

The Empress of Ireland Rivals Titanic Tragedy; Calls For Safeguards.

THE terrible tragedy of the Empress of Ireland, by which 1,027 lives were lost and only 452 were saved, has only been exceeded by that of the Titanic, with a death toll of 1,505. But the rescued numbered 745; therefore relatively the loss of life was greater on the Empress of Ireland.

A controversy has arisen between the masters and owners of the Empress of Ireland and of the collier Storstad, the two ships that came in collision at the mouth of the St. Lawrence river, as to where the blame is to be laid, and the Storstad was seized by a bill of lading on a claim of \$2,000,000 damage against the collier on behalf of the Canadian Pacific Railway company, while, on the other hand, the owners of the Storstad have entered a counterclaim against the Canadian Pacific railway for \$50,000 damages, contending that the Empress was at fault and alleging negligent navigation on her part. This adds to the complications of the case, and counsel on both sides are busy searching for precedents in the Canadian courts.

The question of blame between the two ships remains to be settled if the courts can settle it, but the grave fault seems to lie with the general sea regulations, which are often misinterpreted, and with a certain want of up-to-dateness in taking necessary precautions against collisions and of using the latest appliances.

In a contribution to the New York Times J. B. Millet, the well known authority on under water signals, says: "Collisions between steamships at sea in fog need not occur. I want to make that statement as strong as possible in hopes of assuring atten-



Photo by American Press Association.

CREW SURVIVORS OF EMPRESS OF IRELAND

There is no more reason why two steamships should collide in a fog than one should run into a lightship anchored to guard a shoal. The apparatus exists to prevent such collisions, and it has been in partial use for ten years.

"The necessity of educating navigators to use the bell of their apparatus is apparent from the well attested experience of many captains who have located steamers in fog by listening for sound of their screws. In the case of a collision like this, where the ships are proceeding slowly in fog, or should be, it is not necessary to have an installed electrical receiving apparatus. If an observer is stationed below the water line in some quiet spot, preferably forward, he can easily detect the sound by placing his ear to the skin of the ship and comparing the sounds on the port with those on the starboard.

"An ordinary broom handle or piece of pine stick with one end placed against the skin of the ship and the other end held to the ear forms an excellent receiver. As for the bell itself, a bell weighing ten or twelve pounds when rung under water can be heard from two to five miles, according to the draft of the ship on which the listener is stationed. The deeper the draft the more sound waves attack the ship owing to the greater wetted surface.

"In the case of the Empress of Ireland, which was equipped with apparatus for receiving, but not for sending, signals through the water, the moment she lost headway she became a dangerous target for other vessels on account of her size and inability to move.

"Any vessel so situated sends signals through the water for the reason that they can be trusted, while sounds in the air cannot. By this means other vessels approaching are supplied with warnings, and it is supposed that all navigators are instructed to listen and to use such sounds. It is not known whether the officers of the collier had been instructed in the value and use of sounds in water, but it is entirely possible that if they had been and especially if their ship had been equipped with receiving apparatus they might have located the Empress by the sound of her pumps or screws.

"However this may be, since sound in water can be trusted, it is clearly the duty of all who are in positions of authority in maritime matters to see to it that the subject is given the attention that it deserves. Moreover, it should be taught to all navigators."

A MIGHTY LOCOMOTIVE.

Steam Traction Engine With Great Hauling Power.

In view of the oft repeated warning that the steam locomotive has reached the limit of its hauling capacity it is interesting to note that a monster locomotive has just been completed for the Erie railroad which has a maximum tractive capacity of 100,000 pounds, says Engineering News. It will not be denied, of course, that it would be quite possible to build an electric locomotive which would have a tractive capacity equaling or exceeding this amount, but the cost of such a machine would be so great as to require on most railways operating under present financial conditions a special bond issue for its purchase.

This new monster locomotive for the Erie has been built for special pusher service on heavy grades, but it is extremely doubtful whether any competent railway expert versed in operating economics would advise the use of any such enormous machine for road service. The probabilities are that the economic weight of freight trains has been in many cases exceeded.

The new locomotive knocks on the head another stock argument of the advocates of railway electrification. The steam locomotive has been unmercifully attacked by the electrical engineer because it is under the necessity of hauling behind it, uphill and downhill, a tender carrying its supply of fuel and water. Electrical engineers have argued that this weight was so much deducted from the available power of the machine since the weight of the tender was not available for traction. In this new engine, however, the builders have put a set of driving wheels under the tender, and in this way construct a steam locomotive which has as large a percentage of its weight available for traction as the electric locomotive.

TALC AND SOAPSTONE.

United States Largest Producer of These Minerals.

America leads the world in the production of talc and soapstone, and yet most Americans are far from appreciating how much of the joy and comfort as well as the success of life depends on the use of talc to smooth the rough places and lessen friction of all kinds. The cool and soothing talc powder used by nearly everybody from the cradle to the grave is made of talc, which also absorbs grease from silks and other fabrics, bleaches cotton cloth and cleans up things generally.

The demand for talc is steadily growing in the United States, and the production has responded. The largest amount of talc is used in the manufacture of paper of many kinds, from roofing to writing paper, not simply to give it body and weight, but to improve the quality of the paper, give it a smooth finish and make it better adapted to receive printer's ink.

Soapstone is used for making laundry tubs, griddles and the like, and the industry is for the most part distinct from the talc industry.

Radium a Poison.

Recent widespread discussion of the healing powers of radium has bred such a plentiful crop of radium quacks in England that the medical committee of the British Science Guild urges immediate steps to protect the public. Radium therapeutics is still in an experimental stage. Even in cancer the value is problematical, and at least five years' clinical work will be required before any safe general conclusions can be drawn. The use of radium by unskilled and irresponsible persons is dangerous and should not be permitted. No mud, water or drug advertised as radium-containing should be used without a dependable certificate as to its exact content of radium. Frauds of this sort seem to be particularly rampant. The medical committee adds to the above warnings the suggestions that radium be included in the pharmacopoeia and thus automatically standardized and also that it be declared a poison under the food and drugs act.

Danger of Direct Illumination.

The strain which the human eye is subjected to under ordinary direct artificial lighting conditions is only realized when a person becomes aware of the fact that in letting the gaze shift past the filament of a tungsten lamp to the walls of the inclosing room the eye has to accustom itself to a change in light intensity of 7,000,000 to 1. Indirect artificial lighting does not cause this strain, as the light source is concealed, and the variations in brightness in a room thus illuminated is approximately the same as in one lighted by northern exposure daylight.—Electrical World.

Steel Wheels Are Strongest.

In experiments to determine the relative strengths of wire, wood and steel wheels recently conducted on the Kiehle testing machine at the University of Michigan the steel wheel proved the strongest. This type did not fail under a lateral pressure of 8,940 pounds to the square inch, whereas the wood wheel collapsed at 4,500 pounds, and two spokes in the wire wheel broke at 4,000 pounds. In the latter test, however, no nipples pulled through the rim.—American Machinist.

Cleaning an Oilstone.

Use kerosene oil and a sprinkling of emery flour and proceed to sharpen tools. It is not necessary to clean a stone thus treated before placing the tool on it, as the emery and kerosene will make a good surface on the stone as well as assist in producing a sharp edge on the tool.

OUR BIG JUNK HEAP.

Vast Amount of Metal Recovered Annually From Waste and Scrap.

The value of the "secondary metals," exclusive of gold, silver, platinum and iron, recovered in the United States in 1913 was \$72,845,000, according to J. P. Dunlop of the United States geological survey. Even this large figure is a decrease compared with 1912, when the value was \$77,396,000.

The term "secondary" is applied to metals recovered from scrap metal—sweepings, skimmings, drosses, etc.—as distinguished from "primary metals," which are derived from ore, but without implication that the secondary metals are of inferior quality. The survey figures reveal in a partial way the vast extent of the waste material industry, which yearly becomes greater and better organized. The value of old iron and steel reused exceeds that of re-melted brass, and the value of old rubber and paper stock amounts to many millions of dollars.

For a few purposes requiring especial purity of material it is necessary to employ primary or virgin pig metal, but as a general rule secondary metals can be used in whole or in part, and most foundries use them. Over 90 per cent of the refining and smelting of drosses and scrap metals in the United States is confined to the territory east of St. Louis and north of the Ohio river.

The amount of secondary copper (including that in brass) recovered in 1913 was 136,500 tons, being over 22 per cent of the primary copper smelted from domestic ores during the year.

The secondary lead recovered amounted to 72,834 tons, equal to nearly 17 per cent of the refined lead produced from domestic ores.

The output of secondary zinc was 70,570 tons, equal to 23 per cent of the production of primary zinc.

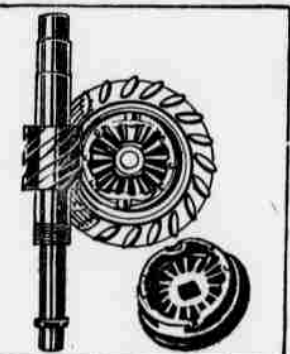
The recovery of secondary tin is of especial importance, for practically no domestic tin ore was smelted in the United States, and the secondary tin recovered in 1913 (14,178 tons, valued at \$12,567,379) was more than 27 per cent of the tin imported during the year.

In aluminum the recoveries in 1913 amounted to 2,654 tons, valued at \$2,190,480.

NEW TYPE OF WORM GEAR.

Device For Automobiles That Increases Power and Lessens Wear.

By placing the teeth of a worm gear on the side of the wheel instead of on the outer edge, a French inventor has produced a new type of driving gear for automobiles. Only the center tooth is fully meshed in the ordinary type of worm gear, while



NEW TYPE OF DRIVING GEAR.

with the new gear the teeth are so shaped that each is in full mesh as long as it engages the worm, a feature that increases the power and adds to the life of the apparatus.

With the ordinary type the worm must be set either above or below the axle casing and the engine must therefore be set high or inclined in order to obtain a straight line drive. This is overcome in the new gear, as the worm may be set as close to the axle as may be necessary.

Instrument For Measuring Earthwork.

Measurement of earthwork in railroad fills and cuts constitutes a large part of the field work in the federal valuation of railroads. The work involves innumerable cross sections, and the importance of any special means of expediting the work or minimizing the computations is apparent. An instrument has been devised which entirely eliminates the need for trigonometric tables in the stadia work and reduces the calculations to simple multiplications and additions. The instrument is stripped of all attachments not needed for this work alone and is designed to permit the most rapid use.—Engineering Record.

New Type of Light Dome.

A dome made of china and designed by manufacturers of art ware and decorative dinner sets for use with electric lamps is now being placed on the market. The dome is made of opaque china, a high grade clay being used in its manufacture. The body of the dome is snowy white, and the surface, both interior and exterior, is provided with a velvety glaze. Domes of this type can be embellished with a variety of decorative colors, and as the colors are burned in the china, the decorations do not deteriorate or become tarnished.—Electrical World.

Protecting Polished Steel Surfaces.

A coating that will protect hardware and machinists' tools from rusting may be made as follows: Mix well four ounces of dammar varnish with a half gallon of turpentine and dip the articles into it or apply as a wash. A thin coat of this colorless varnish will not show on the polished surfaces of tools, but will protect the surfaces indefinitely, unless scratched.

PROOF

of the danger of

DELAY

in treating

CANCER

Last week a young married lady of Dallas was buried, leaving behind her a husband and many young children. She had died from cancer.

A year ago last May her husband brought her to Dr. Toel's office to be examined.

It took him however nearly twenty minutes to persuade her to submit to an examination. Her general health at that time was good, but Dr. Toel found in her breast a cancerous growth two inches long and one inch wide, while in the armpit he found a small enlargement of a gland which however did not yet show the cancerous hardness.

He told her that the growth in the breast was undoubtedly cancer, and advised her to begin electrical treatment at once and if the enlarged gland did not begin to diminish in size in a short time, to submit to one of his bloodless electrical operations and have both the breast and the gland removed.

However, he never heard from her again, though from time to time, four times in all, he wrote her calling her attention to the danger she was running in not having the cancer removed without delay.

At the time her husband brought her to his office he had informed her that the prospect for a cure was fair, as the swelling in the gland seemed to be simply an inflammatory one which usually precedes the cancerous infection from the cancer in the breast.

Why she never came back to him to have the cancer removed, Dr. Toel does not know, he only knows the fact that she died from the cancer lately.

Cases of cancer should be brought to the specialist as soon as they are discovered. The advice that some physicians give; to leave a cancer alone as it is incurable, is the worst advice that can be given the patient.

"Cancer is always local in the beginning. As long as it is local it is curable. If the patient waits until the lymphatic glands become affected, then his chances for a cure are a great deal less, but the present advance in electrical treatment will cure even many of these cases.

When metastases from a cancer on the outside of a body appear in internal organs the prognosis of course becomes very bad, though even such cases have been cured by X rays.

When however, the patient waits until his entire vitality is gone, he can not expect anything even from electricity.

Do not neglect a lump in your breast, but go to a specialist.

Do not neglect an unnatural flow of blood from your womb, but go to a specialist.

Do not neglect a sore place on your lip, but go to a specialist. Do not neglect any growing lump or eating sore anywhere on your body but go to a specialist.

With "Specialist" is meant, not the so-called "Cancer Doctor," who in many cases is not even a licensed physician, but knows nothing but to put an eating plaster on a cancer, causing unbearable pain and driving the cancer germs and cells into the lymphatic glands, but the educated surgeon who has made a life study of the application of the different electrical currents in cases of cancer.

What is said here in regard to cancers refers also to a great extent to other forms of tumors. Do not wait until they become incurable, but go to a specialist as soon as you discover a tumor on or in your body.

Dr. Toel has for over 30 years made a specialty of electrical operations and treatments.

Office, 619 Washington street, Dallas, Oregon, one-half block east of the S. P. depot, from 9 a. m. to 12 noon, 2 to 5 p. m., 7 to 8 p. m., Sunday 10 to 1 p. m. Telephone 1303.

Specialties: Cancers and Tumors. No knife and loss of blood. No plasters and pain for hours or days. Polypus, Goitre, Piles, Fistula, Diseases of Women, Skin and Nervous Diseases, Neuralgia, Neurasthenia, Gout, Rheumatism, Liver, Stomach, Kidneys, Bladder, Prostate, Asthma, Bronchitis, Catarrh, Dyspepsia Constipation.

All of the progressive party of the county are hereby notified to meet in Dallas, Oregon, at Dr. W. B. Or-fleers office on July 9th at 7.45 p. m., discussions to be for benefits of the organization. 34-St.

WANTED—To trade good gentle horse for milch cow. Phone 1683. 2 bells. 34-21-x

WANTED—Clean cotton rags. Bring to Observer office.

SHE DIDN'T GET THE RING.

She hinted that a ring was due; A hat, I knew, I needed, too; My bank account was far from fat 'Twas just enough to buy my hat.

But still, like a little fist, I bought my hat—'twas very nice; She pinned a tag upon the thing. Which read, "My ring is in your hat."

—Contributed.

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Dallas and Salem.....\$.60
Dallas and Corvallis.....\$1.30
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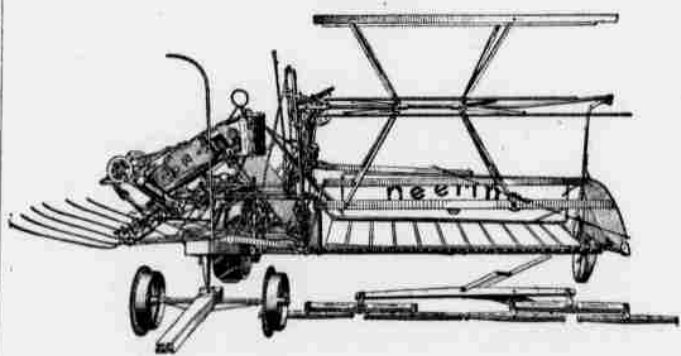
SALE DATES AND LIMITS

Tickets will be sold July 3rd and 4th between all stations in Oregon (where the one way fare does not exceed \$6.00) and will be good for return on or before July 6th.

Call on nearest S. P. Agent for full information as to fares, train service, etc.

John M. Scott, General Passenger Agent, Portland, Oregon.

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10 Watts, 8 C. P.\$.30
15 Watts, 12 C. P.\$.30
20 Watts, 17 C. P.\$.30
25 Watts, 22 C. P.\$.30
40 Watts, 36 C. P.\$.30
60 Watts, 56 C. P.\$.40
100 Watts, 98 C. P.\$.70
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