

Illustrated **FOOTBALL** *Annual*

1930

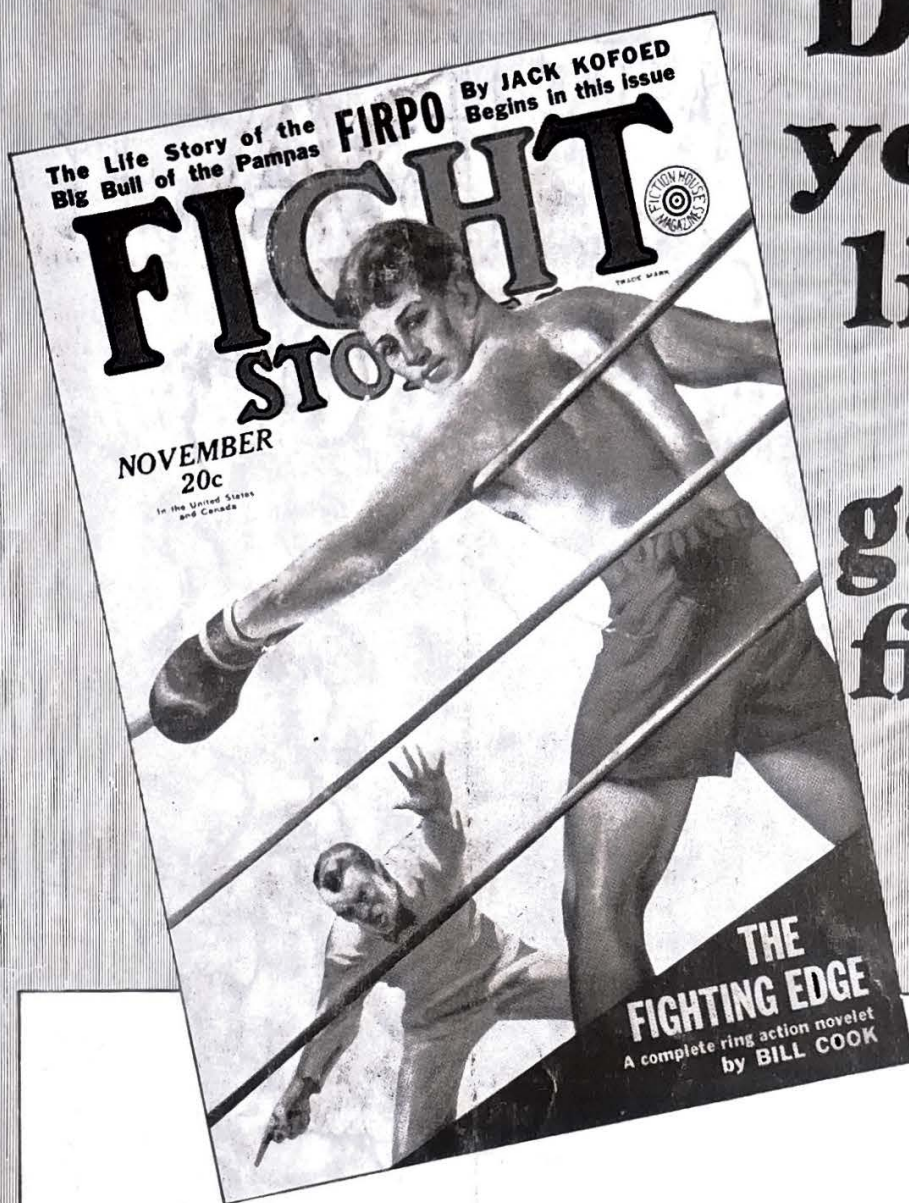
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Illustrated FOOTBALL 1930 Annual

JACK BYRNE, Editor. WM. H. COOK, Associate Editor

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To Our Friends . . . the Football Fans

THE ILLUSTRATED FOOTBALL ANNUAL takes to the field for the first time with this issue.

The purpose of the Annual is to provide a publication which would be both a current history and a manual of the great American game. Such a publication should be pleasing to the eye; authoritative and interesting in its treatment of the subject matter.

To meet these requirements, we have called upon experts in the football world who are the gallant contributors to this first issue of the Illustrated Football Annual—men who have played, lived and love the game.

To provide an eye-pleasing vehicle for their messages, we have tapped the finest reproduction process known to the printing craft.

The result is in your hands. We hope you find it good. Fond parents though we may be, our editorial eyes already sense its omissions and limitations. Publications like the Annual are not born in editorial completeness and perfection; Like Topsy, they "just grow." We invite the help of our readers to make the Annual bigger and better. Your suggestions to this end are cordially invited.

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General Neville. He still cherishes his International Correspondence Schools diploma in Bookkeeping, Accounting and Auditing, earned while he was stationed at Quantico.

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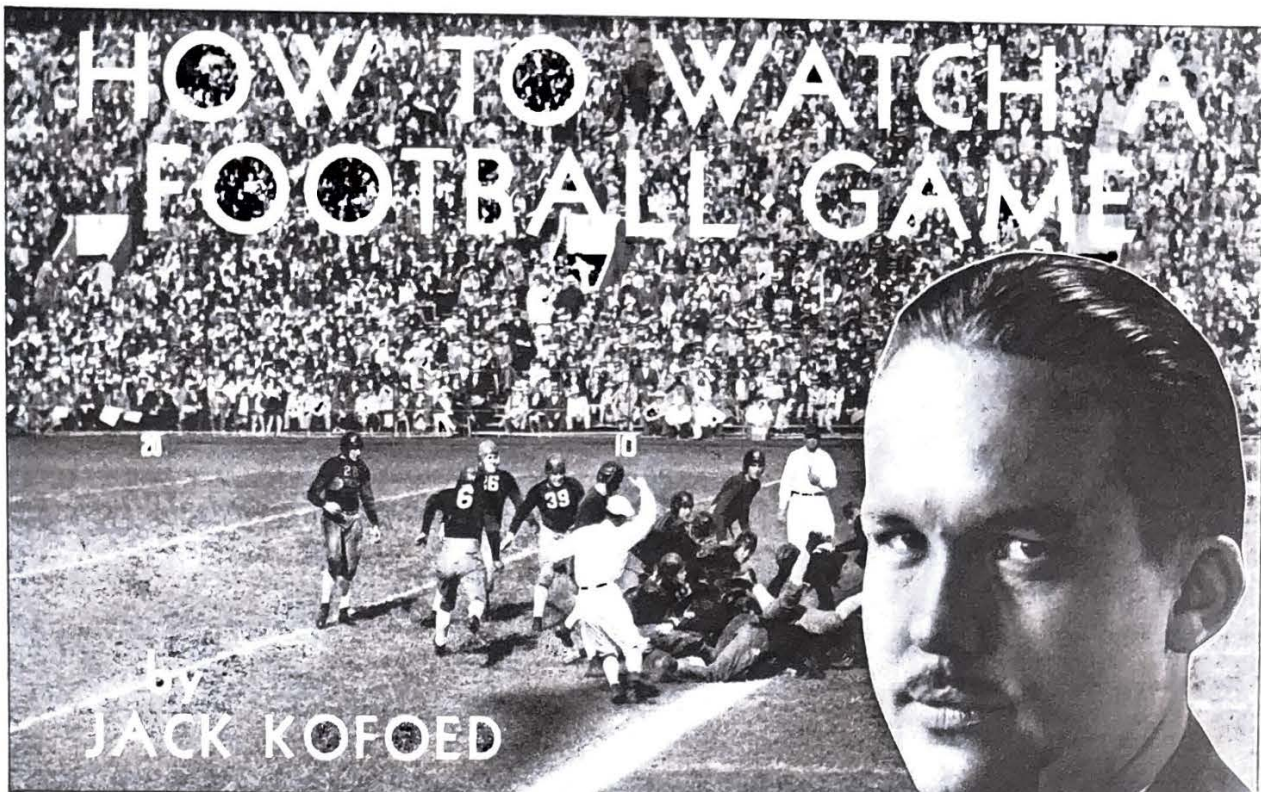
Are any of your own workers preparing themselves for greater responsibilities through I. C. S. study? Or do you know of men in your employ who are eager to work for advancement but who still need technical training before they will be ready? In either case your counsel and your interest in their careers will be well repaid. For a man with the fighting spirit is a man with a future.

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We asked Jack Kofoed, star reporter, to give ninety percent of football fans better football eyes! Here's his recipe.

THE referee, that immaculate gentleman in white, raises his hand. "Ready, Captain Muller?" Captain Muller waves that Stanford is all set. The same question is shouted down to the other end of the field. Army ready—let 'er go.

The whistle blows, keen and shrill.

See the Stanford team spread out in a thin white-jerseyed line across the field, three strides back of the up-tilted ball. Watch the Gray cannily placed to cover every inch of defensive territory. The whistle blasts and the white line moves forward as a unit. There's a plunk of leather against leather and the ball soars high and far.

And right now there's twenty-three different things to watch on that football field. Twenty-two men and a soaring ball. The trick now is to get as many of them as possible in your focus. You'll see the Gold and Gray defense men hurling themselves at the attacking White line to batter them down and keep them out of the play. Somebody grabs the ball back there by the goal line and heads for the open field behind his interference. Then a swirl of White swarms in and the carrier is down. First down and ten to go on the twenty-yard line.

Now watch the way they line up. If you can get clearly in mind exactly what the duties of the various players are, understanding will come easy. The Gold and Gray lines up with seven men in compact formation on the rush line.

Those two on the extremes of the line are the ends. On the offense these men play close to the men beside them. They help charge the opposing linemen out of the way, to keep their opponents from smashing in on the backfield. On defense their chief function is to smash the enemy interference and drive the play into the bulk of the line.

Next inside the ends are the tackles—one tough spot to fill. Their chief offensive function is to tear holes in the other line so that the backs will have a clear path into their opponents' backfield. On the defense they try to keep the other fellow from doing that very thing on his own hook.

Next, on either side of the center, are the guards. Their

duties are greatly similar to those of the tackles. In modern play, however, many coaches use both tackles and guards who come out of the line just as the play starts and join the interference.

The center of the attacking team—that fellow spraddled out there looking back between his legs—passes the ball to the backfield, and then smashes the other line.

Behind the line the backfield is in formation. In the theoretical well-balanced backfield you'll find one half-back who is the triple threat. Chris Cagle of Army is a splendid example of this type of backfield man. When the ball comes back to this player he may run, pass or kick. The triple-threat is a shifty runner who is hard to bring down once he shakes them loose. The other half-back plays a less spectacular part, since his duties are mainly to clear the way for the triple-threat, and to rush the ball occasionally while the star is getting his breath. The fullback, in this backfield alignment, would be a strong line-plunger who would carry the heavy burden of getting those extra few yards that mean first down. And he would be the work-horse who led the interference through the holes opened by the line. The quarterback is the master of strategy who chooses the plays and directs the team on the field. Sometimes he carries the ball to rest the others. Usually he forms part of the interference. Under some systems of coaching—Percy Haughton's at Harvard, for example—the quarter is a pure strategist and takes little part in the actual bruising play. This is an exception, however.

On the defense the backfield guards the territory behind the line. The fullback plays close in to instantly stop the gaps that the attack opens. Further back the halves protect the flanks from end runs and passes; they also cover line plays that break through. The quarter is the safety man; he'll get the ball-carrier if everyone else misses. He watches for long passes and laterals far to the side. He has to be ready to close in or retreat to get back under a punt.

Well, it's Army's ball. The first play is a simple off-

The right end and tackle double up against the opposing tackle, charging him in so that the play can be run through a hole between tackle and end. The right guard blocks the opposing guard. The center passes the ball; then tries to break through to cut down the defending back on the opposing team. On the left side of the Army line the same situation exists.

In the meantime the backfield is performing its function. You can usually spot the fact that a straight power play is coming by the compact formation of the four men behind the line. That staccato barking—if they aren't using the huddle—is the quarterback calling the signals. He's the boss of the lot. Those numbers he's barking are just another way of saying, "Pass the ball to Cagle, Mr. Center. You linemen open a hole off left tackle. The rest of us in the backfield will see that the hole is kept open and we'll take care of those Stanford ends and the men behind the line."

So the ball is snapped and Cagle lugs it off left tackle with two other backs clearing the way for him.

On the other side of the line, however, the Big White team is not asleep. They're using a six man line with the center pulled back to be an auxiliary roving defense. The defending guards and tackles work close together to form an impenetrable wall. When the attacking charge comes they attempt to sweep it aside and break through to the ball-carrier. The ends, playing a couple of paces wide of the rest of the line, charge in to batter down the interference. They drive the play in upon the bulk of the line. The roving center throws himself forward as soon as the play develops, adding his strength and brawn to block the hole at the point of attack. The defensive back on the left side will come up fast to nail the carrier.

Well, Cagle made two yards on that one. Suppose the next play is an end run from a fake pass formation. The Army ends will block momentarily, then dash down the field to take out the defending Stanford backs. The tackles and guards will hold the opposing line from breaking through. One back will block the Stanford end who comes charging in. The other three will start straight across the field, Cagle holding the ball as if to pass. Then, when the opposition is opened up, Cagle will choose his best opening and head for it with his interferers ready to

clear the way. These open plays are the spectacular highlights of football. They produce the Granges and the Booths and the Pollards. One man gets the glory, but there are ten more who make it possible.

Well, a fast-charging Stanford back breaks through and nails Cagle after two more yards. Somebody failed to get his man and the whole play failed. Now Army decides to take a gamble and try a pass. The Army line blocks again. Stanford tries to smash through. The Stanford ends are in harrying the passer, trying to pull him down. One back is defending the passer and the others are down the field as possible receivers.

Watch the Stanford backfield now, trying to break this up. If you keep your eye on the man with the ball you'll miss some neat work that's developing down where the crux of the play will eventually happen. There are four Army players down there, each one a possible receiver. They know where the pass is going and the man who is due to receive it. Stanford uses a man-for-man defense; the defending backs will each choose his man and see that he is covered. If they use a zone defense each Stanford back will cover any man in a certain section of the field.

Here comes the ball. One Army back takes out a Stanford defender. An Army end whirls quickly to the left, a Stanford back follows like a hawk. And the pass falls short, incomplete. And don't forget that while that pass is in the air the Army team must have it covered to prevent it from falling into enemy hands.

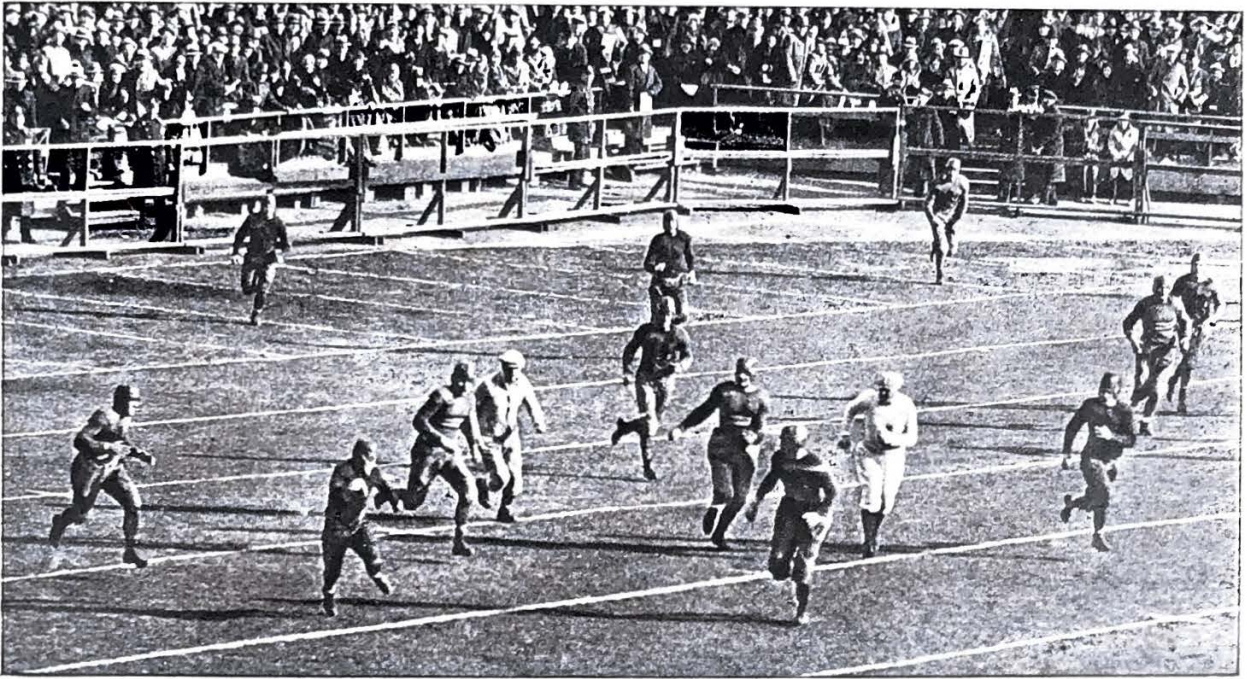
And now a punt on the fourth down. The Army ends and halves are down the field fast, trying to elude the defending Stanford backs and get to the receiver. The Stanford ends are charging in to hurry the kicker. The Army line is holding, the Cardinals are trying to break through. And as the Stanford defense man takes the punt, his interferers gather to clear the path for a quick dash the other way. Now the shoe is on the other foot, and the same basic things happen again with Stanford carrying the ball and Army defending.

Football, in spite of the modern open game, has become more difficult for the layman to watch intelligently. It was easy in the old days when the crowd swarmed out on the field to gather close to the teams. You could watch in-



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There he goes! Al Ratowski, of Penn., breaking loose for forty yards against the Columbia Lion. How far would he have ambled, though, without those three defending mates you see in action.



© P & A Photos

The greatest scoring run of the season is just starting. Jack Elder, Notre Dame speed-king, clutches a Cagle pass out of nowhere. Goal ninety-five yards away—and the Army thundering down on him.

dividual work then, see the play of each man on the team. Now, in the huge stadia that house the Saturday excitement, we see the game more or less in miniature.

The experienced football fan knows, of course, that you can see most of the excitement if your seats are close to the center of the field—the fifty-yard line. A great number, however, still do not realize that you can't see as much from seats on the level with the field as you can from the high places in the upper tier. That's where you'll find the rival scouts who know their business. And if you can't get fifty-yard line seats take a pair of binoculars with you into the end seats. They will help amazingly in giving you the action close-ups.

It is not at all surprising that the casual spectator finds enough thrill in watching the man with the ball and the spectacular open field tackle. With a little study, however, he can increase his enjoyment of football tremendously by watching more carefully the play of the line, the deployment of the defensive, both primary (the line) and secondary (the backfield) and noting the influence which these factors have upon the selection of plays made by the attacking team.

In the last few years, football attacks have tended toward two basic formations. One of these is the famous "Formation B" espoused by Glenn "Pop" Warner and based on theories that had developed in his foxy mind during years of coaching at Cornell, Carlisle, University of Pittsburgh and Stanford.

The other is the Notre Dame system which has been developed by Knute Rockne.

Warner's formation, which many think is the strongest basic formation in football, employs roughly a balanced line, three men on either side of the center, with the ends in tight and with a halfback—called a wingback in this formation—a yard outside and a yard behind either end. Another back is stationed about two and a half yards behind the right guard and the third back who is usually the kicker, the passer and the best runner, about five or six yards behind center.

The virtues of this formation are many. It presents virtually a nine-man forward wall and thus spreads the defensive line, giving each defender more territory to guard. It presents equal running strength to either side

and it gives the defensive tackles plenty of trouble because sometimes both the back and the end are on him, sometimes only the back, sometimes only the end. He seldom knows what to expect. Warner, from this formation, also brings his guards out of the line with telling effect to work on the defensive tackle or end.

The Notre Dame formation basically calls for a balanced line but with a backfield shift that, one second before the ball is snapped, brings the No. 1 back to a position behind and flanking his end. At the same time the end has moved out to flank the defensive tackle—that is, if the play is going to be an end run. If it is going to be a "cut-back", a play which Rockne has employed with telling effect to keep the defense from over-shifting to meet his strength, the Notre Dame end will fake the shift out in order to draw out the tackle. But as the ball is snapped, the offensive end drives back laterally to side-swipe the guard, the quarterback and the wingback will gang on the end and the play will go back inside between tackle and guard.

Superficially, there are basic operations that govern the running attack in football today and there is an indication of some of the things that may be seen if the spectator will take his eye off the man with the ball and watch the play of the guards, the tackles and the ends, defensively and offensively.

Of course, this isn't the easiest thing in the world to do, particularly if one of the teams has a scintillating performer who is famous for his kicks and passes and end runs. Your eyes instinctively are focussed on him. You want to see what *he'll* do. But, if you are really to understand football and get the most out of it, this is a habit that will have to be discarded. As the eleven line up, run your eye over their alignment; try to guess what play is coming; what side of the line will bear the brunt of the attack; how that attack is carried through, or how repulsed.

A study of the alignment of the secondary defenses, and a knowledge of what down it is, also will help the "grandstand field general" to watch football. Against a team with a strong running attack but no forward pass attack to speak of, a 7-2-2 defense is often used. That means a defensive line of seven men, with two backs



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Meet Bud Sprague, ace tackle of the Army. He didn't score the touchdowns, but the experts saw him smash the goalward paths.



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Al Marsters is up in the air here, but usually the other team was that way when the Dartmouth Express got the "go ahead," signal. Tough luck that his injury jinxed a certain All-American selection.

drawn up six or eight yards behind the defensive tackles and two more backs about twelve or fifteen yards beyond the line of scrimmage.

But with a team that has some strength with the pass, the usual mid-field alignment of the secondary defense will be what is called a "diamond", with one hard-tackling, heavy star backing up the line and roving from side to side, two backs about ten or twelve yards on either side and the safety man guarding the back zone.

Some schools of defensive football depend almost solely, except when driven deep in their own territory, on a 6-2-2-1 defense. This has been the so-called "Pennsylvania defense" for years. In it, the defensive ends are supposed to be "smashing ends", directed to come as fast and as hard across the scrimmage line as possible on all occasions. Their function is to strip the runner of the interference, depending on the close-up backs to make the tackle. These defensive backs are able to come up fast without too much worry about a forward pass because behind them are still three more backs ready to guard the forward pass zone. Against a team that is strong with the lateral pass, this is a good defensive system because the defensive end is at liberty to dive in after the first man with the ball, depending on the back coming up behind him to get the second fellow with the ball in case the lateral is completed. The weakness in this type of defense is the fact that a team with a strong line-plunging attack can often gain ground through the center against a six-man defensive line. When it becomes necessary for the defense to go into a seven-man line, then is the time that the forward and lateral passes have a chance to work.

The ability to watch these changes in defense and the way in which the attack strives to meet them constitute much of the ability to watch football in an intelligent and interesting manner.

Harvard has done more than any other major team with the lateral pass, but it is an interesting commentary that in both of Harvard's fine lateral-passing combinations, it has been the second man with the ball, the man who gets the chance to break loose, who has gained the plaudits of the unthinking crowd. Guarnaccia and French were the first pair and they reached their top in 1928. Last year, a pair of sophomores, Charley Devens and Eddie May, were the "lateral-passing twins." Devens, taking a direct pass from center would start on what was ostensibly an off-tackle drive. The development of the play depended on the defense. The defensive tackle was usually driven in by the offensive end but if the defensive end started for Devens, Charley would pass the ball to May, who was running laterally and slightly behind, the instant before he was tackled. This put it up to the defensive back to get May and Eddie is about the most slippery running back in an open field they have had at Cambridge since the salad days of Eddie Casey.

On the next play the end, remembering, perhaps, his previous experience, would go for May. In this case Devens, who is a big, rugged, strong runner, would not pass, but would slide off the tackle for perhaps four or five yards or more before the defensive backer-up would get him. Harvard made this play go especially well against Yale because the Yale ends were in a quandary, not knowing whether to go for the first or second man. Football coaches will argue all night as to the best way in which to meet the lateral pass. Some believe the best way is to send the end always after the first man, letting the defensive back be responsible for the receiver in case the ball is passed. But if that play is worked three or four times and the defensive back gets into the habit of coming up fast, the stage is set for a short forward pass into the territory which he has just vacated. It is part of the generalship of football today to waste plays, if necessary, in the attempt to maneuver the defense into a position in which the long-gaining play will work.

One of the most brilliant examples of this sort was furnished throughout the 1925 season by the undefeated Dartmouth team that boasted perhaps the finest overhead attack the modern game has seen. The strength of that attack was in its balance. "Swede" Oberlander was a great passer and a good runner. Myles Lane was a superb receiver of passes. Horton was a good line-plunger back; there were two fine ends in Sage and Tully and a cool, canny Scotch quarterback in Bob McPhail.

"In a number of games," MacPhail told me, "I wasted play after play in the attempt to coax a defensive back two or three yards out of position, or to bring a tackle over a foot and a half or two feet. When we had him where we wanted him, then we could do business."

This is beautiful strategy to watch if you understand what the quarterback is trying to do. It's like watching a clever boxer feint an opponent into an opening. There is a thrill in it quite equal to that of a broken field run—if you understand what is going on under your nose. You won't if you watch nothing but the ball. Football is more a game of brain than of brawn, and the greatest back in the world is helpless if a smart defense sifts through his forward wall, and nails him before he can get started.

A year ago, when Yale played Princeton, the Blue was gaining well behind the old power formation of an unbalanced line. In short gains, but steadily, they plunged down to Princeton's eight-yard line. The Blue, up to that point, had used no forward pass. Without warning, on the eight-yard line, Yale suddenly shifted from its unbalanced line into the Warner formation with two wingbacks. Tom Taylor, left-handed passer, came across from his position on the right wing, took a pass from center and threw diagonally across into Princeton's right wingback territory and the result was a completed pass and touchdown. That was the only pass of the day used by Yale from a running formation. The Blue threw one other pass but that was for the extra point after its second touchdown.

It is by the use of keen, smart methods of this sort that football games are won and lost today. The modern football team is a machine. It has eleven working parts, each one quite as important as the other. If one bogs down it throws the others out of gear and the machine, as a whole, fails to function.

Red Grange was one of the greatest open field runners that ever lived, but he had big Britton opening holes for him and nine other well-drilled men to help carry out the plays. Jim Thorpe was probably the greatest back to ever dig his cleats in a gridiron, but he could have done little with a tissue-paper line and a stupid quarterback.

If, however, the casual spectator will take some note of the way in which the linemen are deployed and the part they play in making the runs of the star back successful, he will have gone a great part of the distance in learning how to enjoy football much more fully than by waiting for the long run or the sensational forward pass before he jumps up to wave his hat and give 'em the old "nine rahs" for Johnny Gazumps, who made the touchdown.

Observation, of course, is the first essential to understanding football. It is also necessary to read the rules and to know what infractions call for penalties and what those penalties are. It isn't enough that you have read the rules two or three years ago. The game is still in a state of flux. Changes are made each season. It's different with baseball, for its rules were crystallized years ago. We all know them through association from boyhood up, for it is doubtful if any of us have seriously read the rules of the diamond.

But football, that throbbing, dramatic sport of autumn days, calls for a closer study. Don't be of the vast majority that love it as a spectacle and a mystery. Understand what is going on. It is well worth the trouble of learning.



© Wide World

The high-score king of the season—Tennessee's own Gene McEver. They call him the year's greatest back down in Dixie.



© P & A Photos

Yale's Mighty Atom, Albie Booth. Watch those ball-bearing hips this year, snaking him down the field to explode his hundred and fifty pounds of human dynamite against the foes of Old Eli.

TOUCHDOWN TRICKS



Buck Rogers, All-American 1919, head coach of West Virginia, takes his pet touchdown plays apart and shows what makes them tick!

IRA ROGERS

THERE'S excitement running riot on the face of the man at the microphone. His voice rises to a vibrant, faster pitch. "It's Elder—Jack Elder, that human bullet in football shoes who's lugging the ball. He's past the end now—five, ten—they're swarming in on him but he's too fast. Fifteen—twenty—he's away. He's away folks for a Notre Dame touchdown."

Or maybe you're sitting on the sidelines yourself and you come up with a roar as the teams scatter and the threat of the forward or lateral pass puts the tang of thrill in the game. The pigskin is a flash in the air—anybody's ball—and a possible touchdown for either side is in the lap of the gods of football chance and skill.

That's attack for you—thrilling and fast and dangerous. Attack made modern football the amazing sport it is, and the Rules Committee of 1906 made present-day attack possible. Hats off to them! When they changed the rules to require a ten-yard advance in four downs or less, rather than the five yards in three downs which had been in force heretofore, they started something. In one fell swoop they eliminated a huge percentage of the injuries that resulted from the mass plays of the previous era; they put a premium on punting and real football strategy. And with the innovation of the forward pass they made what was then called the "new open game." The forward moved the secondary defense farther from the line of scrimmage, and the game was indeed beginning to open. Under the new rules ground-gaining was more at a premium; you had to have something better than the old power plays. At the same time the on-side kick was legalized, but the fact that it could not be recovered until it had touched the ground caused it to be little used and soon discontinued. Bob Higgin's Wesleyan team did use the on-side kick against West Virginia as late as 1920, but I haven't seen it on display often since that time.

But the forward pass was here to stay, and because the threat of it opened up the secondaries it eventually aided a running attack that produced longer gains against a front line of seven men.

West Virginia University had very little popular football success in the older period of the three-downs, five-yard, requirement, since most of our games were played practically on home territory against smaller colleges. With the introduction of the open game, and contact with



Touchdowns are scored through holes like this. A short-side play can be effective from a left formation planned to draw your opponent's defense away from the side where you intend to drive your wedge.

larger schools, the West Virginia teams had opportunities to see the development of the new type of game as it was played by larger teams of recognized standing in football circles. We saw and we learned—and sometimes we came back with our new-taught weapons to conquer.

From 1914 to 1919, the West Virginia University teams were known more for their ability to gain ground and out-score opponents by a superior style of forward passing. It reached its peak in the West Virginia-Princeton game of 1919, when three touchdowns were scored in less than twelve minutes through this method. A final touchdown in the fourth quarter was scored by another forward pass attack, which netted the mountaineers an outstanding victory of 26-0 over one of the strongest teams in the East.

I don't think it could be called boasting to state that for all-around power of attack that 1919 outfit was as good as I've seen in action. And I've been intimately connected with football as player, scout and coach for the last fifteen years. Throughout the country football was at a new high peak that year, due to the return of the ex-army and navy men to the colleges. Every team had abundant, seasoned material. Against this opposition we unleashed an attack that won high national rating. I don't believe there was a man on the first eleven who didn't rate a mention on some one or the other of the various All-American selections.

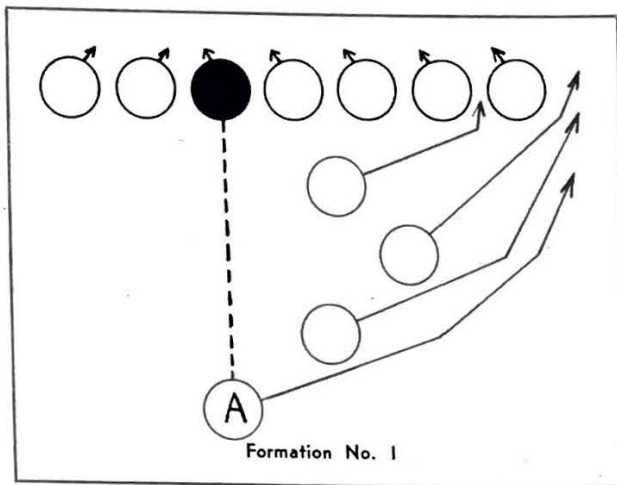
During the past ten years, the Mountaineers have shown an attack which is a combination of the running and passing game, the passes being developed from the strongest running plays. All of the plays used by West Virginia are developed from three formations, namely, for the purpose of this article, number one, number two, and punt formation.

Number One formation, which is used more often than the others, consists of an unbalanced line with usually a guard over, or sometimes, a tackle over, depending on

which man is best in interfering. The men on the line, of course, play close together on offense. The backfield lines up so that the right halfback flanks the opposing tackle, the quarterback takes a position behind a point which would represent the hole between the guard and tackle, and about a yard behind the line of scrimmage. The position of the fullback is back of the hole between the two guards and about three or three and one-half yards to the rear of the line of scrimmage. The left halfback position is four and one-half yards back, and on a line between the center and left tackle. From this formation, as well as the others, we try to use a few plays, simple but strong, instead of spending valuable time on a large number of plays. An end run, to either side of the line, likewise an off-tackle play toward either side of the line, two line-plunging plays, a reverse, and two passes, are the plays used for this formation. The several plays mentioned here are worked up with the idea that each man not only knows his assignment exactly but knows the work required of all the others to make it a successful play.

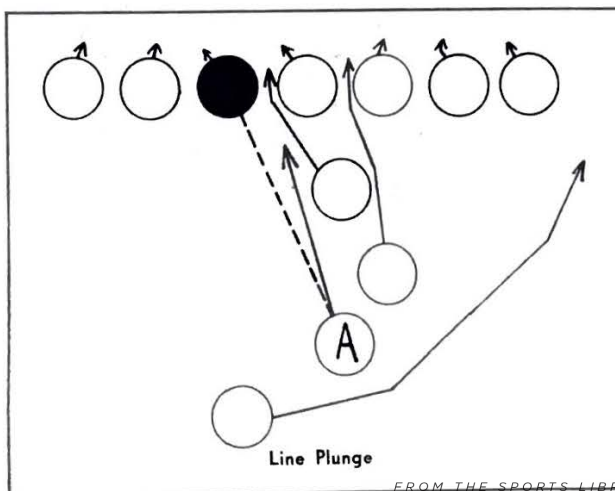
The end run is used when the defensive end plays in close to stop the off-tackle and line-plunging plays. The right halfback blocks the defensive left end. The right end and quarterback block the defensive left tackle. The left guard and fullback swing wide, leading the left halfback, who has taken a diagonal pass from the center, around the defensive left end. The right tackle blocks the defensive left guard. The right guard blocks the defensive center, while the center blocks the defensive right guard. The left tackle and left end block momentarily and sift on through to the secondary. This play was worked very successfully in our game with Fordham University in 1928 when Ryan, our left halfback, scored two touchdowns.

Our off-tackle play, which is used more than any other, is probably the strongest one from this formation. The right halfback and right end block the defensive left



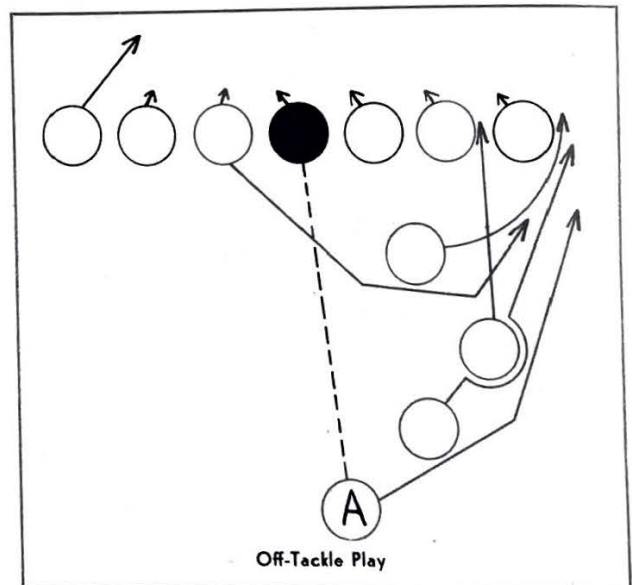
tackle in. The quarterback blocks the defensive left end out of the play. The right tackle blocks the defensive left guard, while the right guard blocks the defensive center. The left guard pulls out of the line of scrimmage and runs between the defensive left tackle and left end to block the defensive fullback. The center blocks the right guard, and the left tackle and left end go down for the secondary. The fullback leads the left halfback, who carries the ball, through the opening between the defensive left tackle and left end. The fullback must take two steps at right angles before cutting up, in order to allow the left guard to pass through in front of him as an interferer. The left halfback follows closely behind the fullback. A fast halfback can gain a lot of ground by cutting back to the weak side after he has passed the line of scrimmage, because of the fact that the left tackle and left end are through on that side of the line taking out the secondary. In our game two or three years ago, Hamilton, a very fast halfback, got through the line of scrimmage, cut back and ran seventy yards against Washington and Lee University for a touchdown without a defensive player touching him. We have gained more ground from this play than any other used in all kinds of weather.

From this formation, also, the following line-plunge has been very successful. The play is directed between the defensive center and left guard, with the right halfback blocking the defensive left tackle out; the right end and right tackle block the left guard out; the right and left guard block in the defensive center. At the same time, the center and left tackle block out the right guard, the left end going through for secondary. The quarterback leads the fullback, who carries the ball, through the opening. The left halfback fakes to the right.



Another play that is a very strong one for the hole between the defensive right tackle and defensive right guard on the short side, works like this: The right end brushes the defensive left tackle momentarily, and goes on through for secondary. The right tackle blocks the defensive guard, and the right guard blocks the defensive center. The left guard pulls out and blocks out the defensive right end. The center and left tackle block in the defensive right guard. The quarterback helps the left end to block the defensive right tackle out. The left halfback leads the fullback, who carries the ball, through the opening. The play has been used effectively for two or three years. In the Oklahoma A. & M. game of 1928, shortly after the opening kickoff, with the ball on our own twenty-five-yard line, Keefer, the West Virginia fullback ran the remaining distance to the goal line for our first touchdown.

A team would be weak without having a reverse play to the short side, and we have had success with this one. The right end blocks the defensive left guard out. The right guard blocks the defensive center out, and the left guard helps the left end block the defensive right tackle in. The center and left tackle block the defensive right guard in. The left halfback takes the ball from center, starts as if making a line plunge off the defensive left tackle, but gives



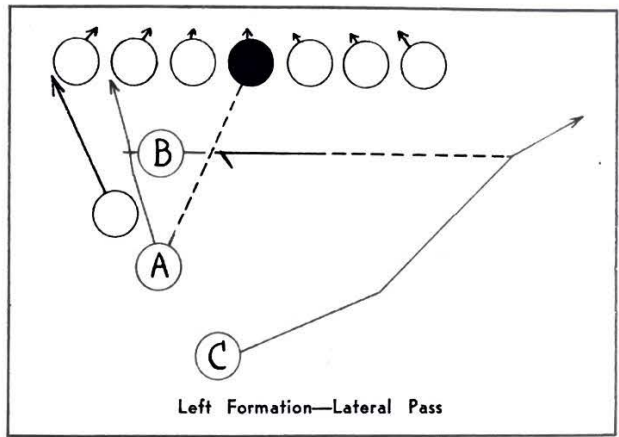
the ball to the right halfback; then the left halfback blocks the defensive left tackle. The quarterback and the fullback block the defensive right end out. The right tackle pulls out of the line and leads the right halfback, who has received the ball from the left halfback, between the defensive right tackle and right end. This play was the turning point in our game with West Virginia Wesleyan a few years ago. After twenty or twenty-five minutes of an evenly contested game, Albert Glenn got loose on this play and ran thirty-five yards for a touchdown.

All of these plays are powerful, with little deception. As we have said previously, it is more important to have plays that can be termed basically sound. However, we have used some trick plays to a very good advantage from this same formation. One of these is described as follows, being used on the occasion of our dedication game with Penn State in 1925. During this game our fullback, Barnum, had been gaining regularly and consistently on line plunges. We had worked the ball to Penn State's five-yard line, and with third down and still four of the five yards to go, the play was ended, using the formation on the left. The right end blocks the defensive left tackle out, and the right tackle blocks out the defensive left guard. The center and right guard block in the defensive center,

while the left guard and the left tackle block in the defensive right guard. The left end blocks the left tackle in, and the left halfback blocks in the defensive left end. The fullback, Barnum, received the ball from center, and in going toward the hole between the defensive right tackle and right guard, gave the ball to the quarterback, Morrison, who tossed a lateral pass to the right halfback, Glenn, who ran unmolested across the goal line. When Barnum took the ball toward the line, a majority of the spectators did not follow the ball closely, thinking Barnum had been stopped at the line, and did not see the completion of the play until some of the fans cheered. This same play was worked for a much-needed touchdown against Washington and Jefferson on Thanksgiving Day of that same year.

All of the plays described up to this time have been running plays. A couple of forward pass plays worked from this formation are now in order.

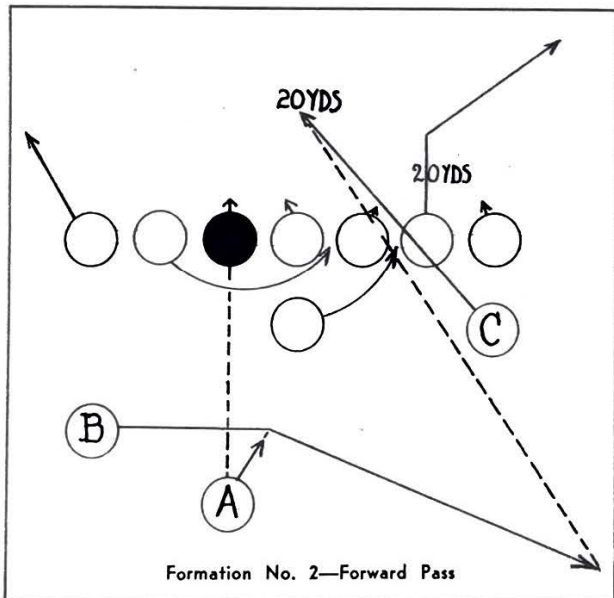
This pass was worked successfully against Lafayette, and was responsible for a touchdown at a critical stage of the game. The ball is in our possession about midfield. The play starts as though it would be an off-tackle or end run, but the right end goes straight down the field for approximately ten yards and cuts forty-five degrees to the left. The right halfback follows the right end for approxi-



territory. The left end ran to the outside of the defensive right halfback. The fullback blocked the defensive left tackle, while the left guard pulled out of the line and blocked the defensive right tackle. The left halfback, Larue, took the ball from center, dropped back a few yards, faked the ball to the right end over center, and then shot the pass out to the side to Glenn who caught it, while falling, on the four-yard line. Due to the condition of the field, which was very muddy, he was unable to regain his feet in time to advance. There was at the time the ball was caught no defensive man in his territory, but due to the hard playing Glenn had been doing up to that time, he failed to get to his feet, and started to crawl. But the delay gave a defensive man an opportunity to fall on him, preventing the score.

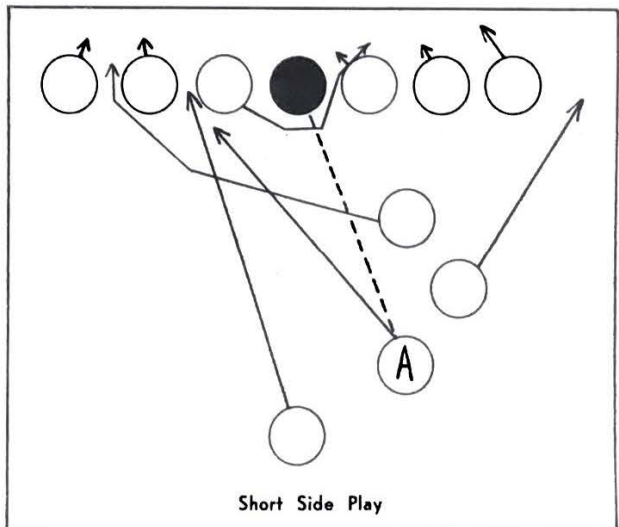
Formation Number Two is the same as formation Number One with the exception that the fullback plays directly behind the center, and four yards back. The left halfback takes his position on the short side, three yards back and directly behind the left tackle. The quarterback is one yard back of the right guard, while the right halfback stands one yard back and one yard to the outside of the right end.

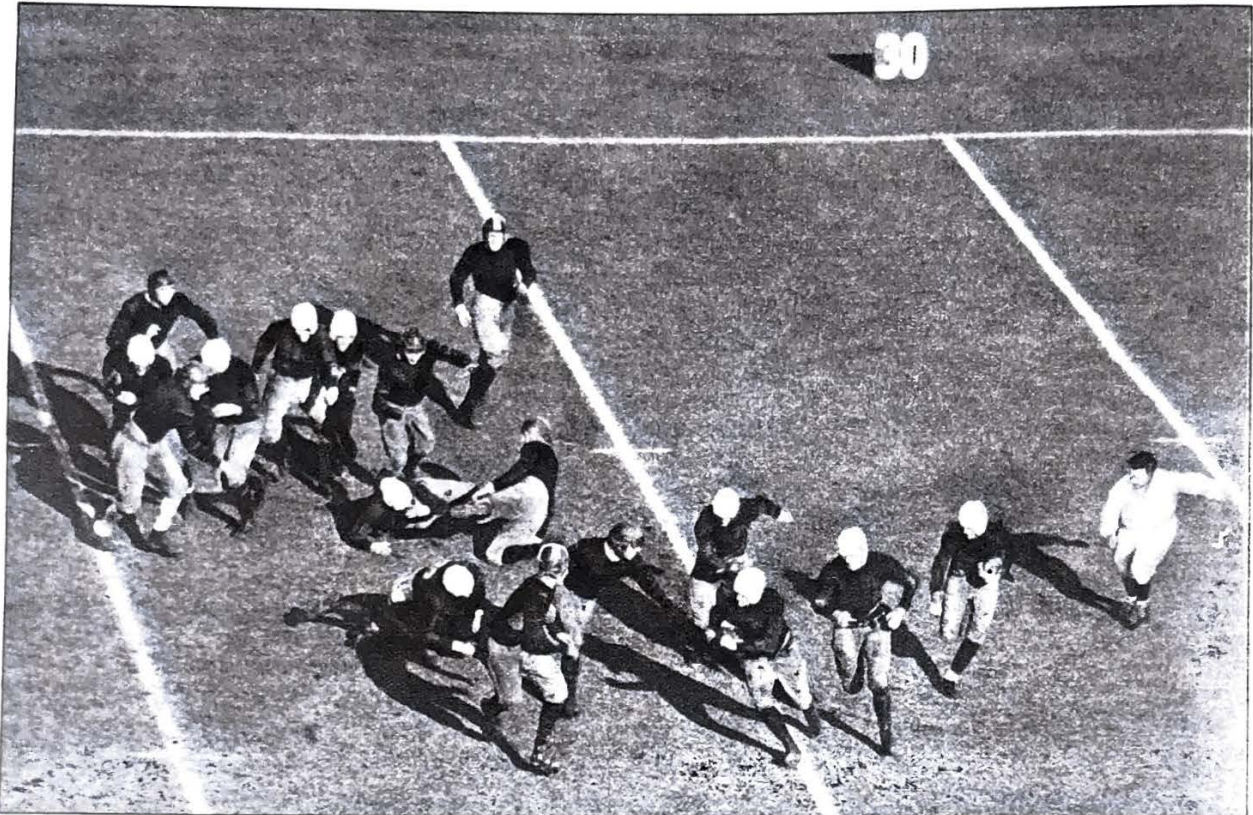
From this formation, we will describe several plays, first of which is a strong line plunge by the fullback. This play worked successfully recently against Missouri and Carnegie Tech. On this play, the right end blocks out the defensive left guard. The right guard blocks the defensive center, while the left guard helps the left end block out the defensive right tackle. The center and left tackle block in the defensive right guard. The quarterback blocks out the defensive end, while the fullback, who takes the ball from center, half turns his body, and fakes it to the left halfback, who turns and starts around back of the fullback.



mately ten yards down the field, and cuts at an angle of forty-five degrees to the right. The left end hesitates momentarily and then runs over to the position where the right end and right halfback diverge on their runs. The quarterback blocks the defensive left tackle, and the fullback blocks the defensive left end. The left guard pulls out of the line and blocks the defensive right tackle. In the Lafayette game the left halfback, Ryan, took the ball from center, started as if to run off our right tackle, dropped back, and threw the pass to Vacheresse, the left end, who caught it in the open, and ran to Lafayette's five-yard line before being tackled by a faster defense man. The line blocked on this play. Then, on the succeeding play, Ryan, on the off-tackle play described before, ran the remaining distance through the defensive left tackle for a touchdown.

The other pass referred to was used against Washington and Jefferson on Thanksgiving Day with the score 6 to 6, and three minutes to go. With the ball on the W. & J. 20-yard line, and directly in front of the goal posts, the right end ran directly over center about fifteen yards; the right halfback ran straight down the field; the quarterback, Glenn, hesitated for a count of three and ran down the field about ten yards, thence out to the right in the flat





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Here comes Yale! This action shot of the Bulldog clashing with the Tiger shows perfect offensive football. Hall, of Yale, has the ball. Note the effective work of the line and the precision of the interference.

But the fullback retains the ball, and runs through the opening between the defensive right guard and defensive right tackle, with the right tackle and right halfback leading him. This play was used so effectively against Missouri that the writer received several letters from coaches in Missouri who witnessed the game, asking that the play be described for them.

A second strong play from this formation is a short end run, to the strong side of the line. The right fullback blocks the left tackle in. The right end and right tackle block the defensive left guard in, while the right guard blocks the defensive center in. The left guard helps the quarterback to block in the defensive left end. The center blocks the defensive right guard. The left tackle and left end pull out of the line and lead the left halfback, who has taken the ball from the fullback, around the defensive left end. The fullback blocks the defensive right tackle after giving the ball to the left halfback. This play, together with the one described in the preceding paragraph, was responsible for our having the ball well in Missouri's territory during the entire first half of our game with them in 1927.

A good pass from this formation is as follows: The right end runs straight down the field for twenty yards and cuts at a forty-five degree angle to the right to draw the defensive left halfback out. The left end runs to the outside of the defensive right halfback to draw him out of position. The right halfback delays, then runs directly over center about fifteen to twenty yards down the field. The quarterback blocks the defensive left end. The left guard pulls out to the right and blocks the defensive left tackle, while the fullback takes the ball from center, then gives it to the left halfback who runs out to the right giving ground to the rear, and shoots a diagonal over center to the right halfback. The fullback, after releasing the ball to the left halfback, blocks anyone coming in from the weak side.

The remaining linemen block. This pass has worked in a number of good games for long gains.

The next formation, from which a series of strong plays have been used, is known as the punt formation. It is good for passing, punting, and rushing the ball. A team should have an end-run to either side, two or three good passes, and a line plunge. If the team has a player who can punt, pass and run, or a so-called triple-threat man, the formation is made more effective by this man playing in the rear position in the backfield. The opposition is usually in the dark as to what sort of attack to expect from this player or the team having such a threat.

The line is balanced in this formation with the ends playing three to three and one-half yards from the tackles, so that they will be in position to box the defensive tackles on runs to their side of the field. Also, in this formation, all players should keep the same position on all plays. The tackles, guards, and centre play a tight line. The right halfback takes his position directly between the right guard and right tackle and one yard back from the line of scrimmage. The fullback position is four yards back of the line, and between the right guard and right tackle, directly back of the right halfback. The quarterback takes his position between the left guard and left tackle and two yards back from the line. The other back takes his position about ten yards back from the line behind the right guard because there is more protection from the right side if he is a right-footed kicker. This constitutes a normal punt formation.

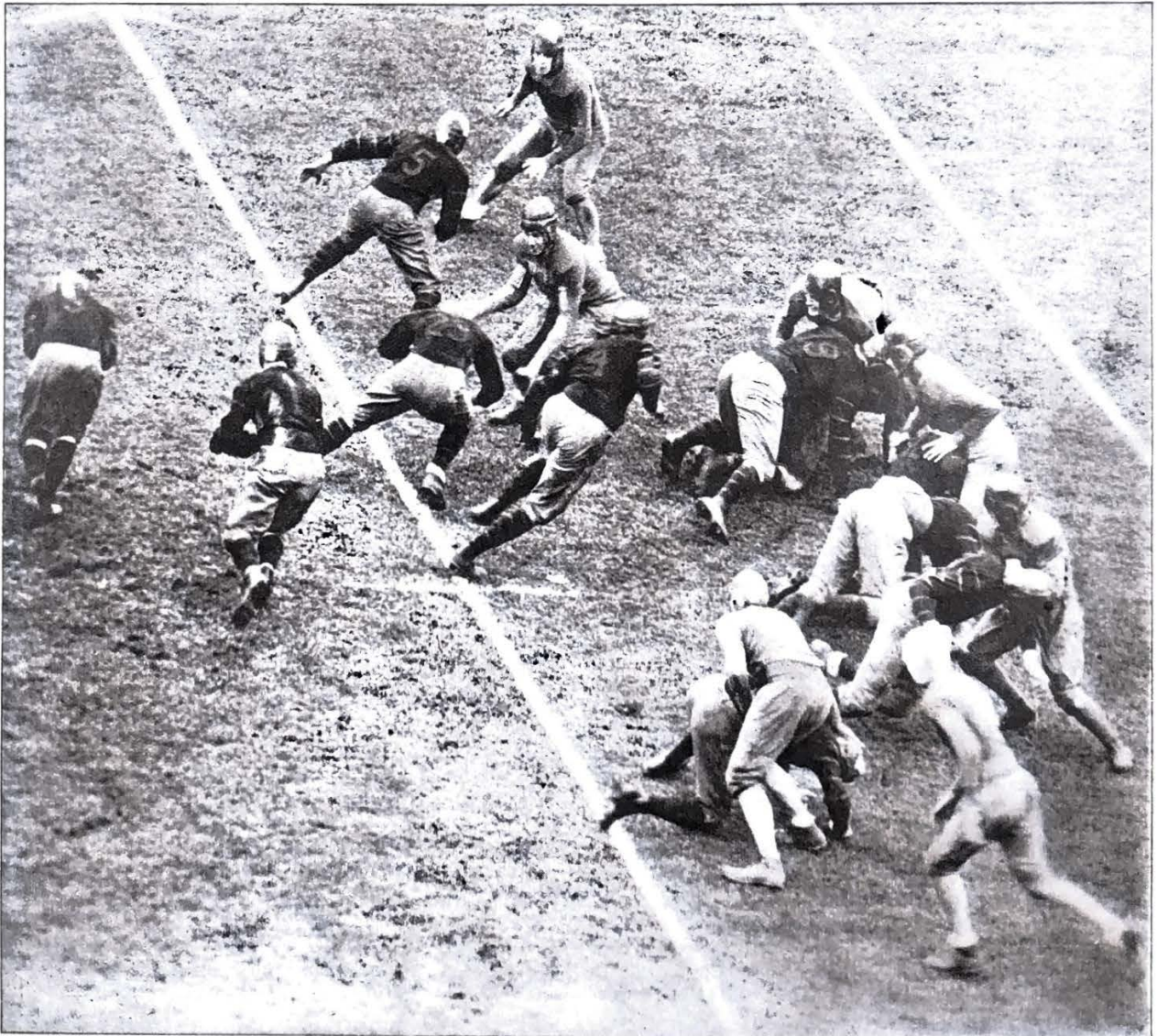
The following is an end run to the strong side. Presuming that the defense is six, two, two, and one, the right end boxes the defensive left tackle in. The right tackle blocks in the defensive left guard, while the center blocks the defensive right guard. The left tackle blocks the defensive right tackle out. The right and left guards pull out of the line, running up through between the defensive

left end and tackle, taking out the defensive fullback and center. The right halfback and fullback box the left end out, while the quarterback leads the left halfback, who has taken a diagonal pass from the center, through the opening between the defensive left end and tackle. The left end goes down for the defensive right halfback. The quarterback, who leads the ball carrier, also tries to take out the defensive left halfback. The ball carrier takes two steps straight out, weaves and then starts for the line of scrimmage, cutting out between the defensive left end and left tackle. There are times when the ball carrier must run on the outside of the end because he will have to be blocked in. The run to the short side from this formation is practically the same as the one described for the strong side, except the quarterback and the fullback block the defensive right end, and the right halfback leads the ball carrier through the opening between the defensive right tackle and right end. The left end boxes in the defensive right tackle and the right end goes down for the defensive left halfback. The other linemen block as on the preceding play to the strong side. These plays are very effective in the territory of the opponent when the ball carrier is also a good threat at drop-kicking.

The following play is a line plunge between the defensive

right guard and right tackle, on the short side. The right end blocks the defensive left tackle, while the right tackle and center block the defensive left guard. The right guard pulls out of the line and runs up between the defensive right guard and right tackle, while the quarterback takes the pass from center, half turns and fakes to the right halfback and fullback, who go on each side of him, and then smash the defensive right tackle out. The quarterback turns and follows the right guard through the hole. The left end blocks the right end out. The left halfback fakes to the right. The left tackle and the left guard block the defensive right guard in on this play. This play worked very well against the Haskell Indians.

This formation lends itself to the execution of a strong pass of this kind. The right end runs straight down the field, while the left end cuts at a forty-five degree angle directly over center and about twenty yards down the field. The quarterback runs down about twenty-five yards, fifteen or twenty degrees to the left from a direct line down the field. The fullback runs to the left down the field about fifteen yards into the flat territory. The passer takes the ball from center, fakes a pass over centre to the left end, and then shoots it to the fullback in the flat territory. The right halfback blocks the defensive left tackle. The left



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Another angle! Vogt, of Princeton, is starting around Amherst's right end. Here the Tigers have pulled a fast one with Amherst's secondary defense laying too far back to prevent a positive gain. A lateral pass can also develop from this point.



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It takes a back with plenty of legs to get past a situation like this. But Masters, wearing the red and blue of Pennsylvania, is a good leg man. If it were not for the Cornell back at the extreme edge of the picture that crowd would have seen the pigskin put across the line.

guard hesitates momentarily and blocks the defensive right tackle. The right tackle and right guard block the defensive left guard, while the left tackle blocks the defensive right guard. This pass worked successfully against Duquesne University last year for a total gain of sixty yards, with Stumpp throwing the ball to Glenn, uncovered out in flat territory to the left.

Here is a good pass against a seven-man line with a diamond shaped secondary defense. The right end breaks sharply over center, about ten yards down the field. The right halfback runs at a forty-five degree angle to the right. The left end runs straight down the field, while the quarterback runs at a forty-five degree angle to the left. The fullback takes the ball from center and throws a fast, quick pass to either the right halfback or quarterback. The line holds on this pass, and the left halfback fakes to the right. You will notice that the fullback, second man in the tandem, throws the pass.

Another good pass, of medium length, can be developed from this formation. The ends run deep into the territory

outside of the defensive halfbacks, to draw them from their positions. The fullback runs out at a forty-five degree angle to the flat territory on the right. The quarterback runs out at a forty-five degree angle to the flat territory on the left. The right halfback blocks the defensive left tackle momentarily, and then goes over center about ten yards to receive the pass from the left halfback. This man has taken the ball and started as if it were an end run to the right, but stops and shoots the pass to the right halfback.

When forced to punt from this formation, it is important that the line know the exact number of men opposing them on the defensive line. If the quarterback or signal caller should make a mistake and wait until the fourth down to punt, one of the secondary defense men of the opponents may drop into the line. The left tackle usually goes down the field under kicks, but if an extra man has dropped into the line of scrimmage, it is necessary that he block his man before going down the field because that would leave two men for the quarterback to block. This nearly cost us

our game with Georgetown a few years ago when our left tackle failed to block an extra man who had taken a position in the line. It is always a good plan for the quarterback or the signal caller to punt when in doubt as to what to do. It is of the utmost importance that a lot of punting be done under fire, with the defensive linemen charging in on the punter in order for the kicker to have plenty of practice in getting kicks away rapidly. The kicker should practice for height, accuracy in placing the ball, and the maximum distance. It is better for the morale of the offensive team to punt a ball high in the air, forty-five yards down the field, and have the punt well covered by the ends, than to punt the ball sixty yards low, only to find the receiver making a return of that distance, or any distance that would make the net punt less than forty-five yards. It is always important to punt the ball high to an uncertain receiver, or fumbler, and keep it away from the good, fast, open-field runner.

While I am on the subject of kicking, it is important that a team have a good "quick" kick. We use a quick kick from each of our close-up formations. When the defensive backs are playing up close in your territory, a quick kick, worked properly, will do a great deal toward upsetting the opponents, putting them on the defense deep in their own territory, with no return of the punt.

If a team has a good punter, and is able to hold opponents from gaining, it is a good plan to punt often. When the opponents are stronger and gain ground consistently, it is better to keep the ball as long as possible.

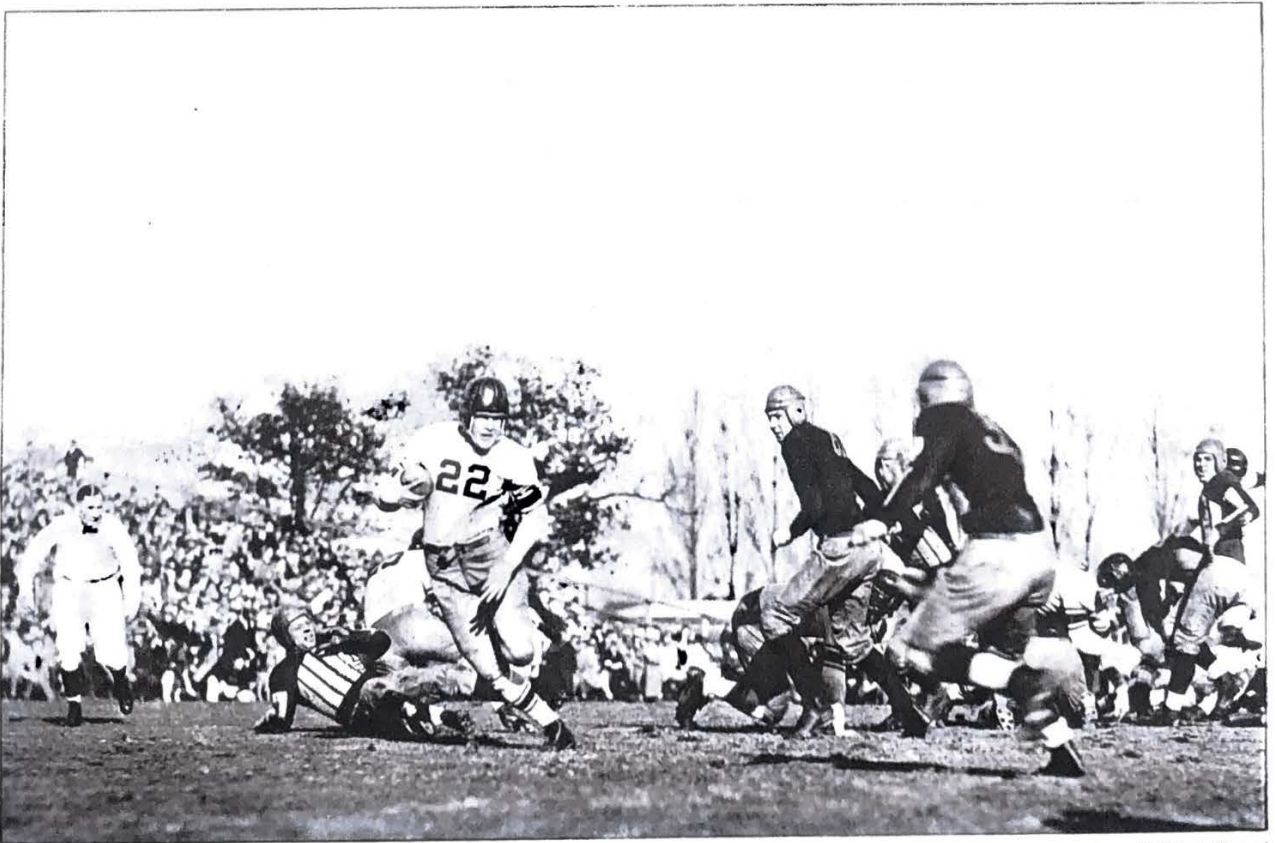
Before the game is started, the direction of the wind and the sun should be ascertained. It is important to secure the advantage of the wind at the back of the kickoff man at the beginning of the game, and this advantage remains with the punter throughout the first period. Likewise, it is important to avoid, if possible, the necessity of facing the sun for receiving of punts.

A very important play in football, and one that is often overlooked, is the return of kickoffs. We use our three best ball carriers near our own goal line, with three of the best interferers in a line about twenty yards from our goal line. These three men lead the man who carries the ball. For instance, if the ball is received on the left side of the field, these men swing over and run interference up that side. However, the runner sometimes will leave these three men and cut back to the other side with the tackle and end on that side, taking out the two end men who come down the field from the kicking team. This flanking run has often been successful in making long runs back from the kickoff, against such teams as Missouri, Georgetown, Boston College and others.

Summing up the article, this system of attack as outlined, represents the general offense used by West Virginia University. Our schedule includes annually many teams of major opposition, and the series of plays we have described, when few or no mistakes have been made by the players in their execution, have gained ground. We have never depended on trick plays to win games, because the uncertainty of weather in West Virginia or the eastern territory where most of our games are played, has made it necessary to rely on sound, basic plays for simple formations.

While some schools or coaches do not believe in scouting, it has been customary for West Virginia to scout opponents. We try to see each of our opponents in at least one game, and obtain a general idea of their strength or weakness, and fit this information into our own plans for each succeeding game. Often, from our scouts, we pick up some new ideas, and develop them into plays of our own.

Essentially, the prime idea of attack in football, is to outscore the opposition. From well-executed plays, simple formations that will gain ground normally in any kind of weather, West Virginia has made a creditable record against some of the very best teams in the east.



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Just breaking out into the open. The kind of picture the grid fan loves to catch on the field. It's Bergherm, of Northwestern, who scored the Wildcats' winning touchdown against Illinois. A trick smash at the other end of the line, a blocked Illini left end, and away goes a back

THE BLUDGEON



"Is a good offense the best defense?" The present head coach of Penn State, All-American and all A. E. F., goes back into his football war-bag and comes up with an opinion that old-time defensive football may have a new and glorious heyday. Listen to

BOB HIGGINS

Third, it is much easier on a man to tackle than to be tackled, and it is much easier for one to push off an interloper than to interfere, because the defensive team has the use of its hands and arms, while on the offense it is against the rules for any man, the ball carrier excepted, to use his hands and arms.

A striking example of good defensive play was used by Harvard under the late Percy Haughton. Haughton always had a good offense, but his defensive play to my mind, far surpassed any other coach in the country at that time. In 1914 Harvard went through a season without a defeat and played one of the hardest schedules any team has ever played. Washington & Jefferson that year had one of the strongest teams in the East, but by playing defensive football Harvard was able to make Washington & Jefferson fumble and thereby gain a victory. "Hurry Up" Yost brought his Michigan team to Cambridge a week or so after the Washington & Jefferson game. Yost had Johnny Maulbetsch, All-American fullback, as his star. Maulbetsch had ripped through every team Michigan had met so far that season. He had a peculiar way of running. He ran so low that he put one hand on the ground, which made it very difficult to tackle him.

At the start of the game Michigan bucked Maulbetsch from their own twenty-yard line to Harvard's twenty-yard line. In this position Haughton switched his defense, putting the center in the line and bringing the halfback up to a distance of three yards back, and moving the safety up to a distance of eight to twelve yards. With this strong defensive position they took the ball away from Michigan on downs, and on the first play kicked it back into Michigan's territory. The first half ended 0-0 with the ball well in Harvard's territory. In the second half, Michigan fumbled the ball and Harvard recovered it in Michigan's territory. Harvard took advantage of this break and pushed over a touchdown which was enough to win the game. In the last quarter Michigan again, due to Maulbetsch's wonderful line plunging, had the ball on Harvard's fifteen-yard line. But by that time they were so thoroughly worn out that it was an easy matter for Harvard to hold them.

WHEREVER you hear them talking football it is *score, score, score* upon which the interest seems to be centered. You'll hear them speak affectionately of Glenn Warner's Formation-B, of Howard Jones' power play, of the amazing Rockne passes or the Minnesota shift. I think it's about time to look at the other side of the picture—and to look long and hard. There is plenty to be said for a super-fine defense, although few football fans or authorities take opportunity of saying it.

Whereupon I take a long breath and air my views for a while:

A team that is well coached on defensive play has a great advantage over a team that bases its game mainly upon offensive football, for three simple reasons:

First, an offensive team takes many more chances and hence can make many more mistakes which may prove costly. For example, if they try to make their offense go inside of their own thirty-yard line and fumble the ball, it puts the other team in a good position to score.

Second, a team on the offense to make any of their plays go must have every man on the team in every play. They all have certain assignments to perform and once they hear the signal they become more or less tense until the play is over, while on the defense, only that part of the team which the play is directed at, need to be tense. The others can to a certain degree, relax.

OF THE DEFENSE



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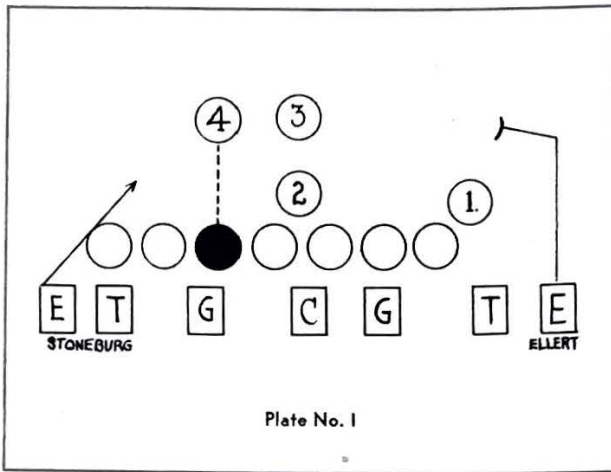
The line is cracked and there they go around the end. Snead, of Yale, is lugging the ball. Defense against an attack of this sort depends on fast smart guards and tackles, as well as the backfield. Brown's line is crumpled but the secondaries may smear this without a gain.

A week or so later Harvard took on Penn State, a team so strong defensively that only six first downs had been registered against them that season. Harvard again kicked off to Penn State and the ball went over the goal line. It was brought out to the twenty-yard line and Penn State directed a few plays at Harvard's line. They were able to make a first down without much trouble. Finding their offense so successful they disregarded the instructions of the coach, Bill Hollenbach, to play a defensive game, and opened up on the offense with everything they had. They scored one touchdown and Lamb a big tackle, kicked two field goals in the first half, which made the score Penn State 13—Harvard 0. In the second half Harvard continued its defensive method of feeding the ball to Penn State. In the third quarter the Penn State quarterback fumbled the ball, Harvard got it and with perfect ease, pushed over a touchdown. In the fourth quarter, Penn State fumbled a Harvard punt and in the last forty-five seconds of play Wilcox, a substitute halfback, shook loose and ran thirty yards for a touchdown. Withington, Harvard tackle, kicked the goal, making the score 13—13. In this game Penn State had gained something like 400 yards to Harvard's 90, yet the score was a

tie. This to my mind in no small way emphasizes the importance of a strong defensive team.

The age-worn adage that "a good offense is the best defense" is brought home stronger today than ever before, due to the fact that the Fumble Rule makes it impossible for the defending team to score, except by an intercepted forward or lateral pass. Nevertheless, ninety per cent of the coaches send scouts to see their opponents play, and all coaches spend days building up a strong defense to meet the strength of their opponents. A strong defensive team can take many more chances on the offense than a weak defensive team. They can use trick plays, passes, and scoring plays. They can bend every effort to get a man out in the open or shake him loose. They are not afraid to lose the ball if they are confident they can hold the other team and keep it from scoring. So a strong defensive team really gives color and confidence to the offense.

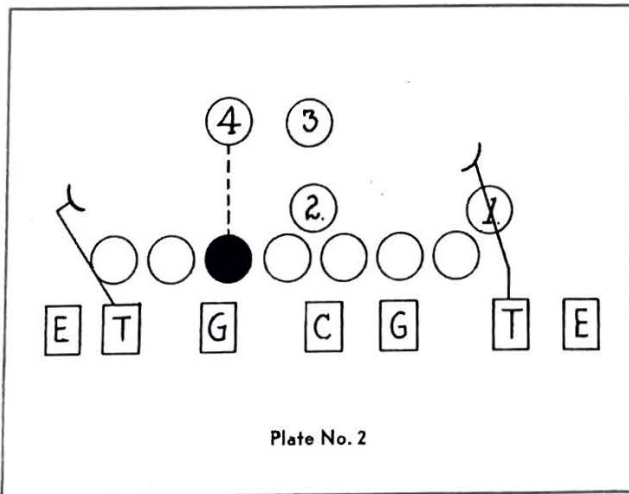
For the past two years the writer has been scouting football games and has seen the following teams play: Pittsburgh, Notre Dame, Brown, Syracuse, Lafayette, Bucknell, Penn, Dartmouth, Navy, Nebraska, Ohio State and New York University. Most of these teams have been seen



twice and under ideal conditions. They have been seen from the press box, on the fifty-yard line, where one is looking down on the heads and shoulders of the players, so that every player can be seen. Add to this an undergraduate of each contesting college, provided with field-glasses, having the ability to recognize at sight, all the members of their respective teams. For example, when the play starts, one boy says "Green carrying the ball." As soon as the tackle is made, the other boy says "White made the tackle." It is much easier to watch and understand a football game under these conditions than from any other place in the stadium.

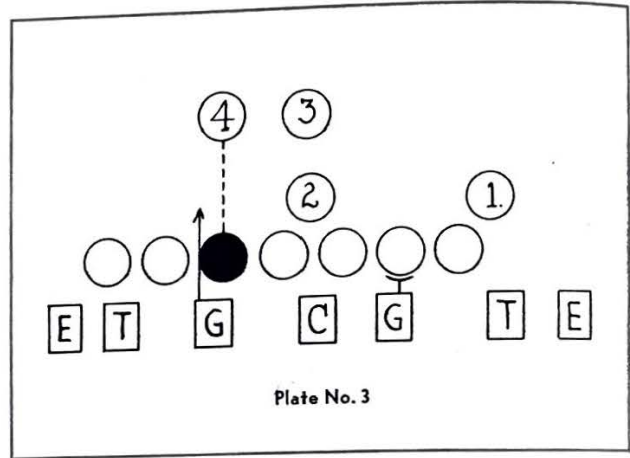
It would be almost impossible to name any one of the above as the best defensive team. But in my opinion, Syracuse had the best defensive line and Nebraska the best defensive backfield. Perhaps either Pittsburgh or Notre Dame could have won from a team composed of the Syracuse line and the Nebraska backfield. But offensive play would be a big factor in a game of this sort, and I am dealing only with defense.

The Syracuse ends were Stoneberg and Ellert, both deadly tacklers and the dashing type of players. Stoneberg, the left end, was six feet-one, and weighed one hundred and ninety-one pounds. At the snap of the ball he would rush into the opponents' backfield with such speed and force that he would break up plays before they had a chance to form. As a rule he would take a sailor's dive and hit the interference with his head and shoulders below the knees, knocking them down and tripping up the ball carrier. If this did not happen the ball carrier would have to circle so far back to get around the pile of interference, that it was an easy matter for the defensive fullback or center to get the ball carrier before he



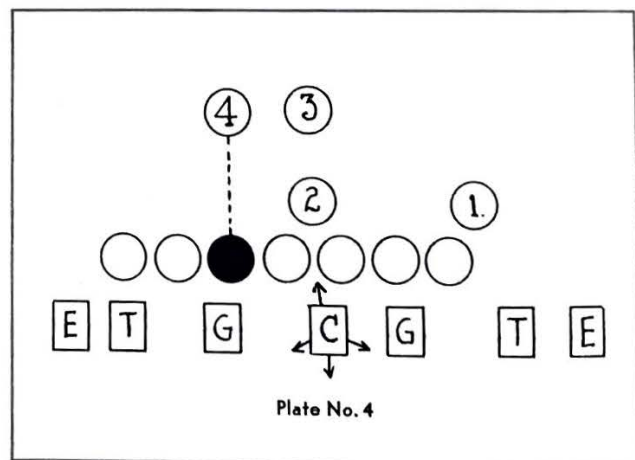
made much yardage. Ellert, the right end, weighed one hundred and eighty-eight pounds, and was five-eleven tall. He was the extreme other type, who took two steps across the line of scrimmage and hand-fought the interference off, shifting between them without much body contact. If he was hit from the side, he always seemed to have balance enough to recover, and made a great many tackles himself.

It was an unusual thing to see two ends on the same



team playing such an entirely different type of end play and yet playing them so well; Stoneberg, the smashing and busting type, Ellert, the shifting, cagey type. Both of these men were sophomores last year and made regular positions on the team. For the next two years, barring accidents, "Big Bill Orange" will have two great defensive ends. I make the prediction because Vic Hanson, who himself was a great end in his day, has taken over the reins as head coach at Syracuse, and it goes without saying, that Vic will show these two sophomores a good many tricks in the trade of defensive end play. (See Plate One.)

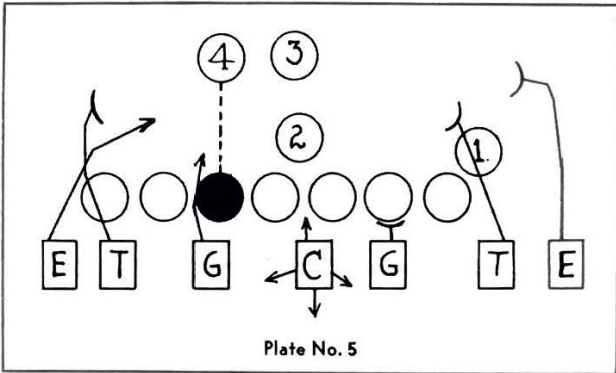
The tackles, Novek and Newton, were real shock absorbers. Novek, the left tackle, weighed two hundred



and four pounds, and down the field under punts he was often abreast of Stoneberg and Ellert. The opponent quarterbacks last year took severe punishment from these three deadly tacklers. On his defensive charge, when playing a wing halfback and end, Novek generally charged the halfback and was extremely strong defensively to the outside. This made a fine combination, because Stoneberg, his end, went in so fast that he took care of everything to the inside. Newton, the right tackle, weighed two

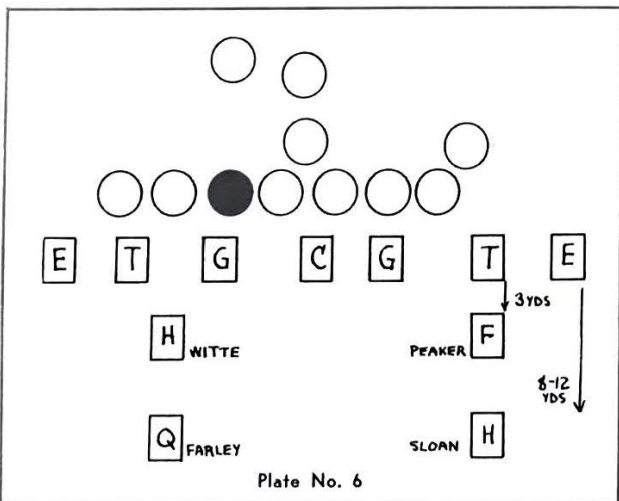
hundred and fourteen, and while he was the slowest man on the line, he was considered very fast for such a big man. His charge was straight ahead, converging a little towards the center, and he generally took the end and halfback with him. (See Plate Two.)

The guards, Obst and Van Ness, played low on their



hands and knees, and charged straight ahead. Obst weighed one hundred and eighty-six and Van Ness two hundred and nine pounds. Obst had the most terrific charge of any linemen I have seen in the last two years. He was the comment of all the scouts in the press box. He was injured in an early part of the season, or I am sure his name would have been often mentioned when the different sport writers chose the All-American teams. Van Ness was a senior last year; had played regular guard position three years and due to his experience was a hard man to move out of his territory. He was not the terrific charger that Obst was, but he was a very stubborn man to get by. (See Plate Three.)

Bernar, their center, six-one in height, weighed two hundred and sixteen pounds. He had always played fullback at prep school and played that position as a freshman at Syracuse. Due to his backfield experience he was very clever at backing up the line as a center. When he thought it was going to be a line buck, he would stand three or four yards back of the line of scrimmage and just before the play was started, would move up and take his position

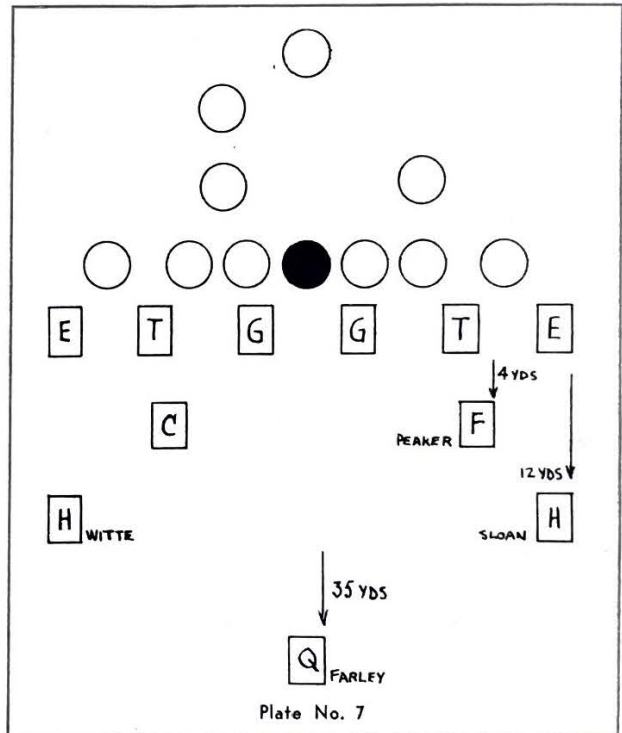


in the line as a lineman. His first charge would be straight ahead, with his head up. If he saw the play was going to the right or left, he would retreat quickly and swing out of the line to meet it. Often when he thought the opponents were going to run the ends or pass, he would line up in the line of scrimmage and then move three or

four yards back, just before the play started. (See Plate Four.)

As can be seen by Plate Five, Stoneberg, defensive left end, went into the backfield so deep that he took care of all the inside territory. Novek, his tackle, for some reason, was a strong outside player. So the two simply crossed, Stoneberg going in front, Novek going behind. This is an ideal combination and confuses the offensive men because they are not able to take the men they are assigned to. This sometimes causes the interference to hesitate and "he who hesitates is lost" applies to interfering backs more than any other phase of football I can think of.

It will also be noticed in the above diagram that Ellert, the defensive right end, goes across the line of scrimmage two-and-one-half steps and waits for the ball carrier to indicate the direction he is going to take. He then covers him in such a way that it makes it impossible for him to go to the outside. So it is very important that Newton, who is not any too fast on outside plays anyway, cover his own territory, because of the way Ellert plays his position. If Ellert does not make the tackle himself, he will turn the ball carrier in toward the center, so that he will actu-



ally run into Newton, his tackle, or Van Ness, his guard.

Notice the different styles of defensive play of the two Syracuse guards. Obst is a typical example of a small, slicing guard; although one hundred and eighty-six pounds is big enough to play anywhere on any team. Van Ness, the other guard, is a big, experienced man. His two hundred and nine pounds will not allow him to move and slice like Obst, but his experience in that position has taught him the best way to cover his territory is to charge into it with his head up and grab legs. Obst will make more tackles behind the line of scrimmage and will be more sensational on defense play. At the same time on plays that fake out and cut back in over his territory, he will sometimes be out of position. Consequently, he can be gained through. On the other hand, Van Ness will rarely be seen from the grandstand. He never makes many tackles behind the line of scrimmage, and it is very seldom that the offensive team goes through his territory.

I have mentioned the Syracuse line because in the first place, they have the best defensive line I saw last year.



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Looks like a bump for Boston of Syracuse as Prucka, the fast Nebraska grid star, tackles. The ball carrier has got to go down when they get him this way. Hit them low and topple 'em. High tackling, above the waistline, never stops a strong runner.

Second, each man played his position in an entirely different way, and yet each played it well. Third, the whole line, with the exception of Van Ness, will be back at Syracuse this fall. This will afford the reader, if he is fortunate enough to be situated near Syracuse, an opportunity to see these men play each position so differently and yet play it so well.

The Nebraska backfield was well coached to meet all offensive formations. On close formations they used the 7-2-2 defense, that is seven men in the line of scrimmage, two men three yards back, and two men from eight to twelve yards back. They used no safety man. But as soon as a two wing back formation or a kick formation was used by the opponents, the center quickly dropped out of line to a position three yards back; the halfback

playing in that position would drop back from eight to twelve yards, and the quarterback or safety man, without turning his back to his opponents, would quickly run back to a position of twenty-five to thirty-five yards. They were very well drilled in these shifts, and there seemed to be no confusion among them, regardless of the kind of offensive formation their opponents took.

In Plate Six you will find the Nebraska defense against all double wing back formations. A double wing back formation has very little bucking strength. If bucks are used from this formation, the ball carrier generally goes through the line alone. When any team took this formation against Nebraska, Coach Bible was satisfied to let him gain a yard or two through the center of his line, but he was very anxious to stop all plays such as end



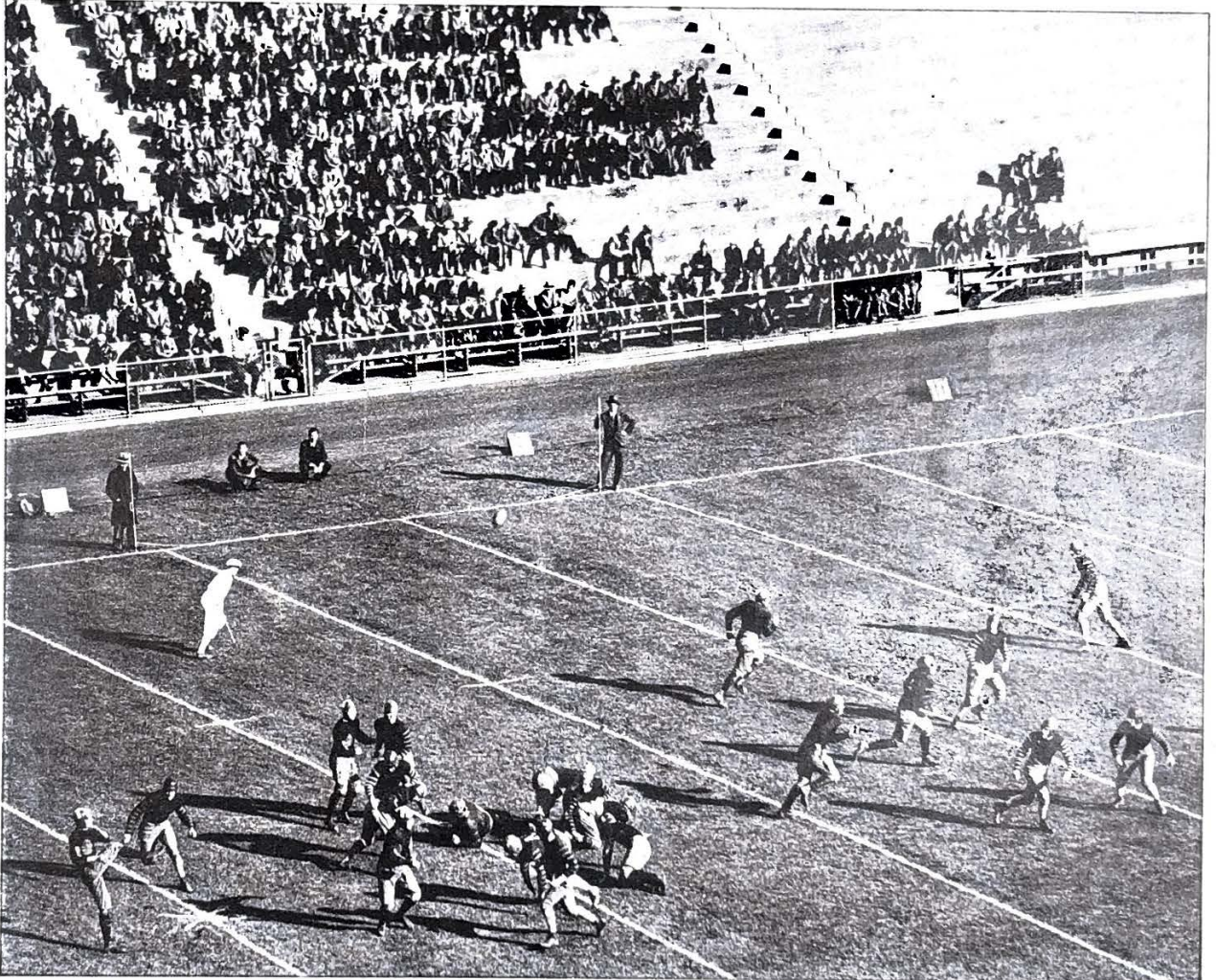
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Human heaps like this are a direct result of ineffective tackling. Here Holman, of Ohio State, is being stopped after wiggling along for a gain, but it takes practically the whole Michigan team to down him.

runs, double and triple passes. So he played what is called a 6-3-2 defense, that is six men in the line of scrimmage, the center and fullback and one halfback three yards behind the line of scrimmage, and the quarterback and one halfback eight to twelve yards and rather wide. This was very effective and not many teams could make headway against them.

The Penn State scouts brought this defensive formation back the week before we were to play Syracuse. It was reasoned that it had been used by Nebraska with so much success that we might adopt it, which we did. The game was very even all the way through, the final score being 6-4 in favor of Penn State. Larry Conover, Joe Bedenk, and myself were scouting the Pennsylvania-Navy game

L.E.	Cogswell	177 lbs.	Was chosen by many sports writers as All-American end.
L.T.	Sonnenberg	200 "	World's heavyweight champion wrestler.
L.G.	Youngstrom	195 "	Picked as All-American by Walter Camp in 1919.
C.	Cunningham	193 "	Second All-American by Walter Camp in 1920.
R.G.	Crisp	197 "	Not flashy, but very dependable.
R.T.	Murphy	212 "	Played professional foot-



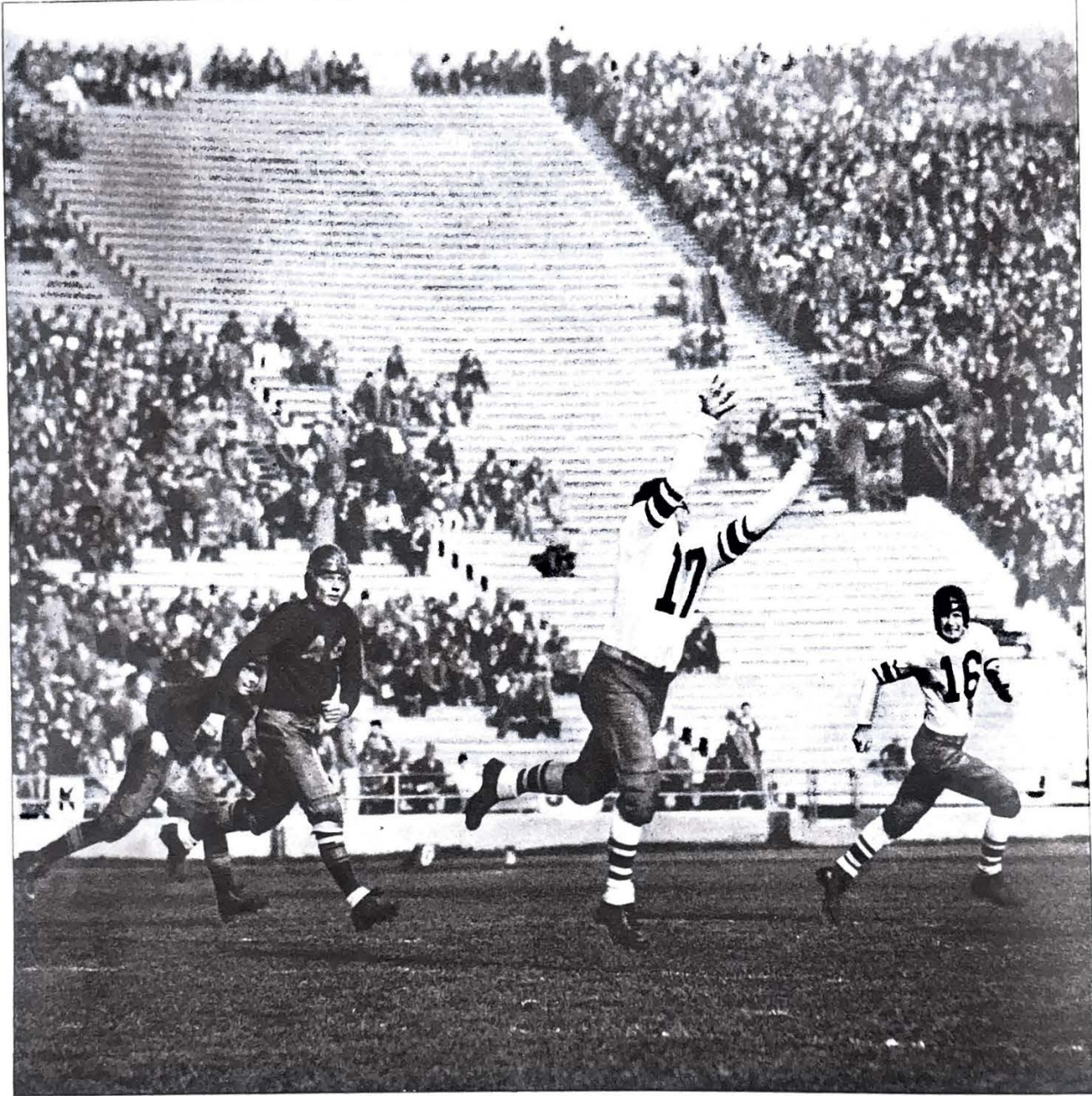
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Lehigh faces the Tiger at Palmer Stadium. Defensive tactics often call for a team with the ball to get the leather away from their own goal. And here's where the punt comes in. Lehigh is kicking. See those ends going down to smack the receiver when he gets his hands on the oval. Every foot that ball travels keeps the attacking force just that far away from the Lehigh goal.

in Philadelphia on this day, and when we heard the score, it reminded us so much of a baseball score, that we wired Hugo Bezdek, collect, asking him who pitched.

The best defensive team I have ever had the pleasure of playing against was the Dartmouth team of 1919. It was captained by Jack Cannell, who is now head coach at Dartmouth, and was coached by Dr. Clarence Spears, who this year has accepted a new position as football coach at the University of Oregon. Almost all of these Dartmouth players had spent a year or two in the army, and consequently they were older and smarter than the average group that makes up a college football team. Here is the lineup, and to anyone who has followed the game closely it just about speaks for itself:

R.E.	Meyers	183	Very capable player.
Q.B.	Cannell (Capt.)	165	Now head coach at Dartmouth.
F.B.	Holbrook	172	Picked by many sports writers as All-American, although was never given the official position.
R.H.B.	Shelburne	185	Second All-American.
I.H.B.	Robertson	196	All-American, 1920.



© Wide World

You can't see Frosty Peters in the picture, but you can see the forward pass he shot to Willis Glasgow in the game between the Eastern and Western All-Stars. The East won out and the forward pass played an important part in the victory. The systems of Warner and Rockne call for a man-to-man defense, but here Glasgow seems to have gotten away from his cover man.

There has been a great deal of discussion as to the best and proper method to defend against the forward pass. In general there are three methods. The zone defense, man-to-man defense, and a combination of the two. In zone defense each man is assigned to a particular territory and he is not allowed to move out of that zone. His duty is to catch or to bat the ball down if it comes his way. In man-to-man defense each defensive back and the defensive center are assigned to a certain man who is eligible to receive a pass, on the offensive team. Wherever this man goes the defensive man goes with him. In the combination of man-to-man and zone, the defensive halfbacks play man-to-man while the center and fullback cover the zone. Each year at the National Football Coaches' meeting some prominent coach is sent to the blackboard to discuss the defense against forward passes, and it is surprising how positive each man is that his particular defense, whether it be zone, man-to-man, or a combination of the

two, is the best. The coach who favors zone says that man-to-man is not good because a defensive man can be decoyed out of his position by an end going across the field, and that the back can delay and then go into his territory which has been left open. The coach who favors man-to-man says zone is not good, because the offensive team can send three eligible players into one zone, and it is impossible for a defensive man to cover three offensive men. The zone advocate replies that the offense can only throw one ball. The other's retort is, that one ball is enough if caught.

Warner and Rockne both use a combination of man-to-man and zone. Warner has his defensive ends rush the passer fast and tells his team that fifty-one per cent of the defense against forward passes is rushing the passer. He has his tackles hold the offensive ends on the line of scrimmage and try to push them over or knock them down, so that it is impossible for them to get out to receive a

pass. Rockne has his tackles rush and his ends back up to cover the flat zone. He has his guards instructed to tackle any back who delays and tries to come out late.

Several years ago when Zuppke and Dobie gave a course in football together at the University of Illinois, a heated discussion arose as to the best method to defend against forward passes. Dobie was very strong for zone and Zuppke was very strong for man-to-man. When the discussion got under way, one-half of the class sided with Dobie and the other half sided with Zuppke. I have been told by some men who were taking the course that the discussion lasted for three or four days.

Finally Zuppke said to Dobie, "If I know that you use zone to defend against passes, I can pass on you," to which Dobie replied "Yes, and if I know that you use man-to-man I can pass on you." This pretty well sums up the argument. In other words, it is very important that the method of defense against forward passes be unknown to the opponents. I believe all good coaches vary their style of defense to meet the opponents' strength.

Jock Sutherland, the Pittsburgh coach, has been criticized since the California game last New Year's, because of his weak defense against forward passes. I have seen Pittsburgh play a great many times and have always thought of them as having a strong defensive team against passes. Two years ago Syracuse came down to Pittsburgh with Baysinger, who is one of the finest passers I have ever

seen. The week before against Nebraska Baysinger threw nineteen passes during the game that were completed. That day Pittsburgh, due to Sutherland's strong defense against passes, only two or three were completed. Ever since I can remember anything about Pittsburgh's defense for forward passes they have always played a six-man line, with the center and fullback three yards back, the two halfbacks eight to twelve yards, and the safety man back about twenty-five yards. They have always been very successful defending against forward passes from this position. I have heard that for some reason they varied their defense against passes, from their regular 6-2-2-1 to a 7-2-2 in their game with California on New Year's and this perhaps may explain why they were not so successful defending against passes as they had been in other games.

As football is played today defense is a flexible, double-edged weapon, a more blunt tool, perhaps, than the rapier of attack, but tremendously effective in hands that know how to use it properly to parry the rapier's thrusts. And don't forget that it can often deal a stunning and powerful counter-blow on its own account.

Countering, in football as in boxing, can swing the tide of the battle. One side of a line, quick to sense a fluke or a play gone hay-wire, can pull a lost ballgame out of the fire. More than one winning score has been marked up in grid history by defensive alertness.

Beware the bludgeon in 1930!



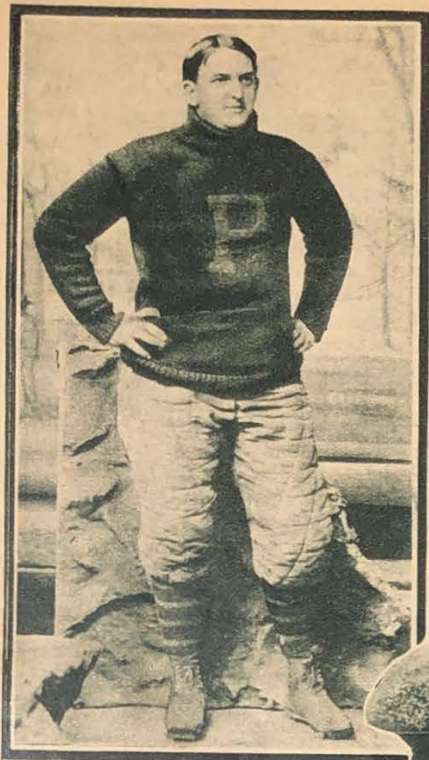
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Three pairs of fighting hands are reaching for him, and the chances are that one will get him. But Bergherm, of Northwestern, hugs the ball and dives for the opening that his plunging line has opened in the Illinois defense. This is a clear example of what can happen if the line fails to block out the ends and tackles. They get up again.

BIG BILL EDWARDS PICKS
THE SUPER-ELEVEN

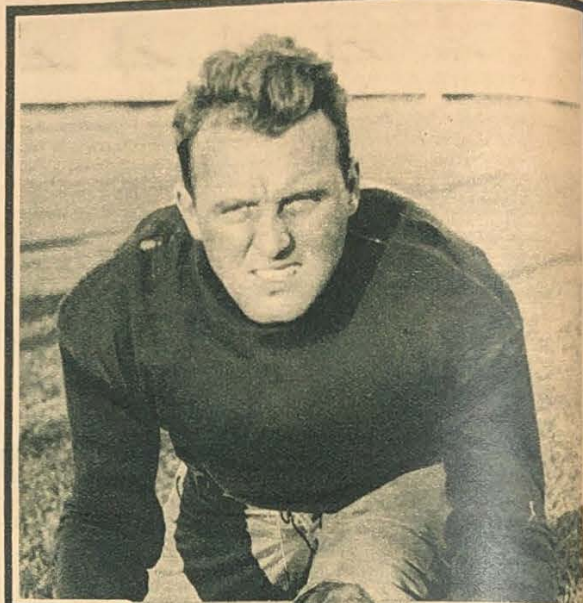
ALL-TIME ALL-AMERICAN

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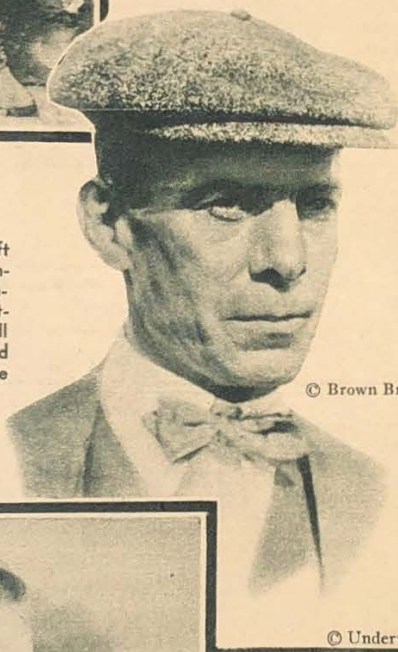


From the marvel men of the past and present BILL EDWARDS (left) names the Aces of the gridiron. Captain of Princeton '91, member of the Rules Committee, and a football official of long standing, Big Bill calls on the experience of forty years in the game to draft this team of scoring stars.

JACK CANNON (Right)—Left Guard 1929, Notre Dame. The top-ace of modern linemen. Fast and rugged and football-wise, he stands head and shoulders above the rest of the pack.



FRANK HINKEY (Right)—Left End 1891-'92-'93-'94. The Burning Flame of Yale. One hundred and forty pounds of giant-killer whose glorious taunt still rings—"Try to gain a yard around my end!" May we some day see his like again.

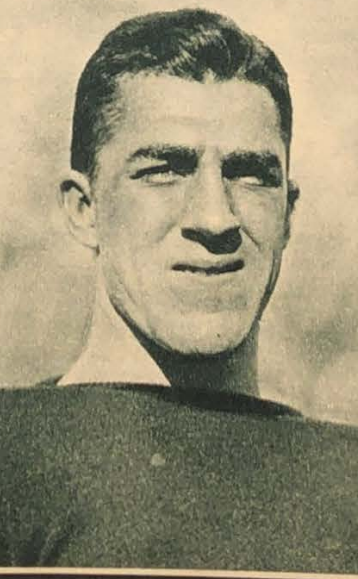


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RED GRANGE (Above)—Halfback 1923-'24-'25, Illinois. The Galloping Ghost of Urbana has never seen an equal in a broken field. You'd need an adding machine to count his score if he played on a team like this one.



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TED COY (Above) Fullback 1909-'10, Yale. "Thorpe? I'd trade him in a minute for Ted Coy," Bill Edwards says, "and get the best of the bargain. Coy could match the big Indian in everything, and he had the plus-stuff of football spirit."

EDDIE MAHAN (Left)—Halfback 1913-'14-'15, Harvard. The true greatness of Eddie Mahan lives in the memory of the men he played against. Don't lose sight of his defensive greatness in the dazzle of his touchdown glory.



RALPH DAVIS (Above)—Right End 1901, Princeton. "Who is this bird?" you're going to wonder. Well, ask dad — he knows.



© E. K. Weller

FAT HENRY (Above)—Right Tackle 1919, Washington and Jefferson. A most amazing combination of weight and strength and aggressiveness. And was he fast for a big man! He has still to meet the man who can outplay him.

PUDGE HEFFELFINGER (Above)—Right Guard 1889-'90-'91, Yale. The Man Mountain of football — a super-giant in the day of giants. They used to ask, "What would happen if an irresistible force met Heffelfinger, the immovable?"

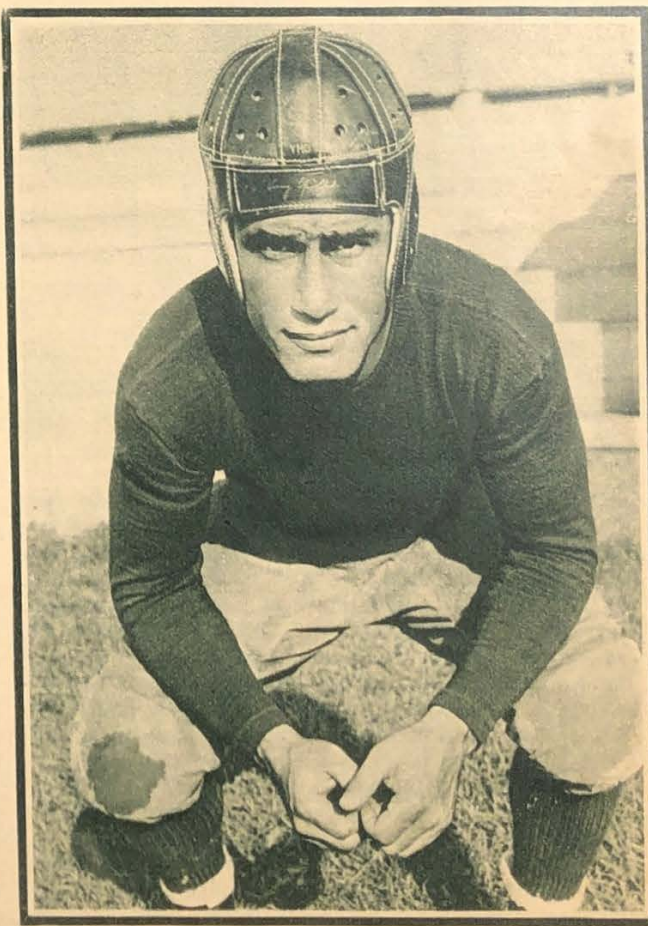


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STAN KECK (Above)—Left Tackle 1920, Princeton. They stayed tackled when Stan Keck tackled 'em. Every rival team played two men against him, and he won his badge of glory under double fire.

GERMANY SCHULTZ (Left)—Center 1907, Michigan. The Wolverines of another day drank his fame in many a flowing stein. The Flying Dutchman made it a rule to get more tackles than any two men in his backfield.

BENNY FRIEDMAN (Right)—Quarterback 1926, Michigan. The greatest football brain that ever called signals. Master of strategy, forward-pass wizard, Friedman also ranks with the top-flight of ball-carriers and safety men.



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THE PIVOT

by BILL

Most treatises upon "How to Play Centre" usually start with the sentence "The Centre's first job is to snap the ball"

—but



BILL CUNNINGHAM OF DARTMOUTH
An All-American centre of 1920.

A SQUARE-JAWED Southern quarterback by the name of Bob McMillin sat in the press-box of the famous Harvard Stadium back in 1921, with his chin cupped in his ham-like hands, gazing intently down upon the field of play while Harvard chewed up some minor early season eleven. His team, Centre College, later to become nationally famous through a victory over the same Harvard team—a victory made possible by a spectacular run of his—was coming up to fight the Crimson in a couple of weeks, and he'd been sent on ahead to size the enemy up.

The great crowd, the blaring of bands, the regiment of reporters and the whick-whick-whack of the telegraph instruments, all set in a scene of blue-and-golden autumnal glory wherein architecture and ivy and wealth and tradition combined to form a panorama unlike anything he'd ever seen in his life, failed to feaze the cool young Colonel who was later to see himself crowned king of all that season's quarterbacks.

He concentrated solely upon the eleven Harvard warriors who were bulging and bending the thin line before them—the rhythm of their signals, the points of their attack, their smoothness or raggedness, their starting and stopping, their charge, their interference, their tackling.

"Well, Bo," a reporter asked him between halves, and there was something patronizing about the way he asked it, "what do you think of 'em?"

"They got a right smart ball club," drawled the boy from the blue grass, "they look pretty tough in their big red sweaters. They got a nice crowd and their band's mighty big, but down in our country they've got a way of saying that you can't never tell how far a frog's going to jump by just looking at the length of his legs."

I've thought of that comment many's the time. I thought of it when the little Kentucky team came on and piled into the big Harvard eleven on its home field to fight it man-fashion to a virtual standstill. I thought of it when McMillin broke loose with one of the wildest and most sensational victory runs ever unreeled on that field where such immortals as Coy and Thorpe and Mahan and the others had contributed their brilliant chapters to the history of the game, and I'm thinking of it now as I undertake to write a piece about centres.

You can't tell how far a frog can jump by a look at his legs, neither can you tell how well or vice versa a man can acquit himself in the exacting and versatile assignment of centre by merely looking at his conformation. There's no rule of thumb nor line of precedent, and when you come to think it over that's rather remarkable.

The lines are pretty sharply drawn in most sports. A boxer, for instance, is usually no good unless he has nimble legs, long arms—the longer the better—a rounded chin that he can tuck in against his brisket and other assets of a distinct and unusual sort. A wrestler needs a bull-neck and a powerful torso, an oarsman, legs like steel-hawsers and walking beam shoulders and so on it goes right down through the list, even to some of the positions on a football team.

But to say, "A center-rush should be built thus and so" would be a ridiculous statement. They come in all sorts of shapes and sizes and some of the funniest looking are some of the best.

Just for instance, the best centre in the country last year, was the giant Ticknor of Harvard. He's the fighting Harvard captain of the current campaign—a shaggy behemoth standing a couple of inches better than six feet and weighing considerably over 200 pounds with his war regalia on. It's hard to see how any rival could match this brilliant battle horse, and yet I once saw a centre who weighed but 165 pounds who I believe would whip Ticknor

MAN CUNNINGHAM

here is a centre of parts who says
"The centre's first job is to know
when NOT to snap the ball!"

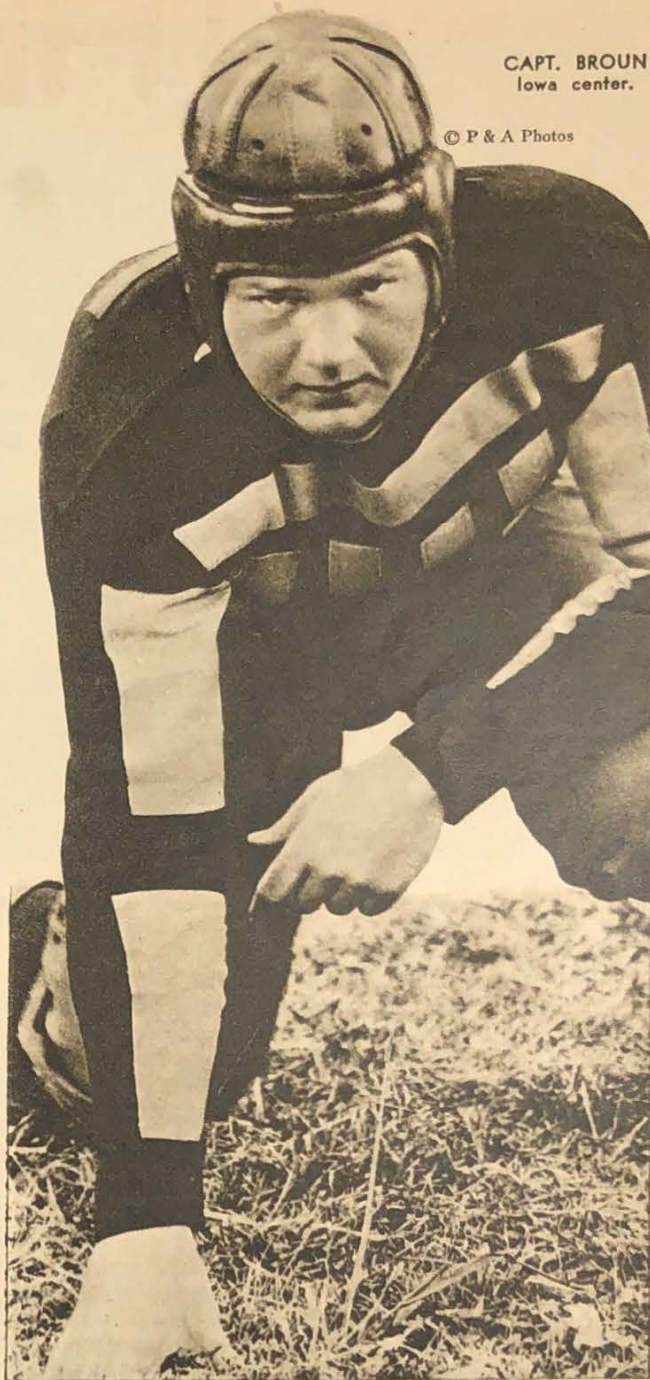
to a whisper. His name was Slats Baxter and he once played for Dartmouth. He was as tall as Ticknor and as thin as a wire, but he was the fastest, fightingest, smartest and most fearless pivot of his generation, never hurt, ranging the field from sideline to sideline, blocking punts, smearing plays, breaking interference, leading his men—at once their inspiration and the crowd's sustained thrill.

How he did it, I don't know. Nobody knew. Not even he knew, but he had that unfathomable knack of being in the right spot at the right time, with brains enough to know what to do and skill enough to do it. He played in a day when the players were heavier and although he took part in many a crashing collision and often came out of a game marked from his eyes to his ankles, he seemed to operate under the aegis of some never-failing charm, for to my knowledge he never had time called at any stage of a bristling career that included grim struggles with such major opponents as Princeton, Pennsylvania, Syracuse and their like, which have never been regarded as soft football fare.

And the centre who gave me the worst afternoon I ever spent on a field was the physical antithesis of Baxter and Ticknor—a blocky little Irishman named Dinny Gildea. Dinny is now the brilliant and successful coach of a famous Massachusetts high school team, but in that bitter and belligerent era just after the war, he was wearing the gridiron regiments of Holy Cross College, and we were playing them at mid-season in what was supposed to be a soft game sandwiched in as a let-down between two much sterner contests.

It may have been a let-down for the rest of the brethren, and as I recall it we did triumph by a fairly comfortable margin, but in Gildea who was smaller and supposedly less experienced than I, I ran into plenty of grief. He was always tangled up in my arms and my legs. He charged low to the ground with the velocity of a 16-inch shell. I felt sorry for him when we first lined up. He looked so little and so nice, but I soon discovered that I had a chap on my hands too tough for cold cream to remove, and when I haul out my scrap-books in this later age to refresh my memory about the days when you and I were young Maggie, I always turn quickly past the account of the day when Mr. Gildea and I tried conclusions with each other across a scrimmage line, and I only mention this painful matter in this present connection in an effort to prove that size and shape have little to do with success in the centre-playing business.

Ticknor, Baxter and Gildea are about as physically different as men could be outside some museum. Ticknor is simply a big, well-built athlete, while Baxter, the bean-



CAPT. BROWN
Iowa center.

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pole and Gildea, the chopping-block, would look like Mutt and Jeff if lined up even now. And yet each was a fine type of centre, a football coach's answer to prayer.

Centre play, like all football, has changed through the years. It might not be an exaggeration to say that of all the astounding changes in football play and football players, as the game has been quickened and brightened and made more open and more colorful, the changes in status and requirements of the three middle men in the line have been by far the most revolutionary.

In the old days, your centre and guards needed little but size, brute strength and no imagination. The guards merely parked their bulk on either side of the centre and devoted their main attention to seeing that he wasn't pushed over. The very name "guard" is a relic of those times and there's also a relic of those days in the rules wherein the guard is still permitted to lock legs with the centre in order to hold him erect against a charge.

Neither of these three gentlemen did very much, es-



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Get 'im through! The ball-carrier wants a hole! He gets it—and there's Schwartz, of Notre Dame, emerging after the plunge. You can't spot the buried centre—but he delivered the hole. Northwestern's big line buckled under the Irish pivot man's thrust.

pecially when their side had the ball, but make sure that it was snapped successfully to the quarterback. The centre did the snapping and the guards stood guard until he did it. On defense, they played a part almost equally inconspicuous, merely squatting in their places in the middle of the line and piling up anything that ran over them.

But then came the change. The forward pass was introduced calling for extra hands in the defense. The "quarterback under centre" passed largely out of style, making way for the direct pass to the backfield. The end sweep and off-tackle play came on with a bang and the more interference the better, and without pausing to trace these changes out in detail, it suffices to say that guards and centres now are really extra backfield men. The guards must run interference and protect on forward passes, wheeling back out of the line to do either, while the centre of today is a high-class specialist, master of a half-dozen intricate passes and, on the defensive, an assistant full-back roaming the short field like a raging lion driving under plunges and runs no matter where they're headed and snaring forward passes no matter where they're flung.

This calls for certain very definite virtues, wherein speed has a wide edge over strength and intuition a bulge over either.

It's hard to try to tell a fellow how to play centre. It's like trying to tell him how to play the violin. The whole success of an attack depends solely upon him. He needs to have a certain subconscious sense of rhythm. If he delays the snap of that ball for even the fraction of a second, the pace of the entire play is staggered, and once that happens an attack goes to pieces.

He must be deadly accurate with his direct passes and each one calls for a separate sort of artistry. If he is exceptionally lucky, he may find himself doing business with a backfield all members of which like the same type of pass, but it usually works out that no two backs like the same sort of feeding. One will want the ball driven

at him with velocity enough to make it stick in his hands; another will invariably fumble that type of pass, and must be fed a slower, softer lob. A centre not only must practice with each man until he gets the matter straight, but he must also be able to remember these idiosyncrasies in the red-hot heat of the conflict.

A centre, however, must be everlastingly alert before he ever passes the ball. Most treatises upon "How To Play Centre" usually start with the sentence, "The centre's first job is to snap the ball." That's not true. The centre's first job is to know when *not* to snap the ball. Many and many a valuable yard has been saved—sometimes the ball game has even been saved—by some heady centre who held the ball firmly on the ground despite the fact that the signal had been given and his team had moved off its mark.

If an over-nerved team-mate has charged off-side, the backfield has started before the ball, one of the backs has missed the signal or things have become twisted somehow, by holding the ball, a smart centre will save his team a penalty or a fumble or a wasted effort any of which might prove extremely disastrous.

And in like fashion, a really smart centre can sometimes capitalize an opposing team's nervousness by snapping the ball ahead of the signal to take advantage of an opponent's off-side. This is dangerous business on direct passing, but if his quarterback is under him with hands all in place, a keen centre will slam the ball into them when an opponent charges too soon regardless of where the signal is or what it's leading to. If he does this, however, he must take especial pains to keep his own hands on the ball until the perhaps astonished quarterback can get control of it. Otherwise, in what amounts to solo gambling for a five-yard penalty, the centre might lose the ball for his team altogether through the agency of a fumble.

Taking liberties with the signals isn't to be recommended as a general thing, but the centre should at least be pre-

Shock troops on the scrimmage line, and the opposing centers at the bottom of the pile. There was no broad gap at the pivot position in this play in Pasadena's famous Rose Bowl, though the battling Trojans of the University of Southern California smothered the Pittsburgh Panthers, 47-14.



© International

pared to take liberties with them intelligently and instantaneously. He should watch that scrimmage line out of the tail of either eye and be ready to protect an over-eager mate by holding the ball or catch an over-eager opponent by letting it go. Only your *good* centres can do this thing deftly, but you might as well be good, if you're to be a centre at all.

Adam Walsh, the former Notre Dame captain and centre, now coaching the linemen at Yale, was an artist at catching an opposing lineman off-side. The Notre Dame offense calls for direct passing, but one of the backs was detailed to watch Walsh's hands on each play and to be prepared at any time to take a quick pass from this wonderful pivot. Walsh was quick as a flash with that catching shot. An opponent had merely to bulge ahead of his mates and back came the ball in the wink of any eye. Many and many a gift yard was added to the Notre Dame total during the years when Walsh was custodian of the melon.

A good centre will never tip the type of play with his hands. This is a common fault on even the best and biggest teams. In modern play, as I said awhile back, every centre has a number of different types of passes to make. There's the long, hard spin back to kicker, for one. That requires a certain amount of physical power and a good firm grip on the ball. Then there are the shorter flips to backfield players standing closer. They are more of a lob than a slam.

An inexperienced centre will invariably give the type of play away by holding his hands differently on such passes as these, and often the balance between victory and defeat rests in this particular tip-off. A major portion of any team's attack in these days is deception and if the deception doesn't deceive, the whole point of the play is lost. If the team with the ball is spread out in kicking formation, but the centre, who uses a spiral pass with his right hand over the nose of the ball when he passes for kicks, has his hands exactly around the belly of the ball with his thumbs paralld atop the laces, any dumb-bell ought to be able to

see that he's merely going to lob it back to a close man who'll probably ram the line, and a smart defensive lineman will spot it in a minute and signal the same to his mates.

A smart centre will work with his hands until he holds them identically no matter what the type nor the length of the pass. A bright defensive player—and this includes primarily, centre—will always watch two things about the team with the ball. One of these is the eyes and feet of the enemy backs as their signals are called. Many players have a way of unconsciously looking, leaning, or pointing the feet toward the path the signal is ordering them to travel. The other is the centre's hands—if he changes them, or how he does.

A defensive centre, standing erect two or three yards behind his line and with *carte blanche* to roam where he will is in the best position of anyone to see these things and to read what they say, and they say an ample amount to a bright pair of eyes.

But by the same sign, the offensive centre—which means the one with the ball—can do a tremendous lot toward keeping his quarterback's plans a dark secret by holding his hands and his body in position unchanged no matter what the chant of the quarterback is, nor how many times it may be changed.

Nor should the centre ever allow *anything* to take his mind off the passing of that ball. His physical position is pretty defenseless and a lot of things, some of them not very pretty, are likely to happen to him as he squats there like a frog with his head between his arms gazing between his legs toward the rear. But he's got to be prepared to take whatever may come until that ball is safely on its way back, and in some other control than his own.

A lot of important battles have been lost by some inexperienced pivot who took more interest in what was happening to him than in what was happening to the ball. I had a hand in such an affair, one Saturday back in my own college days. We were playing Pennsylvania down on

Penn's own magnificent Franklin Field. The year before we had played Penn one of the bloodiest and hardest fought contests in the history of the modern game before a capacity throng in the Polo Grounds, and had been lucky to win by the narrow margin of one point—20 to 19.

Penn had graduated most of her stars the next June, however, including her splendid centre and present head coach J. R. Ludlow Wray, and up to the time we faced off on Franklin Field the next October, she had been unable to find a capable successor to Wray from among her sophomores and substitutes.

Our battle that day wasn't five minutes old before it was plainly evident that the young Red and Blue centre was extremely nervous and none too sure of his passing even when left alone. Moving upon the theory that the quickest way to demoralize his team would be to demoralize him, I moved up from the secondary defense into the line and began to charge him hard on every play.

And since it's the worry of what *may* happen, or in other words, the unexpected, that always brings the nervous shakes on quicker whether in football or in life, I varied the charges in all possible ways. First on the left arm, then on the right, then straight ahead, and every so often, I'd endeavor to pull him forward by the arms instead of charging him at all.

But whatever the charge, or however made, I always prefaced it with a hard slam upon the forehead from the heel of the hand. I have never been sure in later years that the accepted "use of hands" by a lineman is really clean sportsmanship, but such thoughts never bother us in our swash-buckling days, and they didn't worry me then. And they don't seem to worry the boys any yet, for each season sees open-handed blows hard enough to fell an ox rained

upon the heads and faces of offensive linemen by the gentlemen on the defense.

And so gaily I slammed this gentleman upon the visor of his head-guard with enough force to jar out his brains. The first four or five times, nothing much seemed to happen, and then I saw his eyes ranging upward uneasily as he crouched over the ball and I knew he was looking to see where that hand was.

And the moment he did this, I knew the ball game was ours, because his mind was no longer exclusively upon the ball and his backfield, but upon his personal woes and possible dangers. It was shortly thereafter that he started throwing the ball completely away, and the two substitutes who succeeded him failed to do any better.

We won by some such lop-sided score as 47 to 7, and that game has always remained in my memory as the most conspicuous example of how utterly helpless a team can become when its centre play goes completely to smash.

And if the recitation of these now aging anecdotes in which the writer chanced to play an incidental part doesn't sound too unforgivably conceited, I have another memory of those misty days which seems to prove another point about centres, and that point is that centre-playing, whatever it may look like from the stands, is really a specialized art that can't be picked up in a month, no matter how brilliant nor accomplished in some other position the gentleman attempting it may be.

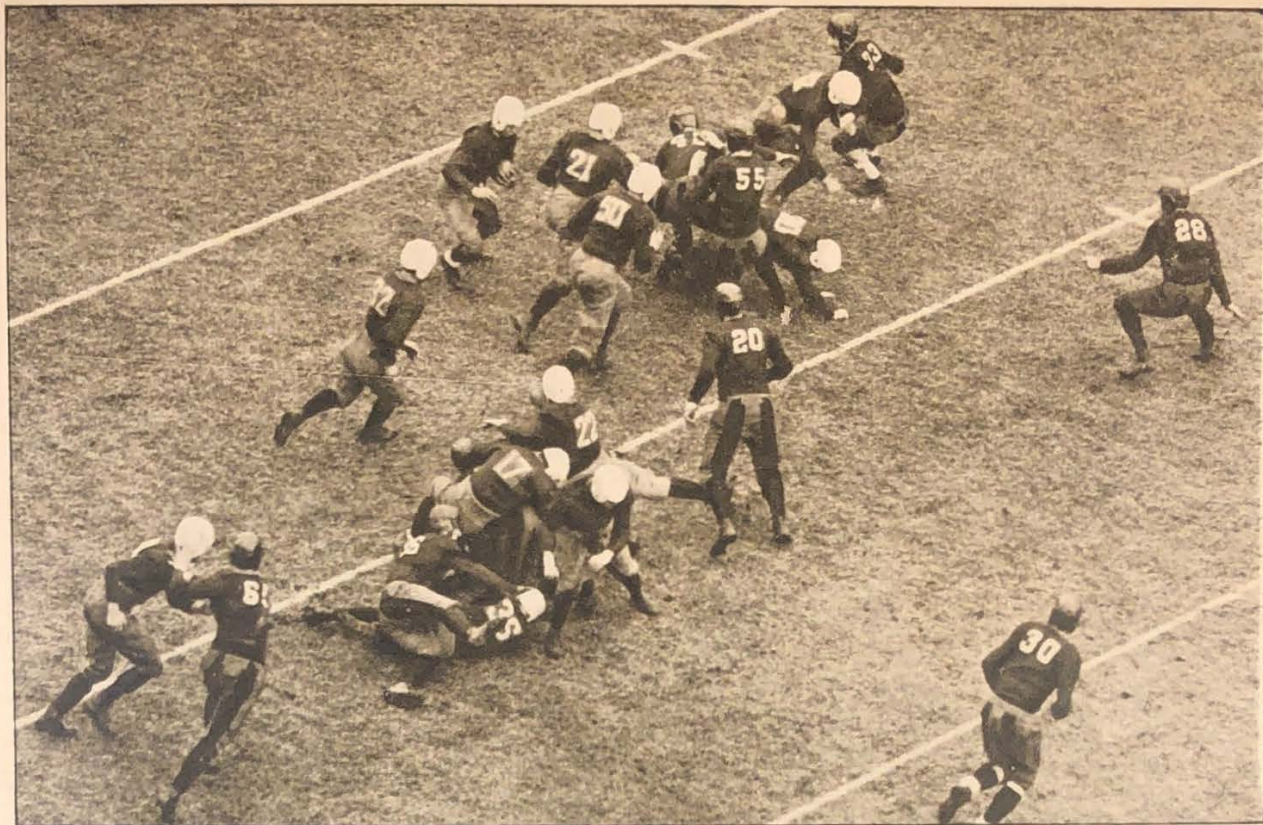
In 1919, perhaps the greatest guard in the nation was the mighty Alexander of Syracuse. He was unanimous choice for All-American honors, and the late Walter Camp pointed him out as the season's most brilliant example of what a great lineman should be. Alexander unquestionably rated every word that was said of him. He was a magnificent

MOYNAHAN OF NOTRE DAME



Here's a whole course on "How to Play Centre," by courtesy of Tim Moynahan. Note the emplaced feet that defy a head-on or side push, and the eyes watching the opposing linemen. And can you tell by the grip on the ball whether it's going to be a short flip to a nearby back or a long spin to the punter? That's center play!

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Three bodyguards! That white-helmeted Eli interference looks good—but Harvard's centre downed McLennan, Yale's quarterback, before he got started. Ticknor, the Crimson's All-American pivot man, was the main reason for his team's 10-6 victory.

figure, well over six feet in height, superbly built, fast as a lightweight, tremendously strong and endowed with a fine football mind. He ranged the field like an end, ripped opposing lines to ribbons and smeared the strongest attack thinly all over the turf.

The season of 1920 found the Syracuse coaches with a weakness at end and strong substitute guards, so they sought to solve their difficulties by moving their captain and centre, Harry Robertson, now head coach at Oglethorpe, out to right end, and have the great Alexander take his place in the centre of the line. It was felt that although Alexander had never played centre, his great natural ability would enable him to pick the knack up in no time, that a strong substitute could be moved into his place and that he could really play both positions on defense.

And on defense, he could and did.

Syracuse, with big Alex tearing things up like a harrow, literally murdered Hobart, Vermont and Johns Hopkins, their early season fare, then played a terrific 7-7 tie with Pittsburgh, which brought Alexander face to face with Herb Stein, Pitt's All-American centre, without the slightest loss of prestige to the big Syracusan.

We met this burly New York State Juggernaut the following Saturday while in grievous physical condition. Our captain and star back was out with a broken shoulder. Our fullback was lame with water on the knee and we were suffering from various and sundry other afflictions that left us barely able to field a representative eleven.

I had worried considerably about this particular contest. It began to look as though I might have at least a claim toward All-American honors, if given any sort of break through the rest of the season. I knew the metropolitan sports writers would be present in droves and a lot would depend upon whether or not I survived the clash with the great and nationally famous Alexander. He was at least 40 pounds heavier, was taller and bigger, was faster perhaps, and stronger most surely. I had centre-playing experience all over him to be sure, but not general football experience

perhaps, and I had no real idea as we lined up for the kickoff as to whether I'd survive the first period.

I watched him like a hawk when Syracuse first took the ball and he first bent over it to snap it, and in three plays I saw that, while on defense he was still All-American in every sense of the word and would be strong as three men when we had the ball, on offense, bent over with his head between his legs, he was largely at a loss as to how to handle himself and considerably unsure with the ball. In other words, he wasn't a natural centre and in those three plays he revealed at least two yawning weaknesses I felt could be cashed in to our team's advantage.

The first of these was that he placed his feet too nearly in a straight line—a line parallel to the scrimmage line—and therefore could, for all his weight and strength have very little resistance against a hard straight charge. A real centre keeps his feet one back of the other in much the same fashion as a tackle or an end. A man with his feet on the same line is top-heavy, and the slightest push will topple him over.

The second weakness was that fault, common to green centres, of hanging in place for a second after the pass back to a kicker is made, in order to see if the pass has been accurate. A veteran centre will know just from the way the ball leaves his hands whether or not the pass is good and will be off down the field with the rest of his line, or even ahead of it, if he's good.

The coach had told me not to try physical conclusions with this giant, in the belief that I'd quite probably be killed, and although my personal loss wouldn't have grieved him to any extent, it chanced that he didn't have any substitutes to spare and it takes eleven men to make a team. But I decided to gamble with the coach's ire and move up into the line when I saw how the rival centre was playing.

And the first play thereafter was a Syracuse punt.

Unlike the Pennsylvania centre, Alex didn't take his eye off the ball. In fact that was all he kept his eye upon. I dug my cleats into the turf to get the best purchase pos-



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Defending the pass! This Davis-Elkins centre was on the job. A quick snap of the pigskin to the kicker and a lightning dive at a Fordham tackle's belt buckle—and Coraine is in the clear for a punt from his twenty-yard line.

sible and charged into him with every ounce of my strength. There was a crash, a crack and a sudden low moan, a wild cry of "Fumble" in the backfield and then the thump of falling bodies. And when we all untangled, there lay the mighty Alexander as cold as a corpse.

He had hung there limply for a second after the pass had left his hands to see whether or not it was good, and my charge had caught him full force at the base of the brain and had dropped him like a pole-axed beef. After a while, he got back on his feet, gallantly refusing to leave the field, but for the rest of the game he was groggy and sick and so far as that particular contest went, was just another football player.

And I bring this up, not in any effort to sing my own praise nor to try to impress anybody with an idea that I was something unusual, but merely to show that centre-playing has its several tricks and angles that require something more than general football knowledge.

Trying to summarize a centre's duties is like trying to summarize the duties of a life-guard or a traffic policeman. He should be the captain and the leader of his line. To start with the offense, he should first of all practice the spiral pass, which is the accepted form of feeding the ball to a kicker, until he can hit a man's hat with it at shoulder height three or four times out of five at twelve or so yards.

There were, and are, greater centres than I was, in all sorts and manners of ways. I had my good days and bad, missed tackles that meant touchdowns and let forwards

whizz through my hands, but it is my particular boast and pride that I never made a bad pass on any man's football field at any time nor in any sort of contest, and even today, I can whip that ball in a pair of outstretched hands at the regulation kicking distance with more speed and accuracy than most college centres. And one reason for this, and you aspiring centres can have this secret for what it is worth, is that every night of my life the year round, I used to take a football and pass it at a pillow tacked upon the door at the height of a man's shoulder until I had smacked it squarely in the centre for at least twenty times.

I did this all through my prep school and college days until I could tell by the very feel of the ball just where and how hard it was going.

The spiral pass is easy to master. You spin it with the right hand gripped well up on its nose and guide it with the left held further back along its middle.

After you master it, learn to make your every pass with your hands held the same way, so as not to tip-off a shorter play to a keen-eyed opponent. Learn to come off your mark the minute you pass. Let the feel of the ball tell you whether it's good and then get across that scrimmage line, to block a hole where your guard has pulled out, to take your centre out of the play, to get into the interference ahead of a wide end sweep, or to cut down some member of the secondary defense who may have a chance at the play.

On defense, you have a glowing and glittering opportu-

nity to distinguish yourself. Playing "loose," which means out of the line, unless they're down close to your goal posts, you have a better chance than anybody to make a quick stab at the play, to spoil short forward passes or knock an interference to flinders.

Make a quick diagnostician of yourself if you can. Watch the hands of the other centre, and the tell-tale eyes and feet of their half-backs. Learn to drive head-on under a line play. Meet it squarely on the line and bend it backward when you hit it. Be on the alert for delayed bucks and reverse plays. Don't be afraid to leave your feet at a closely knit interference.

Remember the down and the distance. Figure all possibilities, always being sure to give the enemy credit for being at least as smart as you. It's a mistake ever to underrate the opposition. Move always upon the theory that he's brainy and capable, and if he proves that he isn't you're all the better off.

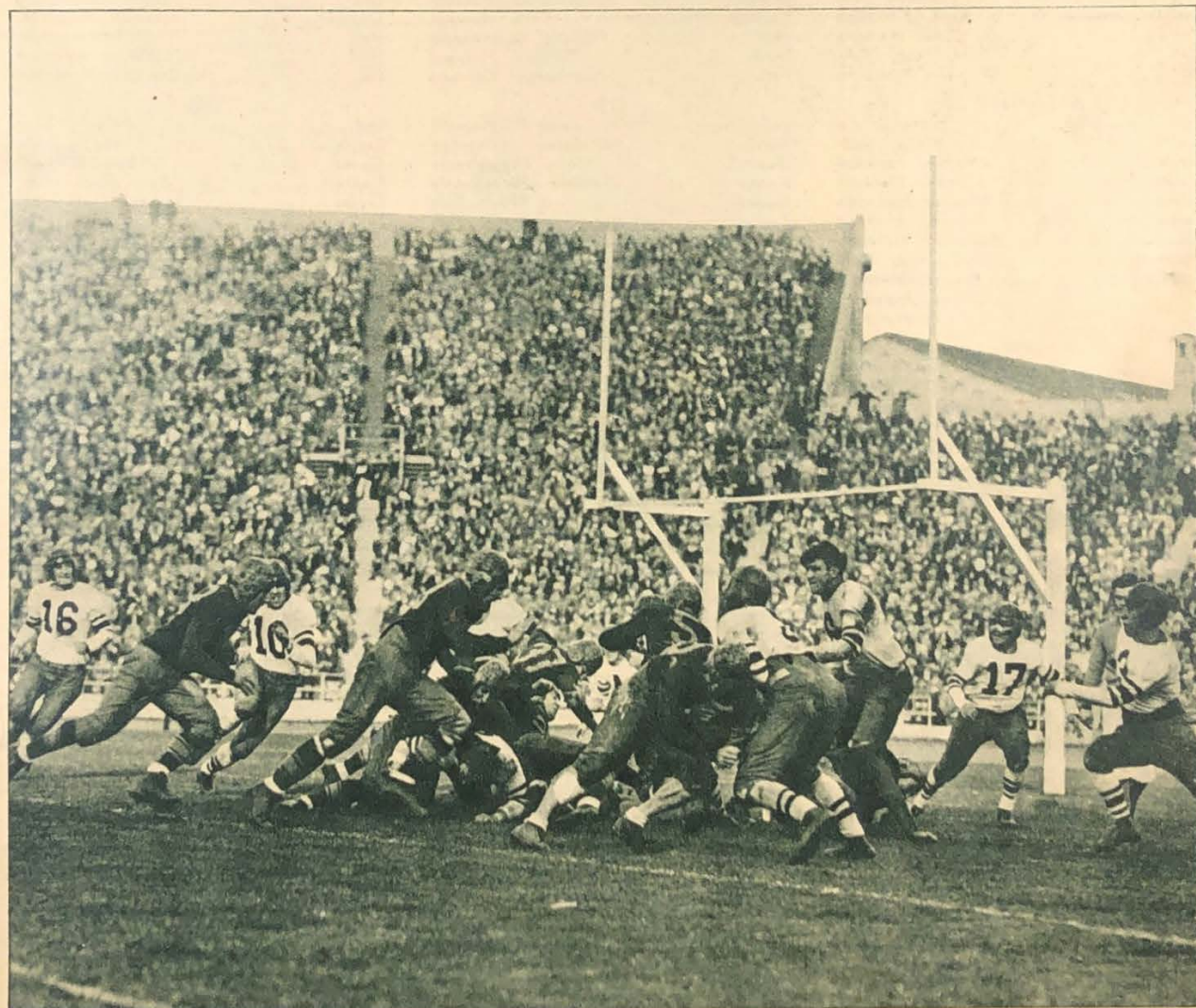
Learn to "talk it up." Encourage your mates. Hand them a word of praise after a nice play and of sympathy after a poor one. Always help your backs to their feet at the end of a play. Linemen can help a lot that way, and few of them do. Learn to get down the field with your ends on kicks. There's usually plenty of protection for the kicker down the middle alley. Learn to delay your man a second and then knife through and sail.

There's nothing prettier than a center down the field with his ends and nothing more trying for the punt snatcher

down there. Maybe you can grab yourself a fumble.

Men who've done most of these things will rest remembered and honored in the All-American lists. Their names are too numerous to catalogue here. They have been of all sizes, descriptions, races and colors. They have varied from the towering Des Jardiens of Chicago and the burly Ketcham of Yale to the dumpy Hooper of Dartmouth and the skinny Wittmer of Princeton. They have included every creed and kind from the Negro, Lewis, at Harvard, through the Portuguese, Bettincourt, at Saint Mary's; the Irishman, Callahan, at Yale; the German, Schultz of Michigan and so on and on through a multiplicity of bloods and breedings including the present Fifth Avenue registerite who leads the Harvard team, Ben Ticknor, who wears a tuxedo with infinite grace and plays his position with all the gentleness of a steam shovel.

There's no set rule for selecting a centre. The centre really selects himself. It's a good tough job, but that's where the fun is. Learn that trick about passing, how to back up a line, how to keep your head, how to get the jump and hold it, how to smell forward passes and get over where they are, and then step in there ready to take a rap or give one and they'll have a tough job keeping you off the team regardless of the fashion of your physical construction, provided always you're fast enough to keep up with the play and strong enough to keep from coming unbuttoned in a head-on collision. For you'll have plenty of the latter before you're through.



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There's grief for the centre in the shadow of the enemy goalposts, with a desperate defending line hungry for holes. This Western All-Stars' pivot man blocks a couple of linemen and Sloan goes over the Easterners' goal line.

FOOTBALL'S FAMOUS

1889	End Tackle Guard Center Guard Tackle End Quarter Half Half Full	Cumnock, Harvard Cowen, Princeton Cranston, Harvard George, Princeton Heffelfinger, Yale Gill, Yale Stagg, Yale Poe, Princeton Lee, Harvard Channing, Princeton Ames, Princeton	1896	End Tackle Guard Center Guard Tackle End Quarter Half Half Full	Cabot, Harvard Church, Princeton Wharton, Pennsylvania Gailey, Princeton Woodruff, Pennsylvania Murphy, Yale Gelbert, Pennsylvania Fincke, Yale Wrightington, Harvard Kelly, Princeton Baird, Princeton	1903	End Tackle Guard Center Guard Tackle End Quarter Half Half Full	Henry, Princeton Hogan, Yale DeWitt, Princeton Hooper, Dartmouth A. Marshall, Harvard Knowlton, Harvard Rafferty, Yale Johnson, Carlisle Heston, Michigan Keefe, Princeton Smith, Columbia
1890	End Tackle Guard Center Guard Tackle End Quarter Half Half Full	Hallowell, Harvard Newell, Harvard Riggs, Princeton Cranston, Harvard Heffelfinger, Yale Rhodes, Yale Warren, Princeton Dean, Harvard Carbett, Harvard McClung, Yale Homans, Princeton	1897	End Tackle Guard Center Guard Tackle End Quarter Half Half Full	Cochran, Princeton Chamberlain, Yale Hare, Pennsylvania Doucette, Harvard Brown, Yale Outland, Pennsylvania Hall, Yale DeSaullles, Yale Dibblee, Harvard Kelly, Princeton Minds, Pennsylvania	1904	End Tackle Guard Center Guard Tackle End Quarter Half Half Full	Shevlin, Yale Cooney, Princeton Piekarski, Pennsylvania Tipton, West Point Kinney, Yale Hogan, Yale Eckersall, Chicago Stevenson, Pennsylvania Hurley, Harvard Heston, Michigan Smith, Pennsylvania
1891	End Tackle Guard Center Guard Tackle End Quarter Half Half Full	Hinkey, Yale Winter, Yale Heffelfinger, Yale Adams, Pennsylvania Riggs, Princeton Newell, Harvard Hartwell, Yale King, Princeton Lake, Harvard McClung, Yale Homans, Princeton	1898	End Tackle Guard Center Guard Tackle End Quarter Half Half Full	Palmer, Princeton Hillerbrand, Princeton Hare, Pennsylvania Overfield, Pennsylvania Brown, Yale Chamberlain, Yale Hallowell, Harvard Daly, Harvard Outland, Pennsylvania Dibblee, Harvard Hirschberger, Chicago	1905	End Tackle Guard Center Guard Tackle End Quarter Half Half Full	Shevlin, Yale Lamson, Pennsylvania Tripp, Yale Torrey, Pennsylvania Burr, Harvard Squires, Harvard Glaze, Dartmouth Eckersall, Chicago Roome, Yale Hubbard, Amherst McCormick, Princeton
1892	End Tackle Guard Center Guard Tackle End Quarter Half Half Full	Hinkey, Yale Wallis, Yale Waters, Harvard Lewis, Harvard Wheeler, Princeton Newell, Harvard Hallowell, Harvard McCormick, Yale Brewer, Harvard King, Princeton Thayer, Pennsylvania	1899	End Tackle Guard Center Guard Tackle End Quarter Half Half Full	Campbell, Harvard Hillerbrand, Princeton Hare, Pennsylvania Overfield, Pennsylvania Brown, Yale Stillman, Yale Poe, Princeton Daly, Harvard Seneca, Indians McCracken, Pennsylvania McBride, Yale	1906	End Tackle Guard Center Guard Tackle End Quarter Half Half Full	Forbes, Yale Biglow, Yale Burr, Harvard Dunn, Penn State Thompson, Cornell Cooney, Princeton Wister, Princeton Eckersall, Chicago Mayhew, Brown Knox, Yale Veeder, Yale
1893	End Tackle Guard Center Guard Tackle End Quarter Half Half Full	Hinkey, Yale Lea, Princeton Wheeler, Princeton Lewis, Harvard Hickok, Yale Newell, Harvard Trenchard, Princeton King, Princeton Brewer, Harvard Morse, Princeton Butterworth, Yale	1900	End Tackle Guard Center Guard Tackle End Quarter Half Half Full	Campbell, Harvard Bloomer, Yale Brown, Yale Olcott, Yale Hare, Pennsylvania Stillman, Yale Hallowell, Harvard Fincke, Yale Chadwick, Yale Morley, Columbia Hale, Yale	1907	End Tackle Guard Center Guard Tackle End Quarter Half Half Full	Dague, Annapolis Draper, Pennsylvania Ziegler, Pennsylvania Schulz, Michigan Erwin, West Point Biglow, Yale Alcott, Yale Jones, Yale Wendell, Harvard Harlan, Princeton McCormick, Princeton
1894	End Tackle Guard Center Guard Tackle End Quarter Half Half Full	Hinkey, Yale Waters, Harvard Wheeler, Princeton Stillman, Yale Hickok, Yale Lea, Princeton Gelbert, Pennsylvania Adee, Yale Knipe, Pennsylvania Brooke, Pennsylvania Butterworth, Yale	1901	End Tackle Guard Center Guard Tackle End Quarter Half Half Full	Campbell, Harvard Cutts, Harvard Warner, Cornell Holt, Yale Lee, Harvard Bunker, West Point Davis, Princeton Daly, West Point Kernan, Harvard Weekes, Columbia Graydon, Harvard	1908	End Tackle Guard Center Guard Tackle End Quarter Half Half Full	Scarlett, Pennsylvania Fish, Harvard Goebel, Yale Nourse, Harvard Tobin, Dartmouth Horr, Syracuse Schildmiller, Dartmouth Steffen, Chicago Tibbott, Princeton Hollenbach, Pennsylvania Coy, Yale
1895	End Tackle Guard Center Guard Tackle End Quarter Half Half Full	Cabot, Harvard Lea, Princeton Wharton, Pennsylvania Bull, Pennsylvania Riggs, Princeton Murphy, Yale Gelbert, Pennsylvania Wyckoff, Cornell Thorne, Yale Brewer, Harvard Brooke, Pennsylvania	1902	End Tackle Guard Center Guard Tackle End Quarter Half Half Full	Shevlin, Yale Hogan, Yale DeWitt, Princeton Holt, Yale Glass, Yale Kinney, Yale Bowditch, Harvard Rockwell, Yale Chadwick, Yale Bunker, West Point Graydon, Harvard	1909	End Tackle Guard Center Guard Tackle End Quarter Half Half Full	Ragnier, Brown Fish, Harvard Benbrook, Michigan Cooney, Harvard Andrus, Yale Hobbs, Yale Kilpatrick, Yale McGovern, Minnesota Philbin, Yale Minot, Harvard Coy, Yale

"400"

Forty years' record of All-American football players



WALTER CAMP
Dean of American football

Underwood

1910

End..... Kilpatrick, Yale
Tackle..... Walker, Minnesota
Guard..... Benbrook, Michigan
Center..... Cozens, Pennsylvania
Guard..... Fisher, Harvard
Tackle..... McKay, Harvard
End..... Wells, Michigan
Quarter..... Sprackling, Brown
Half..... Wendell, Harvard
Half..... Pendleton, Princeton
Full..... Mercer, Pennsylvania

1911

End..... White, Princeton
Tackle..... Hart, Princeton
Guard..... Fisher, Harvard
Center..... Ketcham, Yale
Guard..... Duff, Princeton
Tackle..... Devore, West Point
End..... Bomeisler, Yale
Quarter..... Howe, Yale
Half..... Wendell, Harvard
Half..... Thorpe, Carlisle
Full..... Dalton, Annapolis

1912

End..... Felton, Harvard
Tackle..... Englehorn, Dartmouth
Guard..... Pennock, Harvard
Center..... Ketcham, Yale
Guard..... Logan, Princeton
Tackle..... Butler, Wisconsin
End..... Bomeisler, Yale
Quarter..... Crother, Brown
Half..... Brickley, Harvard
Half..... Thorpe, Carlisle
Full..... Mercer, Pennsylvania

1913

End..... Hogsett, Dartmouth
Tackle..... Ballin, Princeton
Guard..... Pennock, Harvard
Center..... Des Jardien, Chicago
Guard..... Brown, Navy
Tackle..... Talbot, Yale
End..... Merillat, Army
Quarter..... Huntington, Colgate
Half..... Craig, Michigan
Half..... Brickley, Harvard
Full..... Mahan, Harvard

1914

End..... Hardwick, Harvard
Tackle..... Ballin, Princeton
Guard..... Pennock, Harvard
Center..... McEwan, West Point
Guard..... Chapman, Illinois
Tackle..... Trumbull, Harvard
End..... O'Hearn, Cornell
Quarter..... Ghee, Dartmouth
Half..... Maulbetsch, Michigan
Half..... Bradlee, Harvard
Full..... Mahan, Harvard

1915

End..... Baston, Minnesota
Tackle..... Gilman, Harvard
Guard..... Spears, Dartmouth
Center..... Peck, Pittsburgh
Guard..... Schlachter, Syracuse
Tackle..... Abell, Chicago
End..... Shelton, Cornell
Quarter..... Barrett, Cornell
Half..... King, Harvard
Half..... Macomber, Illinois
Full..... Mahan, Harvard

1916

End..... Baston, Minnesota
Tackle..... West, Colgate
Guard..... Black, Yale
Center..... Peck, Pittsburgh
Guard..... Dadmun, Harvard
Tackle..... Horning, Colgate
End..... Moseley, Yale
Quarter..... Anderson, Colgate
Half..... Oliphant, West Point
Half..... Pollard, Brown
Full..... Harley, Ohio State

*1917

End..... Rasmussen, University of Nebraska
Tackle..... Beckett, University of Oregon
Guard..... Black, Yale
Center..... Callahan, Yale
Guard..... Allmendinger, Michigan
Tackle..... West, Colgate
End..... Gardiner, Carlisle
Quarter..... Watkins, Colgate
Half..... Casey, Harvard
Half..... Minot, Harvard
Full..... Smith, Michigan

1918

End..... Robeson, Rutgers
Tackle..... Hilty, Pittsburgh
Guard..... Alexander, Syracuse
Center..... Day, Georgia Tech
Guard..... Perry, Annapolis
Tackle..... Usher, Syracuse
End..... Hopper, Pennsylvania
Quarter..... Murray, Princeton
Half..... Davies, Pittsburgh
Half..... Roberts, Annapolis
Full..... Steketee, Michigan

1919

End..... Higgins, Penn State
Tackle..... West, Colgate
Guard..... Alexander, Syracuse
Center..... Weaver, Centre
Guard..... Youngstrom, Dartmouth
Tackle..... Henry, Wash. & Jeff.
End..... H. Miller, Pennsylvania
Quarter..... McMillin, Centre
Half..... Casey, Harvard
Half..... Harley, Ohio State
Full..... Rodgers, West Virginia

1920

End..... Carney, Illinois
Tackle..... Keck, Princeton
Guard..... Callahan, Yale
Center..... Stein, Pittsburgh
Guard..... Woods, Harvard
Tackle..... Scott, Wisconsin
End..... Fincher, Georgia Tech.
Quarter..... Lourie, Princeton
Half..... Stinchcomb, Ohio State
Half..... Way, Penn State
Full..... Gipp, Notre Dame

1921

End..... Muller, California
Tackle..... Stein, Wash. & Jeff.
Guard..... Schwab, Lafayette
Center..... Vick, Michigan
Guard..... Brown, Harvard
Tackle..... McGuire, Chicago
End..... Roberts, Centre
Quarter..... A. Devine, Iowa
Half..... Killinger, Penn State
Half..... Aldrich, Yale
Full..... Kaw, Cornell

1922

End..... Taylor, Annapolis
Tackle..... Treat, Princeton
Guard..... Schwab, Lafayette
Center..... Garbisch, West Point
Guard..... Hubbard, Harvard
Tackle..... Thurman, Pennsylvania
End..... Muller, California
Quarter..... Locke, Iowa
Half..... Kaw, Cornell
Half..... Kipke, Michigan
Full..... John Thomas, Chicago

1923

End..... Bomar, Vanderbilt
Tackle..... Milstead, Yale
Guard..... Hubbard, Harvard
Center..... Blott, Michigan
Guard..... Bedenk, Penn State
Tackle..... Sundstrom, Cornell
End..... Hazel, Rutgers
Quarter..... Pfann, Cornell
Half..... Grange, Illinois
Half..... Martineau, Minnesota
Full..... Mallory, Yale

1924

End..... Bjorkman, Dartmouth
Tackle..... McGinley, Pennsylvania
Guard..... Slaughter, Michigan
Center..... Garbisch, West Point
Guard..... Horrell, California
Tackle..... Weir, Nebraska
End..... Berry, Lafayette
Quarter..... Stuhldreher, Notre Dame
Half..... Grange, Illinois
Half..... Koppisch, Columbia
Full..... Hazel, Rutgers

1925

End..... Oosterbaan, Michigan
Tackle..... Chase, Pittsburgh
Guard..... Diehl, Dartmouth
Center..... McMillan, Princeton
Guard..... Hess, Ohio State
Tackle..... Weir, Nebraska
End..... Thayer, Tennessee
Quarter..... Grange, Illinois
Half..... Oberlander, Dartmouth
Half..... Wilson, Washington
Full..... Nevers, Stanford

1926

End..... Hanson, Syracuse
Tackle..... Wickhorst, Navy
Guard..... Connaughton, Georgetown
Center..... Boeringer, N. D.
Guard..... Shively, Illinois
Tackle..... Smith, Brown
End..... Oosterbaan, Michigan
Quarter..... Friedman, Michigan
Half..... Baker, Northwestern
Half..... Kaer, So. California
Full..... Joesting, Minnesota

1927

End..... Oosterbaan, Michigan
Tackle..... Raskowski, Ohio State
Guard..... Smith, Notre Dame
Center..... Charlesworth, Yale
Guard..... Crane, Illinois
Tackle..... Smith, Pennsylvania
End..... Nash, Georgia
Quarter..... Drury, U. S. C.
Half..... Cagle, Army
Half..... Welch, Pittsburgh
Full..... Joesting, Minnesota

1928

End..... Fesler, Ohio State
Tackle..... Getto, Pittsburgh
Guard..... Post, Stanford
Center..... Pund, Georgia Tech.
Guard..... Burke, Navy
Tackle..... Pommerening, Michigan
End..... Haycraft, Minnesota
Quarter..... Harpster, Car. Tech.
Half..... Cagle, Army
Half..... Scull, Pennsylvania
Full..... Strong, N. Y. U.

1929

End..... Donchess, Pittsburgh
Tackle..... Sleight, Purdue
Guard..... Montgomery, Pittsburgh
Center..... Ticknor, Harvard
Guard..... Cannon, Notre Dame
Tackle..... Nagurski, Minnesota
End..... Fesler, Ohio State
Quarter..... Carideo, Notre Dame
Half..... Glassgow, Iowa
Half..... Cagle, Army
Full..... Welch, Purdue

* All-America Service Eleven. No All-America Collegiate Eleven chosen.

WHEN THE

Once a man-mountain labeled, THEY SHALL NOT PASS, the guard is changing with a speeded up game. One who played guard under Spears of Dartmouth, McGugin of Vanderbilt and other masters of line play, tells you the new tricks of the trade at guard

GEORGE NILAN

GUARD! The name signifies defense: heavy, solid stone-wall resistance against the attackers. There's two of them on every line, crouching, waiting for the ump's whistle. And they are in there for a purpose. Watch them. Watch that line smash with the backfield driving head-on aiming to crack open eighteen inches of space for the ball carrier to dive through. Watch those guards. See the hurtling blue and red clad figures pile up, twenty of them. Then watch that pile as the players scramble to their feet. Who are the last to get their legs under them, to crawl out into the daylight and shake crash-fog out of their heads? The guards. They held that line, kept it intact.

Guards are the key-men of a football line. And without a line no school could put a winning team on the field. You may get a lot of thrills out of watching the end snare a pass, or a backfield man take a ball down through a broken field for a touchdown. You may see yourself grabbing the old pigskin out of the air on a sweet pass or taking it smacked against your midriff on a direct toss from the centre, but don't forget, rookie, that without that line, and your interference you wouldn't move a step. You take the ball and the guards take the punishment. I played guard myself once and I know.

Football of yesterday—yes, quite a bit behind yesterday now—demanded guards who packed plenty of brawn. In the days of the famous Princeton flying wedge you had to tip the beam at well over the two hundred mark to qualify for guard. The type of play required men who could constitute themselves part of a concrete wall. Today it is different. Down at Vanderbilt in Nashville, Tennessee, you can meet the coach who was the originator of guard play in particular and line play in general. His name is Dan McGugin; Uncle Dan to the boys, and he was the dean of Southern football before a lot of us were up and about.

Dan McGugin has developed more candidates for the mythical All-American and All-Southern teams in line play than any other coach in football. McGugin picks his men for the team, not from the position they played in prep, but from what he sees in them as he sizes them up. I was out for centre. Uncle Dan figured different. He put me in the gang he called "guard material." I knew right then that it was going to be guard or nothing. Action was what I wanted in football, and if you are looking for it, get in the line. Try guard.



GEORGE
NILAN
Vanderbilt,
1926

© Hoback

GUARDS CLASH!

The first thing you want to learn about guard play is whether you belong. Dan McGugin measures his material on ideal sizes. Guards should be close to five feet, ten inches and weigh in with a light heavyweight; meaning about one hundred seventy-five pounds. A boy this size is able to take care of himself to better advantage generally in several different positions than the taller or shorter fellow.

For instance: A boy of these measurements can play as close to the ground as the little fellow and a lot closer than the taller one. Then, when the play calls for an open type of offense or defense developed in the present day game this boy stands right up with the average player and can see what is going on around him.

The little fellow, in order to make this position, has to be beefy. He is therefore slower and cannot get away as quickly in guard interference for the backs. The taller fellow is handicapped by his size because the shorter men can get under him in charging.

The main job of the guard, on offense, is to open up a hole for the backs to get the ball through. Then, besides, he has to block the secondary defense when the play is on the opposite side of the line. That is why you'll always find good guards on the ground when the play is over. Excellent guards are always sprawled out on an opponent. In other words the really big-time guard never fails to put

his man out of the play every time. The upshot of this means that in order to become a real guard a fellow must learn the art of blocking as well as tackling.

One of the best guards that I ever saw in football was "Bull" Brown, who played for Vanderbilt not so long ago. He was handicapped by broken collar bones and had to have his arms clamped to his sides with a special harness of wide leather straps in order to play. This would be enough to keep the ordinary college student on the sidelines or in the cheering section. But Bull was a past master in the art of blocking. More than once I've seen him block out as many as two and three men from in front of the ball carrier. He blocked when he tackled. He blocked in the close line plays.

Once, when Vanderbilt was to play the University of Tennessee late in the season of 1928, the Tennessee boys were betting two to one that Brown wouldn't last the game against their star guard Batchelor. In the beginning of the game we noticed that Batchelor had his hands and wrists taped very tightly. The whistle blew and with the first scrimmage you could see that the big Tennessee guard was putting those taped hands to work very effectively on the head and neck of the Bull. Looked as though a lot of two-to-one bets were going to be cashed.

Well, the first occasion that time was called Brown came on the run to the sidelines calling for all the tape we had.



Flat on the ground—in the dirt—that's where you find the guards. Chuck Smalling, of Stanford, smashes guard from Formation B. And Oregon State goes six points deeper in the red.

© Wide World

Back he went into that game with hands and wrists taped to resemble bludgeons. And from that point on the game settled down to an endurance contest between Brown and Batchelor. These two linemen were the center of interest. It was great to watch the mechanics the pair of them used in their play against each other. There was no dirty or underhanded work in evidence. It was plain skill and brawn. Then, late in the last quarter, we saw Batchelor weakening. Finally, the last we saw of this great guard, he was down on all fours, retching. He had to be carried from the field and he had been played right off his feet, exhausted. Brown played the entire game, but he spent the week-end in bed recuperating.

Among a good many guards that I've played against and seen in action from the side, there were also some that were anything but old Dan McGugin's ideal in type. There was a fellow in military school with me in Georgia. An undersized kid. When I was there we considered him too small to spend any football time on. And this lad later developed into an All-Southern guard playing with Georgia Tech. His name was Wally Drennon. And he lisped.

I saw his name in the lineup when we were scheduled to play Tech and it looked to me like a soft spot with him as my opponent. What a surprise I got. I still remember the game well. Just how this little fellow managed to develop into the most outstanding guard in the South for that season I was never able to fathom. But he was. Why, in the first play of the afternoon, Wally handed me a smack in the middle that told me I was facing dynamite. He took

a lot of pleasure in letting me know, too, that he resented my former attitude toward him. What a fighting guard he turned out to be. Eventually, however, I remembered that he lisped and I ragged him about it as we lined up, time after time, until he was clean up in the air. It's an old baseball trick adopted for football. Get your opponent's mind off his job.

Drennon was an artist in the line when it came to using his knees. Standing in a slightly crouched position with his knees flexed for action as the ball was snapped, he would take the shock of my charge on one knee, then knock me back with the other. Like a "one-two" punch in the ring. There's only one way to offset this. A player must make his charge so low as to get under the knee. And then you take the crack from that knee on the top of your head or your shoulder. Something like bumping an express train.

A lot of fans and a good many player-prospects think that all the linemen have to do is make the initial charge, open up the hole and then sit down and let the backfield do the rest. All wrong. The real lineman is the "cool-headed" boy who can look at the opposing line, watch it make its charge, keep his eyes open and at the right moment, spoil a perfectly good play. He uses his hands, knees and shoulders to keep himself from being brushed away. He can knife his way through a three-man interference merely by keeping his feet well on the ground, hands out and eyes open. Only one man can hit you at a time, if you're on your job. In order to avoid being hit



The guards held 'em this time. Fordham's plunging fullback found the West Virginia line a stone wall on his guard buck. He switched outside but Beall, Mountaineer end, brought him down.



© P & A Photos

This may look like Jack Dempsey in moleskins, but it isn't. E. J. Burke is the name, captain and guard of Navy. Copy the set of his feet and his body angle to get a thunderbolt charge.

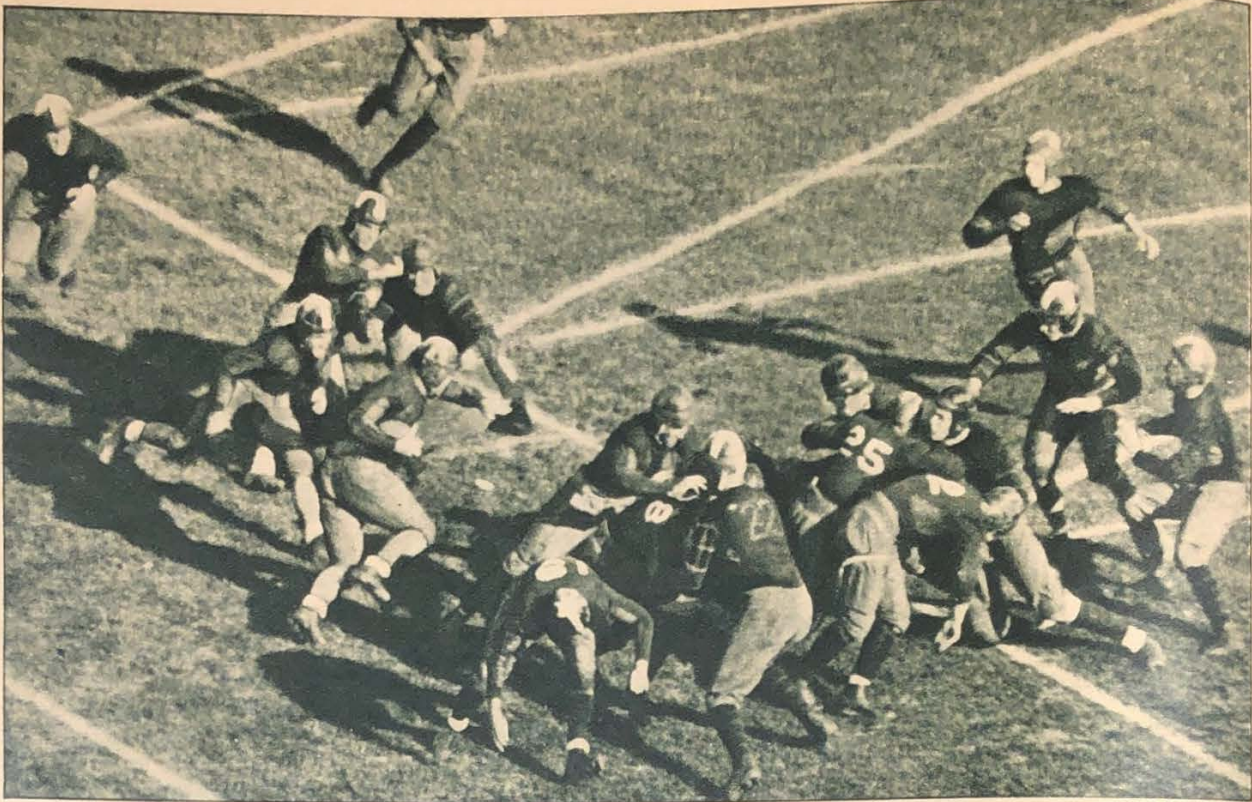
and put out of the play you use the man who is rushing you as a guard. As he leaves his feet to cut you down use your hands and arms to keep his body from making contact with you. Then guide him in his flight against one or more of his team-mates.

A real master of this technique was little Charlie Weible, the diminutive Notre Dame guard. I've seen Weible against the famous old "jump-shift" used by Georgia Tech before the rules committee outlawed it. This play sent two guards, two tackles and an end into motion when the ball was snapped. Two defensive guards had to break that up. The old defense against this type of play was for one guard to throw his body in under the four or five charging linesmen and spill the play right there. The other guard goes over the top to make the tackle. The fellow who went under that charge in those days had to have plenty of grit. There were eight or ten knees waiting for him in there to give him everything they had behind them. I faced this myself and know what kind of a beating you take. But Weible and his mate took this charge standing. They never left their feet and I never saw the Tech line put them on the ground. Weible made tackle after tackle right in the middle of the shift. The secret of his success was the use of his hands, combined with a fast, shifty pair of feet.

Some time later, Weible came to Vanderbilt as an assistant line coach. We had a big fellow there at the time who had had charge of the line coaching. The two differed on how line play should be executed, and as a result the two systems were matched. It was a great sight to watch the

little one hundred sixty pound man spot the two-hundred pounder all over the field.

When the football game is over you can put it down that the guards have done a day's work. Primarily guards have one place on the field: the middle of the line. Their job means clearing the way for the backs to dive through to touchdowns and glory. A guard has his own opponent to look after, but he must also stand ready to strengthen the centre against the man who will try to slap him down and spoil his pass. If the play is coming over the right guard that man must charge-block the man before him to the extreme right of the line. To do this he must interpose his body in a charge that will push his man back and block him from interfering with the play. To get the right results the guard must charge low and contact must be made on the opponent's right hip. Getting the contact just right means that you charge with your eyes open. The fellow who charges with his eyes shut makes an easy victim for a smart player to guide right into the line of play. The boy who learns to keep his eyes open is the fellow who makes the varsity with the least trouble. With your eyes open you stand the least chance of getting hurt. You can see what is coming and are able to avoid danger. And there is danger in line play, the most of it being due to players getting out of position, out of their area. But the fellow who charges straight at his opponent and never backs out of the line for anything rarely, if ever, gets really hurt. He is the one who deals out the damage. Guards, in fact all linesmen, have to keep their bodies straight toward the opponent. Your greatest strength is there. It's the man on an



© P & A Photos

Line play rules the roost when Brown taunts the Princeton Tiger. The Brown tackle sweeps the guard inside and Captain Edwards gallops across the chalk line of destiny.

angle who is hit hardest by a fast charging line. Then bones may crack.

A good guard soon learns to diagnose opponents' plays. My advice is to keep your diagnosis in your own area. You are responsible for certain duties in your portion of the field. Do your own job and do it as well as you can. Keep your eyes on your opponent. There are eleven of you on the team and each man has his own individual opponent to face. The guard who lets himself be drawn out of line by a fake pass play or a fake end run often climbs up when it is all over to learn that the ball carrier gained twenty yards or more through his own position. Keep in your area and stick to your own job.

Some coaches pull their guards out of line to run interference for the backs. In order to be really effective on this style of play the guards must be practically as fast as the ball carriers. Methods of this sort have eliminated the big slow moving fellows who reigned supreme in the old days. Guards today are also being used to protect the forward passer. It is a simple thing for a guard to pivot out of his position on line and block the men rushing the passer. I've seen guards take out two men at once who thought they had the passer in their grasp. It is one of the biggest surprise plays in football, sometimes called the "guard ambushade." This play is a brain-child of Uncle Dan McGugin. It not only gives the passer added protection but slows up the opponents. It is hard for the opposing players to know just when and where one of these guards will show up.

On defense a guard must learn to make ineffective all the tricks he uses himself when on the offensive. His duty as a defensive guard is to break through the line, make tackles and spill interference or any possible plays that come into his region. Never give ground. Give me a good low charging guard who goes in straight at his man with his eyes open. No one can be effective with his head bent over and his eyes shut. This is a hard thing to learn. It takes experience to combat the natural tendency to duck your head and close your eyes when plowing into a fighting

line. Defensive play requires as much coolness and brains as offensive. The defensive line is rarely, if ever, as compact as the offensive line. This means that in many cases the defensive guard has two men to handle when the ball is put in play. Sometimes the opposing guard and tackle mark him for their meat. In this case the guard has to take the charge of one man and "slip" the charge of the other.

To do this effectively the hips and legs must be in such a position as to give one of the opponents a target to shoot at and at the same time be prepared to slip his charge and take the charge of his partner. Take a position slightly to the left of the outside man. As the ball is snapped use your hands on his shoulders or head while directing the charge of your body low into the man on the inside. This calls for skill, practice, but it will spill the play there. The use of the hands in this department spells either success or disaster. If two men get contact on one he is out of the play promptly.

Several years ago there was a guard named Pat Quarles playing with West Virginia University. He had defensive tactics down to perfection. Quarles was self-styled "triple-threat guard," and he played either side of the line. Sometimes he alternated at center. He is supposed to have claimed that he was "the only triple-threat lineman in the country. He threatened the positions of two guards and a center." He knew how hands are supposed to be used and he used them. He knew how to make contact with an opponent and when to let his charge make his own work easy. You can make your own work easier often by letting the other fellow's strength do your work too. That is why I put so much stress on the importance of using hands in line play and it is a point that I drill steadfastly into the heads of prep school teams I coach. Hands are the football lineman's chief stock in trade.

Another point that all guards should bear in mind. Never underestimate your opponent. The wisest thing to do is to start with the idea that he is your superior. Before the game is over it is up to you, yourself, to prove that you are



© International

Hot stuff coming through! Phil Liflander, Columbia's pony halfback, bullets the Williams' line for five precious yards. The guard is about to pounce on him from behind.

a better guard. Many a game has been lost by this error. Give your opponent credit for knowing as much about his position, about the game in fact, as you do. Then, on offensive play look for his weaknesses. Find them. Every man has a weak point somewhere. Use different methods of attack. Stick to the style you find most effective until you learn that he has solved it and offers a style to counter. Then begin all over again. Keep pounding for weaknesses. When you hit one take advantage of it. Some men cannot stand the impact of charging guards against their heads. They will begin to turn aside for it. Some cannot stand the cuffing a man can get in the face. They will begin to give ground under this rougher method of attack. Use your open hand, the heel of the palm. Never close the fist. In the first place the fist is not good sportsmanship, secondly you will be ejected on a charge of "slugging." It is legal to use the heel of your hand, and in this branch of sport it is far more effective than the fist could ever be.

Guards are not the only linemen on the field either. There are some ends who have done their stuff in football that was comparable to real guard play. I'm remembering now a big fellow who played for Vanderbilt, Lynn Bomar. He was chosen by Walter Camp on his last All-American selection for end. Old Dan McGugin used Bomar in practically every position on the field, both in offense and defense. He was used as an offensive end, guard and fullback, and as a defensive end. Bomar is my idea of the best utility player I have ever seen in action. He played three years of varsity ball at Vanderbilt and it has been claimed that he was never off his feet in all that time but once. That one time he was sent to the hospital.

Bomar was a huge man, well proportioned. He had good strong legs, heavy shoulders and large hands. He was absolutely unafraid of anything. He always charged straight for the ball carrier when in end position, smashing the interference out of the way to clear a path for a tackle. The chief objection to having Bomar at end on defense was that the opposing team would not direct a play at his post. This let him rove at liberty on the field, and that is what

he did. He had an uncanny sense of the way a play should unroll and he always happened to be right on the spot to break it up.

Courage is one of the prime factors in guard play. The guard is in the thick of it no matter what play is called. From the earliest days of the game all the way through, among famous fighting guards like Truxton Hare, of the University of Pennsylvania, '96, Heffelfinger, the big Yale battering ram, Cannon of last year's Notre Dame line, and Montgomery of Pittsburgh, you'll find that it's the raw red courage that bolsters up the other football qualities to make guard stars. I could write a list of them as long as your arm. There was little "Pepper" Glenn, who weighed about one hundred fifty pounds. We were playing a Kentucky team that year and Pepper drew a place against a tackle who tipped the beam something over two hundred. Little Pepper did everything he could to topple his man, but the tackle took it and just grinned. Glenn stuck at his task, however, and in the end he took all the smile out of his opponent by the simple expedient of using feet against the other's shins. Fortunately the officials didn't see him or he would have rued the day. But the kick on the shins served its purpose and toppled the big tackle.

A guard may have everything else a football coach desires, but if he is lacking in "guts" he will never make the front row of football fame. He may have flashes of success, and even stick with the team, but if he doesn't possess that inherent fighting quality that keeps him getting up and going in for more of the same as he got last time, you can bank on it that his name will never go down in an All-American line-up.

One of the greatest exhibitions of courage that I have ever seen took place in Atlanta. Dartmouth College was playing Georgia Tech in an early season game. Now early season games in Atlanta are *early*. Imagine yourself playing bang-up football on the hottest Fourth of July you ever knew. It will give you an idea of the kind of weather these boys were playing in. That year the Tech team was riding the crest. They had a wonderful machine. It

was a fiercely fought game and combined with the heat and a bad start Dartmouth was well behind on the scoreboard. The air was stifling and Georgia Tech's shift was working to perfection. The two Dartmouth guards—they were two real guards, real men and I cannot for the life of me recall their names at this moment—were taking most of the punishment and coming back for more. If it had been my team I would have put in about four substitutions. The Dartmouth coach made none.

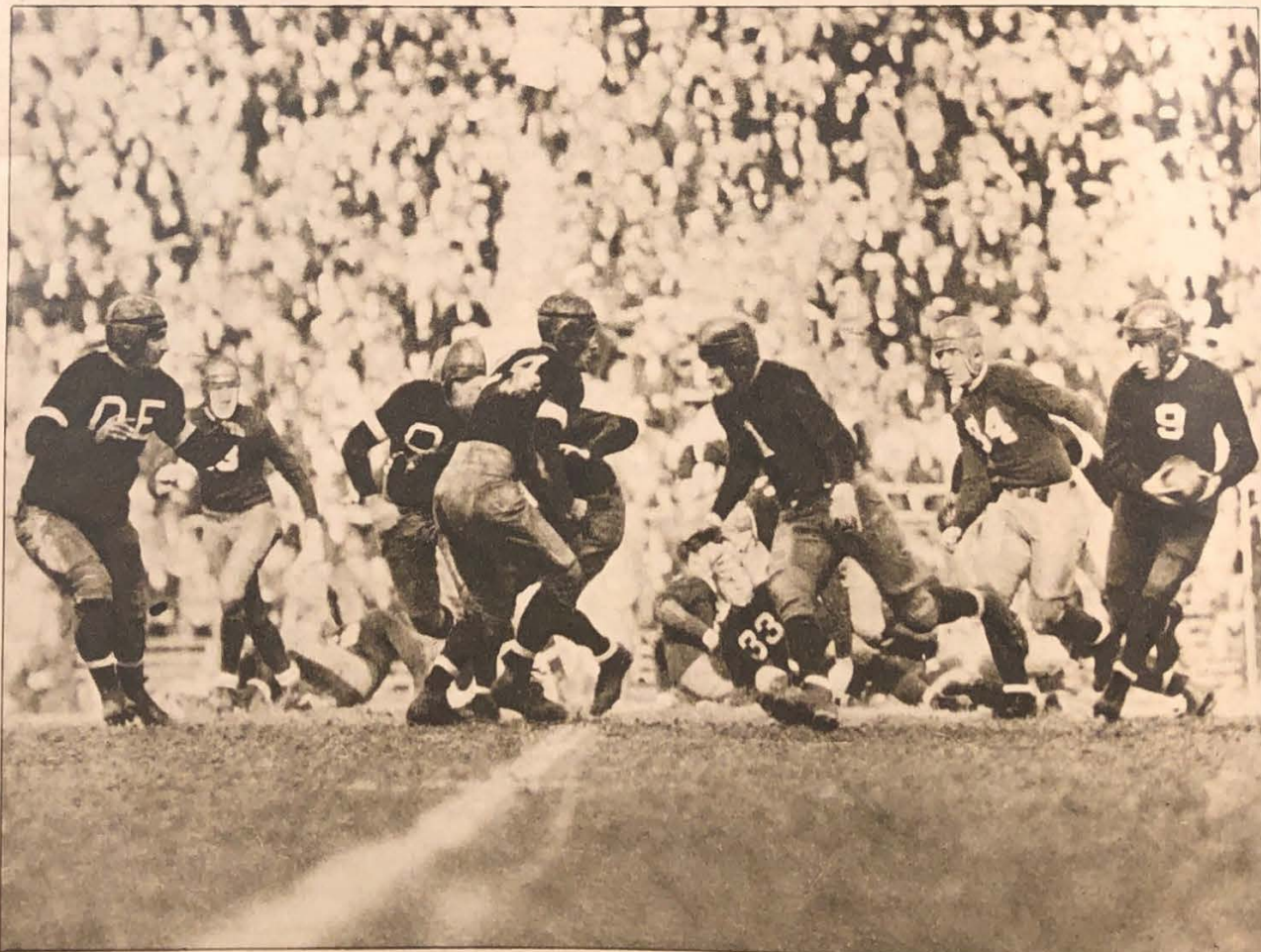
After each play these two guards would drag themselves into position and take the next "jump shift." They could hardly get in place. Finally, late in the last quarter, after Tech had made another touchdown and were lined up to attempt the extra point, it came. One of the Dartmouth guards wearily leaned against the goal post behind him. I watched him. He was slowly sliding down the post, inch by inch. The signals were starting. Down the post he slid, slumping, another inch and he reached the ground. The ball was snapped. He was down there, back against the post, when the play was made. Tech scored the point. After the play one of his teammates went over to him. He was sitting on the ground with his back braced against the wooden upright. They shook him and he rolled over on his face, flat, unconscious. They carried him from the field. You heard fans here and there remarking: "One game boy." Yes, he was. He had the stuff that makes a real guard. His partner lasted two or three more plays, but he, too, had to be helped from the field. The two of them, fighters from the ground up and down again, never knew when to quit. They stuck it out while they had the strength to keep going.

I've seen football played from New Jersey to Texas, and from Pittsburgh to Macon; played in good weather

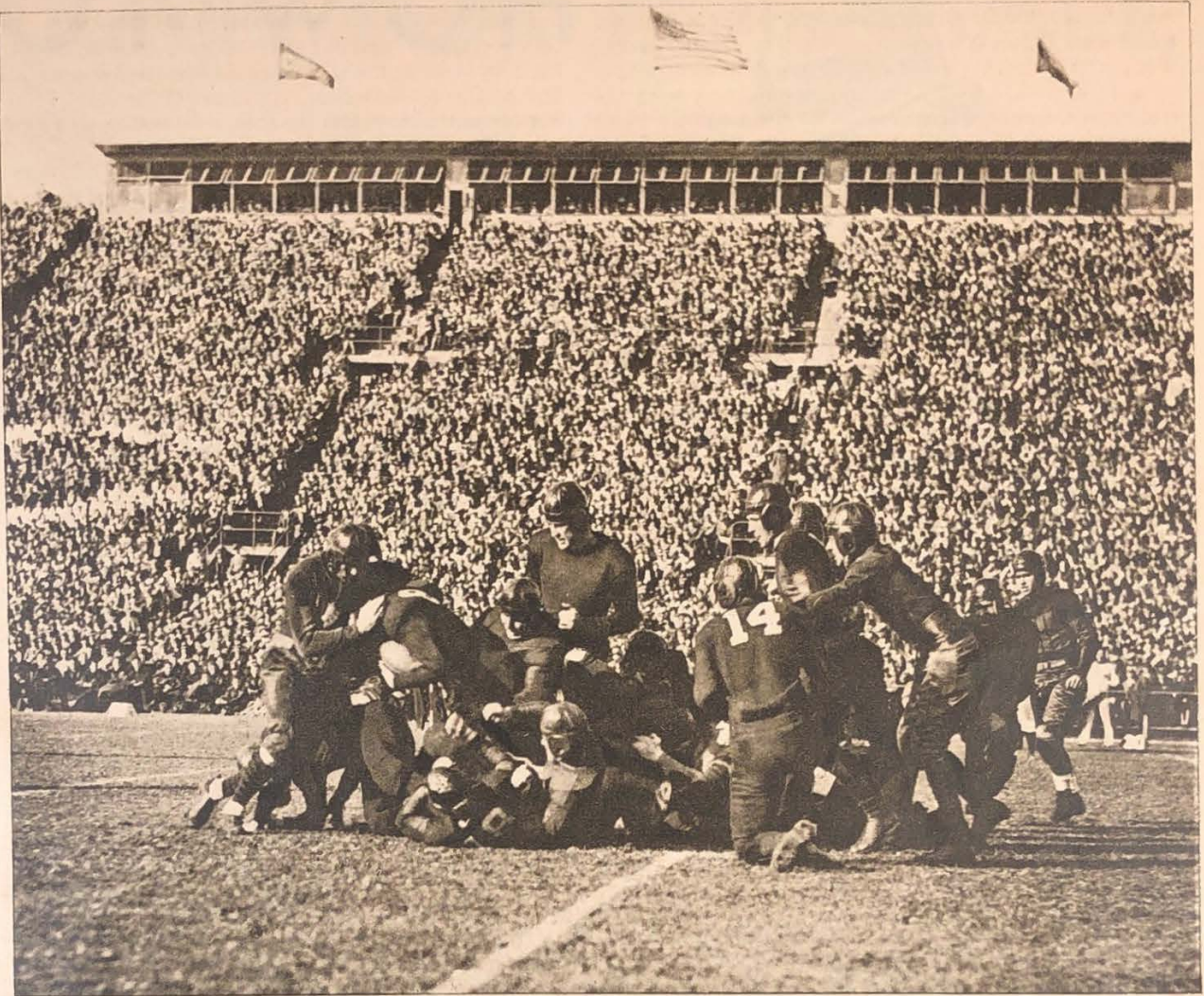
and bad. I've been on fields where cleat holes were filled with ice and it was like playing on a huge waffle iron. I've played in the hot sticky "gumbo" at the fairgrounds in Dallas, Texas, where steam comes out of the ground like a Turkish bath. I've seen the little fellows take their medicine with the big ones. And through it all there is one outstanding fact about the game. The boys who go in for football are innately sportsmen with few exceptions. Underlying all the fierce man-to-man struggle during the roughest game in any college schedule is that undefinable something that breeds among the players admiration for each other. One fighting man admires another fighting man.

On the other hand, regrettable though true, there are coaches who, in the past, made a practice of sending into the game a mediocre player for the express purpose of rousing the temper of a quick-trigger player. This with the idea of starting a two-man battle that would result in both being ejected from the game. In this way the coach was seeing his biggest threat taken right off the field before his eyes. In many cases it meant the winning or losing of a football game. There is a story told about a certain "hot-tempered" lad who played on the University of Georgia team some years back. He was the backbone of the whole team but it was well known that he could be easily roused to the point of "scrapping" by being called names.

The first year this boy played on the varsity he did not finish one whole game. At the beginning of the second year with the team the coach took him aside and explained the situation to him. He told the boy that they were depending on him to win the major portion of their games; that if he was to be dismissed from the field every time a "dub"



The guard post is no bed of roses on Harry Stuldreher's Villanova team. Number 34 has slid out of the ruck to bolster the interference against the fierce tackling Scarlet Hurricane of Davis-Elkins.



© Wide World

Wherever the fight is thickest you'll find the bulldogs of the line. Kissell of Purdue makes it plenty thick for Stagg's Chicago bucks by his bruising lunges through the center trio.

called him names the U. of G. was not going to get very far in the conference. The player was quickly made to realize the gravity of his situation. He determined to keep out of fights no matter what the cost to his personal feelings.

The test of his resolution came in the first important conference game. An opponent, knowing his reputed weakness, called him a name that should have meant flying fists and dismissal from the game. The Georgia player called "time out" and got the referee by the arm. He walked him over to the boy who tried to start the scrap and in the presence of the official he said: "Now listen to me, bud. I'm not going to fight you here for what you just said. But if you're on that bench when this game ends there is going to be the damndest fight that the State of Georgia has ever seen." Needless to say the other boy was not to be found when the game ended.

This is a good example of two important points in line play. One is to keep cool no matter what happens, and the other is, "try to rag your opponent." Though by this I do not want to go on record as sanctioning the use of vile names or bad language. There are ways to get your opponent's "goat," plenty of them, and the real test of a lineman is his ability to turn a deaf ear to taunts of his opponent. Besides you can never tell just when you are going to run up against a fellow who knows something about using his fists.

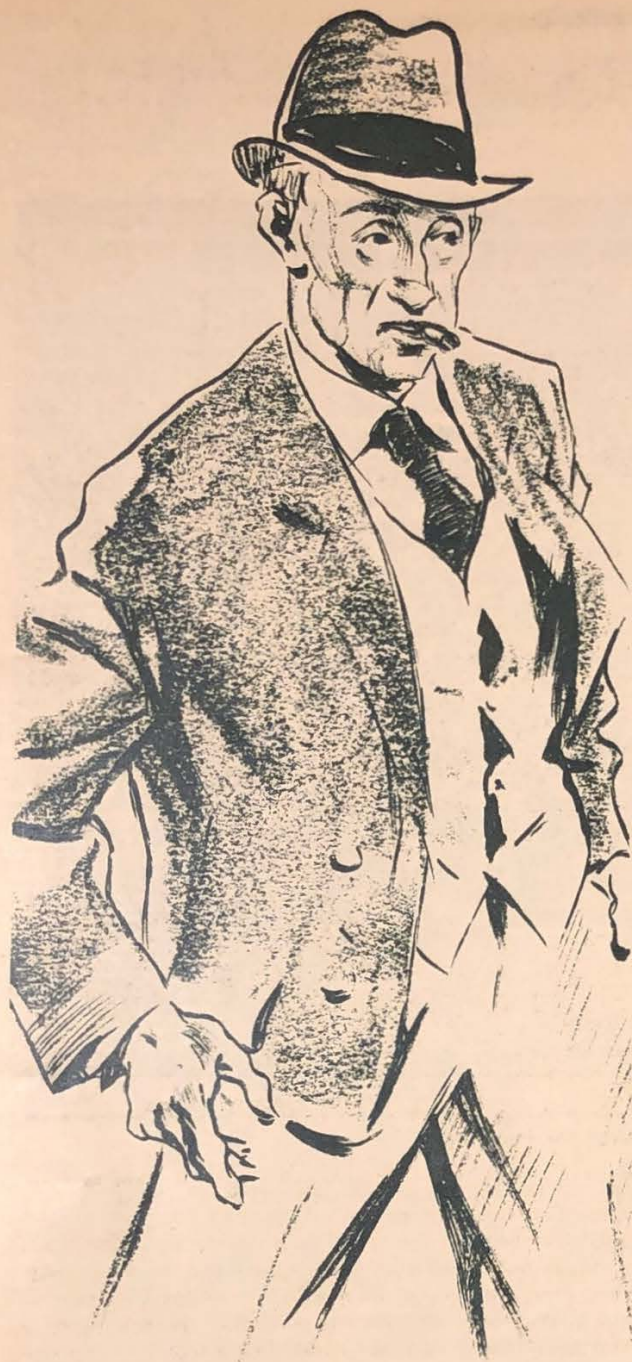
In this article I've tried to explain the uses and abuses of the line positions, especially guards. If any of my read-

ers are looking for a nice soft berth on a college team where they can take the ball and go prancing down the field amid the cheers of the crowd, and the smiles of the "gals," don't try out for guard. Guards are dirty fellows, who get their faces rubbed in the mud, their uniforms hacked off and their bodies sometimes bruised from head to heel. If you can't take it and like it and beg for more, don't even think about guard.

No place on the field is as hot as that middle of the line where two guards and the center take the brunt of the battle. If you want to play football because you love action and the game, because you want to get in there where the going is roughest and pit your brains, strength and courage against fellows who are just as determined and tough as yourself, grab a headguard and report for guard material. And when the first game starts and you hear that whistle blow, and the old band blares out the Alma Mater's favorite air, dig in your toes and go down that field with the kick, resolved to make your guard position the hardest spot in the line that your opponents ever tried to storm. Let them know they were in a corking, bang-bang battle, and when it's over drag yourself away to the showers while the crowd is breaking hats and canes and benches. Let the water wash away the stains of cleat-plowed field and thank your stars that you picked a position where a player can know that he is giving his team everything he has got, and good measure.

Let the halfbacks get the headlines—be a guard and get the headaches, and the self-respect of a lineman.

HOW TO



Out of his shrewd gray eyes Jimmy DeForest has watched the development of two generations of athletes. Here he contributes from his store of wisdom, valuable "do's" and "don'ts" in football training, particularly aimed at the young football player

JIMMY DE FOREST

branches has its particular requirements of mind and body and each is highly beneficial to the participant. But football remains the greatest sport of college and school. It requires the utmost in strength, courage, speed and quick wit and is the one sport which can whip the general student body to the highest pitch of enthusiasm.

It's natural that every schoolboy should hope to make the football team. The football men are the heroes of the campus, and what normal boy wouldn't want to join that favored company?

The high school or prep school is the starting point for the football man. College teams usually are drawn from the ranks of schoolboy stars. A player on a college team seldom is less than nineteen years of age and as such has reached a stage of physical development adapted to the strenuous game. So to the prep school, the incubator of college football, we must look for the proper groundwork—and proper precautions.

Football is not a game for a weakling or for a boy who is under-developed, a fact which every physical instructor, school official and parent must realize. Nor should any boy be permitted to play organized football until he is at least fifteen years of age, preferably sixteen.

The reason for this is easily understood. The sinews, tissues and bones of a boy under fifteen or sixteen years have not been fully knit or settled. Any severe strain during this under-developed stage can do permanent injury to a growing youngster. Muscles can be impaired for life by a wrench or a violent fall. Nature requires just so long to do its preliminary building. Even a boy of fourteen, who may look as husky and strong as a lad two or three years older, has not had the proper chance for normal bodily growth.

I firmly believe schools should bar from the football field all boys who are under sixteen. Another point of equal importance. I am also convinced from personal experience in the handling of boys and young men that no youngster should take the football field without at least a year of advance preparation.

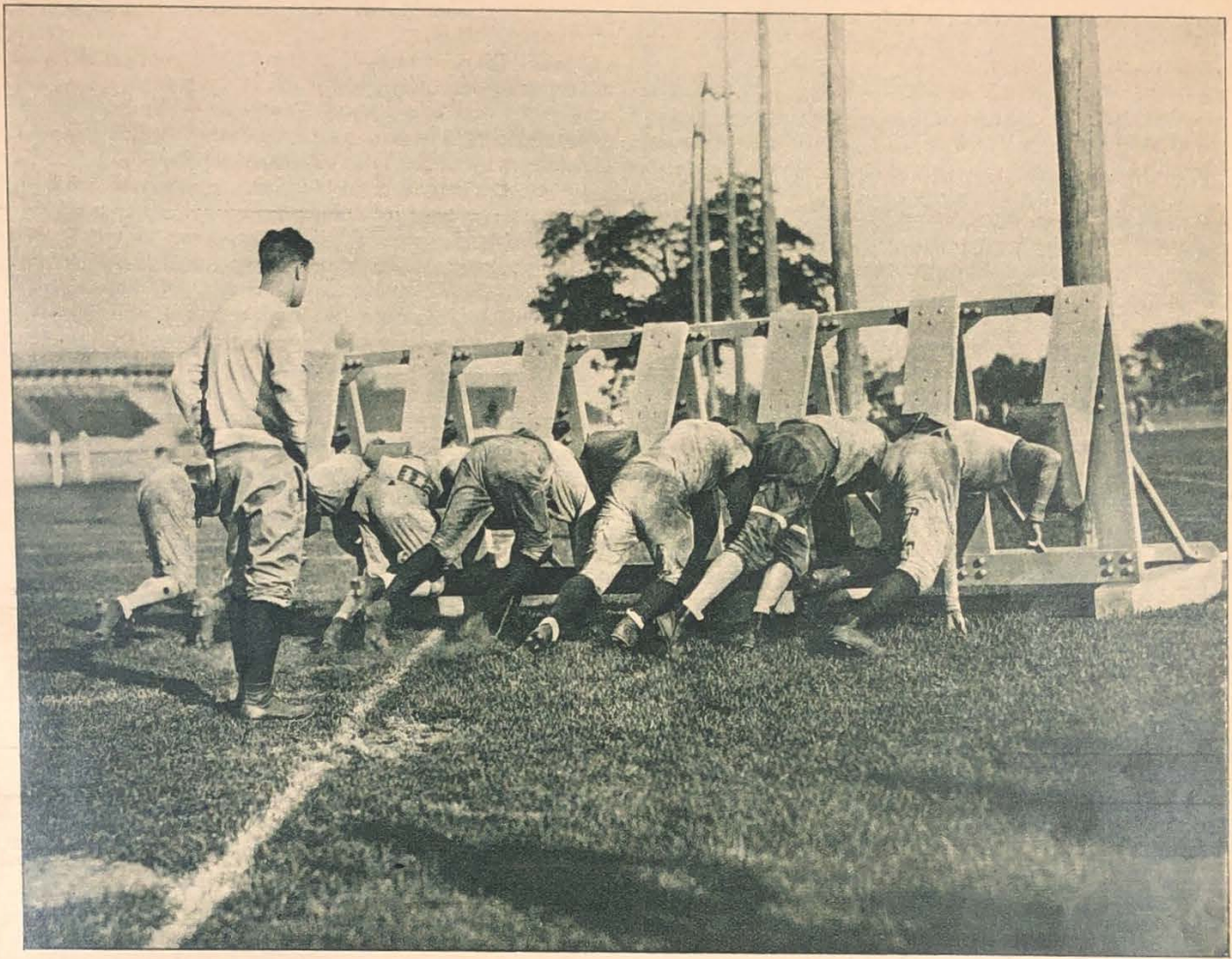
The training should start at the age of fifteen. Every muscle and tissue must be developed, slowly and unhurriedly. The spine and the muscles of the intestines—the parts of the body most easily liable to permanent injury in violent play—must be strengthened particularly. Legs,

AS an athletic trainer, interested primarily in the physical development of boys and young men, I have watched with great satisfaction the growth of public interest in the sport of football.

There can be no question of the value of college and school sports. Any activity which centers the minds of growing boys upon the advantages of a sound physique and healthy competition is to be encouraged to the limit. The wholesome attitude which is so general today among undergraduates and schoolboys has its origin in the enthusiasm for sports. Youth is the time for play, the period when a man is most eager for experiences and when the thought of his future is being molded. The boy who can find an outlet for his exuberance and high spirits in tests which call for physical strength and agility, coupled with mental alertness, is the boy who'll make the better man almost every time, a fact which is underestimated, I'm afraid, by a great many educators.

Baseball, basketball, rowing, hockey, track and lacrosse have their followers in school and college. Each of these

TRAIN FOR FOOTBALL



One phase of a football star's training. Oxen never worked harder. This "sled," part of Eli's equipment, gets the line in shape to smash a hole, or smear a stab through center or tackle. It also makes the backfield fit to hit the ragged hole once its made.

arms, chest and shoulders must be hardened. Wind and endurance must be developed. All without any severe strain upon the heart. Do not start this training until a physician has examined your heart carefully. With the preparations underway, there should be weekly examinations by the doctor. A murmur or leakage of the heart can result quickly from over-exercise.

The first steps come in the gymnasium. With dumbbells—one-half or three-quarter pound—in each hand, begin exercises to develop the upper arms and the shoulders. The arms are held out sideways, straight and stiff. Then the hands are twisted forward and backward. This exercise should be followed in the morning about an hour after breakfast. It should be done ten times at once and may be repeated once again during the morning after a proper rest interval.

A month of this will help the arms and shoulders greatly. Then comes the exercise for the intestines.

This is a matter which must not be rushed. After you have been practising for a week, you can do the full stunt as follows: lie on the floor with the hands extended stiffly upwards, then raise body and bend over until the fingers touch the toes.

At the start, do not attempt to lift your body more than half-way, since this exercise, one of the most beneficial of which I know under proper circumstances, brings a heavy

strain on diaphragm and groin if not worked into gradually. But at the end of a week, provided you feel no pain in the groin, you may begin doing the full exercise five times at once—and only one time a day. At the end of a month more, the exercise may be extended to seven times and then should be kept up daily for two or three months more. But I can't warn too greatly of the need for caution. The diaphragm and groin are mighty tender parts of the body and will not stand sudden, severe twists or strains.

The shock of hard blows and fierce twistings in football falls most often on the spine and it is this which must get most careful development. Here's how:

Place hands on hips, with feet spread apart. The head is bent forward until the chin rests on the chest. Then the body is bent forward, twisted to the right and then backwards. This three times. The same movement then to the left, also three times. Six times in all daily, never more at the start. Don't bend backwards too far at the beginning, and stop the instant any pain is felt. But as you feel the spine strengthening, the number of times to perform the exercise may be advanced to five each way, daily. A month of this, and then another spinal exercise may be attempted.

In this, you stand erect, feet apart and chin on chest. The hands are held limply over the head, the knees are

bent. Bend backward until you feel you have reached the spine, then swing the body forward until your hands are hanging between the legs, and then backward again until the spine is reached a second time. The full backward and downward movement to be performed five times, altogether, once a day. At the end of a month or so, advance to seven or eight times.

The exercises I have proposed here will take you over a period of seven or eight months during which the muscles and tissues have been strengthened to a great extent. Now comes time for the development of legs and wind.

This is to be done by road-work. Start with a mile a day, walking fifty yards, running the next fifty yards, then walking fifty more, running fifty more, and so on. At the end of a month, the road-work may be extended to one mile and a half. It never must exceed two miles in any one day. The road-work should be done in the afternoon, two or three hours after the noon-day meal.

Another point which must be remembered. Under no circumstances are all these exercises to be attempted on any one day. In the interests of safe-guarding the heart, you should limit your exercise time each day of the whole year period to not more than twenty minutes. This allows room for only one exercise at a time. There's one exception to this rule. Deep-breathing may be done from the start and carried throughout the entire period. Five minutes of deep breathing in the morning at first, then add a

second five-minute period in the evening during the last six months.

All bending exercises should be performed at night shortly before bed-time. These may tire you at the outset and you should have the benefit of a night's rest afterwards.

During the year of your training period be careful both of rest and food. Get eight hours of sleep each night, and nine hours won't do you any injury. On the question of meals, follow as nearly as possible the regular training table diet which eliminates all greasy articles.

I'll suggest here a menu beneficial to any young fellow who plans to engage in athletics:

For breakfast: stewed prunes or other stewed fruit; toast (bread always should be toasted for boys and adults for easier assimilation by the stomach); soft boiled eggs, never cooked more than two minutes, or poached eggs; coffee or tea.

We'll follow the old-fashioned habit of regarding the noon meal as dinner: Roast beef, roast lamb or roast chicken with potatoes, cauliflower and spinach. For dessert, rice pudding, a small cup of custard or ice cream.

For supper: Cold meats or steaks, or lamb chops, with at least two vegetables. Choice may be made from lettuce, boiled beets, peas, carrots, beans, stewed corn, stewed or sliced tomatoes. The dessert may be cantaloupe or melon.



A split-second action picture of Southern California practice. The ball is still in the air with the fullback dug in to slash out on a short end play, using the other backs for interference. Only players in proper physical condition can meet the brain and brawn requirements of modern football.

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Soups may be taken with the noon and evening meals, but these must not be greasy. All pork products such as roast pork, pork chops, sausages, should be avoided. Frankfurters also are out, although I know there's something mighty toothsome about a "hot dog."

Eat your fill at every meal, but don't stuff yourself. Eating between meals also should be avoided both during training and when out of it. Sweets should be taken with extreme moderation and there should be no heavy pastries.

Foods such as I have suggested above are easily digestible and extremely nutritious. You can't go wrong by following my instructions.

With the training period completed, another important step should be taken before you turn loose on the football field. You should receive competent instruction on the rudiments of the game, both at blackboard talks and in "walking through" the various plays. The science of tackling should be understood before you test yourself against the tackling dummy.

Then try for the positions which your build and speed best fit you to fill.

I don't pretend to be a football coach, of course, and realize that a great many youngsters may develop into crack performers in positions for which their bodies don't seem to fit them. But I've helped in the past to train football teams for Morristown Preparatory School, Princeton Prep and at Columbia College and I'm convinced that the rules I've suggested here can be followed with benefit. What applies to the high school, I might add, applies in a general sense, also, to the handling of college football candidates.

Most first-line prep schools of today have expert physical guidance and the best of coaches for their various athletic teams. The coaches at these schools recognize that their own reputations are enhanced along with the schools' if the players they turn out are able to make the big college teams. Consequently, they work cautiously and bring their promising players along gradually, aiming to have them develop their greatest skill in the junior and senior years. This means that at the bigger schools, the football teams are largely composed of boys of 17 or 18 years of age, which is exactly as it should be. I've always contended that the youngster of sixteen should not be used in the regular line-up against well-trained opposing teams unless he is of exceptional strength and development.

Now for a word with the parents and the older men guarding the athletic destinies of these youngsters. The feeling which we describe as "school spirit" always is encouraged by the physical trainer and the coach. It has all the attributes of a religion in the bigger schools and imbues the youngster with the determination to make good for the school. But it's a spirit that sometimes leads a boy astray on his own physical abilities. The youngster is ready to risk any injury if he can make the team or the squad. A careful check-rein must be exercised by the coach and parents.

The average husky boy of fifteen is impatient. In a game that fosters the highest principles of manliness, he can't see why he must wait. But parents should make a law of the year's preliminary training. I've seen some very promising youngsters suffer permanent spinal injuries by starting violent exercise too early. No game is worth a life-time of physical deformity or incapacity.

The players themselves should realize that a football team can consist of only eleven men and that a football squad of the big school or college can't number over forty. It's the job of the coaches to pick for the squad only those who are best fitted physically to stand the strain. Willingness and courage, of themselves, aren't sufficient.

But while parents should be certain that proper precautions surround the young boy's participation in football, I have little sympathy with the fathers and mothers, particularly mothers, who refuse to let their youngsters at-



Ralph Lockwood, Colgate guard, works with a training dummy to check rival tackles.

tempt the game on the ground that it's too rough. A well-trained boy benefits from hard knocks, gains confidence, assurance and courage when he holds his own against other boys in a stern physical test. Football develops rugged bodies and it's a game for every normal, strong boy. Fatalities do occur and men of the highest training and strength sometimes suffer severe injuries, but the number is small. Few sports are free of danger. There's as much peril in an automobile ride as is found on the football field.

Football is far less dangerous today than it was twenty, or even a dozen years ago. The old mass plays and formations responsible for so much of the game's reputation for undue roughness, long since have gone into the discard. Brawn and courage have ceased to be the main qualities of the football man. Today he has an even greater need for quickness and speed than he has for brute strength. I'll admit that I wasn't any too pleased with the old style game, but every physical trainer will endorse the present style of open play.

And the game has made more heroes than any other general sport I know except, possibly, boxing—and boxing is a game for individuals, not for teams. Ted Coy, the greatest fullback Yale ever knew, played one game after an operation, actually holding his intestines in place with one hand. Eddie Hart, All-American tackle of Princeton, played for years with a broken neck, wearing a specially constructed harness. Brickley performed prodigies for Harvard while suffering the pains of appendicitis. Men have played with broken arms, cracked ribs, twisted knees and ankles.

Not that I sanction any such fool-hardy risks, but these truly reflect the spirit of the game and the type of men it builds.

ALL - AMERICAN

THE All-American team is an annual record of football achievement. Its membership list is composed of the season's greatest players according to position. Rich in tradition and the glory of the names it bears, the All-American is the ultimate goal of football greatness.

The importance of care and judgment in making this selection cannot be underestimated. We have used these to the utmost of our resources and responsibilities. The intimate records of three hundred of the season's outstanding players have been

studied and checked from as many outside sources as possible. Compilations and ratings of other selections have been made. We have in our files confidential reports from football experts the country over. On these authorities our selection is based. Each of the players listed below has won his spurs in play against high-calibre opposition. He played his game consistently week after week. Each of them has exhibited to a high degree the ideal qualifications outlined by our experts on the other pages of this magazine.

Left End Donchess, University of Pittsburgh—a throwback to the great defensive ends of other years. Outstanding in his ability to ferret out enemy plays and smash them. A hard-hitting battler in the line.

Left Tackle Nagurski, University of Minnesota—a great all-around player of outstanding accomplishment. Not a success in his backfield attempt but too good a tackle to miss top rating.

Left Guard Cannon of Notre Dame—pronounced the best of all-time by many experts who saw him in action. A wonder on the offense, fast in interference, combining burning aggressiveness with excellent football judgment.

Centre Ticknor of Harvard—head and shoulders over any other centre in the country. Big, hard and powerful Ticknor was a perfect ball feeder and a tower of strength backing up the line.

Right Guard Montgomery of Pitt—a combination of speed, strength and ability. He was the heart and inspiration of the mighty Panther line.

Right Tackle Sleight of Purdue—a slashing, ranging play-buster on defense, and a devastating worker when the attack got under way. His specialty was knifing into the opposing backfield to clear the way for Welch.

Right End Fesler of Ohio State—a finished and polished performer in every phase of end play. Handled passes with the skill of a magician, and was fast, hard-hitting and crafty on the defensive.

Quarterback Carideo, Notre Dame—a cool and capable field-general whose season's record was not marred by a single mistake in offensive judgment. A sure-fire passer, and excellent in defensive play, especially against rival passes.

Halfback Glasgow, of Iowa—wins the nod over a star field by his ability to perform every duty of the position and perform it well. A master at executing the quick kick from a fake formation.

Halfback Cagle, United States Military Academy—Christian, the Red, was a will-o'-the-wisp down the field. His speed and twistiness were good for long gains in any broken field, and his defensive play was the feature of the Army backfield.

Fullback Welch, Purdue—Captain of the team. Chosen for his outstanding football ability and the inspiration of his leadership. A strong ball carrier and a consistent kicker, Welch made himself the outstanding back of the year by the burning intensity with which he played the game.

JOE
DONCHESS
PITTSBURGH
End



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RED
CAGLE
ARMY
Halfback

ELMER
SLEIGHT

PURDUE
Tackle



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RAY
MONTGOMERY
PITTSBURGH
Guard

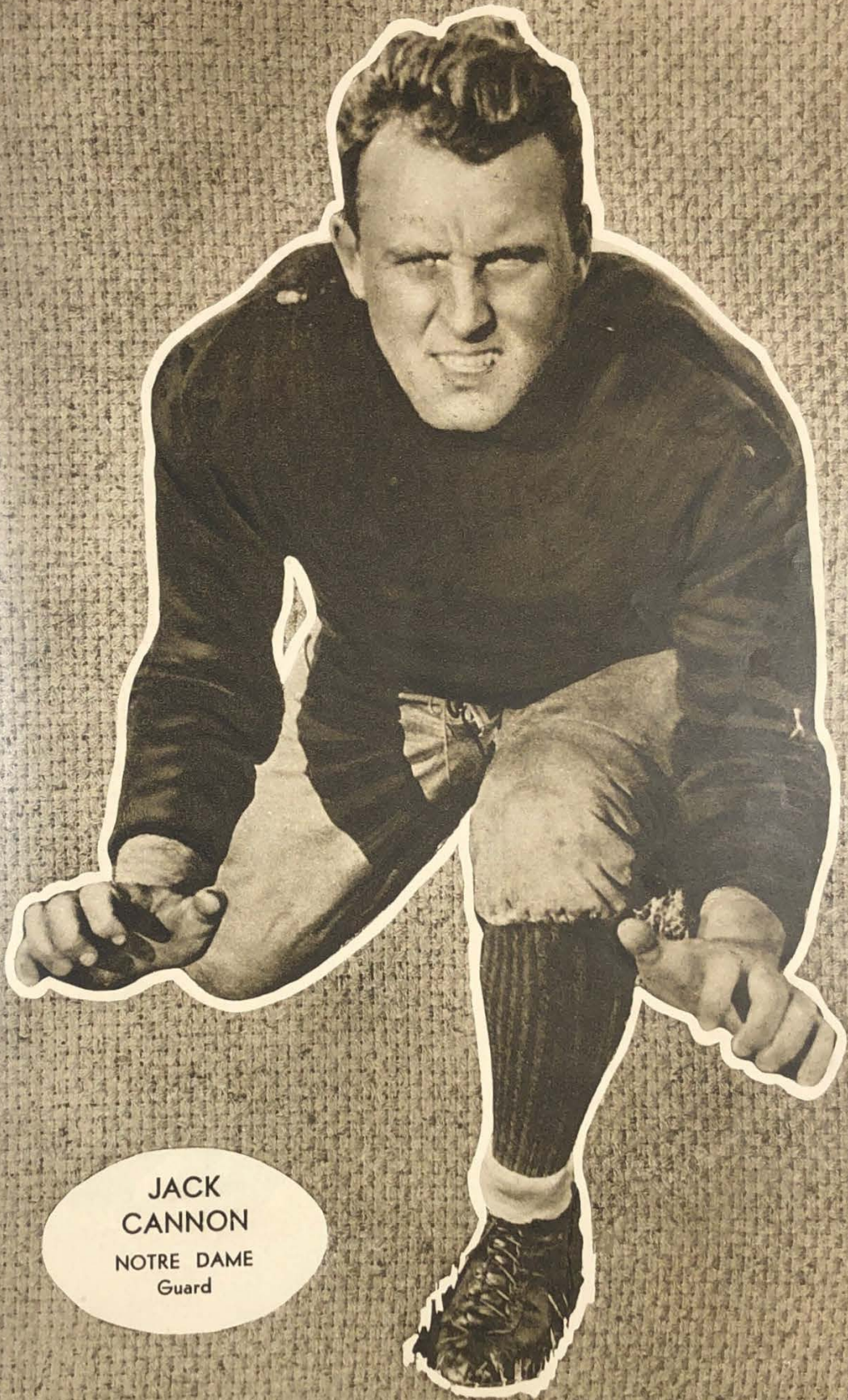
BRONKO
NAGURSKI
MINNESOTA
Tackle



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WILLIS
GLASSGOW
IOWA
Halfback



JACK
CANNON
NOTRE DAME
Guard

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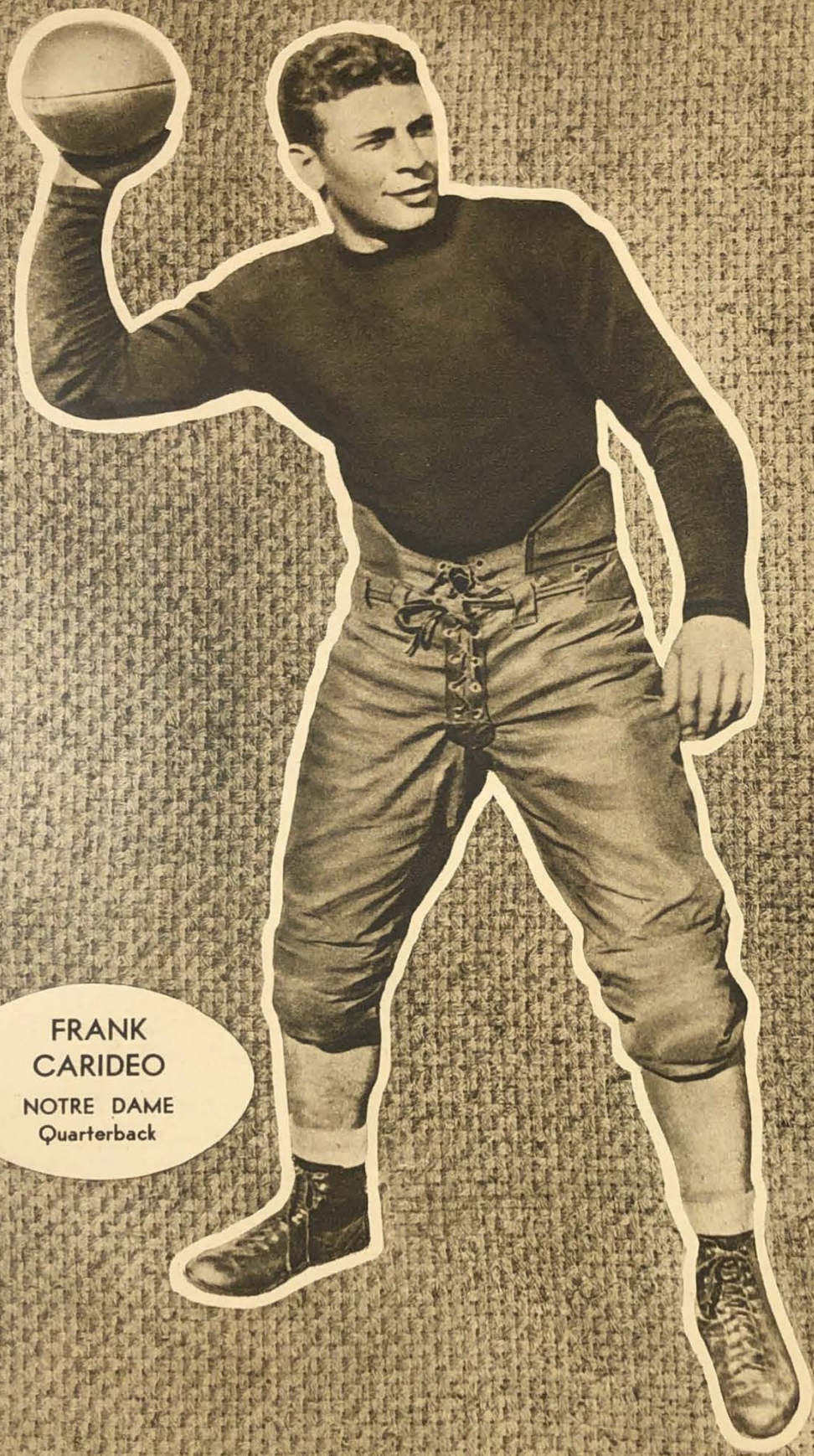


BEN
TICKNOR
HARVARD
Centre



WESLEY
FESLER
OHIO STATE
End

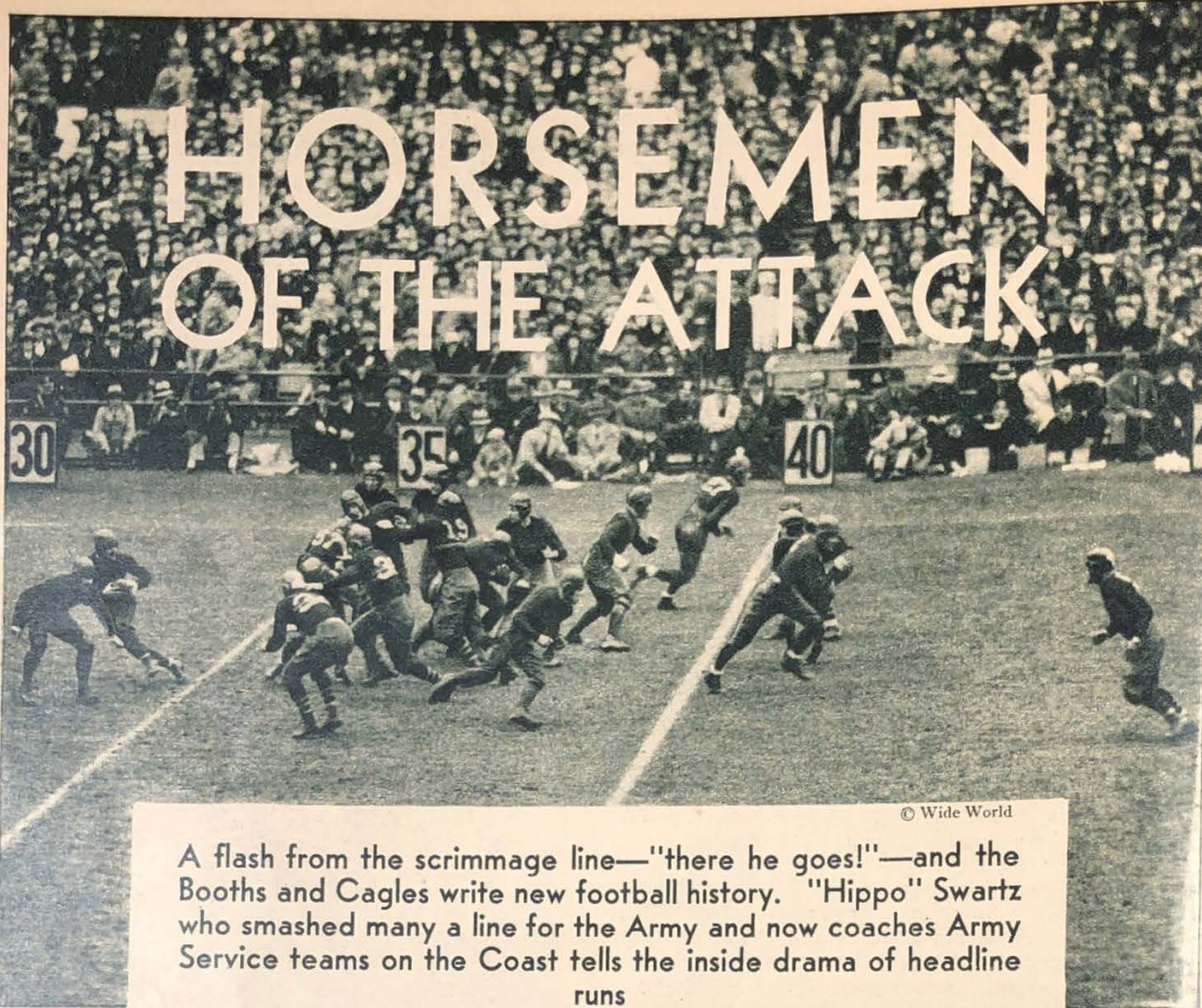
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FRANK
CARIDEO
NOTRE DAME
Quarterback



WELCH
PURDUE
Fullback



A flash from the scrimmage line—"there he goes!"—and the Booths and Cagles write new football history. "Hippo" Swartz who smashed many a line for the Army and now coaches Army Service teams on the Coast tells the inside drama of headline runs

TWENTY-SEVEN, thirty-five, nineteen—eight, six!" Spike Nave's shrill signals rattled through the silence of the Yale Bowl like the crackle of machine-gun fire. Army's roving center snapped the ball and lunged at the line in front of him. Chris Cagle leaped to the left, still panting from his last run, and the brown oval missed his clawing fingers by a split second.

As one man the packed thousands on the benches were on their feet. The concrete bowl shook with one grating roar. Out of the tangled welter of sprawling linemen a giant blue-clad runner plunged. Firpo Greene of Yale had seen the error. He scooped that bouncing pigskin from his shoe laces, and charged like a bull elephant down the field. It was only thirteen yards to the Army goal, but four men were on him as he ploughed his way across for the touchdown that evened the score.

From the dense ruck of Yale men on the west of the Bowl the old Boola song broke out, full-chorused and mighty. Chris Cagle had cracked, the word was howled from tier to tier. The red-headed cadet ace was lost, they prophesied. A bull play like that would break the spirit of the strongest player on the field.

Once more the teams lined up, Army receiving, and Hertz Murrell carried a long kick back to the twenty-eight yard line before a storm of blue jerseys pulled him down. There was only a minute left to the half, and Murrell climbed to his feet with a grimace that Spike Nave, the quarter, knew only too well. Cagle had cracked, the Cadet's tiny field general figured, now Murrell was shaken. Well, Allen was left. But Yale would expect him to carry the ball! Then Spike caught one gleam from Cagle's eyes, and his decision was made.

"Twenty-two, seven, twenty-three," he snapped.

Allen trotted down the scrimmage line for ten yards and settled himself for a sprint. Crile of Yale followed the Army back to his new position. The Yale backfield shifted its diamond formation to cover Allen's threat and waited for the snap number. It never came. Nave squatted slowly. Hall snapped as he had been trained, and Chris Cagle went galloping through the hole between tackle and end that Allen's feint had made.

Hickok of Yale spread-eagled over Spike Nave as that flashing form went by him. Crile was ten yards behind, facing the decoy that had led him astray. And Hertz Murrell hurled his one hundred and ninety pounds of brawn against the fleet Hoben who tried to cut the runner down!

Weaving like a golden shuttle through the hopelessly spraddled backfield, Cagle cut his way alone down the long field. One tackler he slung off with a shake of his phantom hips. A second brought him to his knees only to see the flashy cadet roll to his feet and sprint like an antelope down the torn gridiron, with five Yale tacklers plodding behind and a clear field for his second touchdown before him. He made it at a walk, and the morale of the Eli team was shot; so shot that they never did recover their goats until the last whistle sounded.

"They must train 'em on raw beefsteak at that place," one Yale Alumnus grumbled after the game was ended. "Well, I heard that they concentrate on gettin' a good runner an' then build a team up on him," his equally gloomy friend replied. And the listening sub-coach laughed up his O. D. sleeve as he heard them grumble off. For both of them were wrong!

How are backfields developed, then, is the next question? How do halfbacks like Allen and Cagle of Army, Decker and Garvey of Yale, Gilligan of Harvard, or Chevigny of Notre Dame get their training? Naturally they don't just happen. How then can halves and fulls, the ball carriers of any team be developed? For after all the half and fullback are the hammerhead of attack, since the quarterback must be considered as a thinker, a tactician who should only occasionally risk his valued grasp on the situation in a melee. What is the process of selection? How are the ball carriers made?

First it is necessary to have good material. Men of sound bone and good muscle, with fair wind, speed, and football brains are needed. The halves need not be as heavy as the fullback, as a usual thing, though this rule is often violated. Wilson of Army was a famous example of a light halfback who became a fullback in his last year of play. This was because Lighthorse Harry had an uncanny faculty for foreseeing the opponent's plays, and the back position made him a super safety man, rather than because his weight fitted him for it.

Every individual coach has his own system of early season training, but all of them boil down to this. The backfield material is put through a long period of warming up, pedaling an imaginary bicycle while flat on their backs, limbering every muscle, and keying the tempo of the body up to the point where it reacts automatically. This is a mechanical procedure, often in the hands of a capable trainer. It is alternated with sessions of skull practice in front of a blackboard where projected plays are gone through step by step. Opponents' plays are analyzed with the view of placing the backfield men in the most inconvenient positions—for the enemy!

Once these are thoroughly in mind the real training begins, and here the fun starts. First there is the dummy row, with each runner compelled to twist like an eel down the line, taking one on the right, two on the left, three on the right, and so on. Sounds easy, doesn't it? Just try it. It involves a change of direction, a change of step, and no loss of speed. Furthermore, the dummy is a padded post that a Mack truck couldn't budge, and you can't afford to touch it. Next on the list is the plunging rack, where prospective line buckers charge at a weighted frame, slamming their shoulders into a web harness that represents a hole in the opponent's line.

Somehow they claw their way forward against the drag of the ponderous frame. It isn't a bed of roses, by a long shot, to train as a ball carrier for a first rate team! All the excess fat is gone in a week, and it is replaced by chunks of brawn that snap like rubber under the trainer's fingers.

As for fast starts and speed on the fly, that is developed by workouts against the track squad, using the track men in their B. V. D's as pace makers and competition for the backfield men. Of course it sometimes happens otherwise. Guarnaccia of Harvard, for instance, came roaring down the cinder path like an express train with three panting track men following at his heels the first time that was tried on him. And the afore-mentioned Christian Keener Cagle could reel off a hundred in ten flat with thirteen pounds of assorted war harness on his shoulders. Novak, Army's track coach, nearly had hysterics when he learned that the Redhead would not be available for the track squad, so the rumor goes, but Biff Jones had other plans! Still, in the long run, such competition on the track does make for balanced position and getaway.

By the time the backfield squad is this far advanced on its thorny path the coaches are able to make their selections, fitting men to the places that they have most aptitude for. Rockne, for instance, pulled Moon Mullins out of right half and made him a plunging full on the strength of his shoulders plus an ability to see where holes would be before they actually were created. Biff Jones played Wilson at full, after three years at half, for

LIEUT. CHARLES
"HIPPO" SWARTZ
U. S. M. A. 1920



reason, using his uncanny divination of plays as a wall of strength on the safety line. Each was molded for the place that was best-fitted to his natural abilities.

And right here a big mistake is often made. At times ball carriers become so settled in the mechanics of one job that they are lost if they have to take another. At the start of his last year on the Army team Harry Wilson was laid up with a laughable but malicious case of hives that put him definitely on the sidelines. Now in all big colleges the schedule is arranged so that "breather" games are introduced between important battles. No team can be kept at top pitch of fighting spirit for ten weeks at a time without a blow-up. After each large battle with a team of its own rank, the custom has been to follow with a team of lesser rank. This allows the second and third string men a chance to gain experience in regular games. It also permits the regular backs to rest or take only moderate workouts, and it gives the aspiring teams from the lesser grades a chance to compete with teams of greater established reputation. With a few notable exceptions this is still the general rule; Knute Rockne's cohorts being the most famous of the All-Big-Game dissenters.

In the fury of the preceding week-end's contest two of Army's fullbacks had been laid up with minor accidents, while Wilson was out with his face still red from his itchy

and this time the cadet team struck a tartar!

JIM THORPE
of
Carlisle Indians



© P & A Photos

The greatest back of 'em all—bar none!—when he wanted to be. Why Big Bill Edwards chose Ted Coy over him for All-Time honors will furnish fuel for many a gridiron debate when fans gather

One by one various subs were run in to bolster the backfield, but none of them succeeded. Between the twenty-yard lines Army seemed able to make yardage at will, but on the twenty the defense stiffened and the final punch was lacking. Biff Jones exhausted his patience along with his small stock of fullback material at the same time, and sent in one perfectly good half to play the weak position. The half fumbled and lost eighteen yards. Sidelines beckoned him, with only one play to his credit! Another half went in who carried the ball thirty yards across field to gain a total of three in the vital direction. The trouble was that the halfbacks were not accustomed to the battering drives that are necessary when the ball is in that dangerous home territory where the weakest line seems to imbibe the courage of the wildcat. A powerful, plunging back, trained to put the final punch into a play was needed, but the halfbacks had not been used for such work.

Twice the Army's attack had been hurled back in the very shadow of the opponent's goal, when a red-faced player with the now famous "12" on his back trotted on to the field. The ball snapped into his hands on the first play, and Lighthouse Harry Wilson slashed his way for twelve yards with six men on his shoulders to drive a touchdown over. Biff Jones had sent in his expert and the expert had the punch! The moral of that game went home so sharply that now the Army halves and full are called numbers one, two, and three, respectively; and all of them are taught from the very first that they must be ready to take any number in the backfield. Defense positions often shift responsibility, sending a half to full for just this reason. As a result the ball carriers become more versatile and able to fill any demand at a moment's call.

All during this separate training the backs have been given increasing doses of play in formation behind varying lines. The object of this is to perfect them in the necessary shifts, the pause before the play that the new rules call for, and in cutting through actual flesh and blood opposition. It is obvious that a theoretically perfect ball carrier would be useless if he had no opportunity to practice his art in game conditions. Incidentally here is where the scrub teams fit in, for they make perfect practice material without endangering the more competent regular line. Often a fifteen or sixteen man scrub team is thus used, to make the running more difficult for the broken-field specialists. When this competition is not enough, the better backfield combinations are played behind scrub lines against the varsity first line. Thus the varsity line becomes trained at cutting down dangerous runners, and the ball carriers learn to make the best of poor holes. The line plungers too, often find an enlarged opposition the very best sort of practice for their battering tactics, since they have to make their own holes!

Thus far the development of ball carriers has been in fundamental work, and all the slow-footed, the slow-witted, and those lacking in the essential guts are eliminated. Now they have had some practice behind varying lines against stiff opposition, and the real team work begins. Offensive and defensive is next, with occasional practice or minor games; and through it all that invaluable asset of any football player is developed, *football brains*.

To analyze offensive play is a difficult matter. It depends on the outstanding specialty of the individual players, but every backfield needs one half who can use the wicked passes now in vogue, another who can plunge a line and back up his own on defense and a third who can rip off tackle or around the ends. Try and get 'em! Rockne does it somehow. Pop Warner has a special reservoir for his supply—rumored to be in the Yosemite—and occasionally a triple threat like Chris Cagle makes a coach piously thank his stars. But most of them have to be made, and the making is what we are primarily concerned with. Every first rate coach has a card index in his mind



© P & A Photos

The famous four of the Army touchdown troop—Hutchinson, Cagle, Piper and Murrell. Here's speed, power, and ability combined in a backfield combination that would tickle the heart of any coach.

of possible plays that may succeed, some of them hoary with age. Or if he hasn't himself, he has a subcoach that does just that. Starting with these the ball carriers have to be trained in the intricate business of meeting the coach's requirements in offensive play.

Bearg of Nebraska used the Power House drive for years, and his success was phenomenal. Every burly Corn Husker was taught to clutch the ball in a death grip, lower his head, put on full steam, and stop only when mother earth welcomed him with a resounding thump. Knute Rockne relies on speed, coordination, and timing. His men are drilled for hours until the repetition of a certain number sends them as a body in a certain direction with unerring precision. Pop Warner changes his style to suit his material, now building up a team around an individual star such as Jim Thorpe or Biff Hoffman; now using a complete aggregation of brawn plus speed that wins championships for Stanford and a fat contract for Pop. S.M.U. specialized for years in whizzing passes, any successful one netting the Mustangs as much as five honest-to-gosh line plays. Yuh pays yore money, an' yuh takes yore choice.

But these things in common with all offensive plays must have speed, coordination, and deception. First the play is outlined on a blackboard. Then each one is "walked through" a score of times until every man knows exactly where he must be at every split second. Next a center is purloined from the scrub lines, and the play is run off against the coaches to show the ball carrier

where the danger point is to be met. Speed and coordination come from this incessant practice, until each man is able to do his part in the play without thinking; until *automatic reaction* is gained, in other words. Then comes deception, and this is part of the result of the former two, plus psychology. Anyone who has seen a Rockne half take two steps, poise, raise his hand, and charge off tackle with his arms folded into his belly while the other three backs make an end run on the other side of the line knows what this deception business can be at its height! Hours of experiment have proven that those moves bewilder the opponent, therefore make those moves!

A favorite of Pop Warner's was the "hidden ball," where each man in the assault group acts as though he and he alone were headed for death and glory with the ball in his arms. Leather pads of football shape helped the deception. Indeed, the Old Fox actually had his Carlisle Indians putting the ball under their jerseys until the rules committee stepped in!

Another trick in deception is the common stunt of having a ball passed from the receiving back to the real runner, even on a line plunge. Anything to deceive, mystify, and confuse the enemy is good practice, providing it is not so complicated that it defeats itself. And this deception of the line aids especially when the carriers are specialists. And how!

All the world knew when Tiny Hewitt carried the oval, that the line players were going to have their teeth jarred loose. Similarly, when Wilson took it the tackles or



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Drive—that's the stuff! Put feet and hands and head into it and let 'er go. The wildcat blood is showing up in this Northwestern back, clawing his way out of a one-arm tackle.

ends would suffer from long distance running. But, if Wilson received and the opposing line opened for a wide slash at end only to find Hewitt picking it out of Harry's hands and plugging through for his customary five yards, the effect was harrowing.

Of course this did not apply when a multiple threat like Cagle carried the ball. When Red started to back away from the center with outstretched hands, only the good Lord knew whether it was a pass, a line buck, an end run, or a sizzling spiral—or a combination of the four! This young gentleman was a past master at the art of deception all himself, but such men happen only once in a coach's career, which is fortunate.

Coordination implies that the runner have support, or "formation." That he finds a comrade between himself and the clawing hands of a tackler whenever he is threatened. Usually he doesn't. The other team is there to prevent just that thing, but when he does the linesman moves up to another marker. It also implies that the men who do not carry the ball enter into the defense of the runner with every atom of their energy, as though on them and them alone depended the success of the play. There must be no jealousy, no let down, but perfect backing of the runner and mutual confidence.

An outstanding example of this mutual backing is found in Rockne's famous Four Horsemen, any one of whom could take the ball and find himself surrounded by three capable backs, as good as himself who intended to get every gasping inch out of their legs before the opposing line could muster enough reinforcements to slap

the real carrier down. In this the celebrated four were perfect, and all of them shared the glory. Not so the humble teammates of Red Grange. When that famous Red clutched the pigskin, he always found a perfect net of three other backfield stars who made it their business to get him past the first ten yards without a hand touching him. After that they could no longer keep ahead of the racing Red, and usually no one else could get ahead. The result was glory for Grange, headlines for Grange, a fortune in professional play for Grange—and bruises for his teammates. Such was the penalty for backing an outstanding star of his type.

So much for the material essentials of the offensive. A good football team is a small army, with the backfield featuring as *Diestrum truppen*, the shock troops; who make the big drives while the line holds the enemy in play. One intangible factor is perhaps greater still, and that is guts. As Stearns puts it, "a backfield must have the spirit of the bayonet." It is not enough to play perfectly but every man must be ready and eager to keep on going as long as he can wiggle. A coach never crawls on a runner for fighting forward to gain another inch. Every single man should be capable of carrying the ball right on through the goal posts and into the stands before stopping. But this is part of the psychology called "football brains," and that should come later in discussion.

One of the classic examples of this spirit was found in the Army-Notre Dame game of '28, when the beaten Army came back with a fighting finish that made the defeat almost a victory. Chris Cagle carried the ball for



© International

Four men with a single thought, as the New York University backfield goes into action against the Irish of Georgetown. Jinx O'Herin, Violet speedster, lugs the ball. And look at that protection he's getting.

fifty-six yards up a broken field with a rallying formation around him that made the hardened sports writers drop their footwarmers. It was the charge of a herd of buffalo, that rush, with nothing to gain for success. Only the supreme guts of men who refused to admit defeat after an afternoon of soul-shaking, bone-breaking football had drained them could have made it possible. That was a case of the unbroken spirit of the bayonet carrying on.

But football is not all offensive. At times every army must pause for recuperation, and then it takes up the defensive. Now in football the line should be the main defense, with the ball carriers in reserve to plug the gaps or cut down a break-through.

The two best forms of defense thus far originated are the box and the diamond. In the first of these the center is pulled back from position and the six man line is thus backed by a second line composed of the center, and two other backs, with a third line of defense composed of the pair of remaining runners. This allows for the real line to take the shock, the second line to plug the holes and follow the shifts of the backfield, and the third line to stop any successful rush. It has the advantage of strength, but it is at the same time an admission of weakness, for the place for any attack to be stopped is at the scrimmage. Otherwise ground is lost, and lost ground does not win football games.

The diamond defense is composed of one heavy back, an expert tackler, who plays so close to the line as to be almost a part of it, backed up by two halves who guard the wings and act as secondary defense. The final back

is used as a safety man to intercept passes, pull down punts, and cut down a runner who has broken through the main defenses.

On the defensive the ball carriers must play close enough to the line to aid in stopping the rush. Their own ability as runners should aid them in fathoming a play, getting into position, and dropping the ballman if he does break through.

One excellent system is to use a brawny fullback directly behind the line where he can slap the power of his shoulders into a line buck or quench a tackle slash before it can gain ground. In that case the two halves watch the ends for passes or end runs, aided by an unbroken chance to place themselves (which the line player lacks) while the safety man oversees everything. But it's a poor system that does not work both ways. To use the outstanding player of recent Army experience, Harry Wilson, as an example is only natural for an Army coach.

Lighthouse Harry had played football until he could place a play by the face of the receiver. As a result he was pulled back to safety, with a half backing the line, and there he called the trick nine times out of ten. Play after play he diagnosed, placing his halves with a single word exactly where they were most embarrassing to the enemy. If the breakthrough came it always found a super expert at hand, knowing every move, who ran the most ambitious sprinter to a frazzle, often ending up off-side. And that was perfect defense.

Now how do the ball carriers train for real defense? First by having all the old standby formations drilled into

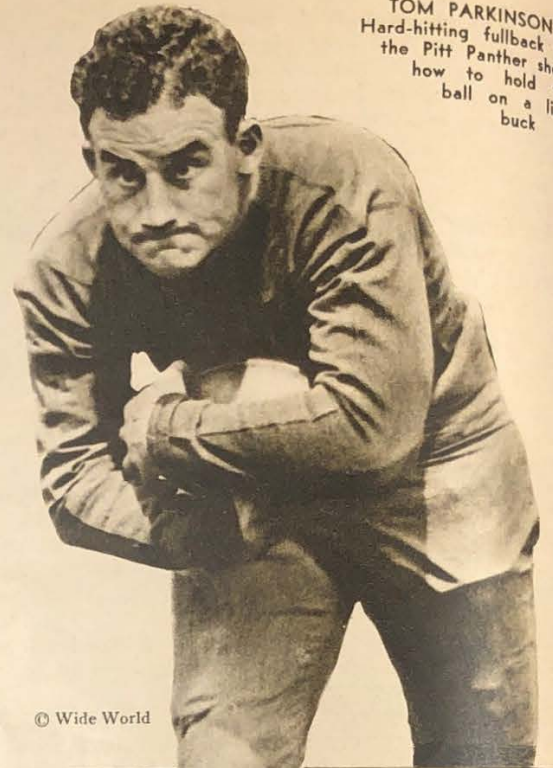
them until they can scent the next move by the tightening of a muscle or the glance of an eye. That takes care of nine out of ten of the usual plays, but the tenth play is the most dangerous.

Every team has observers who watch the performance of their coming adversaries and report to the coach. These scouts are open and legitimate in most cases. It is the custom at Army and Notre Dame to give them places on the players' bench or in the press box where they can get all the information they want. At any rate, after years of coaching, most team coaches can tell what to expect from a given outfit on the basis of past performance.

With this knowledge the backs are supplied. They "walk through" the plays themselves to find the weakness, opposed by coaches or scrubs. It is said that Rockne's second teams know all the plays and signals of his opponents and rehearse the game in scrimmage before it is played on the field. In this way the defensive backs know what plays are run from certain formations and place themselves accordingly. Every back realizes that he must not hesitate to take the shock if needed, even the quarter being included in this.

Some teams play a formation with two ball carriers and one defense expert who does nothing but run formation and break up plays. Of course he must have one or two ball-carrying plays of his own, but the other pair are the main offensive alliance. As a general rule this is not advisable on the grounds of economy, since he may be desperately needed in some pinch. An example of that

TOM PARKINSON
Hard-hitting fullback for
the Pitt Panther shows
how to hold the
ball on a line
back



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This is called the "Lindbergh Lunge"—a trick manoeuvre, but one that has its uses. McBride of Manhattan, pictured above, gained many an extra yard with it.

was found in the opening incident quoted here, where Allen of Army had been playing defensive until he became an uncertain quantity on the offense. Later in the game Allen did get loose to score the third Army touchdown, but it was partly his defensive role that made Nave give the ball to the panting Cagle.

Jake Bagshaw is one outstanding coach whose teams play both offensive and defensive football, but even the redoubtable Oregon team usually has a pair of purely defensive players who can be relied upon to go into a game with the lead in their favor and keep it there by breaking up enemy attacks. Their job is not to rush the ball, but to gain time and in that sense they are not true ball carriers. But they do take up the interval for attempts, and often put such a game on ice.

So much for the actual tangible training of football. A man may be a shark at all of them and a dimwit when it comes to football brains. Such a man should be taught ping pong, for he is no good to a playing team. But what are "football brains?" Is it a knowledge of how men react under certain stimulation? Yes, partly. Is it an ability to guess the working of the opponent's mind? Again, partly. Most of all it is the power to foresee the course of the game from small indications such as a tightened muscle or a grim face and to act on that knowledge without question. And this is the most difficult of all qualities to instill in the average player.

Long years of experience will give it. Constant practice will give it. Some men seem born with the quality, but without original brains it is impossible to work.

The ball carrier must be able to think what he would do in a given set of circumstances before they arise. He must see beyond the clutching fingers that so narrowly miss him to the charging tackler beyond him. And once

a man has football brains, he is on the way to fame unless he is hopelessly outclassed in every other respect.

Red Grange knew where the rushing tackler's charge would carry him. He could sidestep, and let momentum carry the unwary by. Or change direction, and let two opponents clash. Even at times he allowed a tackler to clutch him, only to shake him off like a fly before the fingers could close. He knew by studying the actions of men what their future course must be, and avoided it.

Anyone who saw Chris Cagle in his heroic attempts to win single-handed against the overwhelming onslaught of Stanford tacklers will know what football brains consist of at their best.

This essential is the one thing whose possession changes a good player to a headliner, and coaches cannot teach it. It must be learned by the player himself, mainly by experience, but with much observation of the reactions of men under certain given conditions. And an integral part of it is the ability to act on the knowledge thus gained.

This in brief is the development of a backfield man, the making of a ball carrier. It takes years of effort, unceasing practice, natural ability, and iron constitution, and considerable ingenuity on the part of the coach. In the end your ball carrier turns out to be a marvel; a tower of strength on the defense, a slashing, driving demon on the offense, and a credit to the coach's training. Then he graduates, and goes his way. The Harvard man becomes a professor, the Yale man a bond salesman, the Cadet an army officer, and the Rockne pupil a coach himself. Then the poor trainer who has made him must start the round again with new material. And his only consolation is that sometimes his ball carriers on the grid-iron turn out to be the real ball carriers in the greater game they play beyond. And that is satisfaction.



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The Army and the Navy still lock horns in the Far West. Here's Eddie King, of West Coast Army, putting the hypnotic stare on the opposing gobs as he shifts into high gear for a front line attack.



EDDIE
DOOLEY
Dartmouth's
Star Quarter
of 1924

A. B. C. OF THE 1930 RULES

Don't let the new rules scare you.
Here they are explained in plain talk by

EDDIE DOOLEY

THIS year, for the first time in the last decade, the football rules have dropped their chameleon coat. They have changed their colors a bit it is true, but not with the fickleness characteristic of former seasons. The changes made by the Rules Committee in the football code this year are permanent, intelligent, simple and constructive.

To the average layman, the reason for the repeated changes in the gridiron rules has always been something of a mystery. "What the devil are they always tinkering around with those rules for?" he'd remark as he spotted a familiar headline on a sport page. "Funny how baseball, boxing and the rest of the sports get along without such a lot of fuss. I'd think they'd get through with their rule making and changing once and for all."

Such remarks were only natural. Games, after all, are pleasurable pastimes, and if the public is to enjoy them as spectacles the rules by which they are guided should remain fixed and definite. There's no point in making a change in the way a game is played for the mere sake of having something different than it used to be. Anyone, for example, can think of a dozen ways of running a foot-race. The hundred-yard dash might be run on a triangular course, instead of on a straightaway. Or it might be run on an incline. But in reality there's no point to changing the accustomed method of running it on the flat. It was run that way for centuries and always will be.

Football, however, is a game unique in itself, and to understand why changes in the rules are made so frequently one must get the whole picture. Football started out as a hybrid sport, about fifty years ago. It was called a sport but in reality it was an excuse for a grand and glorious free-for-all, with chairs and bottles barred. It was in every sense a rough, hard and sometimes cruel pastime, with painful injuries abundantly strewn in the wake of the dreaded "flying wedge."

An old-time All American tackle told me recently that while playing against one of the "Big Three" in the early '90's, he pulled a ruse on his opponents which gives him a laugh even to this day. He had a battered shin-bone on his left leg that was giving him a lot of trouble. He knew that if his opponents saw his left leg bandaged, they would kick the very tar out of it, so discreetly enough he bandaged his right leg. "Yes, they did a pretty good job on that leg," he admitted with a chuckle, "but I was able to finish the game out."

Such was the warlike attitude teams assumed towards one another in the rugged '80's and the robust '90's. Football pulled away all the social amenities, and gave men an opportunity to harken back to the days of hand-to-hand combat, and the chivalric "fight-to-the-death." The players got a lot of fun out of it, despite the punishment they took, but the game was not what it should be.

It had a few rules but they were often disregarded or misunderstood. The game was in a plastic state. Teams could agree between themselves how long the contest should go on; how much a goal should count, and how many men should play on each side. Eventually, as with any sport, fixed methods of play arose. The game was beginning to assume definite form. But even at the opening of the twentieth century, football was still so rough and dangerous that public sentiment was aroused. Influential educators and humanitarians of every sort clamored for its elimination from the college curricula.

So forceful was the pressure brought to bear on the gridiron game that President Roosevelt called a convention to determine whether or not football should be abolished permanently. Roosevelt, fully conscious of the values which the sport possessed, advised the authorities who were motivating the game to rid it of its dangerous evils or take the consequences of having the game banned.

It was these men, some of whom are members of the Football Rules Committee who immediately turned their hands towards improving the sport. They drew up a set of rules which put human safety at a premium, yet preserved those qualities of speed, courage, and strength which will forever be a part of the gridiron game.

As the years passed they made changes here and there, holding as closely as possible to the original style of play, and altering the general structure of the game very little. But it was the work of this committee, more than any other factor, which saved football from the rubbish heap. They saw that the old "flying wedge," famous weapon of football teams of father's day, was a thorn in the side of the sport. It emphasized brute power instead of individual skill or synchronized team work. Consequently, it was removed.

The committee realized that the game needed to be opened up, if the players were to be safeguarded from the shrapnel of flying cleats and crashing heads, and it set to work to encourage the development of the forward pass. With the improvement of the aerial game there

came more end runs, sweeping cut-backs, and off-tackle smashes. All of these things helped football.

Nothing strikes a football fan more keenly than a long, zooming forward pass that carries well down the field, and rests gently on the fingertips of a swift-footed wing-man who is tearing for the goal line. Such a play epitomizes teamwork, individual skill, and gridiron grace. It that it is, the one sport that makes football the popular game plumb crazy in public.

The constant improvements in the game brought about by changes in the rules tended to increase the amount of open tackling. The art of dropping a man in the open field is one of the finest heritages of football, even if it is one of the most dangerous. Tackling, however, involves a lot of things. The man who is attempting to bring down the ball carrier is himself the target for the ball carrier's teammates who are anxious to cut him down with a body block. Now before the rules were changed a few years ago a man was permitted to come up behind the runner and throw himself across his legs. This is called clipping, and is, of course, prohibited today. Men's legs were sometimes broken by being clipped from behind, while others had their backs badly wrenched, and their necks injured for life.

By eliminating such ill features of the sport as this, football has finally arrived at the point where it is a safe and sane game, despite the fact that it is rough and vigorous. In my own college football career, I observed a total absence of any of the intentional meanness which is conceded to have been a part of the game in the early days. We played hard football but not dirty football. And the same was true of our opponents. When we tackled it was with the determination to rattle a man's back molars, but not to break his arm. And when we took a man out with a body block it was never from behind. In other words, the pastime of football has actually become a sport rather than a bloody ordeal.

The men against whom we played we regarded as friends, not enemies. During the game we showed no quarter, but after it was over we chatted together about it in the shower room, and laughed and joked over our mutual mistakes. The man who hit me the hardest I have ever been hit in my life is today one of my best friends. And that's true in hundreds of cases today, wherever college football is played.

The game of football has finally grown to the point where it is almost letter perfect. The Rules Committee, conscious of that fact, made very few changes this year. The members of the gridiron's governing body, headed by E. K. Hall, have expressed themselves as being opposed to any further alterations or innovations for some time.

But a few changes were made this year to round off the rules, and put them into what is expected to be their final shape. Most important of these changes was the rearrangement of the order of the rules. The game is, as anyone who has watched the manœuvres of an umpire will agree, full of rules. Consequently it is important that these rules be in order. When a dispute arises on the field the official, always armed with his "bible," can turn at once to Rule 5, Section 3, Article 2, and stand firm.

The recodified rules for the coming season are splendidly arranged and indexed. There is nothing ambiguous about them, and every phrase is clear and explicit. Where there is danger of misunderstanding a supplementary note is offered at the foot of the rule, explaining the proper interpretation.

Briefly, the changes in the rules this year deal with backward passes and fumbles, shift plays, the duties of officials, the pressure of the ball, and the color of uniformed equipment. The last mentioned, namely uniforms and equipment, is in the nature of a suggestion rather than a rule.

There is nothing startling about the rule concerning a backward pass or fumble. Last year on a backward pass (except one made by the snapper-back), when the ball went out of bounds, the fumble rule applied. That is to say that either side could recover it, but the opposing side could not advance it should that side recover it. This year Article 2 of Section 8 or Rule 7 holds: "On a backward pass or a fumble, if the ball goes out of bounds between the goal lines, it shall belong to the team whose player last touched it in the field of play or end zone, at the point where it crossed the side line."

This year's rule merely gives the ball to the side whose player was the last to touch it in the field of play.

The shift play has always been a bone of bitter contention among coaches. Knute Rockne brought this form of attack to its most devastating effectiveness in the regime of the famed "four horsemen." The secret of a good shift lies in the fact that as the men bound from their original position into another stance, they carry the momentum of their original move into their ultimate move and thus pack added power as well as deception. Thus when four backs hop to the right and suddenly knife through the left side of the opposing line the value of the shift becomes evident.

Last year the effectiveness of the shift was limited by reason of the rule which demanded a definite pause between the time of the shift and the passing of the ball by the center. The real purpose of the shift was thus killed off. If a running broad jumper was allowed to run, but had to stop in his tracks before taking the jump there would be little value to his run. The same is true of the shift.

This year Article 5, Section 2, Rule 7 demands that the players come to a stop at least one second after a shift. This rule serves its purpose, but to the writer's way of thinking it robs the game of one of its subtle weapons. The shift added a glamor to backfield play that cannot be replaced and its passing is to be regretted.

One of the most important changes this year is that which has to do with the pressure of the football. I recall in the Harvard-Dartmouth game of 1924 the difficulties we encountered with an improperly inflated pigskin. Just as the game was about to start, I noticed that the ball which we were to use on the kick-off was extremely hard. It is almost impossible to get a good spiral or a long punt with a hard ball. I spoke to the official about it and asked if we could have it changed. He willingly assented and another ball was tossed out on the field. This was just as badly blown up, and after two or three more were tossed out we finally got one that contained about the right pressure. It was merely an oversight on the part of the manager of the team.

With the pressure definitely set at 12½ to 13½ pounds, good kickers will no longer be handicapped by an over-inflated ball. It is surprising what a difference a hard football makes. It can neither be passed or kicked properly.

The Rules Committee also did a wise thing in suggesting that teams refrain from wearing uniforms and helmets which are so similar in appearance to the ball that the opposing players are put at a disadvantage. You will recall the tendency last year among some teams, to wear garish uniforms of dazzling effect. Many of them were extremely colorful and added a glamor to the game. But others were of leather hue and made it virtually impossible to find the ball-carrier. That old trick was first used by Carlisle when those gallant Indians had leather footballs sewed to their jerseys. When they folded their arms it was difficult to tell who was carrying the ball.

All in all, the changes this year are few but wisely chosen. The game will enjoy the greatest season in its history. Intersectional games are more plentiful, ancient rivalries as intense as ever, and the enthusiasm of the football public is already at a high pitch.

SPEED MAKES THE END



The author won his spurs on the Yale Varsity of '27-'28

You have to be a quick starter, and the quicker the better. Get the jump on the play if you want to help win football games

By **STUART SANGER**



© P & A Photos

A breathless moment where a fast end can smear a sensational play. But Glenn of West Virginia pulled this out of the air for a nice gain against Pittsburgh.

ASK the average man or boy what position on the team he would select to play if he had his choice. Unless he has had actual playing experience at some other post it's a fifty-fifty chance he'll say "end." Perhaps it's tradition. He remembers the undying football fame that a galaxy of stars have won at the end post. Remembers Frank Hinkey, the Blazing Flame of Yale, and reckless, dynamic Tom Shevlin. Art Poe and Sam White, mighty figures in the orange and black of Old Nassau. Hallowell of Harvard and the slashing Merrilat of Army. Paul Robeson, huge and smiling, tearing up the enemies of Rutgers. Brick Muller, that amazing man from the California coast, and Lynn Bomar, the Vanderbilt terror. Vic Hanson of Syracuse, and Oosterbaan, pass-snarer extraordinary for the maize and blue of Michigan.

Or perhaps he'll say end because here's a position where a real good little man will win the nod over the fair-to-middling big man. And the American stature doesn't run to giants on the average. Whatever the basic reason is, however, every one knows that at the terminals of the line a player will find a chance for spectacular action and speed and mental agility.

Alonzo Stagg, the Grand Old Man of Chicago, has been quoted as saying that end is the most difficult and gruelling position on a football team. This sounds strange when you think of the bruising work of the guards and the tackles and the battering backfield, but consider the versatility of physical action that a good end must produce, plus the fact that he never gets what they call a rest-play and you'll see a new light on the subject. In modern football the end has almost a dual function of lineman and auxiliary backfield man. He has hard, aggressive work to do every moment of action.

I said before that at end a really good player of average size has a chance against the big men of just normal ability. At the same time, however, a big man has the cards stacked in his favor at the start, especially in college football.

Under the modern system of open football a man is better fitted for the end position if he is tall—six feet or over—and developed proportionately. The ideal end, physically would be about six feet, would weigh one hundred and eighty pounds or more, and be able to keep pace with the average sprinter for about fifteen or twenty yards.

He should also be quick and rangy, able to handle himself and a football expertly. He should be rugged and hard to hurt. Sustained speed, the stock in trade of the sprinter, is not essential in an end. Rather, quick starting and excellent control of your body are of the utmost importance.

Tully, of Dartmouth, the receiving end of those famous passes of Swede Oberlander, was one player who had these last two qualifications to an amazing degree. He had form and plenty of it. His starting speed was geared so high that he'd often get past the defensive backs before they could touch him. And he seemed to have an uncanny ability to gather in those passes. Because he knew how to handle his body in full stride he could weave through the defense zone, and his co-ordination of hand and eye and speed was so unusual as to make his pass retrieving sometimes seem miraculous.

This spectacular open field work, however, is only a small part in the complete function of a good end. An end has four main duties, mentioned hereafter in what I consider their order of importance: First, boxing the opposing tackle. Second, covering punts. Third, defensive play. Fourth, receiving passes.

Most of the offensive systems of our big colleges are built around the off-tackle play. Gloomy Gil Dobie of Cornell is, perhaps, its foremost exponent, but other famous systems—noted by casual observers as being unique in the development of spectacular football—base their play upon the off-tackle lunge. The Notre Dame offensive of Rockne demands powerful line play at the tackles to open the way for the long ground-gainers. Pop Warner's play at Stanford is merely a development from his famous Pitt line-thrust, and the bucking game he taught at Carlisle. The old saying that ninety percent of the games are won or lost in the line still has a lot of truth in it.

The importance of the off-tackle drive is stressed here because the success or failure of this play often simmers

down to whether or not the offensive end can clean out the opposing tackle. Most tackles are big and swift-moving in these days, and this means that the opposing end must be fast enough to beat them to the charge, and strong and husky enough to clear them out after he makes contact. A big man with plenty of poundage can do this more consistently than a smaller player. Bomar of Vanderbilt won his place in the All-American spotlight mainly because of his ability to perform this little trick. He could do it effectively because he was one of the giants of the gridiron, and with his size he combined tremendous and unusual strength.

But sometimes a tackle is so good that it is practically impossible to budge him out of his position. Take a tackle like Horse Chase of Pitt., or Raskowski of Ohio State who is too big, strong and fast to be locked up with the various orthodox blocks. In bucking up against a player of this type you can sometimes solve your problem if you thrust your arm between your opponent's legs, get his leg between your upper forearm and neck and squeeze him. This isn't adjudged holding, and it gives you a firm enough grip on your tackle to keep him in a precarious and unbalanced position in which he can do only a minimum amount of harm.

Don't try to work this stunt too often, however. Mix it up with the more usual blocks and keep your opponent guessing. I still have a very painful recollection of what happened when a Georgia tackle caught me trying it once too frequently.

In covering punts, success depends first on the speed with which the end covers the initial fifteen or twenty



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Where the ball passer, like Stanczyk of Columbia here, falls back behind the center of his defense, the end needs speed to get around the secondary defense, to spoil a pass. He also needs height and plenty of rubber in his legs to reach the zooming ball. Wolff, of Dartmouth, batted this one down just when Columbia threatened to score.



Like a dagger Marsters slashes around Yale's end while his own left end and tackle supplemented by backfield interference box the Eli defense. An end, because of the variety of his work, must be a heady player. Crack end performance by Dartmouth made Yale fight its hardest to win. © Wide World

yards. And, second, in the end's ability to dodge, avoid or smack down the opposing backs. Most ends depend upon speed alone to get past the opposing backs, figuring that the split-second advance they have in starting will get them through. If the opposition is equally fast, however, you are faced with the problem that the ball-carrier has to meet in the open field. You must dodge your way through, or bull your way by bowling over the man who is facing you. The choice is a personal matter which depends upon the individual qualities of yourself and your opponent. The bowling-over method is quicker, but unless you're built for that kind of work better try it the other way. Don't use up too much time dodging, though, and let the receiver of the punt get a start on you.

The best end I played against in college was Nash of Georgia. He had all of the necessary physical qualifications—and a little plus, at that. Under punts he was especially effective; time after time he actually was down under the ball while the Yale backs were still looking for him. It won't do any harm to practice your flash sprinting if you think you are cut out for an end.

Speed, too, is the keynote of the end's defensive play. Breaking fast across the line of scrimmage is half the battle. On defensive play the quick, agile end has an advantage over the larger and more slow-moving player,

because the main thing to do when the opponents start their play is to get into position to handle it before it can completely develop. By moving fast you can often nip opposing strategy in the bud by taking out the key man, spilling the carrier, or forcing the play inside upon the tackles. Once you get across the line of scrimmage your problem has solved itself into terms of action. Nobody can tell you what to do here. It's a question of using your football instinct—if you're right it makes you a hero; if you're wrong you'll know better next time. The main thing is to do what you do just as fast as possible. Get some old-time football fan of the '90's to tell you how Frank Hinkey played it. If you can even come close to doing it that way you don't have to worry.

Receiving passes is mainly a matter of practice in handling the ball, although speed is also necessary to break you loose and get you to the spot where the pass is coming. During the two summer vacations before I went to college a football was my daily companion. I practiced catching and throwing passes every day, devised ways to make each catch a difficult one by loafing going down under it. If you want to be a pass-snarer get some one else with like ambition and do a daily stunt with him. It's good practice and excellent light exercise.

Up to this point I've been dealing mainly with what I

consider the super-ideal physical type for the position of end as played in modern football. Let me state most emphatically, however, that it is not my intention to discourage any young fellow from trying to make an end berth merely because his physical qualifications do not compare with those set down as being ideal. Nothing of the kind. The game of football, to my way of reasoning, is about seventy-five percent a mental attitude, and some of the finest players that have ever pulled on a cleated shoe have defied every one of the natural physical qualifications I have set down. What they lacked in body make-up they more than supplied in determination and gameness.

Frank Hinkey, one hundred and fifty pound Yale immortal who battered them all down in the peg-top days of the football giants and the flying-wedge, made football history at end. Booma, of Brown, was an underweight in comparison with the usual end, tipping the scales at about one hundred and sixty, dripping wet. Yet he played a sound and consistent game against the toughest opposition in the East. Week after week he faced opponents to whom he had to concede both weight and poundage, and did not miss a minute of play during his entire senior year. Carney, of Illinois, whom Bob Zuppke rates with the

best of them when it came to play around the terminal, weighed one hundred and fifty-five or so, and was stocky into the bargain. Brown of Penn State, mentioned by many in their choices for the 1918 All-American, scaled about one hundred and fifty, but had the stuff to do his job at all times. And the football record books will show the names of a host of others who did not have the physical equipment to compete, but who made good nevertheless because they loved the game. They made up in mental strength and the old fight what they lacked in muscle and poundage.

Football is not essentially a matter of bodily power. The finest mechanical football player, a man with ability to burn, could not play on even a poor team if he did not have the mental qualifications that go with the job. It is about these qualifications that I want to declare myself now.

One of these is just ordinary horse sense. Others are self-control, cool-headedness under intensive fire when the breaks go the other way, and instinctive ability to diagnose the opposing plays in the bat of an eye. And, too, you must be mentally alert so that you can outguess the man who is opposing you.

Ordinary horse sense comes into the game in a number



A play that is never planned. Eyth of Carnegie Tech swerving to take advantage of a strategic opportunity against Notre Dame. The threat of a powerful end defense often sends a ball carrier on a tangent, where he is forced to take his chances with surviving linemen and the backfield. Note the way the big Notre Dame end uses his hands on his block man.

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Eddie Kaw, of Cornell football fame, one-time captain of his team and all-time terror to opposing ends. Kaw was one of the best players who ever wore a Cornell uniform and when Eddie tramped out on the field to start a game the opponents knew they were going to get all the action they could ask for.

of ways. It keep a man in training. If a man has it he can remember the signals. Tad Jones used to say that a man who cannot understand or learn the signals is useless to a coach, other than as a tackling dummy.

An end must have self-control at all times. Football is a game that is hard on hot tempers, but if you play it well you must learn to keep your goat tied tightly outside the stadium. You may run into opponents who are professional kidders, but remember that when you blow off steam you're just playing the game the way they want you to. Twenty-five yards means more to the team than the satisfaction of a sock in the eye does to you. If you're up against an opponent who uses foul tactics it's difficult not to retaliate in kind. How I know that! But the best thing to do is to take it out on him in the ways that the rules allow. There are plenty of legal ways of making a tough opponent sorry.

Cool-headedness, the way I see it, is self-control from a little different angle. By it I mean that the good end should play his own game no matter how tough the breaks are against him and the rest of his team. Don't get stampeded and over-eager if you're behind; don't get cocky if your side is ahead. And if you stay cool you can be in a position to influence the rest of the team to pull themselves together. Cool-headedness, too, means sound football judgment and sane use of your native ingenuity. In this day of non-scouting agreements, lotto passes, and the spreading development of the open game with its new plays and formations, the man who plays a good game at end must bring into use an increasing amount of original judgment. It takes a cool head to think fast in a tight spot, and the end must size up the varying situations immediately, and his analysis lead to instant action. He must get the jump on the play from the start, must know instinctively what to do and how to do it.

This analytical sense can be developed through constant study of the playing systems used by the various well-known coaches, plus a snap study—during the heat of the game—of the way his opponents play their positions. A good end should develop the ability to call the play in advance, in the same way that a good half-back can do it. I have heard men who played against Heinie Miller, cagy end of the University of Pennsylvania some years back, say that he must have been a mind-reader or a clairvoyant. Because he noticed every minor thing that happened on the other side of the scrimmage line, it was practically impossible to conceal the play from him or pull him out of position.

Remember, too, that you can utilize all these mental powers in other ways than those afforded by actual play. Football games are not won entirely on the field. The weeks of preparation, the untiring efforts of coaches, trainers and players, all may be wasted if team harmony has not been developed. Every man on the team—end, halfback, center—should realize that he is merely a cog in the machine. Individual brilliance is much to be desired because it sometimes spurs the others on to better effort. At the same time team co-ordination should never be sacrificed to it. Your mental attitude toward the other members of the team determines the degree in which they want to help you cover your position. And no man can cover his position well without absolute and unswerving cooperation from his team-mates. Make yourself well-liked by the other members of the squad—even the lowly ones. It's a well-known fact that there never has been a winning season without good-fellowship existing between the squad and the varsity.

For instance, I do not think that the entire credit for the great team that Tad Jones developed at Yale in the fall of '27 should rest on Tad's shoulders. He gave them the mechanical tools with which they won their championship, but a good share of the credit should go to Tibby Bunnell, the '26 captain and to Bill Webster of '27. During the preceding year these two worked incessantly on the idea that each man was a "member of the team" rather than an individual. They saw to it that the various players knew each other better, did everything possible to make the tedious winter and spring practice pleasant, and made each player admire and believe in the ability of the other. As a result, when the squad reported for practice in the following fall, this mental groundwork had been laid, and the men were emotionally fit to begin the hard, gruelling work that eventually led to a championship for them.

To go back, however, to the more practical side of football, we'll consider the end's duties in preventing the opposition from gaining ground around his side of the line. On the defense the end is responsible for the territory half-way between himself and his tackle, and the sideline. To cover this territory two systems of defensive end-play have

been developed. I will explain these in detail.

The first originated at Pennsylvania. Under the Pennsylvania system the end plays about two yards outside his tackle, charging diagonally, in the shortest possible line, straight at the opposing backs to stop the interference. If he can get the runner, well and good; but his main job is smashing the interference so that they cannot pile ahead and take out his own backs.

The other system calls for the end to play a little wider—from two-and-a-half to four yards outside his tackle. The system works as follows: You make your charge at right-angles to the line and play to get the runner. The best way to manage this is to take three fast steps across the line of scrimmage. Then set yourself and remain firmly set—dig in and get a toe-hold. When the interference comes piling in on you use all the muscle power you have in your hands. You'll need it all because usually there will be two of them against you. It is best, under these circumstances, to avoid playing both of them at once. Make up your mind whether the play is going in at the tackle or off around end, and after your decision play the outside or the inside man alone. In some situations, of course, you'll have to try to split the interference; and at other times you'll have to tackle the interference and runner at the same time. Experience will teach you.

Many high school and preparatory school coaches teach their ends to take their two steps straight across the line of scrimmage on every play. This is a fair enough rule, but it has its exceptions that prove it. I believe that when an end has become experienced and game-wise he can mix up the two systems of play to meet the situation that he thinks is coming. No hard and fast rule of play works every time in football. The ultimate object of the defense is to stop the runner, and the good end frequently gets through to make the final play instead of leaving him to the defending halfback. There are various ways of stopping the man with the ball, but the oldest, the most satisfactory and effective is by a clean and hard tackle. It seems to me, from the football we have been seeing recently, that the art of tackling has fallen on evil days, and that is something devoutly to be mourned. A hard, smashing tackle that bowls a man down like a nine-pin is so unusual today as to merit cheers from the grand-stand.

The two big secrets of tackling are to keep your eyes on your opponent's hips, and to keep on your feet until contact has been made with the ball-carrier. In other words, don't dive or hurl yourself at the man. This is dangerous and too much of a gamble for you risk injury as well as a fumbled or missed tackle. Instead, run at him and lunge forward at the right moment. Hit him hard. Throw your shoulder into the pit of his stomach and let the force of your charge knock him down. Some ends find it more effective to use the head as a ramrod instead of the shoulder. This method is pretty hard on the constitution, but it is also twice as hard on the opponent.

High tackling is one of the worse faults any player—and an end especially—can develop. It doesn't bring your man down instantly, thereby losing valuable yardage, and it leads to many more injuries than does the harder and lower tackle. There are some low, hard-running backs who are impossible to stop if hit high by the tackler.

Sometimes, when close to the sidelines, for instance, the tackle isn't your best weapon. In this territory it is often advantageous to take-out a tricky runner rather than try to tackle him. You have the whole length of your body to hit him with in a take-out, and if you hit him at all you will force him out of bounds. The take-out is a hard, rough weapon, but it certainly has its uses. The Georgetown teams of some years back used it with almost lethal effectiveness. Remember, though, to get your arms in front of the runner when taking him out. Otherwise the officials may stick a penalty on you for clipping.

And as I said before, use your head as well as your



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The athletic world, particularly football and boxing, still mourns the untimely death of big Al Lassman. As Captain and tackle of New York University's varsity team this young smiling giant wrote a name for himself that will live long in the annals of the gridiron. Al had speed to match the fastest end and a fighting spirit that made him an outstanding figure of the 1928 season.

muscle to make your tackles come easier. Most plays are given away before they start by some one or other of the attacking team, and a smart, cagey end can take advantage of this to get in and get set for his tackles. The position of the feet of the backfield men, the lean of their shoulders, even sidelong glances and like movements often give the general trend of the coming play.

When your own team is in possession of the ball, of course, your duties are absolutely changed, although you still have to bring into play the same cool football sense and judgment. Even before the game starts, a good end should have a pretty fair general idea of the kind of team he is up against. Through conversation with scouts and other football men, and a constant perusal of the newspapers he'll try to get a line on the tackle he'll buck up against. You can't get very definite information, but you can dis-

cover whether your man is a big, slow, hard-charging individual or a fast, rangy man who plays a slashing game. With this information in hand you can decide what to try against him first. And if you get the jump on the very first play—grab the mental edge—you have gone a long way toward out-playing your opponent.

When the time comes to buck up against this opponent, you'll find that your strongest weapon is a good, swift charge aimed at the abdomen. The initial charge, aimed correctly, is not sufficient in itself, however. After you get across the line of scrimmage and make contact, you must dig in, make short, snappy steps with all the strength of shoulders and legs behind them. Carry your man back if it is physically possible. Some well-known ends try each time to charge the opposing tackle back ten yards. That's a tough job, but if you accomplish it you have opened a hole that a Mack truck could get through without much difficulty. Upon the speed and viciousness of your charge depends your ability to do this.

In blocking, the idea is not to ride your opponent out of position, but merely to keep him where he is. Therefore, you pivot around on your hands or feet and throw the weight of your body into the opposing force so that he is prevented from breaking through by your outstretched arms and legs. While you block, your team-mates will be clearing out some other linemen to open a hole for the ball carrier. Don't charge when the signals call for blocking. If you do you may force your man smack into the hole the others are opening.

Also on the offensive the end is sometimes called upon to carry the ball on reverse plays, but this is infrequent. The main qualification here is to be able to handle the ball quickly and capably. You'll learn how to do this by prac-

ticing under forward passes. When going down for a pass the sprinter's start is an essential. After you break into the open you will use a change of pace, cutting one way or the other to lose the covering back. If you find that they are covering you too closely, report the trouble to your quarterback. If your opposition is using more than one man to cover you there will be a vulnerable spot somewhere else along the line.

In prep school I played end on the other side from Jim Stifler, later captain at Brown. Stifler was a ball-hawk, one of those ends who seemed to have glue on his fingers when it came to catching passes. During the early season he snatched so many that he made more points than the halfbacks, and consequently was a marked man when the big games came along at the end of the season. Two men were on Jim's tail whenever he crossed the line of scrimmage on the offense. We discovered their defensive system early, and as a result I had a pass-catching field day. An end who can grab passes from any position is an offensive threat equal to your triple-threat halfback.

Don't think it's sufficient merely to catch the pass, either. An end must know what to do with the ball after he has received it. In other words, he must be able to hold on to it, carry it into a broken field and be as versatile in this respect as a halfback. As a rule, long passes—that is, passes of twenty yards or more—should be caught in the arms, using much the same system as the safety man does in catching punts. The shorter passes, particularly those over the line, should be caught with the hands. A man can reach higher with one hand than he can with two, and it is well to keep this in mind when going after a highball. Don't think that an end is trying to be spectacular or showing off when he tries for a one-hand catch



Formations for line attacks vary. Here is one with Missouri, her back to her goal line, making an ineffectual stab at N. Y. U.'s line. The ends and secondary defense are drawn out along the line, as though for a lateral pass on the left. The ball is then snapped and the carrier smacks at tackle. Missouri, despite the fact that the N. Y. U. end (at right edge of picture) was laying far out, did not make much

It's often the only way he can make the play. And one-hand catches are just as much a matter of skill as they are of luck. Among the most adept handlers of passes in the past few years have been Oosterbaan of Michigan and Wear Schoonover, All-American last year from Arkansas. Both of these men could handle a thrown football with the same adroit skill that Tris Speaker handled a blazing liner.

An offensive end is called upon frequently, also, to run in the interference; that is, he must take-out opposing players either from behind his own line or by cutting through across the line of scrimmage to get the opposing half or quarter. The method is the same here as in tackling except that your hands cannot touch your opponent. Make a straight tackle lunge at your man, turning at the last second so that the entire length of your body is across his path. This will vary, of course, depending upon the type of play. On some plays you have to charge him completely out of your way; on others it is necessary merely to hold him where he is, which is not at all as easy as it sounds.

In one Yale-Princeton game, I remember, the Yale end was having his hands full every-time he attempted to block Princeton's star interfering back. "That guy has six hands and he is trying to stick the fingers of every one of them in my eyes," this end wailed. Finally he complained to one of the officials, an ex-Harvard star.

The Harvard man waved him away. He was thinking of the Harvard-Yale set-to coming up the next week. "Don't let it bother you," he retorted. "It will toughen you up for the big game."

In covering punts the offensive end has another job that calls for the use of all his faculties. When you can get down there and toss the punt-receiver without a gain, you are piling up yardage on the credit side of the ledger. The thing to do under punts is to get off fast and retain your burst of speed until you hear the smack of the ball against the kicker's toe. Then locate the ball rapidly, determine its approximate landing place and make for it as best you can. You will be hampered by at least one back, and the way to take care of this fellow is to run straight at him from one side or the other, holding him off with a stiff arm.

Many ends are taught to go outside the opposing half-back every time, but I do not consider this essentially correct. I'd say to keep outside the lane of the ball, regardless of the position of the defensive back. When there is but one man back to receive the punt you can disregard the ball and center your attention on him. Some teams, however, play two men back at safety when a punt is obvious—Major Cavanaugh does it at Fordham, for example—and in this case you must glance back to gauge the position of the pigskin. But do not let the opposing half take a crack at you as you are turning your head. See that you are far enough from him before looking back to locate the ball without endangering yourself in this manner.

Many halfbacks will try to take care of you by turning and preceding you down the field. They will then attempt to take you out as you close in on the receiver. The best way to meet these tactics is to race up behind and push your man forward. This method, I guarantee, will give you good results because he will usually go sprawling.

One of our ends at Yale had a peculiar method of getting rid of the hampering back when he was going down under punts. This chap was a high hurdler, and his object was to make his opponent leap at him too soon. Right then and there the Yale end would leap over his head and carry on. It's a good trick if you can do it.

Two points that I want to make, especially for high school players, are: First, make sure on every play that no opposing player is outside of you on your side of the field unless you call it to the attention of the defending back. Make it a matter of habit to check up automatically on

this before every play. The second is to learn to use your hands just as effectively as possible. An end takes quite a licking in the line, and his only chance of handing it back legally is on the defense. Learn what you can do with your hands and how best to do it. And don't be afraid to make hay while the sun shines by handing it to the opposing backs hot and rough on every play.

Football is a game of give and take—a man's game. You'll be playing a man-size part in it if you dig in your cleated toes at end.



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Above: An excellent example of what an end must face. Three men form the interference for the player with the ball. It is up to the end and one backfield man to stop that run.

Below: Hinkey Haines. He runs ends off their legs and makes them like it. Haines is one of the fastest pigskin chasers in history. It is all-around grid ace like this former Penn State star who are doing much to popularize the professional game.

FAMOUS PLAYERS OF

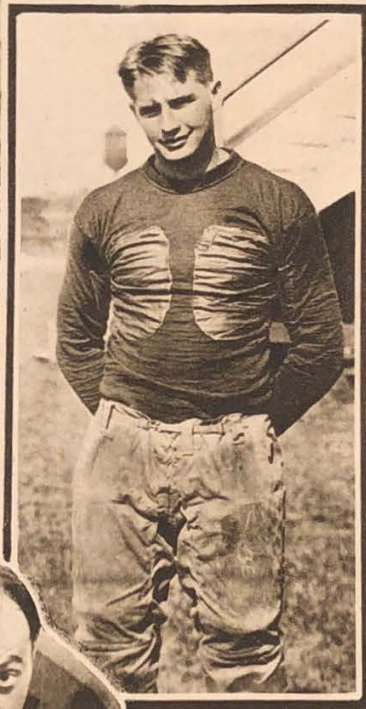
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SIMRALL (left), Captain, Michigan 1930, a fast, hard-hitting grid star whose leadership points to heavy scoring for the Michiganders this season.



"Chick" Harley (above), Ohio State 1916. He ran a punt back eighty yards for a touchdown against Wisconsin in 1914. One of the many big runs Chick made for the big O.



"Benny" Oosterbaan (above), a Michigan star of yesterday, whose selection on three successive All-American teams, 1925-'26-'27, places him in a most enviable position among Ends of all time.

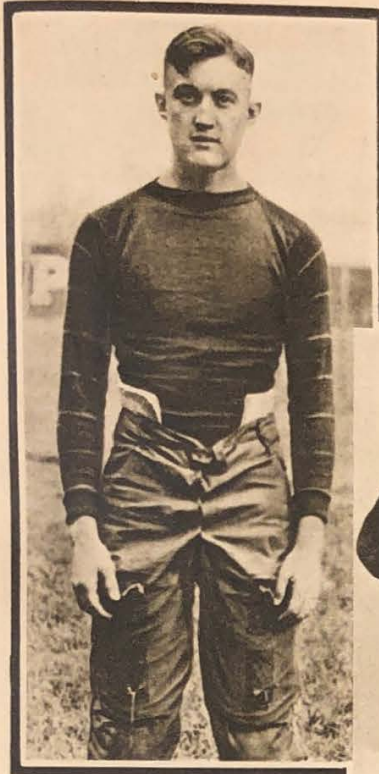


Les Hart (right), Captain, Colgate 1930. One of the fastest backfield men in the East, and a sure-fire ground gainer once the ball is in his grip. Colgate has a heady captain in command.

Dr. Joe Alexander (below), a Syracuse ace, whose ball passing and guard play in 1918 is still a model for rookies up New York State. Joe was All-American that year, and he played the same sterling brand of grid game in the pros when his college days were over.



PAST AND PRESENT

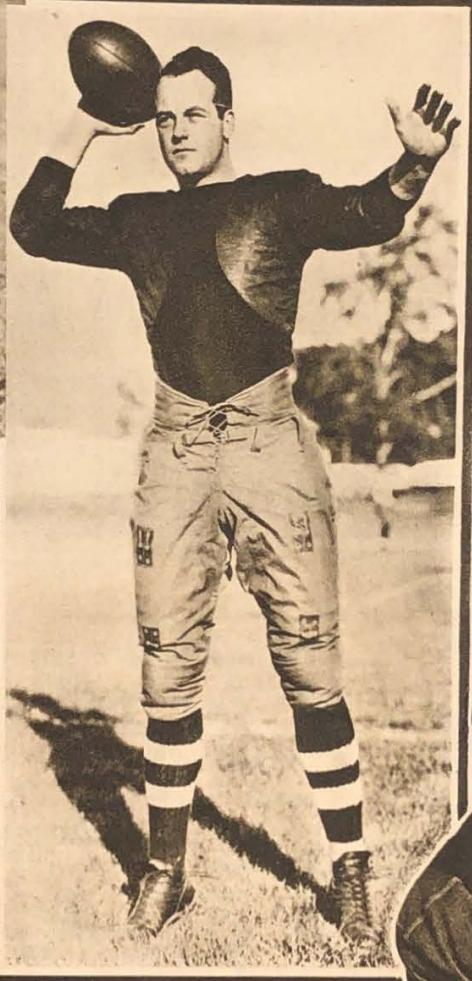


Tom Davies (left), one of Pittsburgh's great pigskin chasers. His famous run of forty-five yards through a steaming Washington & Jefferson scrimmage line, is still a vivid picture in the memories of the fans of 1920.

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Van Nice (above), Chicago University's 1930 captain. A double-threat man, who packs the punch for smashing holes in an enemy's line, and the trickiness to jockey tacklers while getting away a pass.



The Brown captain for 1930, W. Lincoln Fogarty (above), who was elected to head this season's team by virtue of his football brains, cleverness in analyzing opponents' plays and the speed of his legs.

Washington & Jefferson's walk-away entry for tackle on the 1921 All-American eleven. His name is Herb Stein (left), and when he hit a line something was bound to give.



The Tiger ready to spring is Princeton's captain this year. Mestres (right), who leads the orange and black in its 1930 campaign bears a slight resemblance to the great Thorpe. This resemblance, so they say, does not stop with his facial features. Mestres promises to leave football history in his wake.

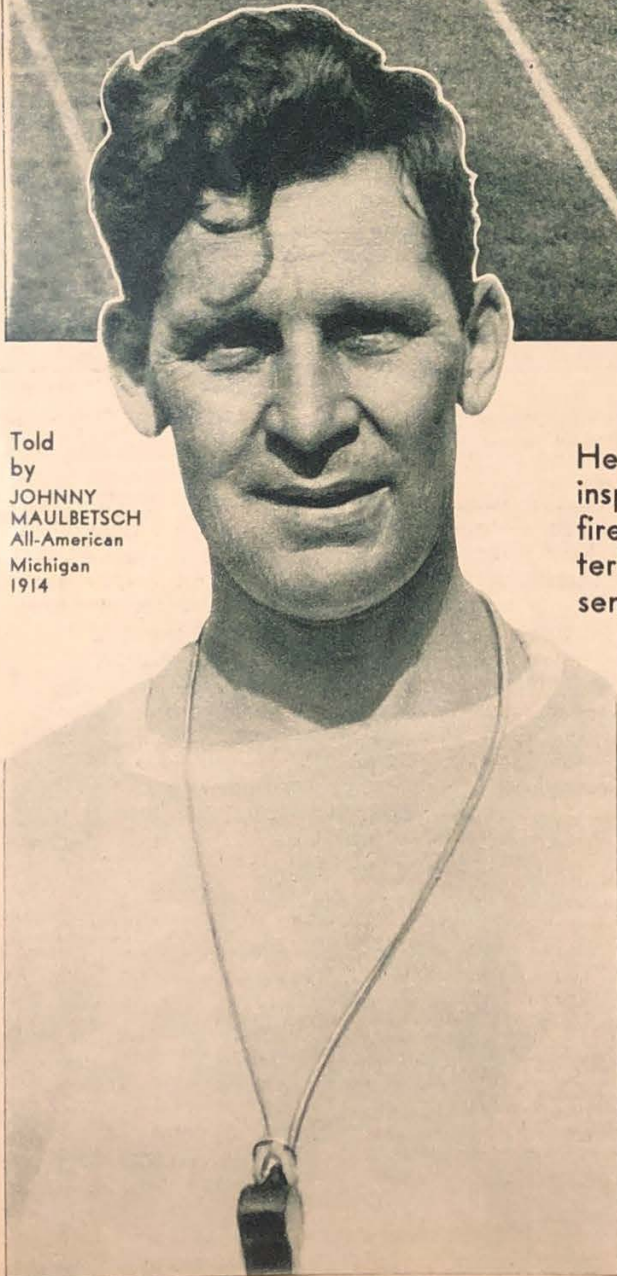


QUARTERBACK



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Told
by
JOHNNY
MAULBETSCH
All-American
Michigan
1914



He must have brains, a cheerful disposition, an inspiring personality; be cool and alert under fire—a big order, that, but an outstanding quarterback is the brain box of the gridiron. He sends his mates into battle, but unlike generals, he doesn't die in bed!

FEW laymen have any conception of the vast amount of strategy involved in quarterback play worthy of the name. The quarterback is not only the pivot around which the whole football machine whirls; he is the carburetor that feeds its energy; he is the driving shaft, the running gear and the steering gear through which it is given its direction.

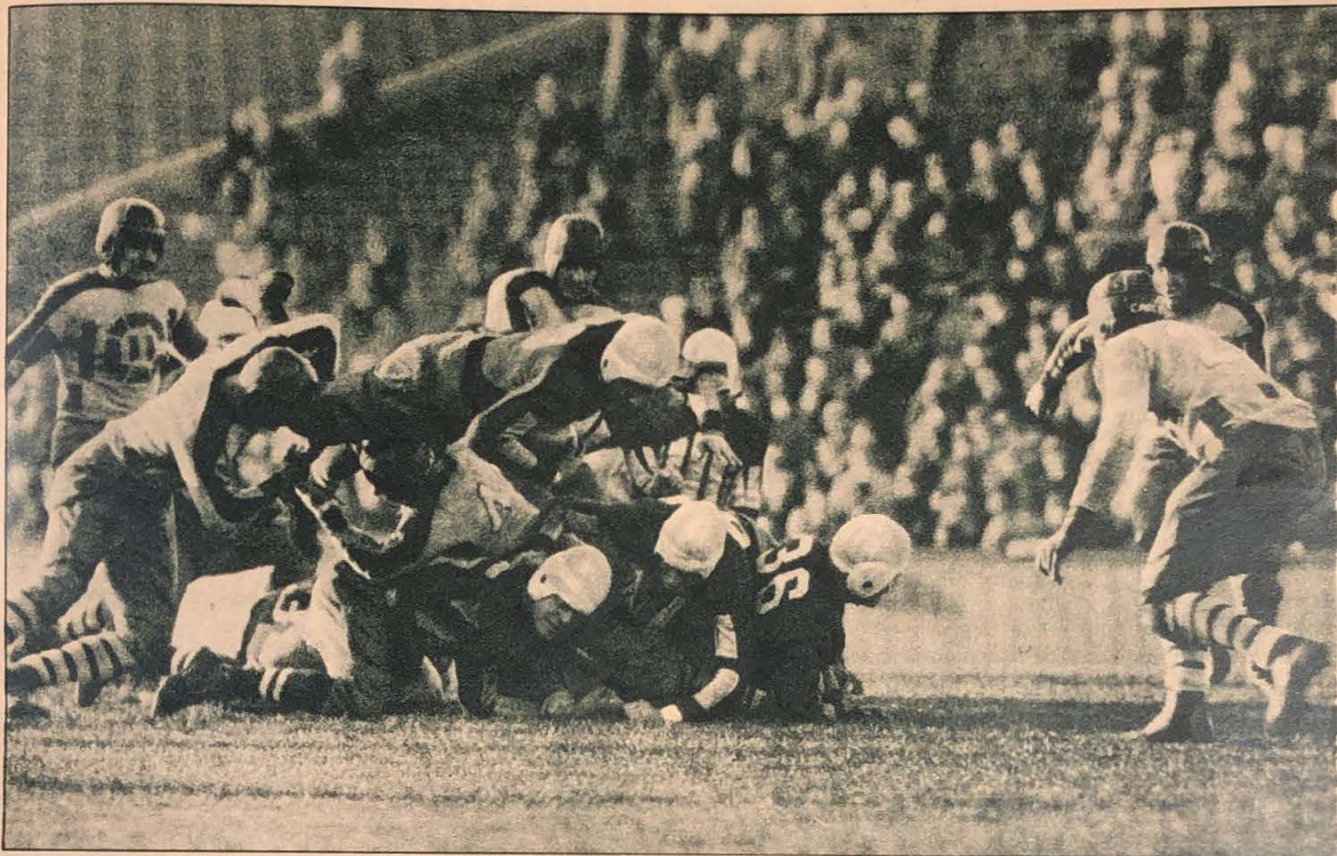
In terms of flesh and blood he is the solar plexus, the nerve center through which the brain imparts its impulses to the entire organization.

In terms of the dog fancier it is the airdale breeders' boast that "an airdale can be trained to do anything any other dog can do—and whip that dog." That's the quarterback. He is called upon to do anything any other player does.

The quarterback who crashes the All-American or All-State teams—or can even approach it—must be a clear, quick, broad thinker, for a winning football team is a thinking team.

Of course all the thinking is not done by the quarterback. Every man must think for himself in a pinch, and

STRATEGY



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There's strategy here, told in terms of furious action. The Columbia line played low, and no hole opened. So Macaluso of Colgate took to the air for four fat yards.

football is just one emergency after another. Too often you will find teams employing strategy on the offense with it utterly lacking on the defense. The team that wins consistently uses both.

Getting every player to do his own thinking is the coach's greatest problem. That this is true especially of the quarterback is manifest to anyone with even the most rudimentary knowledge of the game.

Too many coaches have the deplorable habit of thinking for the team during the week and then expecting the quarterback to do the thinking in the game. They would win more games if they required the quarterback to do the thinking during the week, then when the big game arrived it would not be booted away because he lost his head at the crucial moment.

The quarterback must have brains; but that is not all. He must have a cheerful disposition, an inspiring personality; he must be cool and alert under fire capable of using good judgment in the selection of plays under the most trying circumstances. He must have a clear, commanding voice with strong carrying power that inspires his teammates with confidence.

A commanding voice inspires players to superhuman effort as martial music inspires soldiers to go and do the impossible.

A cheerful disposition takes the mental load off of the rest of the team by accepting the blame of others' faults.

The quarterback who keeps cool in crises is always alert for weaknesses in the opposing players. He is quick to take advantage of the slightest slip, of the tiniest opening.

Contrary to the popular notion, the size of

back is unimportant. But, be he large or small, he must be an inexhaustible reservoir of energy, a human dynamo always generating power and imparting it to the rest of the machine, and some of the game's greatest quarterbacks have been small men. Eckersall, University of Chicago, Boss Weekes of Michigan, and Mt. Pleasant of Carlisle were smaller men who did big deeds at quarter.

Before the game time there are a number of things that the quarterback along with his coach and captain should take into consideration. First, visit the field a few hours before the game and make a complete survey of playing conditions. The entire field should be gone over to see if there are any wet or bad spots to be avoided. Note, too, how the field lies with reference to the sun, endeavoring if possible to choose your goal with the sun to your back in the last quarter. Late in afternoon when it is sinking low in the horizon is the time when the sun blinds and dazzles. The safety man who has to receive kicks against the sun has a dozen men against him. Old Sol is the twelfth.

And don't forget to observe the direction and velocity of the wind, to ascertain whether it is blowing strongly and in a direction that would interfere with your play. Temperature and humidity, too, are factors to be reckoned with, because the quarterback may anticipate the physical condition of his team mates and opponents and call plays which will result in a decided advantage for his own team.

In offensive play the quarterback must have in mind a pre-arranged style of play that he expects to follow during

ording to weather and playing field conditions in the form of a strategy map. This is a mental map of the football field divided into number of different zones. The zone behind you from the goal line up to your own forty-yard line will be considered the defensive zone. This zone, of course, you will try to avoid at all times, but should you gain possession of the ball in this zone don't spend the strength of the team on mass plays. Use open formations with the hope of a long gain, and do considerable punting.

Next on your map will be your punting area. This zone extends from the goal line to the opponents' forty-yard line. Whenever in this zone never wait until fourth down to kick unless playing for time. Should you find the opposing safety man playing too close to the line, you can then use the quick-kick to a good advantage in this zone.

From your forty-yard line to the opposing goal line is recorded as the passing zone. Whenever you reach this zone you are in position to pass and protect properly. Don't take this to mean one cannot pass behind his own forty-yard line. Should there be any weakness in the defense for the opponents a forward pass might be in order in most any position on the field.

From the fifty-yard line to the opposing goal is listed as the detailed or special play area. In this area you will call certain plays of open formations, devised by the coach for a long gain against your particular opponent.

From the opposing forty-yard line to the goal, or the last forty yards to a touchdown, is listed as the offensive zone. Here, of course, the quarterback will start his power plays. The last twenty yards of this zone are considered the scoring zone, and possession of the ball in this zone means everything. In this zone use every opportunity to advance the ball that sound plays offer. If you decide to use a trick play or forward pass on any down other than the fourth, be extremely careful that the passer's attention is called to the down and cautioned not to pass over the goal line. If trick plays or passes are used, be on the alert to use all available strength for protection. As all quarterbacks know, the last ten yards are the hardest, and in this ten yards use your best ground-gaining play with the ball being carried by your best offensive player.

On your strategy map are certain restricted zones, or zones of play to be avoided when on the offensive. These cover a territory that extends fifteen yards from your own goal toward the center of the field, and ten yards from each sideline toward the center of the field. These zones are always poison for the offensive team, and if you get the ball near the sidelines, resort to one of two plays

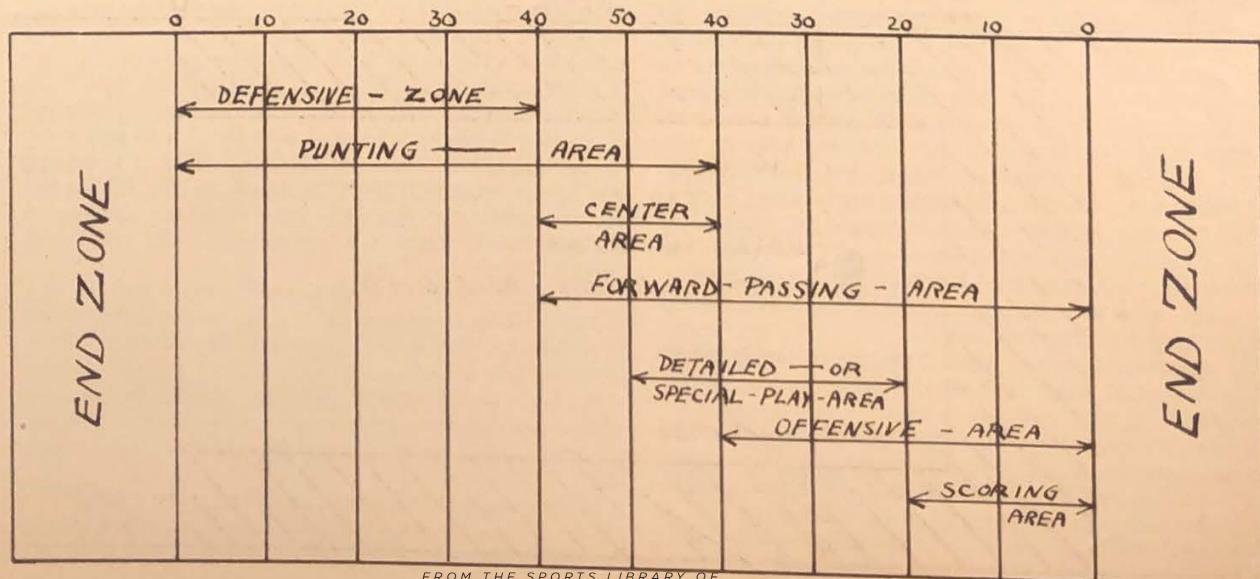
to advance the ball nearer the center of the field. First call the out-of-bounds play. On this play the ball carrier is called to carry the ball along the sidelines, and to fall out of bounds when tackled. Then, of course, the ball will be brought in the playing field to such a distance that you can open up your plays to a better advantage. The other alternative is to run a wide end play toward the center of the field. This play is usually unsuccessful and not used extensively because the defensive team generally is forced to place an end and tackle on the line of scrimmage toward the center of the field, therefore strengthening that side of the line to which the offensive team expects to run a play. If the ball is not near enough to the sidelines to cause the defensive team to shift tackle and end to the strong side, then the end run is considered a good play.

If you find yourself close to the opponents' goal line in one of these poison zones, with the score close, you may decide to try for a goal from the field. Here the end run for position is a good play. After executing it continue to run plays that will keep you in position to kick until the fourth down, the down on which you will try for a field goal.

Mention of this type of play brings to my mind a play executed by Sparks, University of Michigan quarterback, in the Michigan-Michigan State game played at Ann Arbor in 1916. With but a few minutes left to play in the final period and the score deadlocked at 0-0, the ball was in the possession of the University, near the sidelines, on State's twenty-five-yard line. Third down and eight yards to go. Michigan State had been playing great defensive football throughout the game and Sparks elected to run the ball back to the center of the field and try for a goal from placement. On the running play three yards were lost by Michigan, placing the ball on State's twenty-eight-yard line, fourth down.

Sparks called for me to go to the kicker's position, with him kneeling on the ground to hold the ball. Nieman, Michigan center, then made a poor pass, spiraling the ball too high. It looked too bad, to every one but Sparks. He went up into the air like a jumping-jack and speared the ball with one hand while going back. Then he stopped instantly, twisted about, and to everyone's amazement drop kicked the ball directly between the goal posts for a perfect field goal and the necessary three points that won the game for the University. This is an ideal example of what an alert quarterback can do for his team by quick thinking and the "never loose" spirit.

STRATEGY MAP NO. 1



One of the best offensive as well as defensive weapons in football is none other than the punt, if properly placed by the kicker. Much stress should be placed on this phase of the game and the quarterback should always inform the kicker of the condition of the field in regard to the location of wet and soft spots in the field. A good place kicker will direct his punts in the direction of these hazards. The quarterback should also be sure that the kicker knows the direction the wind is blowing, no matter how slight the breeze may be. If he is kicking from the center of the field near his own goal line it is best to try and punt the ball down the field, aiming for it to be near the sideline after the distance of the kick is spent. This will enable his ends to close in on the punt receiver and make the tackle, or force the receiver out of bounds with little or no gain. If in the middle of the field near the forty or fifty-yard line it is best to punt the ball toward the sideline endeavoring to have the ball go out of bounds near the goal.

If within ten yards of the sideline, it is always best to be sure that you do not have a cross wind blowing from the field of play. This condition will make it almost impossible to get any real distance on the kick before the ball is carried out of bounds by the wind. It is never good football, unless on the fourth down, to punt when within three or four yards of the sideline. It is always best to waste a down and run an out-of-bounds play which will give the kicker ample space in which to get the kick away clean.

If the wind is blowing in the direction you are advancing it is good judgment to call a punt often, in order to make your opponents play against the wind. If the wind should be blowing against you it is best not to kick until absolutely necessary.

The quick-kick may be used to a good advantage if the wind is blowing at the back of the kicker. It is also best for the quarter to catch the defending safety man in near the line anticipating a pass. This is a play the alert quarterback can use many times, but you must be a good judge of distance and of the speed of the opposing safety man who will cover the punt to make it successful.

It is imperative that the quarterback inform the kicker to which part of the field to punt. The punt *must* be kept out of the reach of the opponents' best brokenfield man.

In the playing of a real punting game an accurate punter is a necessity. I am of the opinion that an accurate punter, if used properly by the quarterback, is one of the most valuable assets a team can have. A great many fans

have the idea that distance in punts is all that is necessary, but a fair distance kicker who has the uncanny ability of placing his kicks is of a great deal more value to his team than the distance kicker who has no idea where his punts are going.

One of football's greatest kickers was noted not for distance but for accuracy. This man is none other than Harry Kipke, former All-American halfback from Michigan, and at the present time head coach at that institution. Kipke had the reputation of being able to hit a blanket forty yards away with a punt. Barrett, halfback on that great Cornell team of 1915, was a great place punter. Ken Strong, of recent All-American fame from N. Y. U., was another great punter who had exceptional control of his spirals. While for distance one of the greatest punters of all time was the famous Pat O'Day, former University of Wisconsin back. Another great distance punter, but one who failed to get as much national attention, was "Rip" King the West Virginia University back.

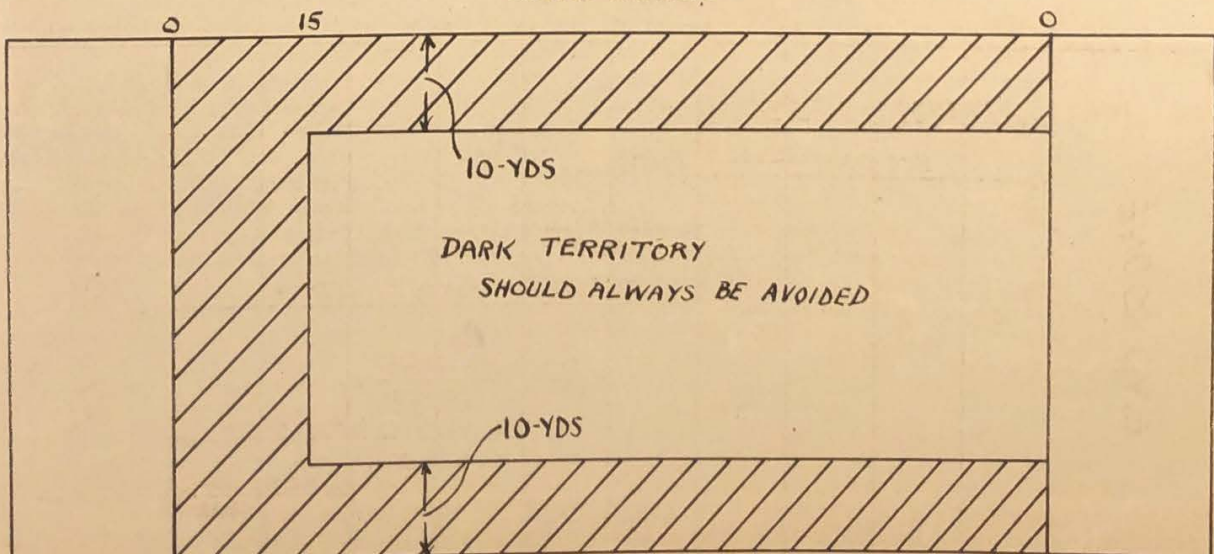
When in defensive territory, especially in wet weather, it is always best for the quarterback to punt before fourth down. If the opponents are not strong on the offense, and do not have a good kicker, it is advisable for the quarterback to call punts often and take a chance of gaining on the exchange. But should the opponents have a good kicker and a fair offense it is always best to keep the ball and make as many plays as possible before punting. This must be determined by the quarterback.

The receiving of punts is another good offensive threat that may be used by the smart quarterback. Proper reception of punts often means the difference between defeat and victory. In a great many instances the quarterback is used as the safety man to catch punts. In this case he must do his own thinking. But if some other member of the team is assigned to the job, the quarter must be ready to offer the receiver a last minute suggestion as to the direction in which to run.

In receiving punts you must know on what yard-line you are standing when you gobble the ball. If you are going to slash in and take it on the run the first thing is to calculate how far the ball will be from your own goal when it drops. If the punt is low and is going to land behind the twenty-yard line it is a safe bet that it will roll behind the goal. On this play, however, it is imperative that you keep yourself in position to block opposing players away from the bounding ball.

Many times during the season games are won or lost because the receiver made or failed to make the right play

STRATEGY MAP NO. 2





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The final test of strategy asks, "Does it succeed?" Where East met West in a battle of All-Stars, the Westerners made their big gamble via the pass route. Bronko Nagurski, number 6, trumped this aerial ace, though, and batted it down.

on a punt. And in a great many instances plays that afterward seem great are in reality bad plays. I recall two punts that were played in practically the same way. One won the game—the other lost.

In the Michigan-Chicago game of 1905, Clark, Michigan quarterback, misjudged a Chicago punt and caught it near his own goal line. In his attempt to run it back he failed to get started before being tackled by a Chicago end. He was hit so hard that he was carried back across the goal line, which, according to the rules of that time, scored a safety for Chicago. The Maroon and White won by a score of 2 to 0. This play had a direct bearing on the change in the safety rule.

In the Michigan-Cornell game at Ann Arbor in 1914, Charlie Barrett, All-American back from Cornell, made the first touchdown for his team when he caught a punt on the five-yard line and ran the remaining ninety-five yards through the entire Michigan team. This punt was in about the same position as the other and would have bounded across the goal line. As it was, Barrett got by with his chance and Clark didn't. Both Clark and Barrett made bad decisions by attempting to play these punts so close to the goal, but because the latter happened to be successful it was hailed by the newspapers as a great play.

And here's something else to remember. If the punter gets off a high kick about the middle of the field—a kick

that gives the ends plenty of time to get down—it is a good policy for the safety man to cover as much ground as possible in getting under the ball. Under the present rule the receiver has the right of way and if you stumble into one of the defensive players or if they in any way interfere with a fair catch your team gets the ball and the advantage of a fifteen-yard penalty.

During the course of playing a punt you should be extremely cool for there are two things to do at once. You must concentrate on the ball while it is in the air, and at the same time through your indirect vision see the players on the opposing team coming down the field toward you. "Red" Grange, was one of the most adept punt receivers the football game has ever known, because he possessed what is known in football circles as a "photographic mind."

He needed only a last glance at the position of the opposing players before he caught the ball and started on his now famous long runs. He anticipated the direction from which the men coming down under the punt would be charging toward him, and with this chart in his mind he was off to a flying start, taking advantage of the situation before it could change much. Then, too, if some would-be-tackler did change his course and cross up the famous "Red," he would then put into operation his shifty hips which operation was really the secret behind his long runs.

The speed and accuracy with which Grange could shift his course and side-step an opponent carried him to many touchdowns after his natural ability to receive punts had given him such a wonderful start down the field.

Many teams, not having exceptional receivers, play safe on punts and allow the ball to bounce around on the ground until it comes to a stop, but I am opposed to this style of play unless it is a very wet and muddy day. I believe it is possible to develop good receivers, and the best way is to let them catch punts under fire.

I recall a play that occurred in the Michigan-Ohio State game in 1922. Michigan had punted to Ohio State and the ball was allowed to hit the ground chiefly because it was a short kick and fell near one of the Scarlet and Gray half-backs some twenty-five yards in front of Johnny Stuart, Ohio State safety man. The ball was near the Michigan forty-yard line, bouncing around among several Michigan players who had gathered to prevent any attempt to advance it. Stuart came charging up and saw an opportunity to catch his opponents off their guard. He tore into the circle, scooped up the ball and shot off down the sideline for a touchdown, giving Ohio State their break that resulted in a defeat for Michigan by the score of 14 to 0.

Stuart took a big chance. Had he failed to get a firm grip on the ball the result might have been disastrous—one of the chief bone heads of the season. But as it was he had self-confidence and plenty of natural ability to execute such a play, and it went down in the books as one of the thrilling deeds of football.

In order to illustrate the possibilities of allowing the ball to bound about on a punt I am prompted to mention the play made by Chic Shiverick, star quarterback for Cornell, playing against Michigan in 1916. The score was tied and Cornell had punted. Rheim, the Wolverine quarterback, allowed the ball to bound about near the goal line, hoping it would go over the line for a touchback. Shiverick came dashing up and bumped Rheim in such a manner that Rheim fell into the ball. One of Shiverick's teammates immediately pounced on the pigskin, and Cornell carried the ball over for touchdown on the next play. Cornell won the game by a close score of 21-20.

If you catch the ball near the sidelines, or are forced to take a course down along the sidelines, it is well to remember to fall out of bounds when tackled. This will place the ball in a much better position from which to run the next play.

In calling plays from close formations be deliberate, and very observing of the opponents' defensive formation. You can start chattering numbers that mean nothing, but the actual play should not be called until you have looked over the opponents' defense and decided just which is the weak spot.

And don't forget to mix up your plays as much as possible. This puts deception into your offense. During each game you should note your most consistent ground-gainer, and also the play which brings your longest gains. Different plays will go best against different teams, therefore this observation must be made during each game.



© P & A Photos

A well conceived fake punt sent Hanson of Temple around the Lafayette end for a long gain. The quarterback gambled with a running play on fourth down—and won. But it wasn't good football.



© P & A Photos

Another fake kick that worked—thanks to the threat of the lateral pass. Charley Devens of Harvard has a wide open hole in the Yale line. The Yale end is drawn out by the Harvard decoy because quarterback brains called a lateral on the previous play.

If five yards or more should be gained on the first down, resort to line plays for the additional yardage. If your team fails to make such a substantial gain on the first down, then it is wise to resort to more open plays, such as passes or end sweeps.

Many games are lost during a season by fumbling. The quarterback—who in some systems of play handles the ball more than any other man on the team—must not fumble. And always impress on the other backs the necessity of handling the ball cleanly.

The quarterback should be well acquainted with the entire roster of the opponents' squad by name and reputation. This information will be supplied by the scout who watches them in action. When your opponents make a substitution you should know who leaves the game and by whom he is replaced. Certain plays may work better against the individual substituting in the lineup. When a substitution is made in your own backfield—unless you have specific orders from the coach to run a particular play—it is always best not to call on the substitute to carry the ball on the first play. Often the substitute is over-anxious and has a tendency to fumble.

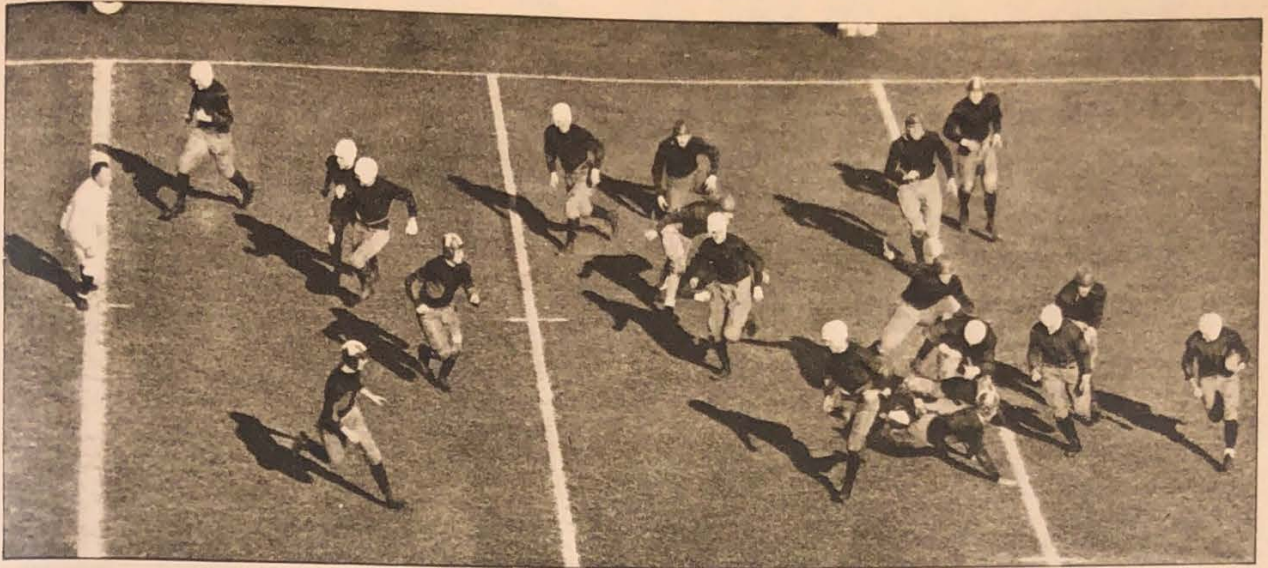
A good quarterback will observe where he fails to gain with certain plays and will run others in that direction. This allows him to mix up his order of plays, and results in better performance by the individual backs.

This article would be incomplete without discussing the phase of defensive strategy. Well-coached teams have three or four types of defense, including the use of six or seven man line, and zone or man-for-man defense on passes. The

quarterback should have prearranged signals that will instruct his team which defense to use. It is imperative that all eligible pass receivers be covered at all times. The quarterback should observe all opponents not in regular position. An example of this is the failure of Princeton to cover the West Virginia end on the famous "lay out play" executed by West Virginia for their first touchdown against Princeton in 1919. Hager, West Virginia end, stopped near the sidelines and on a quick lineup Rogers, All-American fullback, took the spiral from center and tossed a long pass to Hager who scampered the remaining distance for touchdown. That play broke Princeton's heart. West Virginia won the game by the overwhelming score of 25-0.

A quarterback must always be on the alert for these tricky controversial and conversational plays near his own goal line. A play of this type was used by Michigan in the 1914 game against Penn. We had worked the ball up to the six-yard line, but Penn stiffened there and we made two futile assaults against a stone-wall line. So we resorted to trickery. Suddenly, while signals were being called, apparent dissension broke out among ourselves. We seemed disorganized. We talked angrily among ourselves. But the moment the Pennsylvania players relaxed, a quick play was run through the center of the line for the marker.

Two of the neatest pieces of defensive strategy the game has known were executed in the West Virginia-Washington and Jefferson game of 1924 and the Drake-Iowa State game of 1925. Washington and Jefferson was leading West Virginia by the score of 6-0 with but a minute or so



© Wide World

Keep the ball away from the sidelines! Yale strategy follows Johnny Maulbetsch's advice by sending Hall on a wide sweep around the Tiger end with eight warriors in blue ahead of the ball.

left to play in the final period. The game was being played at Morgantown under very disagreeable weather conditions. Washington and Jefferson had possession of the ball on their one-yard line with fourth down and ten to go. Coach John Heisman of W. & J. sensed danger of punting a wet ball, and immediately rushed in a substitute for the man back in the kicker's position. The substitute received the ball and dropped to the ground executing an intentional safety that gave West Virginia two points but placed the ball on the W. & J. twenty-yard line in the possession of W. & J. Before another four plays could be executed the game was over and W. & J. had won by the score of 6-2.

Another bit of similar strategy was called into play by the quarterback of Iowa State in winning the Drake game of 1925. Iowa was leading by the score of 7-0 with about ten minutes to play. The ball was in their possession on their own twenty-five yard line, fourth down. The quarter took the pass from center and ran behind the goal line intentionally giving Drake a safety and two points. The ball was returned to the twenty-yard line and given to the Iowa State team and after three plays were run off—one as slowly as possible—the quarterback executed another run behind the goal for the second safety for Drake. This procedure was called into play again for the third safety, but before the final four plays could be run off, time expired and the game was over with Iowa State the winner at 7-6. This play caused the change in the rule concerning the placement of the ball.

In closing this article I would like to call attention to several things that a good quarterback should always have in his mind. He should always know the distance to be gained, the down, the time left to play and the score of the game. The distance to be gained will determine the type play to be used. It is always best to ask the referee after each play the down and distance to be gained. The quarterback should have in mind the individual characteristics of the members of his squad as well as the opponents. He should always look over the opponents' defense before calling the next play. He should keep in mind the strategy map and certain plays designed to meet certain situations. The unsuccessful quarterback thinks of the play *after* the opportunity has passed. If things go a little tough the quarterback doesn't weaken. Pep up the rest of the team. And above all things, keep in mind that you have one objective—to win the game. And a good quarterback will never quit fighting regardless of the score.



BILL BARFIELD
of Princeton

© Wide World

Bill Roper's Princeton quarterbacks are noted for their slashing, take-a-chance play. Their daring handling of punts is a sensation in Eastern football. Here's Bill Barfield of recent Bengal fame.

GRID GIANTS



© P & A Photos

By ROGER GREENE

They grow their tackles big and rugged and fast on the West Coast. Roger Greene, ex-Andover star and California grid-expert, takes you down on the players' bench for a close-up of them under fire

THE GLAMOUR of the gridiron is almost never reflected in narratives focused on that vague yet undeniably important figure—the tackle.

He's in there lunging, grappling, sweating, fighting in the thick of the conflict. He's bruised and battered and smothered at the bottom of the heap three times as often as the ballyhooed heroes of the backfield.

Occasionally the loud-speaker blares: "Here comes Stanford's right tackle out. He's played a great game of football today. Give him a hand."

And the tens of thousands in the concrete stadium clap mildly. Perhaps a loyal cheer from the student rooting section goes up for the mud-smeared, dog-tired player as he trots from the field.

Then he's forgotten. Interest shifts swiftly back to the battle—to the huddle, the rhythmic "one-two-three" shift, to the fleet-heeled quarterback snaking like a phantom through the broken field. "He's free!" The crowd jumps to its feet, cheering madly, frantically . . . "touchdown!"

And the roar of the crowd, the head-lines, the comment, have no room for the tackle who smashed the way clear to victory or plugged gaps in a faltering line when all seemed lost.

But the coaches know, and it is an old axiom of the gridiron, that "a team is no stronger than its line." And, it might logically be added, the line is no stronger than its tackles.

With which prelude to a discussion of Pacific Coast tackles, their qualification and duties, let's swing into a

rapid-fire tour of Western football camps and see if we can gain, incidentally, an inkling of understanding for the preponderance of West Coast triumphs over eastern teams in recent years.

First we'll drop out to the giant Los Angeles Coliseum, lightly turn Father Time's log-book back two pages to the fall of 1928, and take a look at Jess Hibbs, captain of the University of Southern California Trojan "Thundering Herd," performing some of the greatest tackle plays ever seen.

We'll have to look sharp, for Hibbs is here, there and everywhere, always in the thick of it whether the play is headed through his tackle position or around the other end. He's down in the jumble of struggling bodies and more often than not he's manacled the man with the ball with a grip that would confound even the late Harry Houdini. He's playing football that is to gain him general recognition as a member of that mythical yet glorious legion—the All-Americans.

Hibbs is a typical illustration of a Western tackle: six feet in his stockings; lithe; broad though not heavy shouldered; rather lean; long arms; big hands; powerful-driving but not stocky legs; small hips lending themselves to shiftiness; 190 pounds of action. His is the ideal physique for the tackle post. Why? Let's take them in order.

He must have height because football is a game for big men; because the weight he needs to throw against the opposition requires a long frame to be evenly distributed.

OF THE WEST



© Wide World

Two tons of athletic manhood hammered together in a line that locked, and Bronko Nagurski comes around the end into the arms of "Fanny" Hunting. Grid giants, all of them, and Nagurski by reason of his exceptional talents as tackle or back joins the long list of gridiron immortals.

He must be lithe because unless he is limber he is in the same position as the muscle-bound boxer, who may be as strong as an ox yet cannot use his power for the simple reason that his inflexible muscles won't respond.

Broad shoulders are vital to withstand the repeated shocks of thudding contact as he smacks shoulder-to-knees against a rushing ball-packer. But heavy shoulders are a severe handicap since they at once tire him and are no more effective, under modern conditions with shoulder-guards, than the sparer yet sturdy shoulders such as Hibbs has.

The Trojan leader is lean as a greyhound. But his belly is as hard and unyielding as a sheet of corrugated iron, well able to withstand the rude jolts he receives there as a stray knee drives into the pit of it or a 220-pound full-back, head-down, smashing through like a battering-ram, butts him in the midriff.

Powerful-driving legs are one of the most vital factors in the make-up of a tackle. He may have shoulders like a bull, a torso like Dempsey, and hands like George Bancroft. But he's lost in the savage charge unless his legs can propel him with dynamic force. Stocky or heavy legs may be durable as the Rock of Gibraltar, but they're usually shy on speed. With the notable exception of Al Miller of Harvard, who had the biggest thighs and legs I have ever seen on a fast man (and who, incidentally, played a great lot of football in the backfield for Harvard a few years ago, as well as being a champion sprinter), most kings of the cinderpath have remarkably spindle-like legs.

My old schoolmate at Phillips Andover Academy, Charley Borah (his full name, believe it or not, is Charles Edward LeGrande Keweinecke Yerksprings Napdarling Borah), who won the national 100 and 220-yard sprint championships in 1928, had such comparatively fragile legs that Dean Cromwell, the University of Southern California track coach, refused to let him play football.

It has been pointed out that tackles must be big, fast, powerful men. Yet there have been exceptions. Walter Heinecke, Stanford's All-American center last year, was one of them.

Few fans will recall that Heinecke first broke into the limelight as a tackle. It was in the Pasadena Rose Bowl, January 1, 1928, that he first crashed the public prints in a notable way. Stanford was playing Pittsburgh in the annual East-West classic, and Walter was just a sub, warming the bench, trembling with the faint hope that he might, by some miracle, get his chance.

The Smoky City Panthers were banging their way goalward and "Pop" Warner, the grey-thatched Old Master of Palo Alto, sometimes called "The Fox of the Farm," was fuming. Warner suddenly jerked his star 220-pound tackle and sent little 170-pound Walter to the rescue.

The stands didn't exactly break into a pandemonium of cheering to hail Heinecke. Many gaped in amazement and groaned in mortal anguish at the crazy notion of this unknown shrimp trying to stem the onslaught.

But Heinecke did just that. He not only plugged the hole through which Pittsburgh had been firing shot after shot for devastating gains, but when one of his teammates fumbled and a Pitt man recovered to race across for the touchdown, Heinecke blocked the attempted goal-kick for the extra point. Walter took the thud full in the snout. Those who have done the same thing in gridiron annals are legion, but in this case it meant the ball game, for Stanford scored a touchdown later and converted to win, 7 to 6.

Heinecke never went back to his first love as tackle. Warner found him too proficient at center. He was one of the most valuable players Stanford ever had and frequently called signals even while bending over the ball at center. He was so versatile that on one northern invasion he was prepared to play guard, tackle, center, end or quarterback!

At the end of the 1928 season a group of eminent medics laid their stethoscopes over Walter's heart and gravely announced that his football days were over. But they didn't know Heinecke. That summer Walter went out and labored industriously, and came back to play practically every minute of the 1929 season. And played it so well that at the close of the campaign, Grantland Rice revised

his original All-American team and placed the Stanford star at center jointly with the redoubtable Ben Ticknor of Harvard.

Heinecke was an exception in the matter of build. He didn't even look his 170 pounds, for he was short and squat, built along the lines of a gorilla rather than the Greek-god statuary physique of Jess Hibbs.

As a rule, Western coaches recognize height as a valuable asset in a tackle, inasmuch as it is generally accompanied by a long reach which enables a player to reach out and stop plays even though partially blocked.

However, Jones and Warner do not go in for the towering bean-poles such as are found in the Northwest. Too much height is often detrimental and medium tall players have illustrated time and again when North meets South on the coast that they can beat the bean-poles from the timberlands of Washington and Oregon simply by beating them to the charge.

Yet Trojan and Cardinal tackles are rangy giants, averaging close to six feet, compared to the general run of Eastern tackles. This is generally attested to when East meets West and Eastern scribes dolefully describe the "giants of the Far West standing with their heads in the clouds above our little men."

Besides being big, powerful, fast men, Pacific Coast tackles—like tackles the land over—must be fast-thinking, agile, courageous, good sportsmen, fearless, alert and so on down the line of factors vital to players of the great American game.

They must be particularly cool-headed and swift to reason out or diagnose enemy plays as they are actually in the process of hatching.

As an illustration of what happens when cool-headedness is missing, you doubtlessly recall the famous story about "Brick" Muller, the great California All-American end and the first far Westerner chosen on Walter Camp's mythical eleven.

"Brick" was playing for the Golden Bears against Washington and Jefferson in the New Year's Day classic at the Rose Bowl. The head-lines had been full of the marvels performed by the famed sorrel-top, but it was pretty much a case of "Casey at the Bat" when the two lazy-spoken, good-natured Southerners pitted against him (and told to watch only "Brick") started to rag him.

For some unknown reason, Coach Andy Smith held Muller on the bench until late in the game. When he finally rushed onto the field, the huge crowd rocked the heavens with their cheers.

"Well, well," drawled one of the Southerners to his partner, "looka here, but I do believe this is the great and only 'Brick' Muller playin' opposite us."

The ball was snapped. Together they squashed Muller. "Naw," replied the boy from Dixie, scornfully, after the play was over. "That ain't the great All-American, 'Brick' Muller. You don't seem to know nothin'. Why! this guy's just a beginner. Probably his first game. They'll stick Muller in for him later."

They kept up the unmerciful guying until "Brick" was roaring with rage and intent only on banging these two smart alects to bits.

"The smile is gone from Casey's face, his teeth are clenched in hate:

He pounds with cruel vengeance his bat upon the plate,
And now the pitcher holds the ball, and now he lets it go,
And now the air is shattered by the force of Casey's blow."

That was the famous and feared "Brick" Muller, and once more the poem tells what happened:

"Oh, somewhere in this happy land the sun is shining bright,
Somewhere bands are playing, and somewhere hearts are light;

Somewhere men are laughing, and somewhere children shout,
But there is no joy in Mudville—mighty Casey has struck out!"

The tackle post stands to the fore as one of the most

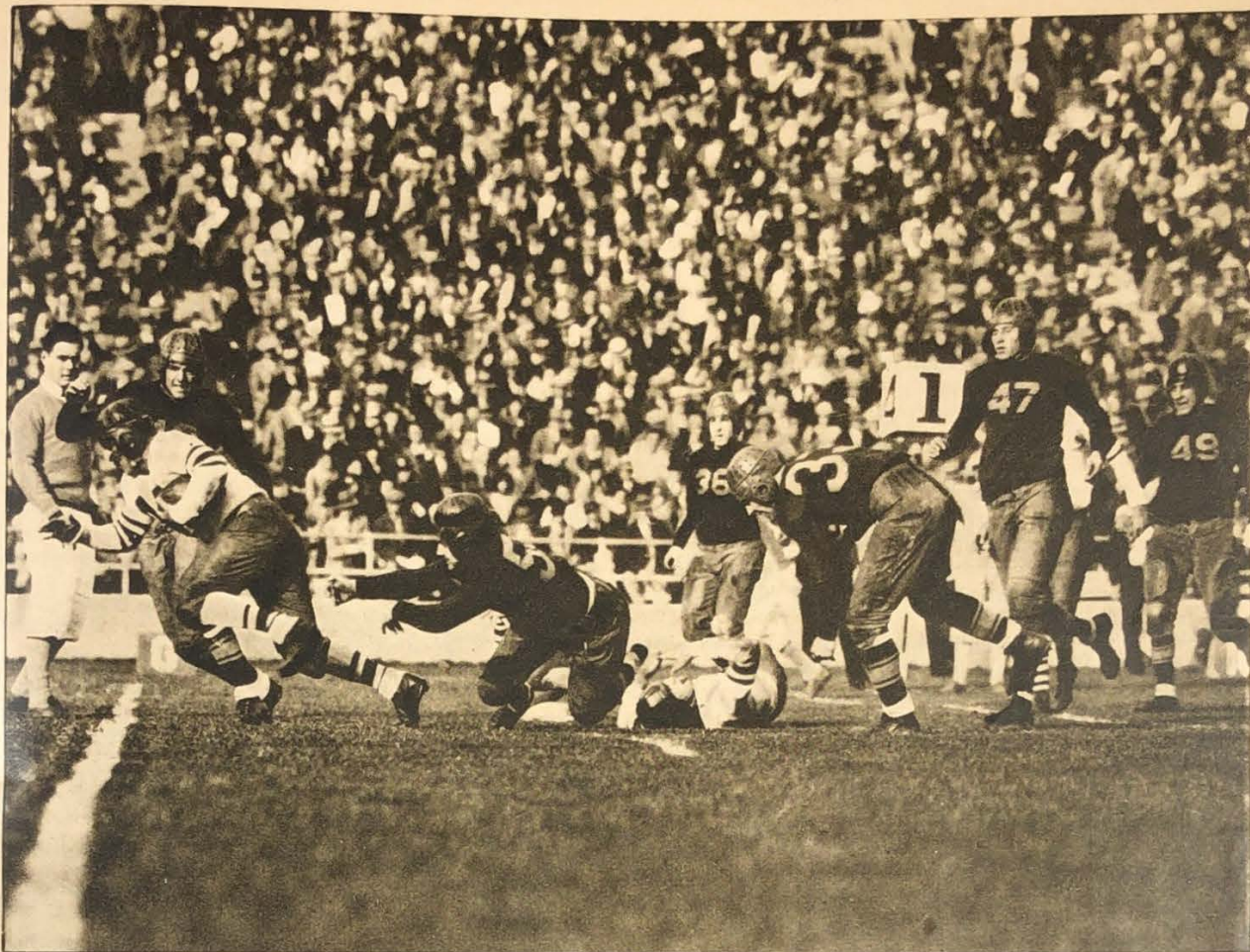


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Hit 'em low! That's the battle cry of the coaches and fans alike. And Bill Calderwood, Northwestern halfback, shows you how to bring the ball carrier down so he'll stay down. The nifty fellow who allowed himself to be used as a victim is Bill's team mate Johnny Haas.

Note the grip on the ball to prevent fumbling.

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A tackle that missed by inches and a ball going across the line to score. Glasgow caught as he tore over the goal line, evading by a hair's breadth two of the Pacific Coast All-Stars. Running a gauntlet of pigskin passers like this calls for speed, agility and a brand of courage that keeps a man stumbling, bumping, plunging always goalward.

difficult to play. Certainly it demands as much if not more stamina than any other position.

Where the center and guards are chiefly concerned with blocking and piling up the center of the line on defense, and are seldom called upon to open a hole on offense unless just a few feet are needed for a first-down, the tackles are involved in virtually every play.

On offense he must:

1. Keep the opposing end or tackle from breaking through while his own ends race into the open for possible reception of the ball, in the case of a forward pass.

2. The same in the event of a punt.

3. Throw the opposing tackle to left or right according to whether the play called is a drive off-tackle or through the center of the line.

4. Figure in a split-second whether the opposing end or tackle is most threatening and should be taken out when his own end is called on, as is often the case in the Howard Jones system at Southern California, to run in the four-man interference.

And on defense he must:

1. Be able to keep his feet against the rushes of the opposing guard and tackle, elude one or two would-be interference-running backs, and tackle the man with the ball.

2. He must sense on which side of the line the play is coming, and not be caught napping or hewn down on the inactive side of the line when he should be either breaking through or helping out on the other side.

3. He may use his hands on defense and so "swat" or shove opposing tackles, guards or ends out of the way in his efforts to get at the man with the ball. But he's got

to be spry to keep his feet and still retain his usefulness.

4. He must know how to block effectively—that is, pile up the players opposite him—so that if the play is scheduled through the line the interference and the man with the ball will bump into a thicket of bodies as impenetrable as the Tar Baby found in the bramble-bush.

5. He must cover a far greater territory than the guards or center, for often the end will move out to counter the opposing end who has spaced horizontally ostensibly to receive a pass. Actually, the opposing end may be only a decoy and the rush will come off tackle. Or, if the tackle is sucked out, the play will shoot inside him.

6. And above all, he must know, of course, how to hit hard and low. His position derives its name from the fact that he is so placed that more than an average share of the tackles must be made by him.

The perfect tackle is a shoulder-smash to the general vicinity of the kneecaps. That cuts a man down to the ground like a scythe, whereas a higher tackle leaves him on his feet and makes it a contest of strength instead of skill.

Try to throw a man, coming at you with equal force, by diving at his waist and he can either shift and shake you off or drive you back for precious yardage.

On the Pacific Coast tackles come big and fast. Speed is emphasized above everything else, because in California at least—where the "Big Three" of the Far West, consisting of Stanford's Cardinals, Southern California's Trojans and California's Golden Bears are located—there is no weather bugaboo to contend with.

Muddy fields are almost unheard of, and fleet-footedness rather than smashing power is vital.

Howard Jones and Glenn Scobie "Pop" Warner, coaches

of Southern California and Stanford respectively, were quick to take advantage of the ideal weather conditions upon their arrival in the West. Their styles of play have changed almost beyond recognition from the methods they employed in the East and mid-West.

Forward pass development has been strong, because this type of play can always be employed in California. And the overhead attack speeds up the game immensely.

Tackles who played under Howard Jones must be particularly speedy, for, as related before, he uses a line shift which means that the tackles may be called upon at any time to play end positions—the regular ends falling back to run in Jones's famous four-man interference—and hence the tackles must be able to step lively at all times.

Jones, himself a linesman at Yale many years ago (1904-1908), personally coaches his tackles. He gets down on the line with them and tells them what he wants, and most critics agree that Jones's great line play is the secret of his phenomenal success.

It might be well to state here that while the Trojan mentor is noted chiefly for his "power play," and is consistently ballyhooed in the newspapers as having "a power play that cannot be stopped," he mildly resents the term.

Once, as I was playing a round of golf with him at the Riviera Club in Santa Monica, Calif., he took time out between shots to state emphatically that he doesn't know what the scribes mean by his "power play" and that he uses something like forty-eight different formations in a season.

I rather think Howard Jones secretly is rankled by the inevitable comparison of himself as the "power play" master and his old foe, "Pop" Warner, as the performer of black-magic trick plays.

However, there's no doubt that Warner's Big Red machine of Stanford always flashes more fireworks than do the Jones' productions.

Indeed, Warner's system of dazzling, intricate reverse plays is often so bewildering that even spectators equipped with field glasses, looking directly down over the back-field, cannot tell who has the ball.

It calls for highly expert blocking by his tackles and other linesmen, and no player can make the grade under Warner unless he can stand his ground and plug a hole while Stanford backs are passing the pigskin around preparatory to flashing suddenly, like a rapier, from a point least expected.

The ball, at times, is slipped to every man in the back-field before it is finally clutched by the one designated by the play to plunge for yardage. Meanwhile the line has to do *some* blocking!

Now let's take a glance at coaches and players (always keeping a particular eye on tackles, since they form the subject of this article), who have driven West Coast football from brief mention among the classified ads into the headlines.

Howard Jones and "Pop" Warner are the two most famous mentors on the Coast. Oddly enough, both came from the East. Jones played and coached at Yale. Later he went to Iowa and as chief grid strategist of the Cornhusker institution brought back to New Haven an eleven which defeated brother Tad Jones's Sons of Old Eli. Howard went to Duke University in the South for a short time, and in 1925 he signed at the then amazing salary of \$10,000 a year at the University of Southern California, succeeding "Gloomy Gus" Henderson.

In his five years astride the Trojan war-horse, Jones has made the best record of any coach in the West in games won and lost.

Warner, scarcely less successful, first flared into notice as coach of the Carlisle Indians far away down the years. It was his astonishing idea which produced the "hidden ball" play, now barred, which humbled mighty Harvard when a Carlisle redskin tucked the ex-porker's wardrobe beneath his jersey and leisurely loped down the field across the goal-line while Harvard players searched frantically for the man with the ball.

From Carlisle, his fame now nation-wide, Warner went to Pittsburgh where he turned out some great machines. In 1924 he tardily took Greeley's advice and went West to Stanford.

The duel between Jones and Warner is one of the most



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The player with the ball is Forster of U. C. L. A. and his chances are not worth two hurrahs in Hades. But the picture proves the ineffectiveness of tackling high. The tackler whose face you see, caught him first, but not until reinforcements arrive does he succeed in halting the gain. All they're waiting for now is the whistle.

dramatic and most evenly pitted in all gridiron lore. In the five games in which Cardinal of Stanford has battled Trojan of Southern California—with the two grim old generals, Warner and Jones, directing the conflict from the side-lines—Jones has won two, Warner two, and the other was a 13 to 13 deadlock.

Rivalry? It's so thick you could cut it with a knife, a sharp knife, when Stanford and Southern California collide.

Warner uses an unbalanced line for his offensive play, his tackles going into formation side by side on the strong side of the line.

He generally has bulky gentlemen doing his work as tackles, and he also employs 200-pounders or heavier in the backfield. Herb Fleishhacker, for example, who played quarterback for Stanford for the past two seasons, tipped the beam at a mere 220 pounds!

Which means that the opposition encounters the stunning shock of more than 800 pounds of man-power when Warner uncorks his power onslaught from the right side of the line.

Jones's system of line play is as complicated as any in the country. His tackles are not interchangeable. By that I mean that his left tackle cannot switch around and play right tackle. Each tackle has his own substitutes and the same goes for the ends and guards.

On offense Jones uses an unbalanced line. But it is often the case that his ends, or at least one of them, leads the interference rather than the tackle.

For this reason, Jess Hibbs, though listed as a tackle, often played offensive end for the Trojans.

Besides Hibbs, the leading coast tackles in recent years have been Buzz Ackerman of St. Mary's "Galloping Gaels" (Oakland, Calif.) and Ronald Sellman of Stanford.

Ackerman finished at St. Mary's last year, and no less an authority than Warner gave him All-American honors on his first team. Ackerman was practically impregnable on defense, and was no little instrumental in bringing the Gaels through an undefeated season which listed among its opponents both California and Stanford.

Sellman was more of the power-house type than either Hibbs or Ackerman. But he did not play his best football

until a stray cleated boot in the shins or an undercover punch on the nose smeared red before his eyes.

Then he was a terror, a slashing, man-handling giant brute—forcing his way through everything.

Of similar temperament is Bob Hall, giant Southern California tackle, who played as a sophomore against Stanford in the "Big Game" last fall. And thereby hangs a tale.

There are few bigger football players in the game than Hall. He scales 220 pounds of whipcord muscle and stands six feet four inches above the pavement. At the same time he is remarkably handsome and also very good-natured. In fact, Howard Jones has often complained that Hall is too good-natured for his own good. "If I could only build some fire under that boy, no team in the world could stop him," Jones commented the week before the classic battle with Stanford.

The Trojan coach had tried everything under the sun to stir Hall out of his lethargic gentleness—without avail.

But the day before the big battle, "Dink" Templeton, Stanford track coach, who writes for a San Francisco newspaper, pounded out a yarn analyzing Stanford's prospects of victory and made the disparaging remark that Hall was "a fine piece of statuary."

Jones saw the piece in the paper. He chuckled, took it to Hall and asked the quiet-spoken Texas youth what he aimed to do about it.

Hall smiled good-naturedly and "allowed" he'd see what he could do the next day.

He did plenty! Templeton's little dig served to build that fire which Jones had been searching for, and Bob Hall, the easy-going and fire-less "fine piece of statuary" just naturally murdered Stanford's plays.

Early in the game the Cardinals marched down the field to the U.S.C. two-yard line for a first down. It looked like a dead-certain touchdown. The Trojan stands were silent and sad.

But that fire was smouldering in young Mr. Hall, and now it whipped into a raging inferno.

Three times the mighty smash of Stanford's power attack hit the line. And three times the man with the



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The answer to a coach's prayer is the breed of tackle who can drive a trench like this through a defense; and then spread himself on the green for his own ball-carrier to tramp on toward victory. Fentrup, of Stanford, uses his teammate's head as a stepping stone to advance

ball felt himself struck with a sickening force from down low. And three times a mound of legs and arms and bodies was untangled to reveal the Stanford ball-carrier clutched in the unflinching embrace of young Mr. Hall!

On the fourth attempt a pass was batted down over the goal-line. The day was saved. And Southern California went on to triumph, 7 to 0.

Bob Hall, the fire lit, turned out to be something a little more explosive than "a fine piece of statuary" and it will be surprising if he does not gain All-American laurels in his remaining two years of football.

Curiously enough, the captains of both California and Stanford football teams for the coming seasons are tackles, and football fans on the coast are going to have a lot of grief trying to keep them straight.

Carl Handy will lead the Golden Bears from the tackle berth, while, opposite him in the same position, will be Captain Ray Tandy of Stanford!

Handy hails from Poly High, Los Angeles, while Tandy attended Poly High, Long Beach. Wait till the radio announcers get these two, Tandy and Handy, together in the "Big Game" next fall! It'll be worse on the listeners than the broadcast of the Loman-Doman fight at the Hollywood Legion Arena a few years back.

One of the greatest athletes the Pacific Coast ever saw was the goliath Herman Brix of the University of Washington "Huskies." He played his last football in 1927, but has been much in the lime-light since as a shot putter.

Big Herm caused Washington's gridiron foes a world of headaches during the three years he played as tackle for Enoch "Baggy" Bagshaw, the Little Giant of the Northwest, who caused such a storm of controversy last year when he refused to resign under student and graduate fire. But Brix's chief notoriety has come since then while putting the big iron ball for the Los Angeles Athletic Club. In July of this year he tossed the cannon-shot 52 feet 7 inches, only a fraction of an inch behind the world's record of Emil Herschfeld of Germany.

They grow 'em big up in the great Northwest, where men are men and women are glad of it. Brix was big. But to Paul Jessup, captain of the 1929 University of Washington team, goes the distinction of being the tallest tackle produced on the Pacific Coast in many a year.

The Husky leader stands six feet *seven* inches in his holeproofs. When the Huskies traveled for their games, the football manager had to wire ahead to have a special bed made for Paul and even then he found it difficult to sleep comfortably because the bed clothes failed to cover both ends of his long-range anatomy at once.

Paul was really a bit too tall to make a great tackle. This was proved pretty conclusively in the clash with Southern California last fall, when the Trojans, while scoring a 48 to 0 victory, cut Jessup down like a ten-pin time and time again.

A good tackle must have control of his legs, so that he can jump aside as opposing players throw themselves at him. The towering Jessup could not move as swiftly as smaller men and was a vulnerable target.

Clarence Dirks was another tackle much like Herm Brix, and after graduating from Washington became a sports writer for one of the Seattle newspapers.

The meatiest tackle seen on the coast in recent years was Corwin "Tiny" Artman of Stanford, who made the Fairbanks groan at 242 pounds. When Pop Warner put Artman in front of Herb Fleishhacker, the 220-pound quarterback, it was a wild stampede and time to flee to the nearest shelter.

Artman was no Bob Hall for lackadaisical manner. In the Stanford-California game last year he got in a battle with Ted Beckett, California tackle, who played such a great game in that memorable New Year's Day game against Georgia Tech's "Golden Tornado" in the Pasadena Rose Bowl—the electric thriller which saw Capt. Roy

Riegels run the wrong way, resulting in a safety which enabled Tech to beat the Bears, 8 to 7.

Beckett, like Hartman, was a huge man. He was the heavyweight boxing champion of the Berkeley institution and during the summer he worked as a stevedore on the San Francisco docks. He loved to fight more than to play football, and it seems that he massaged Tiny Artman's whiskers with a potent left hook.

Artman returned the compliment with a right cross that staggered Beckett and made him an uncomplaining subject for the count of ten. The only difficulty, from Tiny's viewpoint, was that the referee happened to see his punch while Beckett's went unnoticed. Artman was banished from the game and shortly thereafter quit Stanford, even though the Cards still had Army to play and he would have been eligible.

Probably suffered acutely from not having landed the first punch!

Several years ago California had two great tackles in Fritz Coltrin, who won All-American honors, and Steve Bancroft. They were about as good as tackles come, smart, aggressive and chocked with fight. Bancroft started, as an end, but was shifted to the tackle berth when he was putting on beef so rapidly that it got to be a standing joke around the campus as to what he weighed from one week to the next. He finally hit 220 pounds.

One of the greatest athletes the West ever produced was Buck Bailey of Texas. The Lone Star Stater played intercollegiate football in his native haunts, and then joined the famous Olympic Club team of San Francisco. There, playing tackle for the Winged O's, he helped stop the "Wonder Team's" five-year winning streak and also beat California and Stanford in the same season.

Buck is one of the best-liked coaches on the Western slope, easy-going, pleasant-mannered, and possessed of a keen sense of humor. He is now aiding Babe Hollingberry at Washington State College.

In connection with Bailey, I recall an incident in 1926 when the one and only Red Grange, the "Galloping Ghost of the Gridiron," came to the Pacific Coast on his barnstorming tour as a professional.

Buck Bailey turned pro at this time and hired out as tackle with George Wilson's San Francisco Tigers to play against Grange and his mates.

In the Wheaton iceman's line was George Trafton, formerly of Notre Dame—the same Trafton, incidentally, who kayoed Arthur "The Great" "Whataman" Shires in a Chicago ring last winter.

Bailey often came into more or less violent contact with the rugged Trafton, who was something of a tough hombre. Buck, in an easy-going, congenial way, moved Trafton around rather unceremoniously, and was no small factor in the 17 to 12 victory scored by the San Francisco eleven over Grange's team.

That evening, in a Bay City cafe, Trafton was "popping off" a bit while seated at a table with some of his team-mates.

"Wait till I meet up with that mug Bailey again," Trafton boasted. "I'll knock him colder than last night's potatoes. He may be something of a football player, but I'll show him who's the best man."

A few minutes later in came Mr. Buck Bailey, late of Texas. Surrounded by friends, Buck strode to a table and sat down. The air was tense as Trafton's friends quickly called his attention to the presence of his enemy.

Trafton stood up. He threw out his great chest and advanced menacingly towards his antagonist. But something in the quiet, lazy look of the Texan caused an abrupt shift in the plans of Mr. Trafton.

He threw out his arm, laid it around Buck's shoulders, and opined:

"That was sure a great game we had today, Buck, old



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Vic Hanson and Jim Foley, Syracuse coaches, demonstrate what a tackle can do if he breaks through a line and gets within reach of the ball toter. However, the best authorities on football will argue that Hanson, the tackler, is risking his arm and his neck in this manner of clutching his man. Vic's head should be behind Jim's leg to guard against injury when the crash comes.

Capt. John J. McEwan, the old Army coach, had a couple of towering tackles at Oregon University last season in Austin Colbert and George Christensen.

Colbert weighed 195 pounds, Christensen 220. McEwan's team got away to a splendid start and many critics predicted they would capture the Pacific Coast Conference championship. But the Oregonians ran afoul of Stanford's Big Red machine and that ended their title aspirations. Following this, injuries struck the McEwan team. His fine center, Stadleman, was hurt, and his star back, "High Knee" Kitzmiller was knocked out.

McEwan is no longer at Oregon. He resigned, it is said, because the president of the university wanted to give him orders about the running of the team. Dr. Clarence Spears, former Minnesota mentor, will see what he can do at Oregon this fall.

One of the outstanding tackles in recent years on the coast was Meg Dressel of Washington State College. He received numerous All-American mentions. And with his running-mate, Harry Speidel, at the other tackle berth, they made Babe Hollingberry's teams tough outfits to whip. Both were powerfully built and knew how to charge with terrific force, learning this latter from Buck Bailey.

A few months ago, I stood on the side-lines of the grid-iron at Loyola University, just outside Los Angeles in the rolling hills of Playa Del Rey, and watched spring practice under Tom Lieb, the new coach at Loyola.

Lieb, you may recall, was assistant to Knute Rockne, and when the Old Bald Eagle of Notre Dame was laid up with a game leg, Lieb took command of the South Bend Ramblers and took command so well that he brought them open behind the line!

through the hardest schedule of intersectional contests ever faced by a team, undefeated, to the undisputed national championship.

Lieb, Howard Jones, "Pop" Warner, "Slip" Madigan of St. Mary's (former Notre Dame star) and a few other Pacific Coast coaches imported from the East may be part of the answer to Western football supremacy of late years.

Well, I learned something about tackles from Lieb, getting back to the main theme song. It was this: that a little skillful handling of the body is worth just about twice as much as a juggernaut of brute force.

The tacklers, working in pairs, were whamming into each other with enough force to bowl over a house—and were getting nowhere. Unless one happened to be stronger than the other, it was a deadlock that left them wrestling futilely.

Lieb stepped into the picture. He spoke to the man playing defense, who was supposed to break through and tackle the man with the ball.

"You're buttin' him and meanwhile the man with the ball is slipping through a hole or darting around end. You've got to break through and nail him behind the line. Look!"

And he bent into charging position against the offense player, snapped, "Now!" and when the offense man went to grapple with him, Lieb—instead of tensing his leg muscles and pushing against the man for all he was worth—let his left leg hang loose, stepped wide on his right, smacked a hard hand on the head of the man opposite him pushing him aside, and lightly stepped through into the

Meanwhile the offense player, hurling his shoulder savagely against Lieb's relaxed leg, determined to meet shock with shock, found no resistance there and flopped forward on his face.

Oregon State College has produced some tremendous tackles. Corvallis, where the institution is located, is in the heart of the farming region and among other things the citizens raise children of no mean measurement.

Coach Paul Schissler of Oregon State has had some mighty men on his elevens, no least among them Dickerson and Dixon, a pair of tackles who were regular totem poles for height. They played several years and then Schissler replaced them with another equally formidable pair, Roscoe Luce and Charley Stout, each well over six feet tall and weighing over 210 pounds.

These two had a lot to do with that astonishing 25-to-13 victory which Oregon State scored over the undefeated New York University Violets in the late November of 1928. However, the Easterner may well reply that the defeat was not such a staggering upset since the Violets had had a pall thrown over them by the serious head injury of the late Al Lassman, their great defensive star. Lassman was unconscious for days from a kick in the head received in a clash with Pittsburgh the Saturday before Oregon State and New York U. met on Thursday, Thanksgiving Day. Fate struck again at Lassman recently when he was drowned in Long Lake, Maine.

Lassman, incidentally, was the Western type of tackle, six feet four inches tall, 200 pounds. Many Eastern football writers call him "the greatest tackle who ever wore a uniform."

A summing up of all these tackles would indicate that the ideal type of Pacific Coast player for that position weighs close to 200 pounds and stands six feet tall.

But is the undoubted advantage of superior size the only reason back of Far Western teams defeating others?

Following Southern California's smash 47-to-14 triumph over Jock Sutherland's Pittsburgh Panthers last January 2 in the Pasadena Rose Bowl, a scientist of some repute went to considerable pains to show why the Trojans won

by such a lop-sided score.

He discovered that sunshine and vitamins were back of it all!

He found that while Pittsburgh was practicing and training throughout the year, the Panthers had 130 cloudy days and 125 partly cloudy days. During the same time the Trojans had only 52 cloudy days and but 98 partly cloudy.

The scientist then showed that during a partly clouded day, humans receive only ten percent as much ultra-violet light as they do on a sunshiny day. The Trojans, therefore, absorbed considerably more energy than their opponents.

He then went on to show that in their food and drink the Trojans acquired more vitamins than their foes from the East, California-grown oranges, fruits and vegetables possessing more of these high-sounding but strength-giving thingamabobs than edibles and beverages on the other side of the continent. He also pointed out that because of all these known facts, California children average one-fourth of an inch taller and three-quarters of a pound heavier than children from any other state.

In the face of this barrage of scientific data, it isn't to be wondered at that Stanford, California and Southern California turn out dynamic tackles and powerful football elevens—teams which only in the past few seasons have begun to gain recognition.

Look down the long list of the immortal Walter Camp's All-American selections, beginning with 1889, and until 1921, when "Brick" Muller crashed the throne room, not a single Far Westerner is listed.

The predominance of Yale, Harvard and Princeton players continued for 26 years until 1914, when for the first time Yale failed to place a single player on the All-American; and it was not until ten years later that the first All-American appeared without a single player from any of the "Big Three."

By then the tide was swinging sharply west, and in the years to come it is inevitable that more and more All-Americans and famous players will rise in the West.

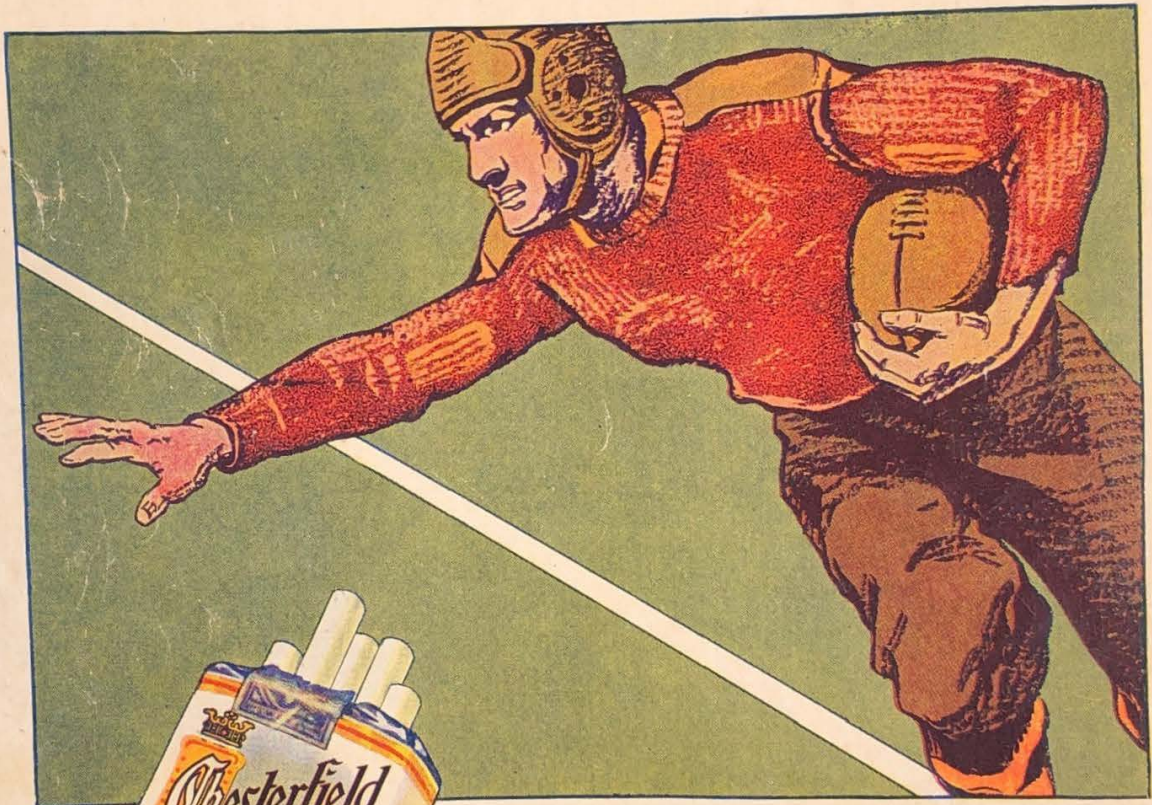


This is a moment that can bring fifty thousand fans to their feet. The goal is only inches away—a tall fullback's sprawling height can make a touchdown. Grid giants call on every last ounce of reserve strength and skill; one to stem the charge, the other to hold its ground. Penn is backed almost to the line and Eisen of California leaps in behind the rip-tearing plunge of his guard and tackle for eight yards.

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