ONE ELEVEN LOST TWELVE

CENSUS OF FOOTBALL CRIPPLES AT THE UNIVERSITY OF CHICAGO

NORTHWESTERN LOST BUT TEN

Story of the Casualties at Two of Chicago's Leading Football Establishments for the Late Season.

CHICAGO, Dec. 9.—A census of the crippled has been taken at the University of Chicago and at Northwestern. During the brief season, twelve men were seriously or painfully injured at the University of Chicago, while at Northwestern, ten athletes received hurts which put them temporarily out of the game. The injuries range from ruptured blood vessels to broken bones and torn ligaments. The list follows:

University of Chicago—W. C. Carey, displacement of the heart; Capt. Kellogg Speed, ankle sprained, cut over eye, Frank Goodenow, ankle broken; Jas. R. Henry, hand broken; A. W. Place, shoulder dislocated; W. H. Eldridge, sprained ankle, knee dislocated; Harvey H. Lord, ankle sprained; Z. R. Pettit, tendons of shoulder torn; C. W. Ervin, tendons of left leg torn; G. H. Garrey, blood vessel in arm broken; Elvin Snider, blood vessel in ear broken; A. R. Horton, blood vessel in ear broken.

Northwestern University—Henry Hanson, rib broken; C. E. Dietz, finger broken, shoulder strained; J. E. Smiley, ligaments of shoulder torn; C. H. Ward, ankle sprained; J. A. Davidson, shoulder wrenched; A. J. Elliott, ankle sprained; Frank Breedin, elbow sprained; C. A. Baird, both shoulders wrenched; W. N. Machesney, muscle in leg stiffened; H. M. Schraudenbach, ligaments in leg torn.

GOOD HANDBALL GAMES.

Nine Matches Were Played in the Tournament Yesterday.

Yesterday was a very busy day for those competing in the hand ball tournament at the Amateur Athletic club, nine series of games being played by the contesting teams. The games are developing more interest as the tournament progresses and some very likely playing was seen yesterday. Both galleries were filled with "rooters," who helped to make the games more exciting. The following are the results:

Class A—Whitmore and Clark beat Kennedy and Blakely, by a score of 21-9 and 21-18.

Swanson and Jennings beat Fitzgibbons and F. C. Nelson two out of three games by a score of 21-14, 21-19 and 19-21.

Juhre and A. Mundy beat Johnson and Sudheimer two out of three games, with a score of 21-8, 20-21 and 21-10.

Koen and Brandhorst beat Johnson and Sudheimer, by a score of 21-5 and 21-14.

Heidenrich and J. Murphy beat H. Mundy and E. Nelson by a score of 21-11 and 21-13.

Heidenrich and Murphy lost to W. Swanson and Jennings by a score of 21-10 and 21-5.

Juhre and A. Mundy beat McAuley and J. Swanson by a score of 21-11 and 21-14.

Whitmore and Clark lost to Fitzgibbons and F. Nelson by a score of 21-7 and 21-8.

Only one game was played in class B and was won by H. Burroughs and B. Barron, who played Prof. Onet and Westernhagen, the score being 21-29 and 21-13.

JEFFRIES SAYS HE WILL FIGHT.

Agrees to Cancel His Theatrical Engagements After Jan. 1.

NEW YORK, Dec. 9.—Herman J. Witte, of Cincinnati, today saw James J. Jeffries in this city relative to the boxing contest which it is proposed to pull off at Cincinnati between Feb. 1 and 14 next, in the big convention hall. Jeffries made an agreement with Mr. Witte to postpone all his theatrical engagements after Jan. 1 and go into training. He told Mr. Witte that he would fight either Fitzsimmons, Ruhlin or Sharkey, Fitzsimmons preferred. If he cannot get a match with Fitzsimmons he will fight Ruhlin, providing the last named beats Maher in his Philadelphia fight. If Maher gets the best of the Philadelphia fight, Jeffries will not meet Ruhlin, but will then take up with Sharkey.

Mr. Witte announced that the Cincinnati people were ready to put up $5,000 and each one of the two fighters who appears must put up $1,500.

HARRIS OFFERS GOOD ODDS.

Terry's Manager Has Confidence in the Terror's Ability to Win.

MILWAUKEE, Wis., Dec. 9.—So confident is Sammy Harris, the manager of Terry McGovern, that his man will win next Thursday night's battle with Joe Gans that he has offered to bet $2,500 even that McGovern will secure the decision and $500 to $1,250 that McGovern will knock out his opponent.

Of this money $1,000 was placed in the hands of John McCoy, who will place it. This money is divided into two parts—$500 even to $1,250 that McGovern will knock out Gans. This commission will be placed in bets ranging from $5 upward.

From this it can be seen that Harris made the match feeling confident that he would surely win the decision and that his man might even do better than that and knock his opponent out before the six rounds are concluded.

That Gans is considered a tough proposition can be seen by the hard work that McGovern is doing. He admits that he has never worked harder for any of his previous matches. One of the surprising facts connected with the bout is the fact that McGovern is training down instead as was expected. This shows that McGovern looks for a fast fight and he wants to be in the best possible condition when he faces the colored light weight.

M'BRIDE, THE VERSATILE.

Irishman Who Fought in Boer Army Reaches New York.

NEW YORK, Dec. 9.—On board the steamer La Bretange, which arrived at quarantine last night, was Maj. John McBride, late of the Boer army. Maj. McBride, who is a native of county Mayo, Ireland, was given the command, May 3. Maj. McBride spoke very enthusiastically of the Boer cause and expressed the opinion that they would eventually win in spite of their resent reverses. The major after leaving Lourenzo Marques proceeded to Paris and from thence to new York.

Clerks Are Up in Arms.

The drug clerks are quite indignant about the proposition made to bond them, and an indignation meeting will be held as soon as the fraternity can find a convenient date.

DISEASE

and discomfort are not-ease and not-comfort. Ease is health; so is comfort.

You may as well be comfortable; that is healthy; as animals are. It is natural, both for you and for them.

If your ill health is caused by imperfect digestion, try Scott's emulsion of cod-liver oil. It does what it does by getting the stomach going right.

We'll send you a little to try if you like.

SCOTT & BOWNE, 409 Pearl street, New York

REMINISCENCES OF DALY.

Marcus Daly, who came to this country a penniless Irish boy of thirteen, left $20,000,000 to his widow and four children. He was buried from a magnificent mansion which he had reared on Fifth avenue, New York, and in which he had never lived. As a waif, the San Francisco Argonaut says, he found his way to the Pacific coast:

"He landed in San Francisco with about as much money as Ben Franklin took to Philadelphia. His objective was the mining country. 'I'd like a bit of work,' he said to a farmer near the city. 'Can you dig potatoes?' asked the farmer. 'I can dig anything,' said Daly, and he set to work with such vigor that in a few days he had the farmer's potatoes in the barn and some dollars in his pocket. As soon as he got enough money to pay his way, he was up in the mountains. He made the acquaintance of the famous syndicate, Mackay, Fair, Flood and O'Brien, entered their employ, and worked his way to superintendent of the Comstock lode. He did not share any of the profits of that famous property, but he studied the mine, and in a remarkably short time became an expert."

* * *

Daly's plan for finding out the real value of the Alice mine in Montana was a characteristic piece of work:

"He went to Butte city, claimed to be looking for work as a miner, and ran up a bill for three weeks' board. The landlord became angry. He went up to Walkerville and told the mine owners that he had a man loafing around at his place for whom he wanted work long enough to pay his three weeks' board bill. They gave him the job and he came back and swore at Daly, telling him he was too particular about his work and too easy about his eating. He said he had got him another job, and that he wanted him to take it and stick to it. As Daly heard him say that the work was in the Alice mine his heart must have jumped, but there was not a change in his features, and he only said: 'Well, I will go and look at it.' It was the opportunity he had waited for, and he took his place as an ordinary miner in the Alice. He worked for three weeks, inspecting the property as he dug and mined, and at the end of this time he threw up his job and left Butte city. Six weeks later he came to the surface as manager of the property. The Walkers, at his advice, bought the mine, and they put him at its head."

* * *

Daly was only twenty-three years old when the stories of the riches hidden in the soil of Montana took him to that state:

"Soon after he helped form a mining combination, composed of J. B. Haggin, George Hearst Lloyd Trevis and himself, Daly was the active, practical man. It was Daly who suggested the purchase of the Anaconda mine, near Butte City, believing that it promised well in gold and silver. The mine was bought for $35,000. Before long copper veins were struck. Today the Anaconda produces one-quarter of all the copper mined in the world. It employs 10,000 men, and reduces 4,000 tons every day."

* * *

It was when Daly began to develop the Anaconda on an immense scale that the trouble with W. A. Clark originated:

"Water was a necessity at the smelters of the Anaconda, and Daly was buying the water rights of Warm Springs creek, and had got about seven-eighths of them for some small amount, when Clark quietly came in and bought the remaining eighth. When Daly sent his representative to buy Clark's interest, he asked $25,000 for it, which the representative refused to give, and went away. Next day he came back to accept the figures, and Clark wanted $50,000. Daly a day or two later sent his man back to pay the price, and then Clark wanted $100,000. This was offered next, and Clark asked $125,000, at which price Daly got it. Daly swore to get even, and he made good his oath, until illness robbed him of the power to fight."

* * *

He waited year after year for a chance to strike:

"In 1888 Clark decided that he would go to Washington, as congressional delegate, Montana then being a territory. He did not then fully realize the bitterness of Daly's enmity for him. He sent a delegation of friends to talk the matter over with Daly. The Republican candidate for the office was Thomas H. Carter.

"According to the story, Carter and Daly were conferring when the delegation arrived. Daly told Carter to step behind a curtain. The delegation made its talk in behalf of Clark, and Daly is alleged to have replied: 'I hate Clark from the ground up, but I am a Democrat first, last and all the time. I'll tell the mine bosses to see that the men vote to bury that little red-headed Irish son-of-a-gun, Tom Carter, in the middle kettle of hades.' The delegation left, delighted, and Carter left, bewildered. Mr. Daly left for California the next day, and when election day arrived every man in the Anaconda mines voted for Carter, defeating Clark, who had counted upon an easy victory."

* * *

Aside from Daly's copper mines and his war with W. A. Clark, he was best known through his magnificent racing stable. He literally ransacked the earth for high-class horses for breeding purposes. He purchased 47,000 acres of land in the Bitter Root valley, many miles out from Butte, and established the Bitter Root stock farm, which has produced some of the greatest racers on the American turf. In the past fifteen years he spent $4,000,000 on the place. The system of irrigation alone cost $350,000. Seven hundred men are employed on the property, the cottages which Daly built for them forming a little village.

MAY BE USED IN SURGERY.

One of the Possibilities Open to Liquid Air.

Those who hear Prof. Foster tonight at the Peoples' church in his lecture on liquid air, employing several gallons of the fluid for experimental purposes, will forget that they are being taught science.

Dr. Foster has peculiar ability in avoiding scientific phraseology, and employs everyday terms and lucid explanations, so that everyone can understand him. His bright sayings and jokes keep the audience constantly interested, while the wonderful experiments mystify and startle them.

The therapeutic value of liquid air is but little understood and appreciated at the present time, but it is expected that experiments now in progress in many hospitals will develop its value in this respect very much during the next few months. Already it has been used successfully in certain lines of work at the Vanderbilt clinic of Columbia college and at the Roosevelt hospital in New York city. Its effects upon the human body is to freeze the portion to which it is applied, painlessly, and to cause it to wither and fall away, thus suggesting painless surgery and amputation without knives. A minute spray of the fluid against the human hand for but a moment, will cause a blistering the same as if severe heat had been applied. Prof. Foster will speak after luncheon at noon today before the members of the Commercial club on "Commercial Possibilities of Liquid Air."

EMPIRE THEATER.

Two Crowded Houses Witness the Change of Bill.

The new Empire theater was crowded to the doors both afternoon and evening yesterday, and the programme, which consisted of a one act comical operatic burlesque, followed by an excellent olio of specialities, was most heartily enjoyed by the spectators. The burlesque is entitled "Claude Duval" and is very interesting, being full of comic songs and witty sayings. Wiley Williams, as Claude Duval, the leading character, is very good, and added much to his popularity by the performance yesterday, which was given under his direction. Amy Clausen made a big "hit" with her singing, and was forced to respond to several encores.

The daring giant swing in mid-air, by the flying Du Bell, was most thrilling, and took the house by storm. The others taking part in the olio were: The four Tyroleans, Martin and Longsdale, sketch artists; Hill and Swan, in a society sketch; Charles Schurman, imitator.

Jennie Mack and Lottie Wilson, song and dance artists, will arrive today and take part in this evening's performance. The same programme will continue during the entire week, afternoon and evening.

TO REDISTRICT THE STATE

ONE WAY OF EQUITABLY PROVIDING FOR TWO MORE CONGRESSMEN.

FAVORS THE AMBITIOUS MAN

Messrs. McCleary and Heatwole Might Be Thrown Into the Same District—How the Figures Run.

The recent bulletin of the census office showing the population of Minnesota by counties makes it possible for those Republican politicians with congressional bees in their bonnets to figure more definitely on the redistricting of the state for the enlarged congressional apportionment which Minnesota is sure to have at the next election.

That the First district will be changed is unlikely unless Minnesota is given nine congressmen, as the southwestern portions of the southeastern counties have not held their own during the last decade. Indeed, three of the counties of the First district are given less population in the federal census this year than the state census gave them five years ago. As a result, the district which five years ago was credited with a population of 208,140, now has only 210,164, as follows:

Dodge	13,340	Steele	16,524
Fillmore	28,238	Wabasha	18,924
Freeborn	21,838	Waseca	14,760
Houston	15,400	Winona	35,686
Mower	22,335		
Olmsted	23,119	Total	210,164

If the apportionment is nine, giving a divisor of approximately 195,000, then the natural order of change in that district will probably be the detachment of Waseca county, which would bring the district down to 195,404, almost exactly the required population, but be a sad blow to Senator M. D. Collester, of Waseca, who has had his eye on the nomination to succeed Tawney in 1902.

The Second district was 50,000 over the apportionment five years ago, and it now has a population of 262,156, as follows:

Blue Earth	32,263	Murray	11,911
Brown	19,787	Nicollet	14,774
Chippewa	12,499	Nobles	14,932
Cottonwood	12,069	Pipestone	9,264
Faribault	22,055	Redwood	17,261
Jackson	14,793	Rock	9,668
Lac qui Parle	14,289	Watonwan	11,496
Lincoln	8,966	Yellow Med'ne	14,602
Lyon	14,591		
Martin	16,936	Total	262,156

One plan that has been proposed, although it throws Messrs. McCleary and Heatwole into the same districts, is to take Waseca, which will have to be lopped off the First, and Blue Earth and Nicollet of the present Second, and add them to the eastern end of the present Third, from which will be taken, Meeker, originally a gerrymander anyway, Renville, Carver and McLeod, to bring the district down to a proper basis of population. The new district would practically be all in the Minnesota river basin, and compact and contiguous.

This new district would then show up:

Blue Earth	32,263	Scott	15,147
Dakota	21,733	Sibley	16,862
Goodhue	31,137	Waseca	14,760
Le Sueur	20,234		
Nicollet	14,774	Total	192,990
Rice	26,080		

Nor will this plan be especially displeasing to Senator George W. Somerville, of Sleepy Eye, who has had a congressional bee buzzing for some time, as this would take McCleary out of competition with him and leave him a district like this, almost square:

Brown	19,787	Nobles	14,932
Cottonwood	12,069	Pipestone	9,264
Faribault	22,055	Redwood	17,261
Jackson	14,793	Rock	9,668
Lincoln	8,966	Watonwan	11,496
Lyon	14,591	Yellow Med'ne	14,602
Martin	16,936		
Murray	11,911	Total	198,331

Western Minnesota has another congressional aspirant, Senator E. T. Young, of Appleton, who is an indorser of the Somerville plans, and as they are both senate leaders, and McCleary and Heatwole will not be around to defend themselves, may be able to swing it.

Young would be given a district of thirteen counties, it is true, but his present district includes eighteen, and that would help a little. Besides they are nearly all strongly Republican. For example:

Big Stone	8,731	Renville	23,693
Chippewa	12,499	Stevens	8,721
Douglas	17,964	Swift	13,503
Grant	8,935	Todd	22,214
Kandiyohi	18,416	Traverse	7,573
Lac qui Parle	14,289		
Meeker	17,753	Total	186,678
Pope	12,577		

RAMSEY AND WASHINGTON.

The present Fourth district will no doubt be cut to leave Ramsey and Washington together, their population just making 198,362, which is about as close a companion for Ramsey as can be found.

Minneapolis, with 202,718, is willing to stand alone, and the rural portions of Hennepin and McLeod and Carver counties being added to a district bordering the Mississippi river, something as follows:

Anoka, Isanti, Wright, Sherburne, Benton and Morrison.

This district would figure up:

Anoka	11,313	McLeod	19,595
Benton	9,912	Morrison	22,891
Carver	17,544	Sherburne	7,281
Hennepin (outside Minneapolis)	25,262	Wright	29,157
		Stearns	44,464
Isanti	11,675	Total	198,094

Under this plan Duluth and St. Cloud would be in separate districts, and a good deal of local feeling would be taken out of the congressional fights up there. The bulk of what is now the Sixth would be, with Chicago and Kanabec added, in a district like this:

Aitkin	6,743	Kanabec	4,614
Beltrami	11,030	Lake	4,654
Cass	7,777	Mille Lacs	8,066
Chisago	13,248	Pine	11,546
Cook	810	St. Louis	82,932
Crow Wing	14,250		
Carlton	10,017	Total	180,251
Itasca	4,573		

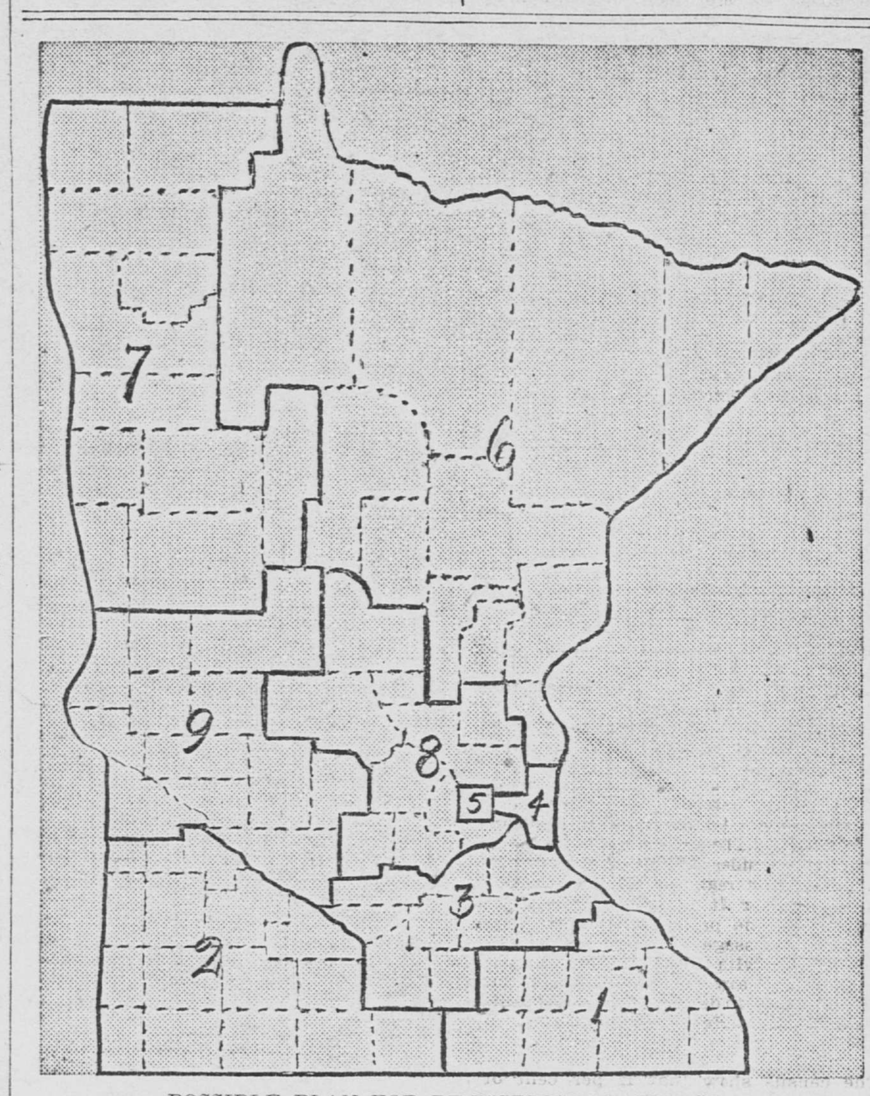
The solidarity of the interests of the Red river valley will result in keeping it pretty solidly together, Marshall, Roseau, Kittson, Polk, Red Lake, Norman, Clay, Becker, Otter Tail and Wilkin of the present Seventh being kept together, with Hubbard and Wadena thrown in to make up the necessary population, which will be as follows:

Becker	14,375	Polk	35,429
Clay	17,942	Red Lake	12,195
Hubbard	6,578	Roseau	6,994
Kittson	7,889	Wadena	7,921
Marshall	15,698	Wilkin	8,080
Norman	15,045		
Otter Tail	45,375	Totals	193,521

This would give nine districts as follows:

First	195,494	Sixth	189,254
Second	198,331	Seventh	193,521
Third	192,990	Eighth	198,094
Fourth	198,362	Ninth	186,678
Fifth	202,718		

The Sixth and Ninth districts are the only ones in the above that are far from the ratio proposed, and they are both parts of the state that are filling up rapidly.



POSSIBLE PLAN FOR REDISTRICTING THE STATE.

PRETTY "PEGGY" EATON.

"Old Hickory Couldn't Open Social Circles for Innkeeper's Daughter.

"The war which President Jackson began against the United States bank did not test his heroic nerve more than the war which opened in his cabinet over the question whether 'Peggy' Eaton should be recognized by the women of Washington as a 'cabinet lady,'" writes Perrine, in the December Ladies' Home Journal. "The prominent ladies of the administration generally reached the conclusion that 'Peggy' Eaton should be ostracized. The social rebellion against 'Old Hickory' even broke out in his own household. The one conspicuous public man who did not yield to the feminine crusade was Martin Van Buren, the secretary of state, who had the advantage of being a widower, and who had determined with his suave dexterity to please the iron will of the president in all things. Jackson was delighted with his conduct, but the diplomatic finesse of the 'little magician' failed almost as much as the fierce mandates of 'Old Hickory.' The British minister, who was friendly to Mrs. Eaton, was prevailed upon to give a ball and supper, but it was impossible to keep together any cotillon in which she took part, or to direct the conversation at the table toward her. Then the Russian minister, who was also disposed to sympathize with her, gave a similar entertainment. The wife of the minister of Holland was especially exhorted by Van Buren to take a seat at the supper table by the side of Mrs. Eaton. But when, after some embarrassing dissent on her part, she reluctantly consented to be escorted to the table she deliberately walked out of the room on discovering that Mrs. Eaton was seated at the head of the table."

INTEREST WAS TOO HIGH.

Omaha Woman Seeks Relief From Clutches of Money Lenders.

M. Remington, an Omaha woman, came to Minneapolis early last summer, leaving behind in the Nebraska city, a quantity of furniture and house fixings. In order to have the goods brought to this city she had to raise a considerable sum of money, and as a result of doing this she is the complainant in a suit in which two well known attorneys and one Richard Roe are the defendants.

She alleges that about June 10 she borrowed from the defendants $1,490 at the rate of 5 per cent a month and deposited as security a number of diamonds. A little latter she borrowed $325 at 10 per cent a month, and gave a lien on her household goods for the amount. She kept the first loan for a little over three months and during that time paid $248 in interest, and then repaid the original amount borrowed. She has kept the $325 borrowed the second time and has paid interest on it to the amout of $169.

She now asks judgment against the defendants for $417 with interest, together with the costs of the action. The plaintiff is represented by S. E. Brame.

The action to recover is based on the allegation that the rate of interest charged was usurious, and that the complainant and defendants entered into an "unlawful, wrongful and corrupt agreement." The legal rate of interest in this state is 7 per cent a year, but much more than that amount is charged as a rule, generally being collected as a "bonus." There is no city ordinance regulating chattel mortgage loans and so long as the person making the loan does not have in his possession the property upon which the loan is made, he does not come within the clutches of the law.

Huxley's Opinion.

New York Weekly.

Belkins—Prof. Huxley says on oyster is a far more complicated piece of machinery than the finest Swiss watch.

Mifkins—Oh, well, he probably ate too many at once.

Nasal Catarrh quickly yields to treatment by Ely's Cream Balm, which is agreeably aromatic. It is received through the nostrils, cleanses and heals the whole surface over which it diffuses itself. Druggists sell the 50c size; Trial size by mail, 10 cents. Test it and you are sure to continue the treatment.

Announcement.

To accommodate those who are partial to the use of atomizers in applying liquids into the nasal passages for CATARRHAL TROUBLES, the proprietors prepare Cream Balm in liquid form, which will be known as Ely's Liquid Cream Balm. Price including the spraying tube is 75 cents. Druggists or by mail. The liquid form embodies the medicinal properties of the solid preparation.

St. Paul's Leading Jobbers & Manufacturers

Boots & Shoes. Manufacturers and Wholesalers of Boots, Shoes and Rubbers. Proprietors of the Minnesota Shoe Company. **C. Gotzian & Co.,** 242-280 E. 5th St.

BAZILLE & PARTRIDGE, (Incorporated.) Wall Paper—Room Mouldings—Paints—Brushes—Varnishes—Window Shades. 468-470 Jackson Street.

Cigars. Manufacturers of the famous Duke of Parma Cigar, And Dealers in Leaf Tobacco. **Hart & Murphy** Cor. Jackson & 8th St

Bottlers. Ale, Porter, Stout and Beer, Soda and Mineral Waters, Fruit Ciders and Soft Drinks. **Drewry & Sons,** 702-710 Payne Av.

Dry Goods. Importers and Jobbers of Dry Goods and Notions. Mfrs of Men's Furnishing Goods. **Powers Dry Goods Co.,** 5th and Wacouta.

Harness. Harness, Stock Saddles, Collars, etc. For the trade only. **Konantz Saddlery Co.,** 227-231 E. Sixth.

Butter. Wholesale Dairy Produce. Butter, Cheese, Eggs, Milk and Cream. **The Crescent Creamery Co.,** Third and Minnesota.

Dry Goods. Wholesale Dry Goods and Notions. A Specialty of Miners' and Lumbermen's Suits. **Lindeke, Warner & Schurmeier,** 4th and Sibley.

Harness Manufacturers and Jobbers of Harness, Saddlery, Shoe Findings and Shoe Store Supplies. **Scheffer & Rossum,** 174-178 E. 4th St.

CARPETS AND UPHOLSTERY. WHOLESALE **SCHUNEMAN & EVANS.** 6th & Wabasha Sts., St. Paul, Minn. Carpets, Linoleums, Imported Mattings, St. Paul Grass Twine Matting, Curtains and Upholstery. Cut order price lists mailed to dealers on application FREE.

Dry Goods. Wholesale Dry Goods, Notions and Carpets; Manufacturers of Gents' Furnishing Goods. **Finch, Van Slyck, Young & Co.,** 4th and Sibley,

Hardware. Importers and Jobbers of Hardware, Cutlery, Sporting Goods, Tools, Bicycles and Sundries. **C. W. Hackett Hardware Co.,** 268-280 East Fourth.

Commission. Jobber and Broker of Fruits, Vegetables, Poultry, Game, Butter and Eggs. **R. E. Cobb,** 31-33 E. 3d St.

National Biscuit Co. MANUFACTURERS OF Crackers and Confectionery. ST. PAUL, MINN.

FARWELL, OZMUN, KIRK & CO. JOBBERS OF EVERYTHING PERTAINING TO THE MODERN HARDWARE STORE BROADWAY THIRD AND PINE

Drugs. Oldest and Largest Drug House in the Northwest. Dealers in Paints, Oils, Glass and Glassware, Surgical Instruments & Appliances. **Noyes Bros. & Cutler,** 6th and Sibley.

Fruits. Importers and Jobbers Foreign, Domestic and California Green Fruits. Established 1849. **B. Presley & Co.,** 102-106 E. Third St.

Mattresses. Mattresses, Woven Wire Mattresses, Cots, Cribs, Cradles, Iron Beds. Children's Folding Beds, Feathers. **Union Mattress Co.,** 505 to 513 Minnesota St.

Rubber Goods. Price Lists to Dealers on Application. GOODYEAR RUBBER CO. GOLD SEAL 1872. **Goodyear Rubber Co.,** 375 and 377 Sibley St., St. Paul Minn

Grocers. Wholesale Groceries. The Oldest Wholesale Grocery House in the Northwest. **J. H. Allen & Co.,** 201-209 E. 3d St.

IMPORTERS OF TOYS, DOLLS, CHINA, ETC, A full line of HOLIDAY GOODS and General Merchandise. Sample rooms the most complete in Western America. The only Toy Stock in the Twin Cities. **G. SOMMERS & CO.** 181, 189 E. Fourth St., St. Paul, Minn.

Hats & Furs. Jobbers and Manufacturers of Hats, Caps, Furs & Gloves. Makers of the "North Star Fur Coat" and "Lanpher Hat." **Lanpher, Finch & Skinner,** 180-184 E. 4th St.

Hats, Gloves & Furs. Hats, Gloves and Furs. Manufacturers of the Gordon Hat. Established 1871. **Gordon & Ferguson,** 216-226 E. 4th St.

FLOWERS MADE OF GLASS

A COLLECTION OF WONDERFUL CREATIONS OF TWO DRESDEN ARTISTS

MEMORIAL GIFT TO HARVARD

Secret Process Which Has Enriched the Botanical Museum—Almost Incredible Scientific Accuracy of the Specimens.

CAMBRIDGE, Mass., Dec. 8.—(Special.)—Every sightseer at Harvard is sure, sooner or later, after making the rounds of the "yard" and Memorial hall, the gymnasium and the library, to ask at last where he can see the "glass flowers;" and, finding them, to linger over the cases in the university museum which contain them with more interest, often, than he has shown for anything else that he has seen in Cambridge. The collection, apparently, is known from one end of the country to the other, better known, perhaps, than any scientific collection, whether of flowers or of other objects, in the United States. It appeals to the common human love of flowers for its beauty as well as to the professional botanist for its accurate reproduction of all the delicacies and intricacies of flower formation, and to everybody for the marvelous ingenuity and patience that have gone to the making of the hundreds of specimens which it now comprises.

The Ware collection of Blaschka glass models of flowers, it is called, made by a secret process by Leopold Blaschka and his son Rudolph, in Germany, and secured to the university by the generosity of Mrs. Elizabeth C. Ware and Miss Mary L. Ware, of Boston, who have established it as a memorial of the late Dr. Charles E. Ware, of the Harvard class of 1834. The elder Blaschka died in 1895, leaving his son to continue the work alone. While the two were working together the number of models received at Harvard in a year sometimes amounted to over 100, including the branch with its flower, and certain special details on a magnified scale; but for the last two or three years the average number of models received has been in the neighborhood of twenty or twenty-five. The total number of plants now shown in the cases at the museum is 578, besides 2,424 illustrative details.

The idea of such a collection originated with Dr. George L. Goodale, who is at the head of the Botanical museum, and the director, also, of the Harvard Botanic Garden. For some years the Blaschkas, then established in Dresden, had been making, for museums all over the world, particularly the marine invertebrates—polyps and the like—as could hardly be represented in collections unless copied in some such durable substance. Some of these models had been procured by Harvard and may still be seen in the Museum of Comparative Zoology. Looking at these suggested to Dr. Goodale that the same process might be used to make models from the living plant, which should be permanent and free from decay, and in which the color and bloom of the original, impossible to preserve in pressed or alcoholic specimens of plants, should be combined with complete scientific accuracy.

Accordingly, in 1886, Dr. Goodale visited the Blaschkas in Dresden and laid his plan before them. Leopold Blaschka, however, had the German inflexibility of mind which is so often referred to as obstinacy, and his first answer was a downright refusal. But Dr. Goodale had seen in the house a wreath of flowers in glass which the Blaschkas had made twenty years before for the funeral of a relative, and he was not to be shaken in his purpose. Tact, persistence, and the offer of terms which doubtless seemed princely to the plain-living German artists finally prevailed. The Blaschkas made their first shipment to Dr. Goodale in the year following, and in 1890 a ten years' contract, in which they agreed to give their time exclusively to the Botanical museum, abandoning their previous zoological work, was entered into. This year the contract has been renewed for an indefinite period, and Rudolph Blaschka's name is now regularly carried on the college lists as "artist-naturalist" to the botanical department.

With the first money received from the university the Blaschkas bought a comfortable house in Hosterwitz, a town about ten miles from Dresden. Not far away are the royal botanic garden and greenhouses at Pillnitz, which, with the botanical gardens in Dresden itself, furnish such living material as is required in making the models. The process which the Blaschkas have used is, as has been said, a secret one, hereditary in the family, and Rudolph Blaschka, as the last of his line, has said that it should die with him. Whether this will be the case or not, the laboratories in the Hosterwitz house have been visited by only two persons besides the Blaschkas—Dr. Goodale, and, not long ago, Miss Ware.

The first models made were, in comparison with those being turned out today, a little crude—though doubtless if they had remained the only ones in existence their imperfections would hardly have been noticed, so great was the skill shown in the minutest details from the very beginning. But the work has steadily improved in quality, in exactness, and in beauty, with every succeeding year. The first point to strike the attention, perhaps, is that the models do not look like glass at all. A blade of grass has the translucency not of glass but of the original growing in the fields. The surface of the leaf of a water plant is nothing like the surface of a piece of glass, but has the waxy effect of the real leaf. The very hairs or tiny excrescences which grow on the stems of certain plants, are reproduced with an accuracy which one would have thought beyond human skill to obtain. This wonderful accuracy is well brought in a report made from a strictly scientific point of view, several years ago, by a contributor to the Botanical Gazette. Speaking of the model of the thorny aralia, the writer said:

"The building up of the complex inflorescence, with its multitudinous minute flowers, is almost past belief. In this cluster, with its flowers so small that their structure can be seen only with a lens, while many of its buds are so minute as to be indistinguishable to the naked eye, I counted of buds, blossoms and developing fruit from 2,500 to 3,000. And yet every flower has its five petals and five alternating stamens with long filaments. I sought to find on the under part of the cluster some flowers perhaps less carelessly done, as being practically out of sight, but they were all equal in their perfection. The immense compound leaf shows the spines scattered irregularly along the stalk and midribs. The pale under surface of the leaflets is quite invisible, owing to the position of the leaf on the card. Were every specimen in the collection to be inverted, the same accurate work would be seen."

The color is naturally the most effective characteristic of the Blaschka models—its freshness, its brilliancy or tenderness, as the case may be, and its absolute truth to the natural flower. In some instances the color appears to be a pigment laid on the glass, but for the most part it is in the glass itself. In neither case has it faded in the slightest degree, so far as the closest observation can tell, even in models received ten or a dozen years ago.

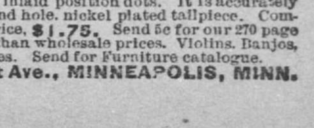
Another striking point about the glass flowers is their seeming fragility and their real toughness and durability. One would suppose that at least half of them would be broken in the transit from Germany to this country, but, as a matter of fact, practically all arrive at the museum as perfect as when they left the Blaschka studio. The greatest care, of course, is taken to pack them securely for the voyage. Each specimen, with its illustrative details, is wired to a piece of heavy white cardboard, properly labeled. This piece of cardboard is glued to the bottom of a heavy pasteboard box, which is packed closely with the finest tissue paper. This box, with others, is packed in straw in a wooden case, which in turn is bundled in more straw and sewed finally in a covering of burlap. The models have until recently been left on the cardboard to which they were originally fastened, but the cardboard, it has been found, is liable to warp, bringing a strain on the glass, which sometimes causes it to break. Accordingly it is proposed to transfer the whole collection to tablets of white plaster of Paris, and the change has already been begun. With this improvement the models should be in a position to last for centuries. Even as it is, the breakage is wonderfully little. The stems are built up on wire, for one thing, and, for another, the glass, as has been said, is not nearly so fragile as it looks. At the close of the World's fair, in Chicago, the glass flowers which had been sent there as a part of the Harvard exhibit were found in a heap at one end of the case in which they were shown. The case was not quite level, and the plush on which the specimens rested, constantly stirred, as it was, with the heavy vibrations of near-by machinery, had carried them gradually down the slight incline. But hardly any were seriously damaged; only here and there had one been broken, and a little cement made the collection nearly if not quite "as good as new."

The Harvard collection—the main part of it, that is—is intended to represent as fully as shall be possible in the lifetime of Rudolph Blaschka, the affinities of the principal flowering plants of North America, in the territory, particularly, of the United States. Beginning, that is, with the lower forms like the pine, the collection passes in order upward through the orchid, the cactus, the rhododendron, the rose (to name only an example here and there), to the most highly developed plants, like the dandelion, the daisy, the burdock, the thistle, and the aster. In attractiveness the cases vary as the flowers are more or less brilliant; but though it is desired that the collection shall be as beautiful and striking as may be, the scientific progression from the lower to higher forms, embracing the plainest as well as the showiest blossoms, is the object aimed at.

The models are, of course, all life-size, ranging from the humblest and smallest field flower to such superb specimens as a great branch of the eucalyptus, two and a half feet long. Each tablet, or card, includes the flowering branch and magnified studies of any details of the botanists. Usually there are three or four of these details—including pretty regularly the stamen and traverse and longitudinal sections of the ovary—and often as many as seven or eight, where some peculiarity in the structure of other parts, as the stigma, the style, the plant hairs, or the pollen grains, is to be brought out.

Besides the main collection just described, two supplementary ones have been formed. One is in connection with the department of economic botany, and shows the natural state of the plants producing Indian corn, cotton, coffee, tea, tobacco, chocolate and the like, each model being surrounded by specimens of the commercial product. A second collection illustrates the relation between insects and plants, and is divided into two parts—one to explain the phenomena of cross-pollenation by insects; and the other displaying the habits of plants which, like the Venus fly-trap and the pitcher plant, ensnare insects and devour them as food. The examples shown in this last section are perhaps the most striking models in the museum.

Remarkable as the Ware collection now is, it is to be considered as only the beginning of the great and systematic exhibition which Harvard will have to show in coming years, if Rudolph Blaschka's life is prolonged. He is now forty-three years old, an artist possessing a unique and unequaled process of copying the most delicate and perishable of natural things and a botanist of the keenest observation and the greatest love for his subject. He has twice visited this country to collect and study such native plants as could not be transported or grown in Europe from seed or bulbs, going as far south as the island of Jamaica and west to Arizona and California. His enthusiasm for the collection which he has built up is as keen as Dr. Goodale's; and though he cannot hope—generations would be insufficient for the task—to make models of all even of the better known North American genera, it is certain that, if his life is only spared a reasonable number of years, the museum will possess a collection as representative and useful for all purposes of exhibition as it is unique and beautiful.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