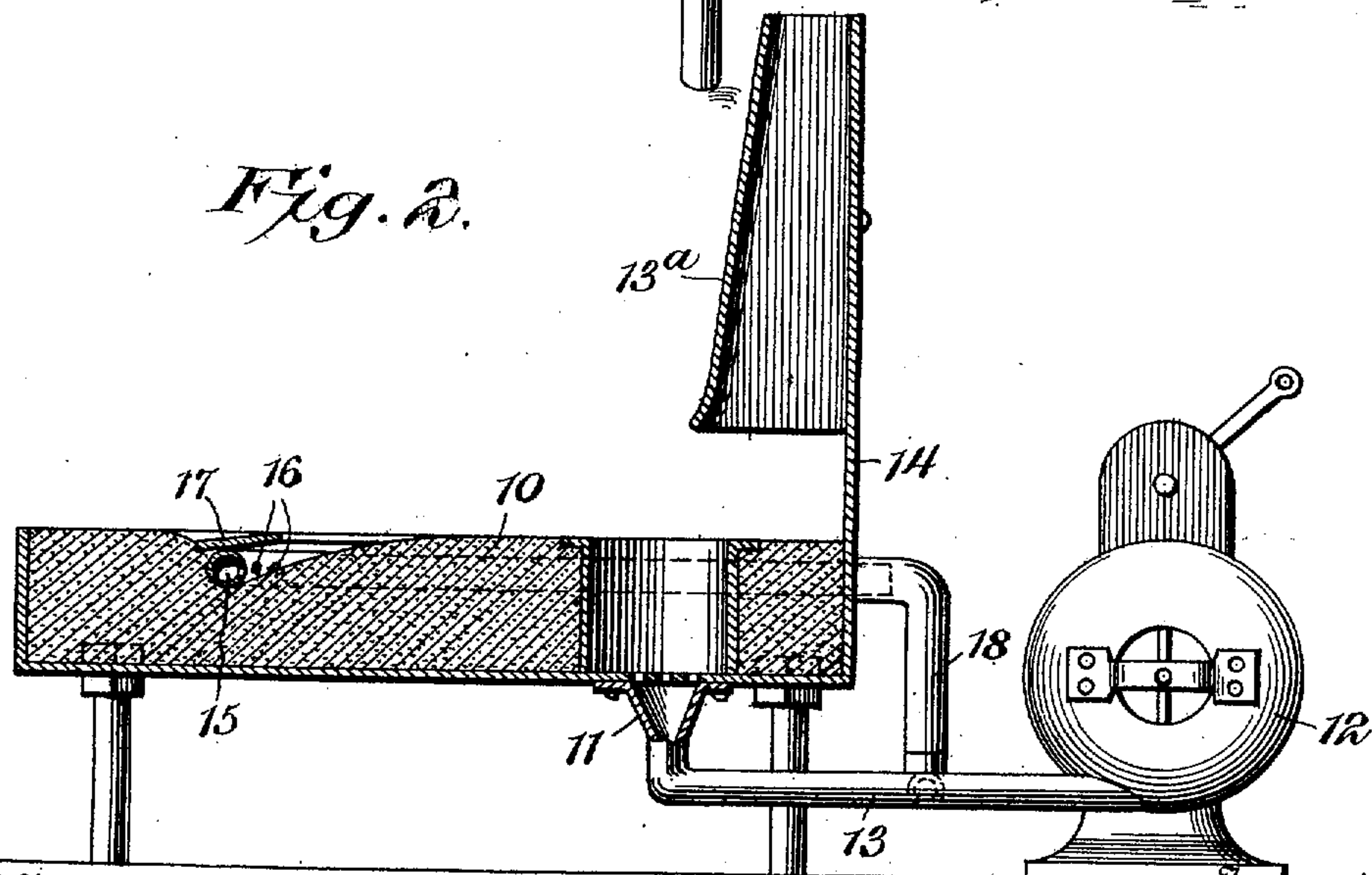
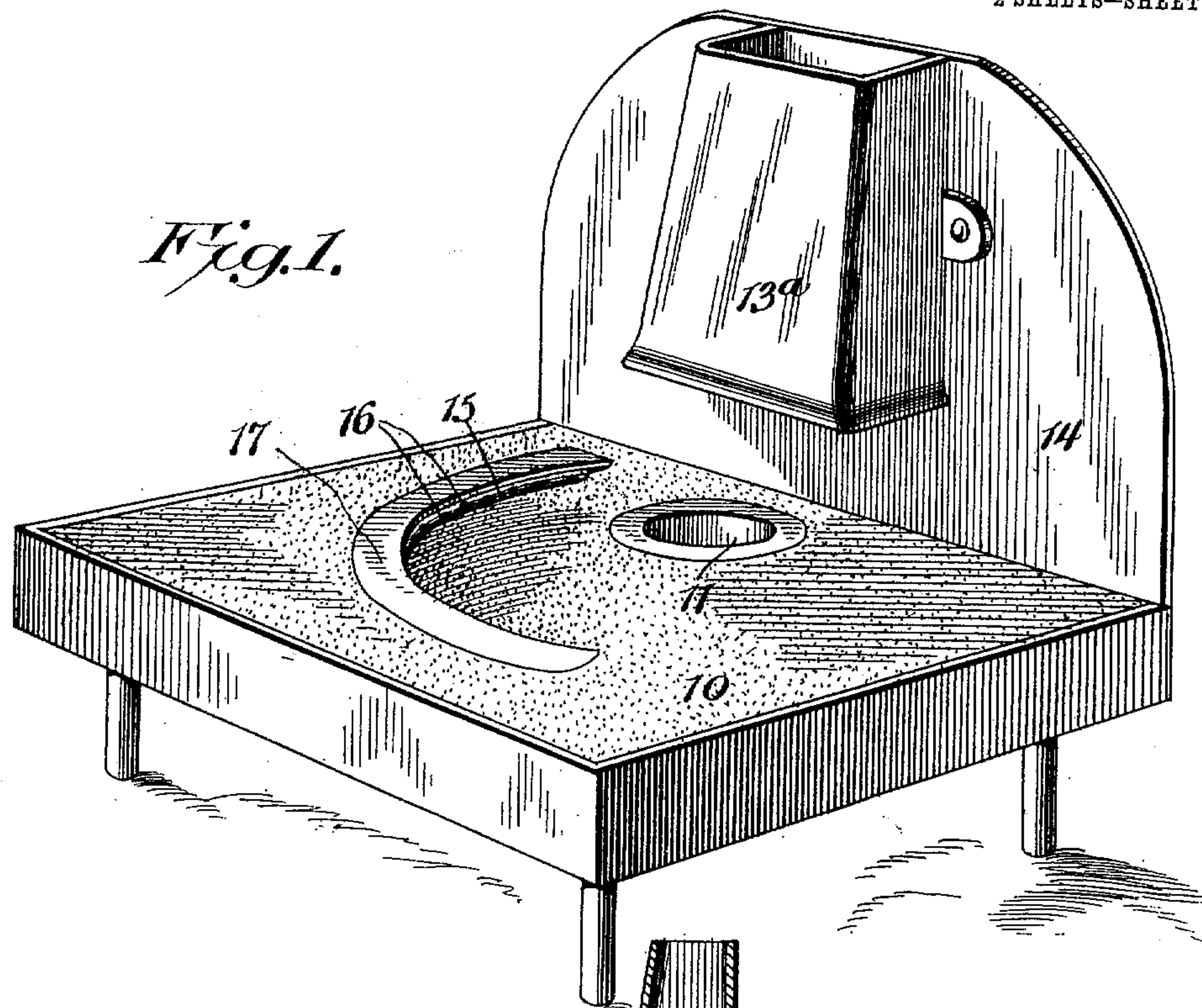


No. 886,773.

PATENTED MAY 5, 1908.

H. P. DORSHEIMER.
BLACKSMITH'S FORGE.
APPLICATION FILED AUG. 8, 1907.

2 SHEETS—SHEET 1.



Witnesses

R. C. Braddock
H. Joseph Doyle

Inventor,
Henry P. Dorsheimer,
by William W. Deane
his Attorney

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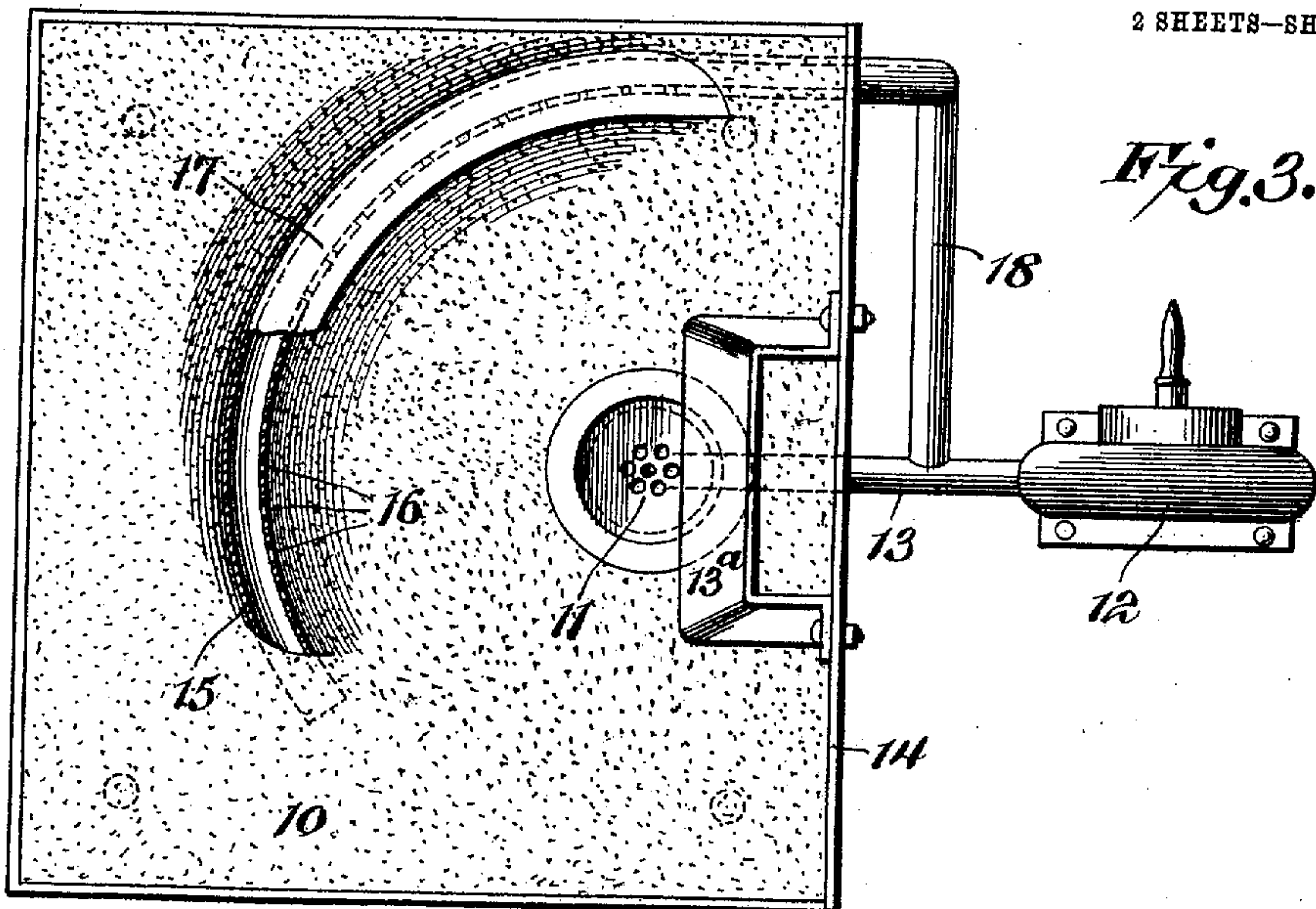


Fig. 3.

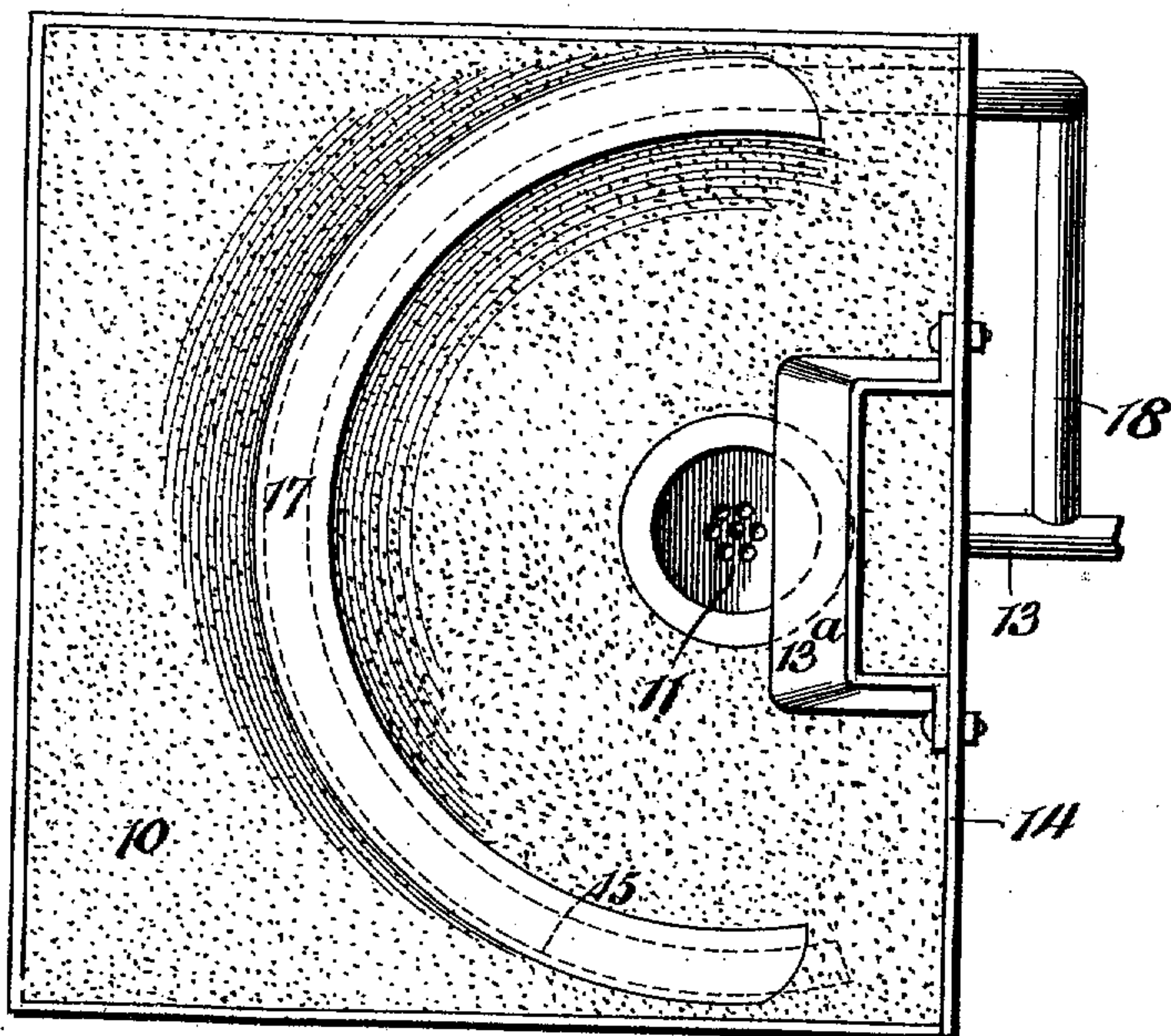


Fig. 4.

Witnesses
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UNITED STATES PATENT OFFICE.

HENRY P. DORSHEIMER, OF YORK, PENNSYLVANIA.

BLACKSMITH'S FORGE.

No. 886,773.

Specification of Letters Patent.

Patented May 5, 1908.

Application filed August 8, 1907. Serial No. 387,649.

To all whom it may concern:

Be it known that I, HENRY P. DORSHEIMER, citizen of the United States, residing at York, in the county of York and State of Pennsylvania, have invented certain new and useful Improvements in Blacksmiths' Forges, of which the following is a specification.

The present invention relates to blacksmiths' forges, and the principal object of the invention is to provide novel means for positively directing the flames and gases to a chimney, so that there will be no danger of injury to the workman by said flames and gases.

Another object is to provide a form of rest for the tools used in connection with the forge that will keep all parts of the tool being used in a cool condition excepting the parts thereof that are in actual contact with the fire.

With the above and other objects in view, the invention consists in a source of air supply having communication with the bottom of a main blast twyer; a hearth preferably consisting of a cement bed in which said twyer is embedded; a hood arranged above said hearth for directing the products of combustion to a chimney or smoke pipe, and a supplemental air supply arranged within said bed and adapted to direct a plurality of jets of air horizontally across the face of the hearth and convergently toward the main blast twyer to deflect the flames and gases away from the front of the forge, and a positive deflector for said air supply, the upper surface of which forms a rest for the tools being used.

In the accompanying drawings wherein like characters of reference refer to corresponding parts—Figure 1 is a perspective view of a forge equipped with the present invention. Fig. 2 is a vertical sectional view thereof. Fig. 3 is a top plan view, partly in section. Fig. 4 is a similar view of a slightly modified form of the invention.

In the accompanying drawings the invention has been shown as applied to a portable forge consisting of a hearth 10 formed of cement or other plastic material in which is embedded a main blast twyer 11 connected with a blower 12 by means of a pipe 13. The main blast twyer 11 is preferably arranged near the rear of the hearth 10 and a hood 13^a carried by a backshield 14 is held in a position to slightly overhang the said main blast twyer 11, in position to receive the products

of combustion and convey them to a chimney (not shown).

Within the plastic hearth 10 is a supplemental blast twyer 15 consisting of a perforated pipe extending from one side of said hearth 10 partly around and arranged concentrically to the main blast twyer 11 with its perforations 16 in a position to direct a plurality of blasts convergently toward said main blast twyer 11. A positive deflector 17 is carried by said supplemental twyer 15 and is preferably arranged at a slightly upward inclination and has its front edge projected beyond said supplemental twyer 15. The upper surface of said deflector 17 is flat, so that it may serve as a rest for the tools being used in connection with the forge. The supplemental twyer 15 has one of its ends projected through the hearth 10 and has a branch pipe connection 18 with the air supply pipe 13.

By referring more particularly to Fig. 2 of the accompanying drawings it will be observed that the supplemental twyer 15 is seated within a recess in the hearth 10, the material of which surrounds the bottom and one side thereof and also engages one edge of the deflector 17. The surface of the recess in which the supplemental twyer is seated slopes upwardly in a direction toward the main blast twyer 11.

The invention as above described is the preferred one, and from said description it will be understood that, as the forge fire is arranged over and around the main blast twyer 11, a strong draft of air currents will be directed through said fire, tending to cause the products of combustion to pass upwardly and into the hood 13^a and into a chimney or smoke pipe, not shown. In forge fires it is necessary that the material used should be one that produces the maximum of heat, and owing to the air-forcing device that is used to create the forced draft, supplemented by various air currents in the shop, frequently the flame spreads out laterally with the result that the workman is in danger of being burned by the flame or injured by the fumes of the gases. By the present invention, the supplemental perforated twyer being arranged concentrically to the main blast twyer where the center of the fire is generally located, it will be seen that there is at all times a plurality of jets of air being directed toward the fire, which are of sufficient force to deflect the flame toward

the back shield of the forge hearth. And it will be further understood that by means of the broad, flat surface of the deflector 17, a rest is provided for the tools which are used, and as the portion of the tools that are projected beyond the tool rest in a direction toward the fire, the said projected portions are always in the path of movement of the several air jets from the supplemental twyer, they will be kept in a cool condition.

In Fig. 4 of the drawings a modified arrangement of the supplemental blast twyer is shown, the construction being the same as in the other figures. In this form the supplemental twyer and its attached deflector extend from one side of the hearth to the other. This arrangement is for use in cases where the character of the work being performed is such as would necessitate the positioning of a workman on each side of the hearth.

I claim as my invention:—

1. In a forge, the combination with the hearth and the main blast twyer, of a supplemental twyer arranged to direct a blast toward said main twyer.

2. In a forge, the combination with the hearth and the main blast twyer, of a supplemental twyer arranged to direct a plurality of blasts converging toward the main blast twyer.

3. In a forge, the combination with the hearth and the main blast twyer, of a supplemental twyer arranged to direct a blast horizontally over the face of said hearth.

4. In a forge, the combination with the hearth and the main blast twyer, of a supplemental twyer arranged to direct a plurality of blasts converging horizontally over said hearth toward the said main blast twyer.

5. In a forge, the combination with the hearth and the main blast twyer, of a supple-

mental twyer consisting of a perforated pipe arranged concentrically to said main blast twyer and adapted to direct a blast toward said main blast twyer.

6. In a forge, the combination with the hearth and the main blast twyer, of a supplemental twyer consisting of a perforated pipe arranged concentrically to said main blast twyer and adapted to direct a blast convergently across the face of said hearth toward said main blast twyer.

7. In a forge, the combination with the hearth and the main blast twyer, of a supplemental twyer carrying a deflector and comprising a perforated pipe arranged concentrically to said main blast twyer.

8. In a forge, the combination with the hearth and the main blast twyer, a supplemental twyer partly embedded within said hearth and arranged concentrically to and adapted to direct converging blasts toward said main blast twyer.

9. In a forge, the combination with the hearth and the main blast twyer, a supplemental twyer partly embedded within said hearth and arranged concentrically to and adapted to direct converging blasts toward said main blast twyer.

10. In a forge, the combination with the hearth and the main blast twyer, a supplemental twyer partly embedded within said hearth and carrying a deflector having a broad flat surface, said supplemental twyer being arranged concentrically to said main blast twyer and adapted to direct converging blasts towards said main twyer.

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

HENRY P. DORSHEIMER.

Witnesses:

ELI G. LEATHERY,
FR. GERKENMEYER.