PREVENT COLLISIONS,

AS ARE S^METIMES OAU ED BY THE FORGETFULNESS OF THE ENGINEER. ·

IS ON A "DUTCH CLOCK" PLAN,

Combining With the Speed Indicator an Automatic Alarm Considered of Much Value.

General Manager W. A. Scott, of the Chicago, St. Paul, Minneapolis Omaha, and Joseph Jungbauer, of St. Paul, have added their names to the long list of Americans who have made the nineteenth century famous for the invention of devices calculated to proect human life. The railroads of the United States last year carried hundreds and hundreds of millions of passengers. Thousands and thousands of passenger trains rolled their way in safety. Millions of lives entrusted to the vigilance of engineers were carried safely to and fro. Yet accidents did occur. There were collisions, for engineers are but human, and some

times they err. Any invention which can be relied upon to guard against accident and prevent collisions carries with it a fortune, and the friends of General Manager Scott and Mr. Jungbauer already see these two gentlemen living miles up on Easy street.

Last year, when the terrible collision at Melby, on the Great Northern, occurred, killing a score of people, General Manager Scott, of the Omaha, was deeply impressed with the need of some kind of a device which would prevent collisions. The Melby wreck was occasioned by the negligence of an engineer, who had been ordered to wait at a certain station for the up-bound train. He forgot his order, and a wreck

General Manager Scott immediately "We must have some invention in America to warn engineers of im-pending danger." He immediately set to work and with help invented a device which has not yet received its official christening. But it is a suc-That much was determined last week, to the great joy of the inventors the amazement of the railroad world generally. The contrivance was sent to Washington, and it said it passed the patent officers and received its papers with remarkable celerity. It is contained in a box seven inches

Technically, the description of the invention is as follows: A device to perform automatically at given and specified distances, the following acts; to sound an alarm by bell, gong or other signal, apply air brakes and automatically bring to standstill a locomotive or train; the device to consist of a distance recorder so constructed that can be set to operate at any given an alarm continuously for a period of wenty seconds, and at the termination or that period to throw an air. brake lever controlling the train brakes and stop the train, unless while the alarm is sounding the engineer releases by his own hand the air brake lever and thus stops the train.

The invention does not look unlike a large cyclometer, such as are carried

Every delicacy of the season, all staple goods, everything in the grocery line is to be found in our store sweet and fresh. Our goods sell promptly, because our prices are the lowest in the market; in fact, they establish market prices.

Three cars Strawberries for St. Paul Monday. We will sell very low.

5-lb iar Best Creamery Butter. 90 cents. Pure Lard, per pound,

6 cents. Palmer House Java and Mocha Coffee 25 cents.

8 bars Schoch's Best Soap, 25 cents. Schoch's XXXX First Patent Flour, per

\$2.35. 3 dozen Oranges for 25 cents.

Pry Schoch's triple Vanilla for ice cream Schoch's highest quality Baking Powder, 1-lb can.

40 cents. ... it is the purest and best made. I quart bottle Maple Syrup, 15 cents: ...

Jonathan Cider, per gallon, 25 cents. 10 cents.

6 cents. Jersey Sweet Potatoes, per pound 2 cents. Tomatees, per pound, 12½ cents.

5-Crown Figs, per pound, 15 cents. 4 lbs California Figs for 25 cents. Fancy French Prunes, per pound, 5 cents.

Summer Sausage, per pound, 12½ cents. THE ANDREW SCHOCH GROCERY COMPANY,

Seventh & Broadway.

by wheelmen. In fact, the invention has some of the functions of a cyclome-ter. The device is set up in the cabin locomotive at a point convent or the locomotive at a point convenient to the sight of both the engineer and fireman. There are hands on the dial of the device indicating any desired distance. The importance of the invention can be easily seen from the

following suggestion.

An engineer at the St. Paul union depot, bound out to Chicago, receives an order from the train dispatcher to run to Stillwater Junction and there meet another train bound in the opposite dispatcher. another train both in the opposite arrection. On entering his cab the engineer immediately sets the dial of the device at say, twenty-eight miles, the distance to Stillwater Junction. He starts his engine, and from that moment his mechanical mentor and work property of the starts o prompter comences its work, perhaps to save a hundred lives. Behind the driving wheels of the engine is a smaller wheel running upon the rail every revolution of the small whe the record of that revolution is carried to the indicator or cyclometer. The wheel revolves a stated number of times per mile. As the train reaches times per mile. As the train reaching the junction, let it be supposed, for illustration, that the engineer is asleep or for other reasons, is incapacitated for duty. He nears the junction, but does not notice his danger as the train

rushes along. But his little promptor has been at work. As the dial reaches the twenty-eight-mile notch, the mechanism is released and instantly a loud gong commences to sound over th head of the sleeping engineer. For twenty seconds the signal continues to give its warning, and at the average speed, the train is nearing the danger point. But at the end of the twenty seconds the device takes matters into its own hands and automatically, by means if a powerful coll spring, throws over the air-brake lever and the train is brought to an instant stop. If the engineer awakes by the sound of the bell or gong, he, of course, can turn the lever himself, but the device is unfail-

ng. The revolutions of the small whee upon the rail accurately denote the distance traveled. If the engine wheels slide when the brakes are applied, the sinde when the brakes are applied, the cyclometer does not lose the distance, as the little wheel acts independently of the drivers which can slip for a half mile without affecting the acquarate record of distance traveled. General Manager Scott is a practical engineer and railroad man and understands what is needed thoroughly, and Mr. Jungbauer has an inventive mind which has grasped each one of the general manager's suggestions.

At one time it was thought that electricity might be used in the working of the device, and Chief Operator C. B.

Davison was brought in to figure out some kind of electrical attachment. But this was thought to be impracti-cal for the reason that an electrical de-vice would more easily get out of repair. Then the inventors went back to mechanical contrivences with great

on the Omaha road, between St. Paul and Lake Elmo. The inventors were in the cab of the engine. The distance and Lake Elmo. The inventors were in the cab of the engine. The distance was figured out accurately in order to judge of the reliability of the device. The dial was then set for nine miles, which would take the engine to the outer switch at Lake Elmo station. The engine was run at ordinary speed, and the small wheel at the rear of the drivers accurately performed the form The engine was run at ordinary speed, and the small wheel at the rear of the drivers accurately performed its function. The inventors were awaiting the result with the keenest interest and expectancy as the engine neared the station. Just as the locomotive came within 1,000 feet of the outer switch there was a click in the indicator and irstantiy a gong began its warning. The inventors looked at each other with the keenest relief. But it was not all done yet. As the twenty seconds wore away and the gong ceased its clamor, there came the ear-splitting hissing of the air brakes and the engine was brought to a dead standstill, without a human hand being lifted to assist. There was joy on the cab of the engine, and every one predicted a great future for the device. On the return trip, the invention worked with equal precision. The next day another trial was made, after improvements had been added. This trial was also very satisfactory. Since that time constant improvements have been added to the device and now it stands nearly perfect. Wooderful things are expected of it, for its field of operations: sengers. Letters patent will also be taken out in foreign countries for the device can be operated on one class of road as well as another.

FAVORABLE REPORTS.

Received by Western Roads From

CHICAGO, May 8.-The traffic officials of the Western and Northwestern roads declare that they are receiving the most flattering accounts of the crop conditions in Iowa, Nebraska, Kansas, Minnesota and the Dakotas. They say Minnesota and the Dakotas. They say that the reports of their agents are to the effect that not in any recent year have the conditions been so favorable and they are looking for a large business in the fall. This is largely counting the crop before it is in the ground, but the majority of the reports from the railway agents are of so sanguine a nature that the roads are feeling very cheerful over the progrects ahead. very cheerful over the prospects ahead of them.
The Chicago, Burlington & Quincy

will tomorrow put on its Southwestern limited express train with an entire new equipment throughout, and it will be one of the finest trains in the be one of the finest trains in the coun-try. It will leave Chicago daily at 5:30 p. m. for Kansas City, St. Joseph, Leav-enworth, Atchison and the Southwest.

CHANGED TIME SCHEDULE Goes Into Effect Today on the Milwankee Road.

The Milwaukee road has prepared The Milwaukee road has prepared a new schedule of trains to go into effect today. There will hereafter be a sleeper attached to the fast mail, leaving this city for the East at 6:55 p. m. The train over the I. & M. division will leave this city at 4:40 p. m., ten minutes earlier. It will go by way of the Prairie du Chien division and Milwaukee, instead of by way of the Dubuque & Council Williams division. Other changes are made, but hone affecting trains out of St. Paul.

TENNESSEE CENTENNIAL.

The Lowest Rates Ever Made to a

Exposition in This Country. The Exposition in commemoration of the hundredth anniversary of the admission of Tennessee into the Union is mission of Tennessee into the Union is not a local affair by any means. It far surpasses in extent of buildings, beauty of grounds, interesting exhibits and number of both foreign and home attractions any exhibition ever held in this country, with the possible exception of the Columbian of 1893. Located as it is on the main line of the Louisville & Nashville Railroad it is in the direct line of travel between the North direct line of travel between the North and South, and can be visited en route with loss of but little time. The ex-tremely low rates that have been es-tablished make it cheaper to go a litthe out of your way, even, to take it this great show, while its own attractions will well repay a special visit Write Mr. C. P. Atmore, Gen'l Pass Agent, Louisville, Ky., for matter concerning it

cerning it. He Was Hurried Out. Charles Williams, a colored man arrested Friday on the charge of vagrancy, went out to the workhouse with the other prisoners from the municipal court yesterday, but when he arrived it was found there was no committeent papers for him. An investigation showed that Williams had gotten into the Black Maria either by mistake or design, as he has not been sentenced by Judge Orr, but had his case continued until Tuesday. He was taken to the Rondo street police station and subsequently to the county jail, where was taken to the Rondo street police station and subsequently to the county jall, where he will await his trial.

ACCORDING TO REPORTS RECEIVED FROM ALONG THE NORTHERN. PACIFIC

ACREAGE LARGER,

CORRESPONDING - DE-CREASE IN THE COARSER GRAIN CROPS.

SOIL ENRICHED BY THE RAIN.

Promises a Bountiful Harvest for the Autumn of I897-Reports by Divisions.

Northern Pacific crop report No. 2 was issued yesterday for the information of the officials of the road and the public. The report contains the same general optimistic tone which characterized the first report for the season, issued a week ago. The news is very flattering and will be received with delight by those figuring upon a large crop for the coming harvest.

The report shows that from the Mississippi river to the Pacific coast the acreage will be increased from 10 to 25 per cent in wheat, while there has been some shrinkage in oats and coarse grains to equalize. All over the West the farmers report that the soil is in excellent condition and works very easily. In Minnesota and North Dakota, also in portions of Montana, the wheat has already come up from two to four inches, showing the most favorable conditions of weather and soil. The report follows:

conditions of weather and soil. The report follows:

Minnesota Division—The weather for the past few days has been very warm and dry, bringing grain up very rapidly, especially on the east end, where the fields are now quite green. Wheat is all sown west of Perham. Other crops are going in rapidly. On lighter soil, the want of rain is felt, but nothing is suffering as yet. Pasturage is now good, but showers would be beneficial.

Little Falls and Dakota Branch—The week has been favorable for the finishing up of wheat seeding and for grain already in. Grain has made a fine start. West of Glenwood farmers are preparing ground for flax. Some of the latter has been planted. In the vicinity of Starbuck, the largest shipping point on the branch, the wheat acreage will be 25 per cent heavier than that of last year. There is plenty of moisture in the ground. Fergus Fails Branch—Grain is coming up very rapidly and presenting a fine appearance along the eastern portion of the branch. Rain would be appreciated, as the surface soil is becoming dry as the result of continued high winds. In North Dakota wheat seeding will be finished this week Early sown seed its sprouting nicely. Soil and weather conditions excellent. There is some plowing yet to be done for flax.

Manitoba Division, South of Boundary—Farmers are taking advantage of perfect conditions of weather and soil and have accomplished a great deal of seeding this week. South of Fertile wheat and oats are all in. Rain would assist in germinating the seed, as the surface soil is becoming somewhat dry.

the device and now it stands nearly perfect. Worderful things are expected of it, for its field of operations is unlimited. Engineers can be required to set the device at every station at which train orders are received, thus protecting doubly the safety of the pas-Fargo and Southwestern Branch—Conditions for seeding have been all that could be desired this week; fhree-fourths of the wheat is sown and a start has been made on oats and barley. In one or two localities plowing is backward, which will necessitate the sowing of wheat on stubble or put into fax later. East of Sheldon rain would be appreciated. Some of the early sown wheat is coming up. Cooperstown Branch—Over 75 per cent of the wheat is seeded and the first sown is up two to four inches. Weather and soil conditions could not be more favorable. No rain has failen this spring, and farmers would be glad of a shower. The outlook is favorable.

James River Valley Branch—Three-fourths of the wheat crop is in the ground and a good deal of it is coming up. Fine weather has prevalled and there is no need of rain yet. The acreage promises to be large.

Jamestown and Nörthern Branch—Fine warm weather has prevalled all this week, enabling farmers and crops to make great hendway. Half the wheat sown and much of it is above ground. There will evidently be an increase of 20 per cent in wheat acreage; the acreage of coarse grains will be about the same as last year. North of Carrington. there

it is above ground. There will evidently be an increase of 20 per cent in wheat acreage; the acreage of coarse grains will be about the same as last year. North of Carrington, there is 25 per cent plowing yet to do. The season is considerably earlier than last year; farmers appear thoroughly satisfied with the prospects. Mandan to Dickenson—Since last report, great advance has been made throughout this district. Seeding has progressed and grain is coming up. About all the wheat is sown and progress is being made with oats. The weather has been very warm and dry, and rain will soon be required in many localities.

Montana—Spring seeding is progressing famously in the Gallatin valley; host of the wheat should be in this week. Barley and cats will be sown to the end of the month; winter wheat and grass are growing lively. Alfalfa gives promise of a very good crop. The weather is warm and sunny. In the Bitter Root valley the weather has continued warm, and rain is needed, but nothing is suffering yet. Orchards look promising and new ones are being set out.

Washinston, Idaho and Oregon—On the main

yet. Orchards look promising and new ones are being set out.
Washington, Idaho and Oregon—On the main line east of Pasco crops are in excellent condition; the weather is warm and light rains are desirable. Seeding is progressing rapidly west of Pasco; crops are in better condition

Elgin Creamery Store, 103 West Seventh Street

DAIRY. PRODUCTS.

The prices are very small to meet Buttermilk (Fresh)

We sell them all. Read the list

By glass or gallon. Morning's Sweet Milk

By glass, quart or gallon. Sweet Cream

By glass or gallon. Ice Cream,

Pints, quarts or gatlon. EGGS-Strictly Fresh-Mrs. Wells. EGGS-Good seconds, 70 per dozen BUTTER-Best Separator-"The

Daisy Brand." BUTTER-Best Dairy, 15 cents. CHEESE-Full Cream thew), 121/0. HONEY-White Clovery 12 cents. We Give Out Cash Coupons.

HAS LOST A SISTER.

Jacob Wienharge of Duluth, Seeks " His Mister Nettie.

Jacob Weinberg; of Duluth, is in St. Paul looking for his seventeen-year-old sister, Nettle Wienberg, who ran away from home last Sunday. The police have been given a description of the yong girl and asked to detain her for her relatives, if found.

It is known that the girl came to this city, as she was seen by Officer William Bunker late Sunday night. She asked the officer about hotel accommodations and he directed her to the Grand Centhe officer about hotel accommodations and he directed her to the Grand Central hotel, at Seventh and Wabasha streets. Her name is on the hotel register and a valise belonging to her is still in the office, though neither officer nor the brother could yesterday locate the girl, who left the hotel Wednesday evening. When she went away she informed the proprietor that she had met an acquaintance in St. Paul and was going to stay with his family until she could procure employment. The friend's name she said was Dr. E. C. Boxell. Yesterday the proprietor was given a note by a man Dr. E. C. Boxell. Yesterday the proprietor was given a note by a man claiming to be Dr. Boxell, which requested that Miss Wienberg's valise be turned over to him. The valise, however, was not taken away, and word was left that it would be called for again. The only Dr. Boxell known to live in St. Paul or its vicinity, resides at St. Paul Park.

ST. PAUL SCHOOL UNION. Annual Meeting at Central High To-

morrow Night. The first annual meeting of the St. Paul Public School union will be held tomorrow evening at 8 o'clock at the central high school. The organization will be completed by the election of permanent officers, after which Miss Margaret J. Evans, dean of Carleton college, will give an address on "The School a Moral Factor in the Nation." schools are cordially invited to be pres-

A meeting of the Lincoln school auxiliary to the Polic School union will be held at the Liscoin school tomorrow afternoon at 4 o'clock, Addrsses will be made by Miss Brooks and others.

The next regular meeting of the John Ericsson branch of the St. Paul Public School union will be held at Woolsey's hall, corner Case and Burr streets, Friday evening at 8 o'clock. The officers of the branch are: President, Dr. A. W. Whitney; first vice president, A. Lindahl; second vice president. G. F. Woolsey; third vice president. Oscar Peterson; secretary, Mrs. W. G. Peterson. The president has appointed the following executive committee: A. P. Crocnquist, Mrs. Dr. Robilard, Mrs. Hillstrom, Miss H. E. Ruddy, Rev. Mr. Driscoll, A. Anderson, James Smith.

The Harr'son branch of the St. Paul Public School union was organized at the Harrison school Friday. The following officers were elected: President, Mr. D. Lange, vice presi-dent, Mrs. Eugene Petit; secretary, Miss G. Whaley.

POLES TO CELEBRATE. Honor the Memory of Their

local Poles will celebrate the 166th anniversary of the re-establish-ment of the Folish monarchy, under a constitutional form bins afternoon at 3:30 o'clock in Garfield hall, Fauquier and Arcade streets, where the will revive the memory of Kosciusko and Poniatowski. The celebration will be under the direction of the Polish Na-tional alliance, a patriotic organiza-tion. The exercises will consist of addresses, recttations and music. Judge Willrich, T. M. Helinski, postmaster of Duluth, and president of the Polish Na tional Alliance in the United States. Joseph Rosenthal, Ald. Kaldunski, S. T. Modrzejewski, C. Krauzowicz, Ju-T. Modrzejewski, C. Krauzowicz, Julius Wirth and S. Titmyer will make eeches, and Beatrice Francylak, Mrs Titmyer, Miss Helen Merwicki, Miss Angeline Vermus, Master Ignatius Ro-senthal will give recitations. The A Koutski, Paderewski and Wanda singing societies will be in attendance. Mis Frances Pauszek will appear in a mandolin solo. Charles H. Frankoviak, chairman of the committee on arrangements, will fill the post of master of

SOUVENIR OF ST. PAUL. Several Thousand Copies Sent to Los Angeles.

There was sent yesterday to Delegate M. N. Goss, of this city, to the railway conductors convention at Los Angeles, several thousand copies of as neat a souvenir of St. Paul as a convention city as has been gotten out in

The little brochure, which is designed to set forth to the convention good reasons for holding the 1899 gathering in St. Paul, contains a series of half in St. Paul, contains a series of half-tone engravings, together with brief-descriptive stories of the St. Paul busi-ness and other buildings, theaters, ho-tels, to say nothing of a number of at-tractive views of the park system, res-idence district and picturesque spots in and about the city, including the lakes and other points of interest.

On the cover of the pamphlet is minted in a tasty combination of color

printed in a tasty combination of color the insignia of St. Paul Division No. 40 JOY FOR JUNIOR PIONEERS.

Eighth Annual Entertainment Now Close at Hand.

The evening's pleasure closes with supper

PRESIDENT WRIGHT COMING To Address the Children's Home So ciety Annual.

Hon. A. O. Wright, of Madison, Wis. will deliver the annual address before the Children's Home Society of Minne-sota, at the Plymouth Congregational church, Summit avenue and Wabasha street, Sunday morning, May 16.

Mr. Wright is president of the Chil-dren's Home Seciety of Wisconsin, and has been president of the national conference of characies and corrections, and it will be an able and interesting ad-

Coming Entertainments.

The Elks Banjosculub give their first enter-tainment in Litt's hall May 19. They have se-cured for an attraction Mr. Alfred A Farland, of New York city, a renowned banjoist. Mr. Snyder, the director of the club, is his repre-sentative here, and is most fortunate in hav-ing secured him for the occasion, as he sel-dom appears anywhere but in the larger cities. The club will render several numbers on which they have been working for some time. In addition to this, they will be as-aisted by some excellent local talent in a pro-gramme of an unusual high order. gramme of an unusual high order.

A society drama entitled "Imogen; or the Witch's Secret" will be presented by the Clover Leaf Comedy club, at Cretin hall, Fort and Sixth streets, Thursday, May 20, for the benefit of the Sacred Thirst T. A. society.

The cantata of "Esther," by Bradbury, will be given in Goodrich avenue Presbyterian church, Monday evening, May 17. The chorus and the solo singers are asked to be at the rehearsal tomorrow evening in the House of

Now is the Time to Place an Order for Filling Your

## FLOWER BEDS, VASES And Window Boxes.

It is a great advantage to you as well as ourselves if orders are placed early, as we can then take the boxes or vases to our conservatories and get the plants well started before delivering the same.

Call On Us for Estimate. Our Prices Are Low.

WE HAVE THE FINEST LINE OF

RUSTIC AND IRON VASES

Come in and see our Assortment, and let us quote you Prices on them.

L.L.MAY&CO.

LATE SOCIAL NEWS.

The relief society of St. Paul chapter No. 4, O. E. S., will meet Monday afternoon rith Mrs. William Starkey, 1049 Fauquier treet. 24, O. E. S., will meet Monday afternoon with Mrs. William Starkey, 1040 Fauquier street.

Vesta lodge No. 3 is preparing for an entertainment and hop to be given at Odd Fellows hall Friday evening, May 28, for the benefit of the I. O. O. F. home fund.

Mr. and Mrs. A. K. Teisberg, of Olive street, have taken up their residence at Bald.

Mr. and Mrs. A. K. Telsberg, of Olive street, have taken up their residence at Bald Eagle lake.

The ladies of Acker W. R. C. will give a literary and musical followed by dancing tomorrow evening at Central hall, corner Sixth and Seventh streets.

The Mrsses Eckert, of Nelson avenue, entertained at luncheon Saturday.

A very pleasant surprise party was tendered to Miss Gertrude Wiemann at her home on West Tenth street last Wednesday evening. The evening was devoted in playing progressive euchre, and refreshments were served, after which dancing was indulged in until an early hour. Several soprano solos were rendered by Miss Anna Grode, and a duet by the Misses Lizzle Simmer and Anna Grode. The prizes were captured by the following ladies: Progressive, Miss Mattie Hartman; lone hand, Miss Wallie Greffley; booby, Miss Annie Gerth; gent's progressive, Joe Dries; lone-hand, Andrew Schmitz; booby, Mr. McCauley. Among those present were the following: Misses Katie Heidenreich, Anna Grode, Frances Brann, Anna Wagner, Katte Schmitz, Mamie Oleson, Wallie and Lizzle Greffley, Tinea and Lizzle Simmer, Mattie Hartman, Gussie and Lettle Lux, Mary Gerth, Annie and Barbara Gerth, Vervinca and Rose Eibert, Mary Wiemann, Lena and Gertrude Wiemann; Messrs. Joe Koch, Joe Dries, George Stenger, Mike Heirlenreich, Andrew Schmitz, Henry and Will Berlosi, M. J. McManus, Al Metzger, J. Simmer, Prof. Marvin, Fred Bender, McCauley, Will Gelsen. The party was chaperoned by Mr. and Mrs. John Grode.

CELEBRATE AN ANNIVERSARY.

Theodored Koerner Lodge Joilifles Over the Event. The members of the Theodore Koern er lodge, Sons of Herman, celebrated the seventeenth anniversary of the or-genization by a grand ball at Assemhall last evening. Marking as i did an extended period of successful existence, the occasion was embraced by the members and their friends to make the function memorable and nothing was lacking for the entertain-ment of the guests. The hall was prettily decorated with banners and colors of the order, while the dancing was diversified by an address upon the history of the lodge by Lieut. William Budy, of the Prior avenue police sta-tion. Lieut. Budy related the beginning of the lodge with few members and detailed its progress until today it is regarded as one of the strongest local Sons of Herman bodies. As State Past Grandmaster of the Sons of Herman, Lieut. Budy prohesied a successful future for the organization, and congratulated the lodge upon the evening's entertainment. Officer Stutz, of ing's entertainment. Officer Stutz, of the Rondo street station, acted as man ter of ceremonies. The officers of the lodge are: President, O. G. Peters; vice president, W. Schebbenger; corresponding secretary, August Thomas; financial secretary, John Schneider. The guests of the evening were served with a substantial supper by the wives of

the members. TWO TEAMS WERE TIED. In the Cavendish Club Whist Play

Last Night. The result of the sixth night's play in the current whisf series at the Cavendish club was a victory for Bowen and Kipp, although Countryman and Taylor had a tie with them in points made. The full scores were:

North and South—

North and South—
Frank and Graburn
Countryman and Taylor
Filebrown and Kane
Deuel and Prendergast
Barlow and Carson
Brown and Jaggar
C. H. Glibert and Kennedy
Bowen and Kipp

Total
Average, 166%.
East and West—
Armstrong and Benjamin.
Hay and Ricketts.
Bonfoy and Larkin
Carleton and Youngman.
Rothschild and Zenzine Patterson and Scholle.
P. Gilbert ind Wood.
Total
Average, 145%

GOING TO THE N. E. A.! Buy Your Tickets Via "The North Western Line."

Which is the only road that can offer you absolute comfort and the best of service. The National Educational As will hold its annual meeting at Milwaukee, Wis., July 6, and the fare from Minneapolis or St. Paul is \$12.20 for the round trip, including N. E. A. meantership fee.

Tickets on sale July 3, 4 and 5. Ticket offices: 13 Nicollet House Block, Minneapolis; 395 Robert St., Cor. Sixth (opp. Hotel Ryan), St. Paul.

Opening of Wildwood. The popular and well-known summe resort at Wildwood, on White Bear lake, will be opened on the 1st of June with all the old amusements and many

electric car service.

Now is the time for churches, Sunday schools, fraternal and other societies and trade and labor unions to book their picnics when they can have a choice of dates.

Office, No. 318 Manhattan building. Telephone, No. 744. Office hours, 10 a. m. to 1 p. m.

O. F. Briggs, Manager.

Fort Snelling Social Notes. An informal hop was held at the fort last evening. Afgreat many of the guests were from St. Paul. Mrs. Omar Bundy entertained at cards Thursday afternoon.

hursday atternoon. Mr. Will Page, of Chicago, son of Col. Page, visiting his parents for a short time.

From Ship to Ship.

Possible to Send Telegraphic Messages Through the Sea.

ventor who has already contributed several important and successful inventions to electrical science, has devised a means of telegraphing without land or sea. Prominent electricians regard it as practicable, and the Franklin institute, of Philadelphia, which is very conservative in its treatment of all new ly and has applauded its results. Mr. Kitsee has reduced the old ideas of long distance telegraphy by induction to a practical basis. The idea has been patents out in all large countries of the world in January, 1895. But since that time the idea has lain idle, for Kitsee matic retransmission to further dislacked a backer. Meanwhile Guglielmo Marconi, the

young Italian experimenter, has gone to London and has attracted the attention of the English scientific world by the wonders he proposes to work with backed by a moneyed syndicate, and its members are watching the course of affairs in England to see whether Marconi does not run up against the Kitsee patents when the opens up his mysterious: box:

The American inventor uses a familiar form of energy and familiar apparatus. The waves are sent through water and air. To send waves through the air the current used must be of high frequency and high potential, an ternating current of minute volume and immense pressure. This may be done on a dynamo of ordinary form.

THREE CURRENTS USED.

Three currents are used. The primary current is used only to induce waves in the secondary, and through the secondary in the tertiary coil. The make and break signals are made on the primary coil. The secondary cur-rent is the one by which signals are sent through air and water. The third is the one by which the signals are shown, the faintest return wave caus-ing a glow in the vacuum (X-ray) globe. One end of the secondary wire is on

the masthead, where a great copper disk is hung, and the other is on a copper plate fastened to the keel.

The course of an induced impulse is not that of the ordinary electric cur-rent, which always chooses the easiest path, and would short circuit itself rather than travel any considerable distance to another ship. The electric impulse from keel and masthead are exerted in every direction, from the masthead upward and outward, from the constant of the const the keel downward and outward. Each pole of the ship's instrument is sending out an inconceivably rapid succession of electric impulses.

These impulses cannot return to the ship unless they find another ship equipped just as the first, and travel from keel to masthead. They will go to all vessels within their reach, and that is only limited by the power put into them. Half an ampere is thought best for

sea signaling, and about ten thousand volts, or six or seven horse power, is thought necessary for signaling fifty The primary current is kept turned on when the instrument is "sending," and signals are made by the Morse key and sounded on the secondary circuit.

The induced waves at every touch of the key are dispersed in sky and sea. They go out over the water and through it, seeking some path through through it, seeking some path through which their force can satisfy itself, and this can only be done through just such another vessel as the one by which they have been sent out.

The current in the secondary coil induces another of still higher voltage and smaller volume in the tertiary coil, which current, as it passes through the receiving globe an exhausted tube.

receiving globe, an exhausted tube, causes a purple spark—the X-ray.

The long and short glows in the vacuum globe represent dots and dashes.

It would not do to have the signals produced in the globe at the same end from which they are being sent, for there would be trouble and confusion when the second ship began to answer. It is necessary that the globe in one ship should respond only to the key in another. Here is where the second set of coils come in. The opposing coils are wound in a direction opposite to the active ones. The primary current acting on the tertiary balances the effect produced by the secondary current in the other coils. The globe does not glow, therefore, unless extra current reaches the apparatus from another produced in the globe at the sam aches the apparatus from another

ship.

This practically covers the details of the Kitsee apparatus for telegraphing

The coil for a fifty-mile instrument should be about four feet long, built in sections. Vessels would always have sections. Vessels would always have their current on as a signal to other ships, and an extra globe in the pilot house would at once give notice of the presence of another ship in the fifty-mile field. As the waves sent through salt water would "lag" somewhat, dots and dashes would have to be very long. A speed of three words a minute, however would not be difficult ever, would not be difficult.

For and mist and storm would have ect on the working of the system, 

APPLIED TO LAND USES.

Kitsee has applied the same idea to land telegraphy, with slight variations, and claims to have a method of telegraphing from trains which is really practicable.

racticable.

Kitsee proposes to send, or at least proposes the possibility of sending, messages without wires to any part of the earth by relay stations,

"The great step forward in telegraphy without wires is," he said to me, "in my estimation, the collection of the electric waves with the aid of a vacuum globe and converting the rays of the globe and converting the rays of the vacuum globe into sound. "This method allows the 'repeating' of messages and therefore their auto-

"As for example: Let A be a send ing station apart from B a few miles, B, being equipped with the automatic repeating device, will be enabled to send the received message (without the send the received message (without the aid of an operator) a few miles further. Such automatic relay stations may be stationed across the whole continent, or at intervals along dangerous coasts, and local circuits may be closed at any point. Therefore, an uninterrupted path of communication can be established through a space covering practically all points desirable." point.

Praise for Miss Farwell.

Miss Birdena Farwell, well known in St. Miss Birdena Farwell, well known in St. Paul musical circles, sang recently at Niles, Mich. A Niles paper says: "Her reception was as enthusiastic as a Niles audience has ever bestowed upon any visiting artist. She is a modest young lady, who came without heralding, and she made a favorable impression. The hearty encores were graciously responded to."

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One fine square, only 50
One Fischer upright 115
One Gabler upright 165

One Keller upright

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Off for St. Louis Convention. Gen. Becker, Secretary Tiesberg, Attorney ills and Chairman Kingsley, of the railroad and warehouse commission, leave tonight for St. Louis to attend the annual convention of railroad and warehouse commissioners of the various states of the Union. Nearly five-sixths of the states now have commissions.

West side residents have called a mass meeting for Tuesday evening, to protest against the propostion to close the Humboldt high school.

MARRIAGES, BIRTHS, DEATHS.

MARRIAGE LICENSES. BIRTHS.

Mr. and Mrs. Jacob Merrick Boy
Mr. and Mrs. R. McNamara Boy
Mr. and Mrs. Hugh McGee Girl
Mr. and Mrs. Fred Henning Girl
Mr. and Mrs. William Lathrop Boy
Mr. and Mrs. John T. Dots Boy DEATHS. Mrs. Minnie St. Clair, city hospital ..... 36 yrs

SCHUMANN—In St. Paul, Saturday, May 8, 1897, at the residence of his daughter, Mrs. Charles J. Hanft, 114 East Isabel street, Abraham Schumann, aged seventy-five years. Funeral Monday, May 10, from residence, at 2 o'clock, Members of Minnesota Grove No. 1, U. A. O. D., please attend.

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