IRON AND STEEL TRADE IN 1902.

THE report, now in press, on the iron and steel trade for 1902, by Mr. James M. Swank, United States Geological Survey, shows a continued advance in the annual domestic production of pig iron, the excess over 1901 being 1,942,953 tons, or almost 12.24 per cent. The total production in 1902 was 17,821,307 long tons, as compared wth 15,878,354 tons in 1901, 13,789,242 tons in 1900, 13,620,703 tons in 1899, 11,773,934 tons in 1898, and 9,625,680 tons in 1897.

Notwithstanding this increase of production, the imports of iron and steel in various forms amounted in foreign value in 1902 to \$41,468,828, as against \$20,395,015 in 1901, an increase in 1902 of \$21,073,811, or over 100 per cent. The total exports of iron and steel, including locomotives, car wheels, machinery, etc., amounted in 1902 to \$97,892,036, as against \$102,534,575 in 1901, \$129,633,480 in 1900, \$105,690,047 in 1899. The exports of agricultural implements, which are not included above, amounted in 1902 to \$17,981,497, against \$16,714,308 in 1901.

The consumption of pig iron in 1902 was approximately 18,439,899 long tons, of which 625,383 tons were imported, as compared with 16,232,446 tons in 1901, of which 62,930 tons were imported. The increased production of pig iron in 1902 over 1901 was 1,942,953 tons; the increased consumption was 2,207,453 tons.

At the close of 1902 the number of furnaces in blast was 307, as compared with 266 at the close of 1901 and 232 at the close of 1900. At the close of 1902 105 furnaces were out of blast—many being temporarily banked from lack of fuel—as against 140 furnaces at the close of 1901.

The production of Bessemer steel ingots and castings increased more than half a million tons in 1902—to 9,306,471 long tons; the production of Bessemer steel rails remained almost stationary. The production of openhearth steel ingots and castings in 1902 was 5,687,729 long tons, an increase of 1,031,420 tons over 1901.

In the fiscal year 1902 there were built for mercantile service 106 steel vessels and one

iron vessel, with a gross tonnage of 280,362 tons, as compared with 119 steel vessels and one iron vessel, with a gross tonnage of 196,-851 tons, built in 1901. Of these 107 vessels, 49, with a gross tonnage of 161,930 tons, were built at ports on the Great Lakes.

The production of pig iron in Canada in 1902 increased to 319,557 long tons, over 30 per cent. as compared with 1901; and the production of steel ingots and castings in 1902 was 182,037 long tons, as compared with 26,084 tons in 1901, an increase of 155,953 tons, or nearly 600 per cent.

The second part of Mr. Swank's report consists of an interesting and valuable series of tables presenting complete statistics of the production of iron and steel, iron ore, and coal in the United States, Great Britain, Germany, France and Belgium, to the close of 1901, thus showing the progress that has been made by these countries in the first year of the twentieth century.

## 'FESTSCHRIFT' IN HONOR OF PROFESSOR VAUGHAN.

A COMMITTEE consisting of John J. Abel, Johns Hopkins University, Baltimore, Md.; Edmund Andrews, Chicago, Ill.; Flemming Carrow, University of Michigan, Ann Arbor, Mich.; Richard Dewey, Wauwatisa, Wisconsin; George Dock, University of Michigan, Ann Arbor, Mich.; William J. Herdman, University of Michigan, Ann Arbor, Mich.: William H. Howell, Johns Hopkins University, Baltimore, Md.; Franklin P. Mall, Johns Hopkins University, Baltimore, Md.; William J. Mayo, Rochester, Minnesota; Lewis S. Pilcher, Brooklyn, New York; Albert B. Prescott, University of Michigan, Ann Arbor, Mich.; Henry Sewall, Denver, Colorado; and G. Carl Huber, secretary, has sent out the following announcement:

The close of the present academic year marks the twenty-fifth anniversary of the doctorate of Doctor Victor C. Vaughan. Certain of the former students of the Department of Medicine and Surgery of the University of Michigan and his colleagues have deemed it opportune to commemorate the long and valuable services which he has rendered to his Alma Mater and to American medi-