

MAINSTAY IN GOPHER LINE-UP FOR TITLE



Ed Ruben is one of the players upon whom Minnesota fans have based their predictions this year for a Gopher championship in the Big Ten. He is a former Minneapolis high school player and is one of the best prospects Coach Williams has had in several years. Ruben played fullback on the 1917 freshman eleven and his line-smashing ability was the bone of the varsity that year. He has an uncanny ability to pick holes in the opposing team's defense. Ruben joined the navy late in 1917 and was a star player on the Dunwoody naval station squad.

MANY FREAK HOMERS MARK RECENT GAMES

Many Instances Noted of Queer Actions of Batted Ball.

Sphere Has Scooted Through Hole in Fence or Otherwise Disappeared—Amusing Incident at Detroit in Early Days.

During the baseball season recently closed many instances have been noted of batsmen getting credit for home-run hits by reason of the ball scooting through a hole in the fence, rolling through an exit or otherwise disappearing, to the dismay of the fielders and the delight of the sticker.

"Whoo Bill" Rariden of the Champion Cincinnati Reds got one of the strangest homers in the history of the game at Boston. He drove the ball to left center and the spheroid bounded into a hole in the score board.

O'Neill of Cleveland got a home run as a result of the ball rolling into a hole in the left-field fence on the Cleveland ball ground.

Hal Chase of the Giants hit an odd homer against the Braves on the Polo grounds. Hal sent the ball to right center and it rolled through the gate in the bleacher fence and disappeared.

Instances have been known of a dog seizing a ball hit far afield and running away with it, and there is extant a report to the effect that a hard hit ball found lodgment in an empty tomato can that lay in the outfield. The fielder was resourceful and threw the tomato can and all to the diamond, but the ball stuck in the can and the batter got credit for a homer.

One of the most amusing instances of the kind occurred in Detroit in the early days of the game, when the catcher came behind the bat only when there were two strikes on the



Bill Rariden.

batter. Bennett was catching and there was a runner on third. A wild pitch got past the catcher and the runner started for the plate.

Bennett made a clutch as though he had stopped the ball and then menaced the runner with a pretended throw. Back to third went the runner, and then Bennett raced to the grandstand wall and reaching down appeared to pick up the ball. The coaches howled themselves hoarse telling the runner that the ball was lost, but Bennett kept making motions as though to throw to third, and the runner danced back and forth for nearly a minute before he finally realized that Bennett did not have the ball.

The spheroid had rolled into a small hole at the base of the grandstand wall.

The most spectacular incident took place at Providence August 17, 1882, when the Grays won a 1 to 0 game in the eighteenth inning. John Montgomery Ward was the pitcher for Providence and Weldman and Trott the battery for Detroit.

As was customary in those days Radbourne, the famous pitcher of the Providence team, played in the outfield on the days on which he did not pitch.

Radbourne, who was an effective hitter as well as a great pitcher, went to bat in the last half of the eighteenth and drove the ball on a line to left.

George Wood was the left fielder of the Wolverine team, and the ball got past him and rolled to the part of the field where it was customary for horses and carriages to be parked. Wood dashed up to the parking space and found that the ball had nestled near the heels of a large black horse of vicious mien. As Wood reached for the ball the animal made a terrific kick at the fielder, who backed away with alacrity.

Wood was still saying "Whoa boy!" as Radbourne pattered over the plate with the winning run.

In the way of weird home runs, it only remains for some player to knock a ball into a flying machine that is looping the loop over a ball pasture.

WILL SELL OLD RACE TRACK

Belmont Driving Club, Just Outside of Philadelphia, May Be Sold by Stockholders.

Directors of the Belmont Driving club, located at Narberth, a few miles outside of Philadelphia, the scene of the Grand Circuit races, have decided to submit to the stockholders a proposal to sell the racetrack, grounds and buildings. The track was built in 1876.

NO KNOWN CURE FOR BLACKHEAD

Ailment Caused by Parasite, and Is Characterized by Great Sores in Caeca.

PREVENTIVE MEASURES BEST

On Farms Where an Outbreak Has Occurred All Birds Not Affected Should Be Sold for Meat—Disinfect Premises.

Blackhead in turkeys is caused by a parasite and is characterized by great sores in the caeca (blind intestines) and liver. This microscopic parasite causes irritation, destruction of the tissues, and nearly always the death of the affected turkeys.

The characteristic symptoms of the disease are as follows: The loss of appetite and tendency of affected birds to stand apart from the rest of the flock in common. When the intestines are severely affected the birds have diarrhea and the droppings are liquid and stained orange yellow; this is a characteristic symptom. Diseased birds are frequently found dead under the roosts.

Means of Diagnosis. The only sure means of diagnosis, however, is by post-mortem examination of a bird that has recently died. The bird should be cut open to expose the internal organs, and the liver and caeca examined. The presence of large sores in the substance of the liver and the caecal walls is sufficient evidence for a diagnosis. The caecal sores may vary from a single point to a large scab covering nearly all the lining of both caeca. The liver is very much enlarged and the sores on it are two-fifths to three-fifths of an inch in diameter.

At the present time there is no known cure for this disease and the only means by which it can be controlled is by preventive measures. On farms where an outbreak has occurred, all the turkeys which have not come down with the disease should be marketed for meat and not sold for breeding. Nor should eggs from an infected flock be used for hatching. It would be well not to attempt to restock a farm with turkeys for several months; and not until a thorough disinfection of the premises has been made, by exposing the ground to the hot summer sun and by the liberal use of freshly slaked lime in the poultry houses, roosting places, and feeding pens.

Make Fresh Start. A fresh start may be made by hatching turkey eggs under hens, or by obtaining fresh breeding stock from a non-infected district. It is recommended that turkey raising be conducted on dry, sandy, well-drained lands, since blackhead seems to be prevented in large part by dryness of the surroundings.

Healthy and Vigorous Tom.

IMPROVEMENT OF CORN CROP

Little Extra Care in Selecting, Curing and Testing Seed Will Increase Net Profit.

Extra care in selecting, curing, testing and grading the seed corn will do much to improve the stand and yield of corn, thus saving labor, reducing cost per bushel and increasing net profit per bushel. It requires the same labor to manure, to plow, to disk, to harrow, to plant and to cultivate a 40 per cent stand as is required for an 80 per cent or a 100 per cent stand.

KEEP EVERY TOOL IN PLACE

Practice of Keeping Bolts and Screws of All Kinds Mixed Together Is Not Good Plan.

Farm tools and materials should be kept in their proper places. If they all haven't a place, one should be provided for each. Do not keep all sizes of bolts and screws mixed together in a single receptacle, but fit up suitable boxes or bins, properly marked, so that the supplies may be accessible on short notice.

OPERATION OF DISK PLOWS

Better Work in Hard Soils When Sharp-Have Narrow Carriage in Working in Orchard.

A sharp disk plow insures good work in hard soils and rolls better. Self-lift disk plows save labor and do better work. For work in the orchard, disk plows should have a narrow carriage, and the operating levers should be low so as not to catch limbs of the trees.

SKIMMILK FED CALF TO GOOD ADVANTAGE

Change From Whole Milk Should Be Made Gradually.

Amount of Meal to Be Given Depends on Size of Animal—Encourage Youngsters to Take Hay and Grain at an Early Age.

Many times a farmer selling milk has a surplus which he runs through the separator. This provides a limited amount of skimmilk which can be fed to calves to good advantage. In such case the milk in the ration can be gradually changed from whole milk to skimmilk at the end of two or three weeks by substituting an equal amount of skimmilk for each portion of whole milk removed, according to W. W. Swett of the University of Missouri College of Agriculture. A complete substitution can be effected in a week or ten days, at which time a good,



Teaching Calf to Drink, Showing Two Fingers in Mouth.

healthy calf should be receiving about six quarts a day. In case the supply of milk is irregular it is well to have on hand a supply of skimmilk powder, which can be mixed with water at the rate of one pound to every nine pounds of water. This can be fed the same as the whole or skimmilk.

When the calf is started on calf meal the amount to be added varies with the size of the calf and the brand of meal. Directions included with the meal should be followed very carefully. In almost every case, the recommendations are to mix the meal with either hot or cold water in sufficient amounts to make a thick, pasty gruel. This is stirred carefully to remove all lumps and then diluted with boiling water. The gruel is usually added to the skimmilk and fed at approximately blood temperature. It should never be fed cooler than 95 degrees Fahrenheit and should be given at the same temperature every day. A thermometer is necessary; "guess work" has no place in calf feeding. The amount of skimmilk should be gradually decreased and the amount of calf-meal gruel increased. At the end of six weeks the milk can be discontinued. At this time the calf may be taught to eat the dry meal from a feed box if small quantities are rubbed on its nose after it has finished drinking. Feed the dry meal regularly and in small quantities so that none will be left in the feed box to spoil. Give just what the calf will readily eat, and develop the appetite slowly. The gruel can be continued until the calf is four months old and perhaps somewhat longer if desired.

It is always advisable to get the calves to take hay and grain at an early age as possible. They will usually begin when three or four weeks old if given the opportunity. The early development of this habit helps greatly when calves are taken off the calf-meal ration, for they are already taking liberal quantities of hay and grain and the change to this ration alone will be gradual. The calves will not suffer such a serious "set-back" as they might otherwise experience. For the first six to eight weeks the hay fed should be a fine grade of timothy or a coarse alfalfa or mixed hay. Fine alfalfa hay is so palatable that the young calf will eat too much. Either feed a coarse hay or limit the amount of hay which the calf can get. After this time alfalfa may be fed liberally in safety.

BEST PACKAGES FOR MARKET

Forms and Sizes of Receptacles for Fruits and Vegetables to Be Worked Out.

What are your ideas about forms and sizes of packages for the marketing of fruits and vegetables? Better give them to the Bureau of Markets, Washington, D. C. This whole proposition will be worked out before long, and all of us want standard packages that will prove satisfactory.

So-and-So and Daughter.

It is a welcome sight to see the words "and daughter" as the suffix to the name over a shop, says the London News. It is a sign of the times of women's interest in business and their recognition as responsible helpmates. In the west end there is more than one emporium of feminine attire under the ownership of So-and-So and Daughter—or daughters—and I know of another which belongs officially to father and daughters; but I have never yet come across a shop under the joint ownership of husband and wife, yet we know of countless small businesses in which the wife of the owner does a goodly share of the work.

LED IN "ART PRESERVATIVE"

Conclusive Proof That the Koreans Were the First to Perceive Value of Movable Type.

Fifty pieces of movable type bearing the Chinese characters, being part of the first font of movable type ever made, were shown in the last week in the Museum of Natural History, in New York. England has the other half of the font, which was cast in Seoul, Korea, in 1403, some years before the discoveries of Forster, Gutenberg and the other early typemakers in Europe. It seems, thus, that to the Koreans belongs the distinction of having invented and first produced separate type characters in metal.

Each type is cylindrically concave on the under side, in order to make it cling more firmly to the bed of beeswax which constituted the "form." When the type had been firmly and evenly embedded in the wax the printer, sitting cross-legged before the form, covered the type with ink applied with a soft brush. Then the paper was laid lightly on the form and a piece of felt was brushed gently over the paper with one hand, after which the other removed the printed page. It was possible to strike off as many as 1,500 impressions a day in this way.

Thrown aside as useless, the font lay as rubbish on the floor of the government printing office at Seoul during the Japanese invasion of 1932-37, and so lay unnoticed and escaped being carried off into Japan. Later, however, the types were collected and the font again made up and used for printing.

Although this font was the first to be made of movable metal type, various methods of printing had already been in vogue for centuries. Dr. Berthold Laufer, anthropologist and orientalist, has recently drawn up an excellent reference summary of the important dates in the history of printing. As early as 175 A. D. texts of the Chinese classics were engraved on stone tablets, and impressions were taken on paper by rubbing. In 533 classical books were printed by means of wooden blocks, block-printing on a smaller scale having already been practiced. In 764 Japan adapted block-printing, and in the tenth century there were discovered in Fayum, Egypt, block-printed books in Arabic.

To Explore Earth's Interior. Our knowledge of the earth from actual contact is confined to a thin layer of only a few hundred feet, and what exists deeper down is a subject for speculation. The idea of exploring further by a bore-hole some ten times as deep as any yet attempted was again brought up in the late presidential address of Hon. Sir Charles A. Parsons to the British association.

He proposed in 1904 the sinking of such a shaft to a depth of 12 miles, and estimated that it would require eighty-five years of time and cost \$25,000,000—an outlay about equal to that for one first-class battleship. Since then Prof. F. D. Adams has concluded that a depth of 15 miles could be reached in limestone before the rock would give trouble by being crushed, and in granite about 30 miles could be reached. Such a shaft might throw much light on the earth's internal constitution—especially as related to very heavy minerals. In Italy, bore-holes sunk to moderate depths in a volcanic district discharge great volumes of high pressure steam, and this is being utilized to generate about 10,000 horsepower by turbines.

Differing Types of Marble. In its tests of 52 different types of marbles, the United States bureau of standards has found the compressive strength of the dry material to range between 7,850 and 50,250 pounds per square inch. Wet specimens were usually somewhat weaker, and in a few instances loss of strength from soaking was as great as 25 per cent. After 30 freezings and thawings, most specimens were much weakened, though some were little affected, while a few were actually strengthened. The electrical resistance varies so greatly that care is necessary in selecting material for switchboard. Marbles expand irregularly on heating, and part of the increase is permanent.

FOOTBALL SHOE HAS HINGES

Ankle Support Devised by Chicago Firm Minimizes Chances of Misstep by Half-Back.

At the quarter-back's signal for a run around right end, the half-back sets his shoe-calks into the earth and waits for the ball to be snapped back. But a husky guard on the opposing team breaks through, the quarter fumbles and there is a wild scramble. The half-back swings in his tracks and dives into the middle of the struggling players. A moment later the referee's whistle sounds, the human omelet is unscrambled, and the half-back emerges with the ball.

A misstep in making the lightning-like change of direction might have



Hinges Give It a Freedom of Movement Impossible in a Rigid Shoe.

put the half-back out of the game. It is to minimize such mischance that a Chicago firm has turned out a football shoe with double-hinged ankle support. The shoe combines flexibility with perfect ankle support.—Popular Science Monthly.

IT PAYS TO BE WITH WINNER

Cincinnati Reds Picked Up Quite a Bit of Easy Money Besides the World's Series Coin.

The Cincinnati Reds in their late exhibition games, in which the players shared 50-50 with the club, took in over \$10,000 and the players who took part netted over \$200 each as their share. Add this to all the presents from Cincy fans and the world's series pelf, and you can see it pays to be on a winner.

GAME PLAYED WITH MALLET

Smooth, Level Courts, With Hard Rubber, Elastic Balls Necessary for Roque.

The game of roque is played with mallets, on smooth, level dirt courts, with hard rubber, elastic balls. The courts are bordered with elastic cement walls, 60 feet long by 30 feet wide. Caroms, as in billiards, are a distinctive and constant feature of the game. Played by experts the game is a battle royal, often taking two or three hours to finish.

Enters Boston College. Jimmy Connolly, national junior mile champion, may enter Boston college, according to reports from the B.S.B.

IS GREAT FOOTBALL PLAYER

Moon Ducote Played Good Game With Mobile, But Is Much Better as Gridiron Star.

Moon Ducote, who has shown in a season with Mobile in the Southern league that he is a greater football player than he is a baseball player, refused several offers to play professional football this fall. Instead he preferred to assist in coaching the Spring Hill College football team at Mobile. Ducote played good baseball with Mobile, but did not turn out the scintillating star that had been hoped for in the diamond game.

GOSSIP AMONG SPORTS

Plans are under way for a spring series between the world's champion Reds and the Cleveland Indians.

N. M. Purcell won the 100-yard swimming championship of Dublin university in 65s. at Blackrock recently.

It is said that John McGraw, who traded Pitcher Ferdie Schupp to the Cardinals, wants him back again.

The American Bowling association championship tourney at Peoria, March 10 to April 1, 1920, will be rolled on 14 alleys.

Eddie Collins still avers that the pitching of the Reds, though it may be the best in the National league, is not as good as that in the American.

Coach Jack Moakley has only one veteran cross-country runner, Capt. T. McDermott of the 1917 team, to build a successful team around this year.

Rumors in Toledo have it that John Ganzel wants to purchase Roger Bresnahan's stock in the Toledo Club and take hold of affairs in the Mudhen town.

Now they are saying that Hod Fler got his shine ball trick from Eddie Cicotte, who showed him how in the spring of 1916, when Hod made the training trip with the White Sox.

Adding up all Pat Moran received for his efforts in directing the Reds to a National League pennant and a world's championship, the total "get" is about \$21,000.

Larry Conley of Boston has been appointed as instructor in boxing at Harvard university. He will be connected with the department of physical education.

Tris Speaker did not enjoy going to Detroit last season. He batted only .158 on the Tigers' lot. On the Athletics' field he poked only .108. At home he hit .433 against the Tigers and .500 against the Macs.

Manager Pat Moran hopes to yet realize on the heavy investment the Cincinnati club made in Charley See, for whom the Rochester Club was paid \$10,000. Moran says he will make a pitcher out of See.