No. 815,489. PATENTED MAR. 20, 1906.

C. O. SWENSON.

COMBINED FIRE POT AND TWYER IRON.

APPLICATION FILED JULY 10, 1905.

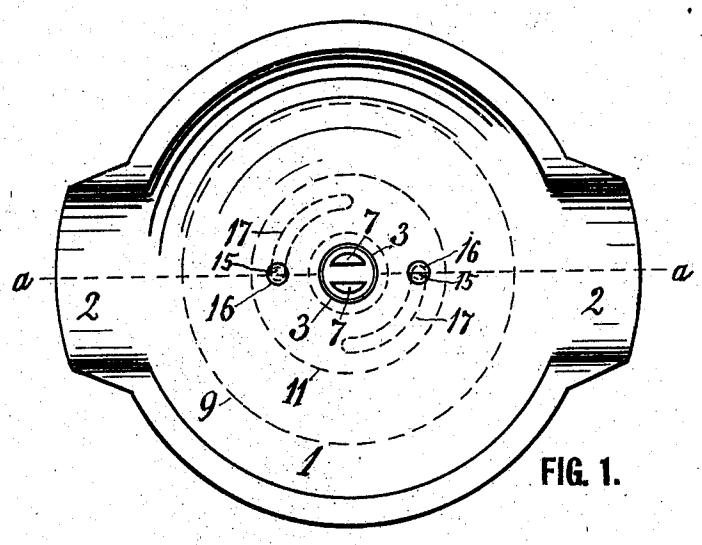


FIG. 1.

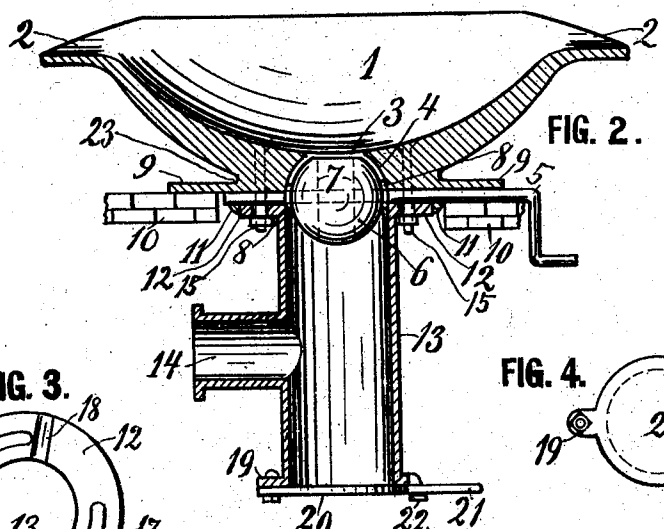


FIG. 2.

FIG. 3.

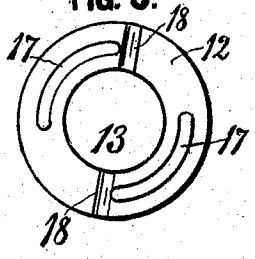
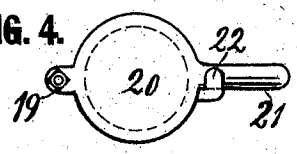


FIG. 4.



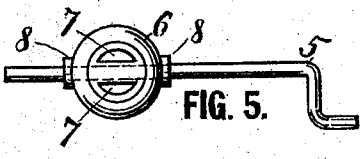


FIG. 5.

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COMBINED FIRE-POT AND TWYER-IRON.

No. 815,489. Specification of Letters Patent. Patented March 20, 1906.

Application filed July 10, 1905. Serial No. 269,023.

To all whom it may concern:

Be it known that I, CHARLES O. SWENSON, a citizen of the United States, residing at Minneapolis, in the county of Hennepin and State of Minnesota, have invented certain new and useful Improvements in a Combined Fire-Pot and Twyer-Iron; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

My invention relates to blacksmiths' forges. It has special reference to the parts known to the trade and art as the "fire-pot" and the "twyer-iron;" and the main objects are, first, to provide an improved combined twyer-iron on fire-pot; second, to further improve upon the construction set forth in my United States Patent No. 792,179, issued on the 13th of June, 1905, partly by simplifying and cheapening the same and partly by embodying important features which by misunderstanding and errors were omitted from said application and patent. These and other objects I attain by the novel construction and arrangement of parts illustrated in the accompanying drawings, in which—

Figure 1 is a top view of my improved fire-pot and twyer-iron. Fig. 2 is a vertical central sectional view of same on the line *a a* in Fig. 1. Fig. 3 is a top view of the upper flange 12 of the twyer-iron. Fig. 4 is a bottom view of the twyer-iron, showing the means by which the ashes and cinders are let out from the ash-pan. Fig. 5 is a detail top view of the draft-regulator.

Referring to the drawings by reference-numerals, 1 designates the fire-pot, which is of a substantially circular concave form, with two diametrically opposite depressions 2 and a central-blast opening 3, below which is a hemispheric concave 4, in which is mounted on a horizontal rocking rod or shaft 5 a substantially globular body or damper 6, provided with practically central-blast openings 7, forming a central blast, while collars 8 about the rock-shaft hold the damper in a central position in the cavity 4, so that practically all around the damper is formed a side blast, which in combination with the center blast forms a very effective blast, producing the most efficient fire. Said fire-pot is also formed with a base-flange 9, which is so large that it holds the fire-pot very steadily supported upon the surrounding bottom or base 10 of the forge or hearth thereof. In my former patent above referred to said flange was so small that it had to rest on supporting-bars, which involved more expense both in material and labor than to simply make the flange wider. At the under side of said flange 9 are provided in circular order guiding-lugs 11, between which is centrally guided the upper flange 12 of a vertical cylinder or tube 13, having a lateral branch 14, through which it receives wind from the blower. (Not shown.) Said tube 13 is suspended from the fire-pot by the bolts 15, inserted in holes 16 in the latter and in quadrantal slots 17 in the flange 12, so that the position of the depressions 2 in the fire-pot may be changed from a longitudinal to a transverse position with reference to the rock-shaft 5 or the tube 14.

In Fig. 3, 18 designates grooves in the flange 12 for the shaft 5.

The lower end of the tube 13 has at one side a lug 19, to which is pivoted a horizontally-swinging lid 20, having a handle 21 stopping against and normally resting in a hook 22, formed upon the opposite side of the tube. Said lid serves as the outlet for ashes and cinders accumulating in the lower half of the tube 13. The purpose of the depressed portion 2 2 is to form a valley for tires and other irons of some length to get them in proper position in the fire.

It will be observed that although the flange 9 is wide enough to answer the purposes described the structure is still inexpensive, since the flange only connects with the fire-pot by a reduced neck 23. It will also be understood that the valve or blast-regulator 6 need not necessarily be globular, but may be elongated or otherwise diverging from the form shown as long as its form causes a side and center blast.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination with a fire-pot having a central-blast opening and a cavity or concave in the lower part thereof, of a horizontally-arranged rock-shaft and a substantially centrally perforated blast-regulating piece mounted on the shaft in said concave in such a manner that an opening for side blast is formed between the valve and the fire-pot,

said valve being of a substantially globular form with a flat face at its normally upper side.

2. The combination with the vertical tube 13 having the side inlet 14 and means for closing its bottom end, of the upper flange 12 formed on said tube and having oppositely-disposed quadrantal slots and the grooves 18, a rock-shaft in said grooves and a perforated valve-piece or blast-regulator on the shaft, a fire-pot having in its upper edge diametrically opposite depressions and in its bottom bolts extending down through said slots and being provided with nuts below the flange 12, said fire-pot also having a central opening directly over the blast-regulator and a flange adapted to rest upon the hearth of a forge and hold the tube 13 suspended in an opening therein.

3. The combination with the vertical tube 13 having the side inlet 14 and means for closing its bottom end, of the upper flange 12 formed on said tube and having oppositely-disposed quadrantal slots and the grooves 18, a rock-shaft in said grooves and a perforated valve-piece or blast-regulator on the shaft, a fire-pot having in its upper edge diametrically opposite depressions and in its bottom bolts extending down through said slots and being provided with nuts below the flange 12, said fire-pot also having a central opening directly over the blast-regulator and a flange adapted to rest upon the hearth of a forge and hold the tube 13 suspended in an opening therein, said fire-pot also having at its bottom side guards engaging the flange 12 to help hold the tube in central position.

In testimony whereof I affix my signature in presence of two witnesses.

CHARLES O. SWENSON.

Witnesses:
A. P. PETERSON,
L. B. SHOTWELL.