

L. H. WATSON.  
Forge-Blower.

No. 161,581.

Patented March 30, 1875.

Fig. 1.

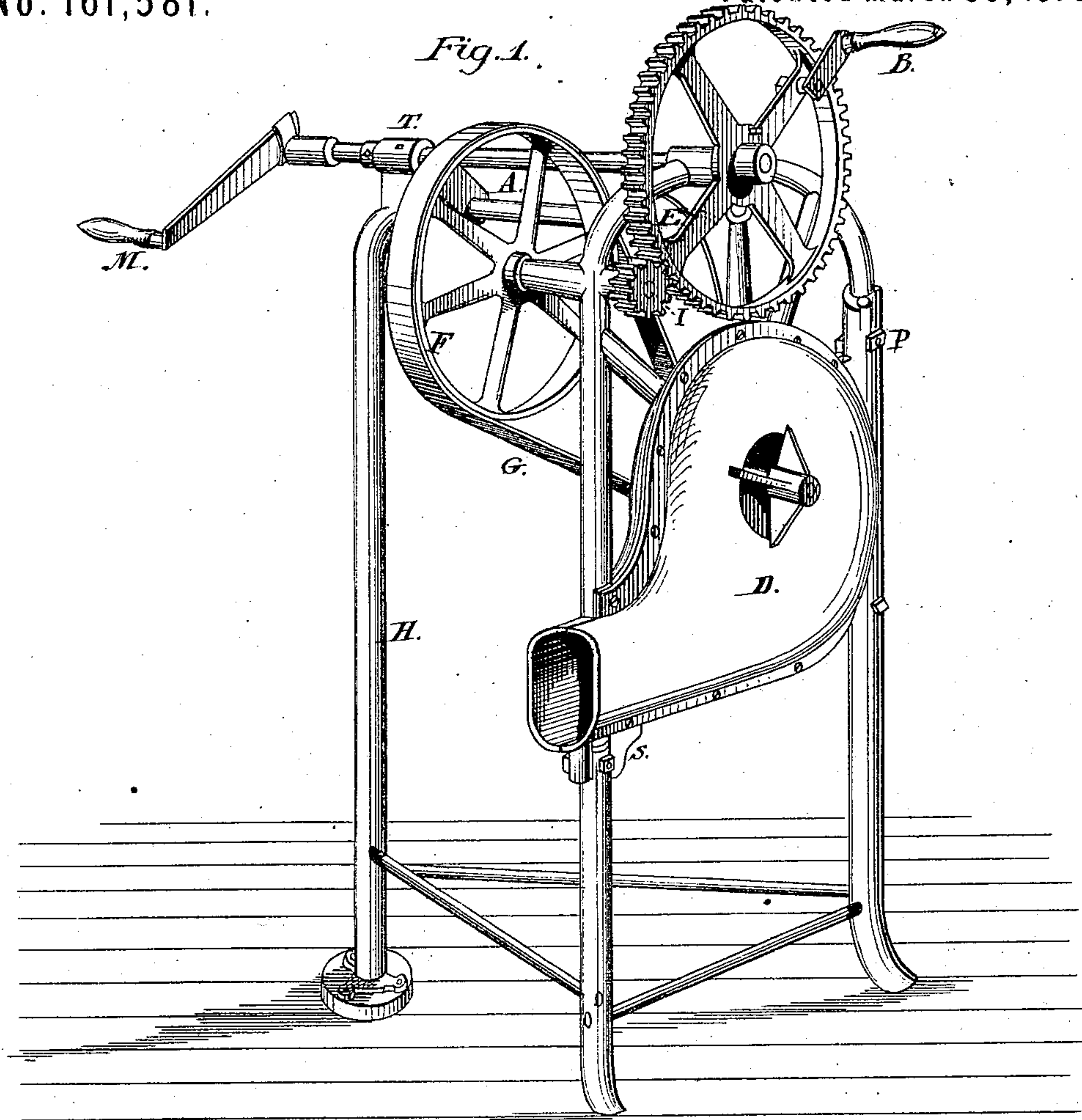
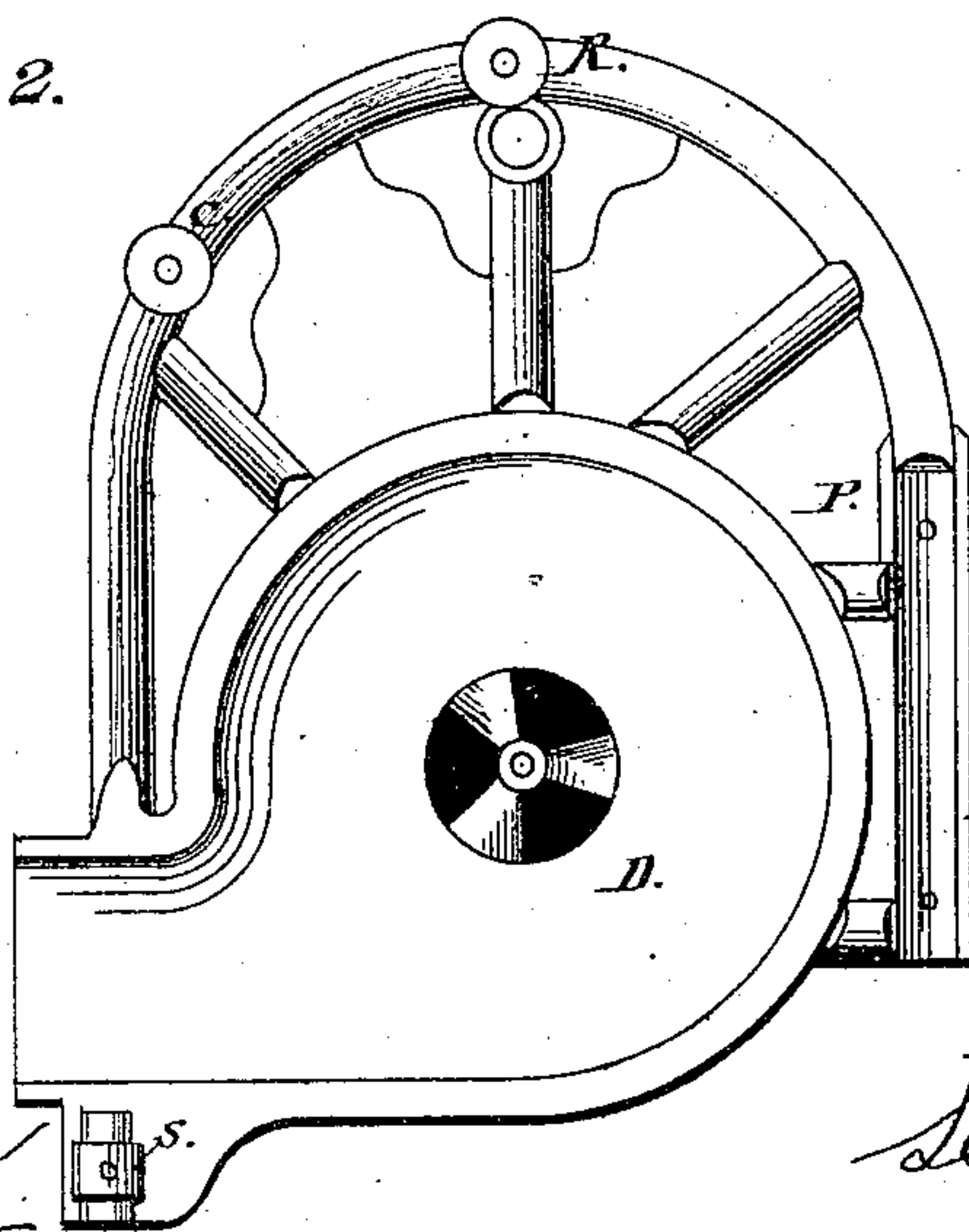


Fig. 2.



Witnesses:  
Edw. M. Dunn  
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# UNITED STATES PATENT OFFICE.

LEWIS H. WATSON, OF CLEVELAND, OHIO.

## IMPROVEMENT IN FORGE-BLOWERS.

Specification forming part of Letters Patent No. **161,581**, dated March 30, 1875; application filed January 27, 1875.

*To all whom it may concern:*

Be it known that I, LEWIS H. WATSON, of Cleveland, Cuyahoga county, Ohio, have invented certain new and useful Improvements in Forge-Blowers, geared for hand, of which the following is a full, clear, and exact description:

The nature of my invention consists in the construction of a cheap, simple, and effective forge-blower for blacksmithing, and all other purposes where hand-blast is desired, as will hereafter be more fully set forth.

In the accompanying drawing, Figure I is an external view of my forge-blower; Fig. II, the frame, with legs, gearing, and one-half of fan-box removed, showing half of fan-box cast in the frame.

A is the shaft, to which power is applied; B and M, the cranks. Extending through the boss C is the shaft I, which receives power from the shaft A by means of the gear-wheel and pinion E. Running on the other end of shaft I is the belt-wheel F and belt G, which transmits the power to the fan-shaft and fan. The frame, as shown in Fig. II, is of cast-iron, with bosses C and R, to form bearings, in which the shafts A and I run, and also a boss where the leg H is secured in the center of said frame. Near the lower side is the circular concaved shell D, forming half the case or box wherein the fan runs, the other half being attached by means of screws or bolts, thus forming the fan-box or case. The legs are of wrought-iron or gas-pipe, and con-

nected together at the bottom with small rods, and secured to the frame with bolts, as shown at P and S, Fig. I.

Owing to the different positions in which forges are situated, it sometimes becomes necessary to dispense with the leg H and crank M, together with a part of shaft A. When this is done, the boss R should be made sufficiently long to carry the shaft A alone, dispensing with bearing T.

The operation is as follows: The blower is set in the position most convenient, the crank B or M in easy reach of the operator. The other may be used by the helper. The tuyere-iron is connected to the blower with suitable pipe. The top of large gear-wheel runs in the direction of the pinion, when a good blast will be obtained with comparatively small power.

Having thus described my invention, I make no claim to the fan, as that is of the ordinary kind.

What I claim as my invention, and wish to secure by Letters Patent, is—

1. A frame, as shown in Fig. II, with one-half of a fan-box cast therein and forming a part of said frame, as shown and described.
2. The frame, as shown in Fig. II, in combination with the detachable half of fan-box D, legs S, P, and H, and gearing to drive the fan, as shown and described.

LEWIS H. WATSON.

Witnesses:

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