

ENGINE CAB ALARM TO PREVENT COLLISIONS.

AS ARE 3 TIMES O.U.D. BY THE FORGETFULNESS OF THE ENGINEER. IT 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 protect human life. The railroads of the United States last year carried hundreds and hundreds of millions of passengers. Thousands and thousands of passengers were 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 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 ensued.

General Manager Scott immediately said: "We must have some invention in America to warn engineers of impending danger." He immediately set to work and with help invented a device which has not yet received its official christening. But it is a successful one. The contrivance was sent to Washington, and it said it passed the patent officers and received its papers with remarkable celerity. It is all contained in a box seven inches square.

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 it can be set to operate at any given distance in such a manner to sound an alarm continuously for a period of twenty seconds, and at the termination of 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.

By wheelmen.—In fact, the invention has some of the functions of a cyclometer. The device is set up in the cabin of 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 device 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 dispatcher to run to Stillwater Junction and there meet another train bound in the opposite direction. 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 prompter commences its work, perhaps to save a hundred lives. Behind the driving wheels of the engine is a small wheel running upon the rails. At every revolution of the small wheel, the record of that revolution is carried to the indicator or cyclometer. The wheel revolves at stated number of times per mile. As the train reaches the junction, let it be supposed, for illustration, that the engineer is asleep or for other reasons, is incapacitated, does not notice his danger as the train rushes along. But his little prompter has been at work. By the time it reaches the junction, the mechanism is released and instantly a loud gong commences to sound over the head of the sleeping engineer, and gives its warning, and at the average speed, the train is nearing the danger point. But at the end of the twenty seconds the gong ceases, and the engineer awakes by the sound of the bell or gong, he, of course, can turn the lever himself, but the device is unailing.

The revolutions of the small wheel upon the rail accurately denote the distance traveled. If the engine wheels slide 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 accuracy of the distance traveled. General Manager Scott is a practical engineer and railroad man and understands what is needed thoroughly, and Mr. Jungbauer has an invention 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. Davidson was brought in to figure out some kind of electrical attachment. But this was thought to be impractical for the reason that an electrical device would more easily get out of repair. Then the inventors went back to mechanical contrivances with great success.

A few days ago the invention was given a practical and exhaustive test upon the Omaha road, between St. Paul and Lake Elmo, for a distance of twenty-six miles. The distance was figured out accurately in order to judge of the reliability of the device. The dial was set at each of the stations which would take the engine to the outer switch at Lake Elmo station. The engine was run at ordinary speed, and the dial was set at each of the drivers accurately performed its function. The inventors were awaiting the result with the keenest interest and when the engine reached the station, just as the locomotive came within 1,000 feet of the outer switch, there was a click in the indicator and the dial showed the distance in miles. The inventors looked at each other with the keenest relief. But it was not all done yet. As the twenty seconds passed, the gong ceased its clamor, there came a click in the indicator and the engine was brought to a dead standstill. The driver of the engine, who had assisted, the inventor worked with trial and error, and after improvements had been added, this trial was also very satisfactory. Since that time continuous tests have been made with the device and now it stands nearly perfect. Wonderful things are expected of it, for its field of operations is unlimited. It can be set to operate at any distance to set the device at every station where train orders are received, thus protecting doubly the safety of the passenger and the freight train. It is taken out in force, and can be used in any country, and can be operated on one class of road as well as another.

Received by Western Roads From the Wheat States. CHICAGO, May 8.—The traffic officials of the Western and Northwestern railroads that they are receiving the most favorable reports of the crop conditions in Iowa, Nebraska, Kansas, Minnesota and the Dakotas. They say that the reports of their agents are to the effect that 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 here in the grain, 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 prospects ahead of them.

The Chicago, Burlington & Quincy will tomorrow put on its Southwestern train to Kansas City, St. Joseph, Leavenworth, Atchison and the Southwest. CHANGED TIME SCHEDULE Goes Into Effect Today on the Milwaukee Road. 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 train for the 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 in the way of Milwaukee, Prairie du Chien division, and Milwaukee, instead of by way of the Dubuque & Council Bluffs division. Other changes are made, but none affecting trains out of St. Paul.

TENNESSEE CENTENNIAL. The Lowest Rates Ever Made to an Exposition in This Country. The Exposition in commemoration of the hundredth anniversary of the admission 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 Exposition, 1893, as it is on the main line of the Louisville & Nashville Railroad it is in the direct line of travel between the North and South, and can be visited on route with loss of but little time. The extremely low rates that have been established make it cheaper to go a little out of your way even to take this great show, while its own attractions will well repay a special visit. Write Mr. C. P. Moore, Gen'l Pass. Agent, Louisville, Ky, for matter concerning it.

CROP IN FINE SHAPE

ACCORDING TO REPORTS RECEIVED FROM ALONG THE NORTHERN PACIFIC WHEAT ACREAGE LARGER, WITH A CORRESPONDING DECREASE IN THE COARSER GRAIN CROPS.

SOIL ENRICHED BY THE RAIN. Promises a Bountiful Harvest for the Autumn of 1897—Reports by Divisions.

Northern Pacific crop report No. 3 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 grain 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:

Minnesota Division.—The weather for the past few days has been very warm and dry, bringing grain up very rapidly, especially wheat. The crops are in fine shape. Wheat is all sown west of Perham. Other crops are going in rapidly. On higher soil wet rain will do no harm, but showers would be beneficial. Little Falls and Dakota Branch.—The work has been busy in finishing up of wheat seeding and for grain already in. Grain has made a fine start. West of Perham the soil is in fine shape. Some of the latter has been planted. In the vicinity of Starbuck, the largest shipping point on the river, the soil is 25 per cent heavier than that of last year. There is plenty of moisture in the ground. Minnesota Division.—The weather for the past few days has been very warm and dry, bringing grain up very rapidly, especially wheat. The crops are in fine shape. Wheat is all sown west of Perham. Other crops are going in rapidly. On higher soil wet rain will do no harm, but showers would be beneficial.

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 getting the crops in. The surface soil is becoming somewhat dry. From Fertile to East Grand Forks wheat seedings have been sown under advantageous circumstances. Acreage larger than in 1896. North of Grand Forks to Cahoon half the wheat and other crops are sown. The prospects, and say they have never a better spring. Land along the flooded the flooded lands have been seeded.

Will Honor the Memory of Their Country's Heroes. The local poles will celebrate the 166th anniversary of the re-establishment of the royal monarchy under a constitutional form of government at 3:30 o'clock in Garfield hall, Faulquier and Arcade streets, where the will be under the direction of the Polish National alliance, a patriotic organization. The exercises will consist of address by the lords by Lieut. William Willich, T. M. Hellinski, postmaster, Duluth, and president of the Polish National Alliance in the United States, T. Modrzewski, C. Krausz, Stanislas Wirth and S. Timmer will make speeches, and Beatrice Franowiak, Mrs. Timmer, Miss Helen Merwick, Miss Mary Riebel, Mrs. Marie G. Schmitt, and others will give recitations. The A. Koutski, Paderewski and Wanda singing societies will be in attendance. Miss Franowiak will appear in an arrangement. Charles J. Franowiak, chairman of the committee on arrangements, will fill the post of master of ceremonies.

SOUVENIR OF ST. PAUL. Several Thousand Copies Sent to Los Angeles. There was sent yesterday to Delegate M. N. Goss, the city and the railway contractors convention at Los Angeles, several thousand copies of a new souvenir of St. Paul as a convenient city as has been gotten out in time. The little brochure, which is designed to set forth to the convention good things of the city, including the lakes and other points of interest. On the cover of the pamphlet is 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 eighth annual entertainment of the Junior Pioneers, organized by Capt. Edward J. Goss, will be held Wednesday in Elks' hall. There will be a reception from 7:30 to 9, with address by John Schmitt. The musical program is: Overture.—Seibert's Orchestra Quartet.—Messrs. Allen, Henninger, Bookstaver. Vocal solo.—Miss Willie E. Pettigrew. Solo.—Mrs. J. H. Goss. Bass solo.—John P. Gehan. Quartet.—Messrs. Schmitt, Allen, Henninger, Bookstaver. The evening's pleasure closes with supper and dancing.

PRESIDENT WRIGHT COMING To Address the Children's Home Society Annual. Hon. A. O. Wright of Madison, Wis., will deliver the annual address before the Children's Home Society of Minnesota at the Plymouth Congregational church, Sumner avenue and Wabasha street, Sunday evening, May 16. He is president of the Children's Home Society of Wisconsin, and has been president of the national conference of charities and corrections, and it will be an able and interesting address.

Coming Entertainments. The Elks Banquet give their first entertainment in Elks' hall May 19. They have secured for an attraction Mr. Alfred A. Farland, who will give an address on the life of Snyder, the director of the club. His representation here, and is most fortunate in having secured a most attractive entertainment. The club will render several numbers in addition to this, they will be assisted by some excellent local talent in a program of songs and recitations. A society drama entitled "Imogen; or the Witch's Secret" will be presented by the Lever Lovell Club, at Gracie hall, Fort Snelling, on Thursday evening, May 14, for the benefit of the Sacred Heart T. A. society. The cantata "The Good Shepherd" will be given at the church, Monday evening, May 17. The chorus and solo singers are asked to be at the rehearsal tomorrow eve in the house of Hope church.

FURLONG'S Elgin Creamery Store, 103 West Seventh Street. DAIRY PRODUCTS. We sell them all. Read the list. The prices are very small to meet careful buying. Buttermilk (Fresh) By glass or gallon. Morning's Sweet Milk By glass, quart or gallon. Sweet Cream By glass or gallon. Ice Cream, Pints, quarts or gallon. EGGS—Strictly Fresh—Mrs. Wells. EGGS—Good seconds, 7c per dozen. BUTTER—Best Separator—"The Daisy Brand" Creamery. BUTTER—Best Dairy, 15 cents. CHEESE—Full Cream, 12 1/2c. HONEY—White Clover, 12 cents. We Give Out Cash Coupons.

than same time last year. Tributary to the Spokane and Palouse branch, Marshall to Palouse, 100 per cent of seeding is in. South of Palouse, practically 80 per cent is finished; crops are from one to three weeks in advance of last year. The weather is all that could be desired. Occasional showers are falling in certain localities. The appearance of the seeding is all complete on the W. & C. R. railway; wheat averages 10 to 15 per cent greater than last year. The weather is pleasant and prospects are good.

HAS LOST A SISTER. Jacob Weinberg, of Duluth, is in St. Paul looking for his seventeen-year-old sister, Nettie Weinberg, who ran away from home last Saturday. The girl has been given a description of the young girl and asked to detain her for her relatives. Her father, who lives at this city, as she was seen by Officer William Bunker late Sunday night. She asked the officer about hotel accommodations for the night. She was at the Grand Central hotel, at Seventh and Wabasha streets. Her name is on the hotel register and a valise belonging to her is in the room. She was seen by the officer on the brother's office yesterday. When she went to the hotel, she was met by the proprietor, Dr. E. C. Boxell. Yesterday the proprietor was given a note by a man claiming to be Dr. Boxell, which requested that Miss Weinberg'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 girl's name is known to live in St. Paul or its vicinity, resides at St. Paul Park.

ST. PAUL SCHOOL UNION. Annual Meeting at Central High Tomorrow 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 was formed by the election of permanent officers, after which Miss Margaret J. Evans, dean of Carleton college, will give an address on "The Public Schools of St. Paul." The public schools are cordially invited to be present.

LATE SOCIAL NEWS. The relief society of St. Paul chapter No. 24, O. E. S., will meet Monday afternoon at the home of Mrs. William Faulquier, 404 Faulquier street. Vesta lodge No. 3 is preparing for an entertainment to be given at Odd Fellows hall Friday evening, May 28, for the benefit of the L. O. O. F. home fund. The evening was devoted to playing cards, euchre, and refreshments were served. After which dancing was indulged in until an early hour. Several supper solos were rendered by Miss Anna Grode, and a duet by the Misses Lizzie Simmer and Anna Grode. The prizes were given to Miss Grode. The program was: Miss Mattie Hartman; lone hand, Miss Willie Greffey; booby, Miss Annie Greffey; second prize, Miss Annie Greffey; third prize, Miss Annie Greffey; fourth prize, Miss Annie Greffey. Among those present were the following: Misses Kate Heidenreich, Anna Grode, Frances Olson, Willie and Lizzie Greffey, Tina and Lizzie Simmer, Marie Hartman, Gustie and Gertrude Gerth, Annie and Barbara Gerth, Verma and Rose Eibert, Mary Wiemann, Lena and Gertrude Wiemann, Mrs. Joseph Dries, George Stenger, Mike Heinenreich, Andrew Schmitt, Henry and Willie Gerth, Fred Bender, McCauley, Will Gelsen. The party was sponsored by Mr. and Mrs. John Grode.

CELEBRATE AN ANNIVERSARY. The members of the Theodore Koerner Lodge of the Sons of Herman, celebrated the seventeenth anniversary of the organization by a grand ball at Assembly hall last evening. Marking as it did the anniversary of the death of the lodge, the occasion was embraced by the members and their friends to make the function memorable and nothing was lacking for the entertainment. 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 order by Lieut. William Budy of the Prior avenue police station. Lieut. Budy related the beginning of the lodge with few members and the progress made up to today. He is regarded as one of the strongest local Sons of Herman bodies. As State Past Grandmaster of the Sons of Herman, Lieut. Budy presided at the evening. The officers of the lodge are: President, O. G. Peters; vice president, W. Scheibinger; corresponding secretary, August Schmitt; financial secretary, John Schmitt. The guests of the evening were served with a substantial supper by the wives of the members.

TWO TEAMS WERE TIED. In the Savannah Club Whist Play Last Night. The result of the sixth night's play in the current whist series at the Savannah Club was a victory for Bowen and Kipp, although Countryman and Taylor had a tie with them in points made. The full scores were: Bowen and Kipp, 189; Countryman and Taylor, 189; Deuel and Prendergraft, 188; Brock and Jagger, 187; C. H. Gilbert and Kennedy, 186; Bowen and Kipp, 185. Total, 1,325.

GOING TO THE N. E. A. Buy Your Tickets Via "The Northwestern Line." which is the only road that can offer you absolute comfort and the best of service. The National Educational Association will hold its annual meeting at Milwaukee, Wis., on the 1st and 2nd inst. Tickets from Minneapolis to St. Paul is \$12.20 for the round trip, including N. E. A. membership fee. Tickets on sale July 4 and 5. Ticket office, 314 Nicollet avenue. Block Minneapolis, 266 Robert St., Cor. Sixth (opp. Hotel Ryan), St. Paul.

Opening of Wildwood. The popular and well-known summer resort at Wildwood, on White Bear lake, will be opened on the 1st of June with all the old amusements and many new attractions, and with improved electric car service. Now is the time for churches, Sunday schools, fraternal and other societies and trade and labor unions to book their picnic when they can have a choice of dates. Office, No. 218 Manhattan building. Telephone, No. 744. Office hours, 10 a. m. to 1 p. m. —O. F. Briggs, Manager.

Fori Sailing Social Notes. An informal hop was held at the fort last evening. A great many of the guests were from St. Paul. Mrs. O'Neil's party entertained at cards Thursday evening. Mr. Will Page, of Chicago, son of Col. Page, is visiting his parents for a short time.

Now is the Time to Place an Order for Filling Your FLOWER BBS, 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 IN THE CITY. Come in and see our Assortment, and let us quote you Prices on them. L. L. MAY & Co. 25 AND 27 WEST FIFTH STREET.

From Ship to Ship. Possible to Send Telegraphic Messages Through the Sea. Isidor Kitsee, of Philadelphia, an inventor who has already contributed several important and successful inventions to electrical science, has devised a means of telegraphing without wires. His invention applies to either 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 ideas, has taken the invention seriously and has applauded its results. Mr. Kitsee has reduced the old idea of long distance telegraphy by induction to a practical basis. The idea has been patented out in all large countries of the world in January, 1895. But since that time the idea has lain idle, for Kitsee lacked a backer.

Messrs. 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 his new electric wave. Now Kitsee is backed by a moneyed syndicate, and its members are watching the course of affairs in England to see whether the current of telegraphic communication can be established through a space covering practically all points desirable.

As for example: Let A be a sending 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 aid of an operator) a few miles further. The automatic relay stations may be stationed across the whole continent at intervals along dangerous coasts, and local circuits may be closed at any time. Therefore, an uninterrupted path of communication can be established through a space covering practically all points desirable.

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 primary does not run up against the primary coil. The secondary current is the one by which signals are sent through air and water. The third current does not run up against the secondary, but it is used to show the position of the signal. The signal is a glow in the vacuum (X-ray) globe.

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 signaling, and about ten thousand volts, or six or seven horse power, is thought necessary for signaling fifty miles. 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 the ether, 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, 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 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 ship.

The coil for a fifty-mile instrument should be about four feet long, built in sections. Vessels would carry their current on 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. The speed of these waves is a minute, however, would not be difficult.

Fog and mist and storm would have no effect on the working of the system.

Good Suits THAT FIT FROM \$15.00 UP. Plenty Patterns, All New. McGRATH TAILORING CO. 111 East Fourth St. National German-American Bank Bldg. DRIGGS & CO. 190-192 B. Third St., St. Paul. OROGRIE Supply Hotels, Restaurants, Boarding Houses, and all who buy in quantity. Call and see what can be saved.

THE ANDREW SCHOCH GROCERY COMPANY, Seventh & Broadway. 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 Jar 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 sack, \$2.35. 8 dozen Oranges for \$25 cents. Schoch's triple Vanilla for ice cream, 25 cents. Schoch's highest quality Baking Powder, 40 cents. It is the purest and best made. 1 quart bottle Maple Syrup, 15 cents. Jonathan Oiler, per gallon, 25 cents. Sugar-Cured Ham, per pound, 10 cents. Salt Pork, per pound, 6 cents. Jersey Sweet Potatoes, per pound, 2 cents. Ripe Tomatoes, per pound, 12 1/2 cents. 5-Crown Flgs, per pound, 15 cents. 4 lbs California Flgs for 25 cents. Fancy French Prunes, per pound, 5 cents. Summer Sausage, per pound, 12 1/2 cents.