No. 807,480. PATENTED DEC. 19, 1905.

A. MATHIS.

FORGE.

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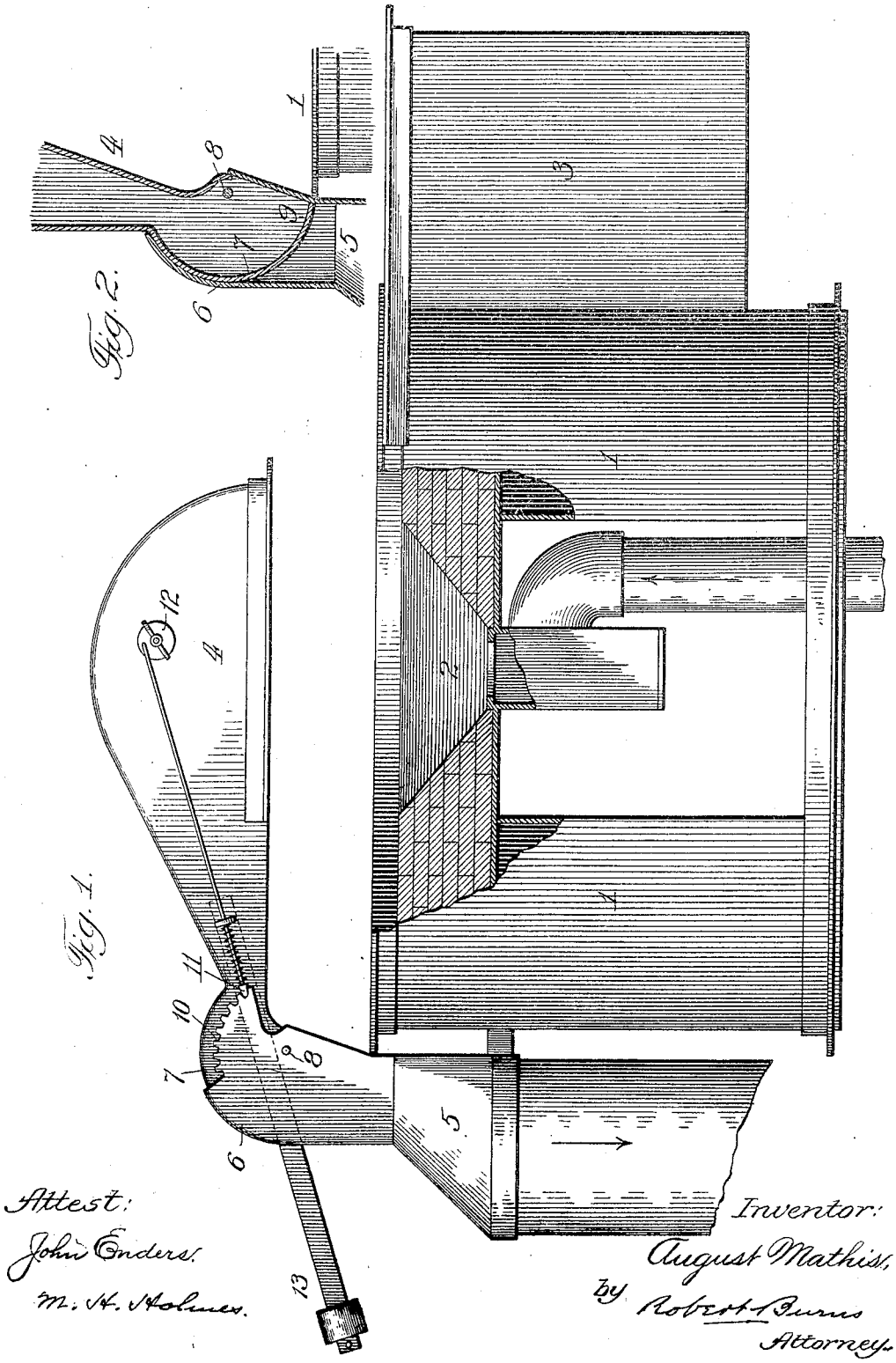


Fig. 2.

Fig. 1.

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FORGE.

No. 807,480. Specification of Letters Patent. Patented Dec. 19, 1905.

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To all whom it may concern:

Be it known that I, AUGUST MATHIS, of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Forges, of which the following is a specification.

This invention relates to that class of forges in which a suction-hood is arranged above the furnace-hearth to carry off the products of combustion; and the present improvement has for its object to provide a simple and efficient structural arrangement and combination of the forge parts whereby the position of the hood with relation to the fire on the forge-hearth can be readily changed to suit the varied requirements arising in the practical use of the forge and with which the hood can be moved from above the forge-hearth to afford unimpeded access to the same, all as will hereinafter more fully appear and be more particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a side elevation, partly in vertical section, of a forge constructed in accordance with the present invention. Fig. 2 is a fragmentary vertical section illustrating the forge-hood in its raised position from above the hearth.

Similar numerals of reference indicate like parts in both views.

Referring to the drawings, 1 is the forge-body, of any usual form and having a centrally-arranged hearth 2 for the forge-fire, a front water-pan 3, and other usual accessories.

4 is the suction-hood, of any usual and suitable form, arranged above the hearth of the forge.

5 is a vertical exhaust-trunk arranged at the rear side of the forge-body and adapted for connection to an exhaust-fan or other like means for effecting a suction through said trunk.

In the present construction the upper end of the exhaust-trunk is provided with a curved portion 6, the walls of which are concentric with the pivot-axis hereinafter described, and the rear end of the hood is provided with a correspondingly-formed portion 7, adapted to have a moving fit with the said portion 6 of the exhaust-trunk.

8 is a pivot bolt or axis above referred to and which is preferably arranged near the forward edges of the portions 6 and 8 of the trunk and hood and adapted to pivotally connect such portions together, so that the hood is capable of being thrown up from over the forge-hearth, as shown in Fig. 2, to afford free and unimpeded access on the part of the operator to such hearth. The purpose of the described location of the pivot-axis 8 is to enable the end 9 of the hood portion 7 to contact with the forward wall of the exhaust-trunk and shut off the exhaust when the hood is in its thrown-up position, as illustrated in Fig. 2.

10 is a tooth-sector secured to or forming a part of the upper portion of the exhaust-trunk and having concentric relation with the pivot-axis 8 aforesaid.

11 is a spring-dog guided upon one side of the hood and adapted to engage between pairs of the teeth of the aforesaid sector to lock the hood at any required adjustment in relation to the forge-hearth.

12 is a turn piece or handle journaled to the side of the hood and having operative connection with the spring-dog 11 to afford a convenient means for the manual actuation of the same.

13 is a counterweight extending rearwardly from the hood and adapted to counterbalance the same in its movement of adjustment.

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

1. The combination of a forge-body having its top formed with a fire-hearth, a vertical exhaust-trunk adapted for attachment to the side of the forge-body and provided with a curved portion at its upper end, a suction-hood arranged above the fire-hearth and having at its rear end a curved portion fitting the curved portion of the exhaust-trunk, and a pivot bolt or axis pivotally connecting the hood to the trunk, the contacting walls of the hood and trunk having a concentric relation to said pivot-axis, substantially as set forth.

2. The combination of a forge-body having its top formed with a fire-hearth, a vertical exhaust-trunk adapted for attachment to the side of the forge-body and provided with a curved portion at its upper end, a suction-hood arranged above the fire-hearth and having at its rear end a curved portion fitting the curved portion of the exhaust-trunk, and a pivot bolt or axis arranged adjacent to the forward walls of the curved portions of the hood and trunk to pivotally connect the parts,

the contacting walls of the hood and trunk having a concentric relation to said pivot-axis, substantially as set forth.

3. The combination of a forge-body having its top formed with a fire-hearth, a vertical exhaust-trunk adapted for attachment to the side of the forge-body and provided with a curved portion at its upper end, a suction-hood arranged above the fire-hearth and having at its rear end a curved portion fitting the curved portion of the exhaust-trunk, a pivot bolt or axis pivotally connecting the hood to the trunk, the contacting walls of the hood and trunk having a concentric relation to said pivot-axis, and means for securing the hood in its required adjustment, substantially as set forth.

4. The combination of a forge-body having its top formed with a fire-hearth, a vertical exhaust-trunk adapted for attachment to the side of the forge-body and provided with a curved portion at its upper end, arranged above the fire-hearth, and a suction-hood having at its rear end a curved portion fitting the curved portion of the exhaust-trunk, a pivot bolt or axis pivotally connecting the hood to the trunk, and means for securing the hood at its required adjustment, the same comprising a toothed sector on the exhaust-trunk, a spring-dog on the hood, and a handle operatively connected to said dog, substantially as set forth.

Signed at Chicago, Illinois, this 13th day of September, 1905.

AUGUST MATHIS.

Witnesses:

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