

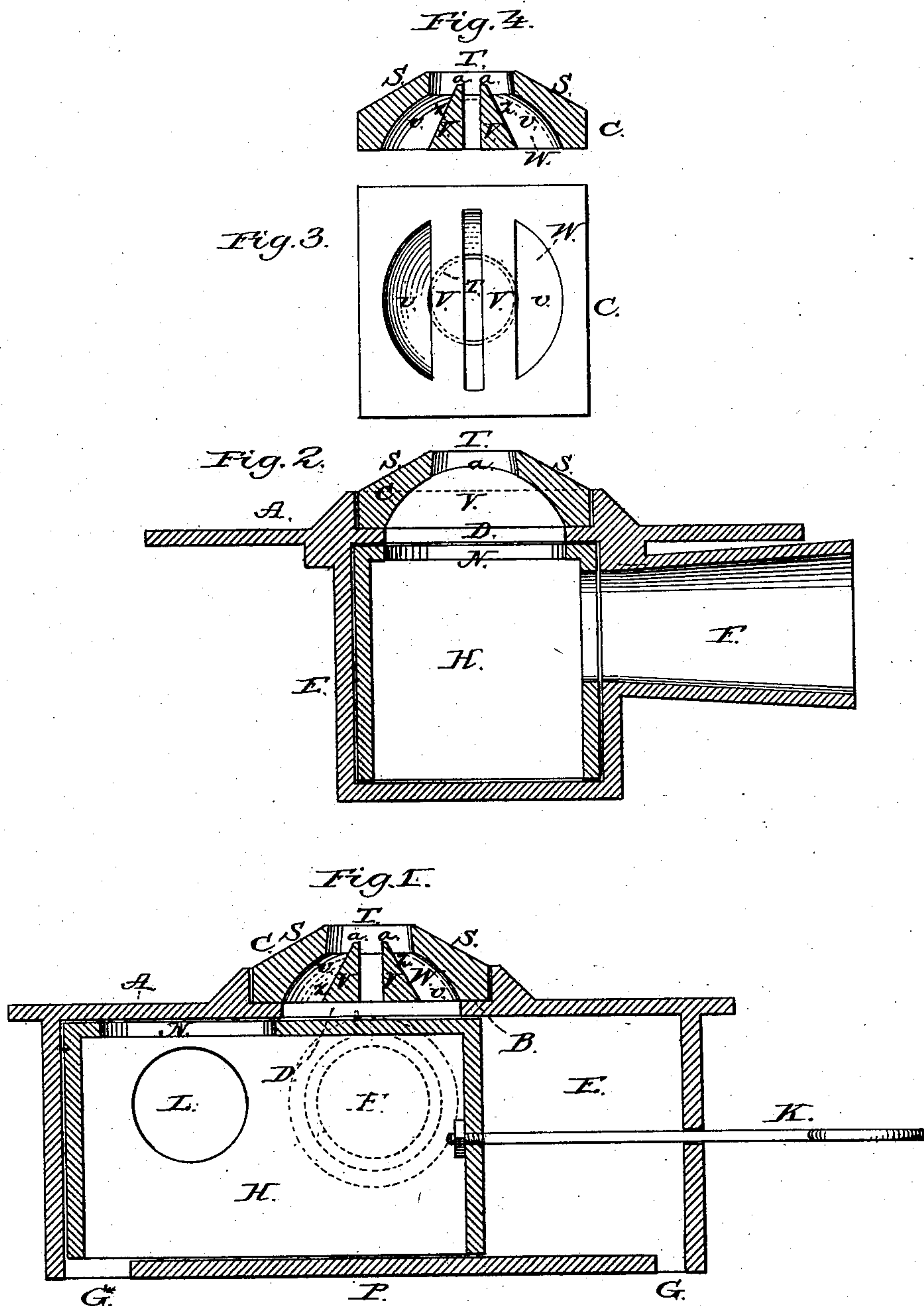
(No Model.)

I. W. MEAD.

TUYERE IRON FOR BLACKSMITHS' FORGES.

No. 264,414.

Patented Sept. 12, 1882.



WITNESSES

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UNITED STATES PATENT OFFICE.

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TUYERE-IRON FOR BLACKSMITHS' FORGES.

SPECIFICATION forming part of Letters Patent No. 264,414, dated September 12, 1882.

Application filed January 23, 1882. (No model.)

To all whom it may concern:

Be it known that I, IRA W. MEAD, a citizen of the United States, and a resident of New York, in the county of New York and State of New York, have invented a new and valuable Improvement in Tuyere-Irons for Blacksmiths' Forges; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a longitudinal section of my invention. Fig. 2 is a cross-section, and Figs. 3 and 4 are detail views of the tuyere-iron.

This invention has relation to tuyere-irons and blast-connections for blacksmiths' forges; and it consists in the construction and novel arrangement of the sliding wind-box inclosed under the grate, and of the under-recessed tuyere-plate having beveled grate-bars separating converging wind-passages, all as herein-after set forth.

In the accompanying drawings, the letter A designates the hearth of the forge, having a seat, B, for the tuyere-iron C, said seat being provided with a wind-aperture, D, over which the tuyere-iron is located.

E represents an incasement or slideway under the tuyere-iron, having the lateral blast-pipe F and the end openings, G, in the base, as indicated in the drawings.

Within the incasement E is located the sliding wind-box H, which is provided with an operating-handle, K. In the side of this wind-box is a wind-aperture, L, and in its top is a blast-opening, N. The slide-box is usually made without a bottom, the base P of the incasement serving to close the box on the under side.

The tuyere-iron C is designed to rise by inclined side walls, S, to a center, in which the blast-opening T is made. Under this blast-opening, and communicating therewith, is formed in the under side of the tuyere-iron a

circular concavity or wind-recess, W, of larger diameter than said blast-opening. Transversely arranged in this recess W are the grate-bars V V, having inclined outer walls or sides, *z*, running to curved upper edges, *a*, and separating the wind-recess W into converging wind-passages *v*, as indicated in the drawings, which are designed to concentrate the wind divided equally by the grate-bars, forming a powerful blast at the top of the grate.

When the blast-box H is moved to one end of its slideway its wind-aperture L will register with the inner opening of the blast-pipe F and the blast-opening N in its top with the wind-aperture D in the seat of the tuyere-iron, so that the wind will be put on when the bellows is actuated. When the wind-box is moved to the other end of its incasement or slideway the wind is cut off at the side of the box and under the grate at the same time. The slide-box also moves over the opening G in the base of the slideway, allowing the ashes which have accumulated in the box to fall through.

Having described this invention, what I claim, and desire to secure by Letters Patent, is—

1. The combination, with the inclosing slideway under the hearth, and having blast-pipe and wind-aperture, of the sliding wind-box, having in its side a wind-aperture and in its top a blast-opening, substantially as specified.

2. The combination, with a tuyere-iron having grate-bars, and a slideway having wind-openings and ash-discharge, of the sliding wind and ash box, substantially as specified.

3. A tuyere-iron having a raised central opening, T, under recess W, and transverse grate-bars V, having inclined sides *z*, substantially as specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

IRA W. MEAD.

Witnesses:

ISAAC V. MEAD,
R. M. LUSH.