

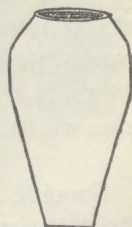
from which it is not difficult to select objects suitable for most of the smaller constructions, thereby saving a considerable item of cost for new patterns. The superintendent of the works (Mr. Taylor) was formerly employed in the works of Mr. Blashfield, Stamford, England. This establishment exhibited largely, and with great credit, at the Paris Exposition in 1867, and is making the ornaments for the Art Museum now building in Boston.

REFRACTORY BRICKS, RETORTS, CRUCIBLES, ETC.

In refractory materials of all kinds, for construction of furnaces and various metallurgical purposes, the Exhibition was particularly rich. The amount and variety of such goods were far greater than at Paris in 1867, and there was a notable advance in the art, especially in the production of special forms of large dimensions, and the increasing use of them in the construction of furnaces. Attention may be directed to the exhibits of fire-brick for the hearths and crucibles of blast-furnaces and for the stack complete, which are now being made at several establishments at very moderate prices. The formation of tubes and retorts of superior density and strength, by hydraulic pressure, is also worthy of attention.

H. J. VYGEN & Co., *Duisburg, Rhein-prov. Deutsches Reiches*, exhibited fire-brick and blocks for blast-furnaces, cast-steel melting furnaces, reheating furnaces, gas-retorts, and for smelting purposes generally. The plumbago-pots for cast-steel from this establishment are formed as in the annexed outline, and stand about two feet high.

These works were founded in 1856. The value of their products in 1871 was 200,000 thalers for 360,000 cwt. of goods, being the heaviest production of large pieces in Germany. There are 266 workmen employed, and 3 steam-engines of 130 horse-power.



C. KULMIZ, *Marienhütte*.—Fire-bricks and fire-clay, gas-retorts and drain-tiles were exhibited by this firm. The value of their products in 1871 was 150,000 thalers, and, in