

allowed to project. The 64th of an inch would give four or five copies, an eighth of an inch about thirty.

THERE are now very few lines of trade in which corporations are not found conducting a mercantile business. This is especially the case with houses which have built up a large trade which is in danger of being injured or weakened by the death of one of the partners. The change to a corporation secures perpetuity and also releases the general estate of old members of the firm from liability beyond the stock held by them. The antipathy to corporations, which is the stock in trade of sundry agitators and professed leaders of public sentiment, is exerting no influence whatever in checking their growth, but on the contrary the corporate idea is in this way becoming popularized.

ACCORDING to the *Philadelphia Bulletin* the Farmers' Alliance is disturbing the equanimity of things in the United States. It says:—

The movement of the people seeking new homes is turning to the great North west. A few years ago the railway trains leading westward were crowded with emigrants bound for Kansas, Nebraska, or Dakota. One or two short crops have created discontent. The Farmer's Alliance has come into existence, the chief support of which appears to be based on the misfortune of the people and its chief occupation formulating and publishing complaints. Emigration no longer seeks these States, however inviting their rich and beautiful plains. All is changed, and those seeking homes are looking farther west, casting their eyes towards the mountain States and the Pacific Coast.

A FACTORY in Ottumwa, Iowa, has increased fivefold its facilities for the manufacture of cutlery, and its hands employed from 100 to 500, entirely because of the new tariff. The *Ottumwa Courier* explains that the enlarged works will compete with foreigners in the production of a class of cutlery which this country was not able to manufacture with much success under former duties in competition with makers of other countries. At the same time that journal states that the prices of all kinds of cutlery are no higher in that town than they were before the new duties were imposed. These are interesting facts, and they accord precisely with what is known of the trade in Eastern States. Protection does it.

THE *Philadelphia Press* says: "Notwithstanding all the talk and legislation concerning undesirable immigration there continues to be an increase in the number of immigrants arriving in this country. And they are not as a rule of the class that makes desirable citizens. Formerly the great proportion of the immigrants were English-speaking or from the north of Europe. Last year over sixty per cent. of the immigrants or 332,000 in number, did not speak the English language. They came principally from Central and Southern Europe. A considerable proportion of them come from parts of Europe where eighty per cent. of the population cannot read and write their own language. It needs no argument to prove that these are not desirable. But how are they to be kept out?"

It occasionally happens that fomenters of a strike run foul of the laws and get into trouble thereby. A case of this kind recently occurred in Chicago. A conductor, and a discharged

conductor, of the Chicago and Eastern Illinois Railroad Company, undertook to tie up that road because a freight crew was discharged for disobeying orders. They stopped freight traffic for four days by issuing orders to trainmen in which they represented themselves to be a committee of employees. They were arrested on a charge of conspiracy to injure the company's business, and were convicted after a hard fought trial. The penalty imposed is rather light, being but \$100 fine each and costs, but the principle has been established that two or three disaffected men cannot block the traffic of a railroad.

THERE are 12 iron rolling mills in Canada, owned and located as follows: Ontario: 3 mills, all owned by Ontario Rolling Mill Company, Hamilton, Ont., 2 being located at Hamilton and 1 at Swansea, a suburb of Toronto. Quebec: 4 mills, all in Montreal, owned 1 each as follows: Montreal Rolling Mills Company; Pillow-Hersey Manufacturing Company; Peck, Benny & Co.; Abbott & Co. New Brunswick: 2 mills, both in St. John, owned 1 each as follows: J. Harris & Co.; I. & E. R. Burpee. Nova Scotia: 3 mills, owned 1 each as follows: Londonderry Iron Company, Londonderry; Nova Scotia Steel and Forge Company, New Glasgow; E. D. Adams & Co., Halifax. Recapitulation: Ontario, 3 mills; Quebec, 4 mills; New Brunswick, 2 mills; Nova Scotia, 3 mills: Total in Canada, 12 mills.

THE Grand Trunk tunnel under the St. Clair River at Sarnia will be formally opened on September 19th. The opening ceremonies will be most brilliant in their character. Sarnia, on the Canadian side, and Port Huron, on the American side, will give up the day to celebration and enjoyment. The arrangements now being made for the opening include a banquet in the tunnel, at which President Harrison, many of the American State Governors, the Governor-General of Canada, Sir Henry Tyler, president of the Grand Trunk Railway, and other Grand Trunk officials will be present. The tables will be laid on the boundary line, and during the entertainment and banquet the 13th Battalion Band of Hamilton will play a programme of music. On the Canadian side the band will play "God Save the Queen" and on the American side "The Star Spangled Banner."

A FACT which will make scientists open their eyes is the practical use of air as a fuel. An explanation of the process is as follows: Air is mixed with coal gas, as every one knows, and with hydrocarbon vapors, and the compound when burned generates a much greater heat than if the air were absent. So, too, a powerful air blast is a great economizer in smelting and reducing ores. But the new fuel is the air itself, which as a powerful blast is directed upon an incandescent substance, say coal made white hot, pure carbon or any other materials that can be made to glow. Coal, hydrocarbons or what not may be employed to give the initial incandescence, but once the blast strikes the luminous body, the utmost intensity of heat secured apparently by the combustion of the air, and may be maintained for an indefinite period by merely pressing the incandescence of the surface, and this may be done by a slight manipulation of the surface brought to incandescence, and with some slight renewal of carbonaceous material.