

Western and other British railways have run a whole year at a stretch without losing the life of a single passenger. Contrast this with the record of the fiscal year in Canada, in which 420 people were killed and 1,453 injured on the railways. An investigator of railway accidents was recently appointed by the Dominion Government. The idea of such a reporter is a good one, but the public has so far seen little or nothing of the results of his work. If these reports are to be pigeon-holed, they are not much advantage to the country. The new Railway Commission has got fairly to work and has already justified its existence, but the casualty record of the past month shows that it has before it more serious work than it has yet contemplated.



#### MACHINE SHOP NOTES FROM THE STATES.

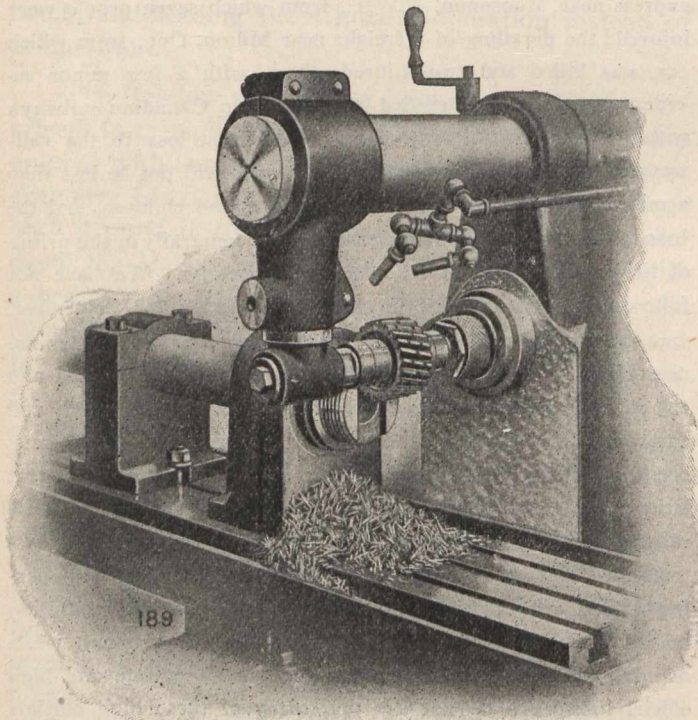
By Chas. S. Gingrich, M.E.

##### VIII.

"Don't bother about changing all your patterns so that you can use castings in the rough, because by allowing 'finish' you can mill them quicker than file the lumps off." This statement was made to me while going through the milling department in the shops of the Cincinnati Milling Machine Company recently.

This seemed like pretty strong talk, but before I had a chance to question it I was shown a job which fully bore out the truth of the statement. Permission to make a photograph was granted, and it is reproduced herewith.

This is one of the braces that go with each milling machine. It is a simple cast iron bar having a long bolt slot through its centre by which it is clamped in position, the slot allowing for a great deal of vertical adjustment. It had been the custom for years to core this slot in the casting, accuracy being of no particular importance; but no matter how careful the moulder was, it was always necessary to smooth the slot with a file before the pieces could be used.



No. 2 Plain Cincinnati Geared Feed Miller, with Power Vertical Feed.

The slots are about 22 inches long, and if a man cleaned one of these up by hand in ten minutes he was doing very well; but to refer to their present practice: The pieces are now cast solid. A single hole is drilled through the bar at one end of the slot. It is then secured to the milling machine table, and adjusted to bring this hole in line so

that the piece can be slipped over a small end-milling cutter of proper size, which is held in the spindle of the machine, and the slot is then milled out of the solid metal and finished to size at a single cut. It takes just about five and a half minutes to mill one of these slots. The cutter used is 13-16 inches diameter, Novo steel, and runs about 480 revolutions per minute. The bars are  $1\frac{1}{4}$  inches thick.

There were other machines at work on a variety of pieces, which proved conclusively that the above statement, that it does not pay to file up rough castings, applies just as well in the case of bearing caps, couplings, etc., as it does in the case of the particular piece illustrated.



The Victorian, the first of two turbine-driven ships for the Allan Line, has been launched at Workman, Clark & Co.'s yard, Belfast, and it is expected that she will be ready for service before the end of the year. She will be fitted with Parsons turbines.



The Minister of Railways has appointed E. J. Walsh, C.E., to be engineer in charge of surveys in connection with the Trent Valley Canal. One of these will be along the Port Hope route to Lake Ontario, and the other will be for the purpose of determining the best channel between Lake Simcoe and Georgian Bay.



The Department of Marine and Fisheries has begun the making of a hydrographic survey of Lake St. Francis, which will dovetail into the similar work done by the United States Government a few years ago. The party consists of about sixteen men. The work will be under the charge of Mr. Chapleau, Chief Engineer of the Department of Marine and Fisheries.



—Two Sheffield workmen, John Creswick and Herbert Shaw, after three years of experimenting, have discovered a process of electroplating with aluminum. Thousands of pounds have been spent by silversmiths of Birmingham and Sheffield in developing an aluminum electroplating process, but no method could be devised of making this metal "take" on another metal. Creswick and Shaw have found a solution which, by immersion before being subjected to the battery, will accomplish the result. The process, which is patented, is applicable to any articles now made in nickel or Britannia ware, and the inventors have started a small factory for plating goods.



#### NEW INCORPORATIONS.

The Continental Contracting Co.; capital, \$500,000; head office, Ottawa. Directors: W. H. Curle, J. T. C. Thompson, J. Connolly, A. R. Fraser, and G. A. Brown, all of Ottawa.

Compagnie Générale d'Entreprises; capital, \$1,000,000; head office, Montreal. Directors: F. Allard, L. Coiseau, A. Couvreur, J. Dollfus, A. Duparchy, L. Wiriote, contractors, all of Paris, France; J. Nyssens-Hart and J. Cousin, both of Bruxelles, Belgium, and J. de Shryver, of Raismes, France.

Canadian Pipe Co.; capital, \$25,000.

The Ontario Independent Telephone Co.; capital, \$100,000; head office, Windsor. Directors: C. W. Taylor, J. R. Brooks, J. A. McRae, P. T. Chesley, and A. D. Prosser, all of Detroit.

The charter of the Niagara Falls Park and River Railway Co. has been transferred to the International Railway Co., incorporated in New York State.

The Minnehaha Mining and Smelting Co., of Arizona, is licensed to do business in Ontario to the extent of \$40,000 capital.

The Crown Oil Co. is incorporated with a capital of \$300,000; head office, London. Directors: D. S. Robb, of London; B. G. Baker, of Buffalo, and others.

The Mount McKay Brick and Tile Co.; capital, \$40,000; head office, Fort William. Directors: K. O. Brune, F. Waldberg, and others, all of Fort William.

Simplex Coal Saver, Limited; capital, \$40,000; head office, Toronto. Directors: P. H. Patriarche, F. B. Allan, and W. Eacrett, all of Toronto.