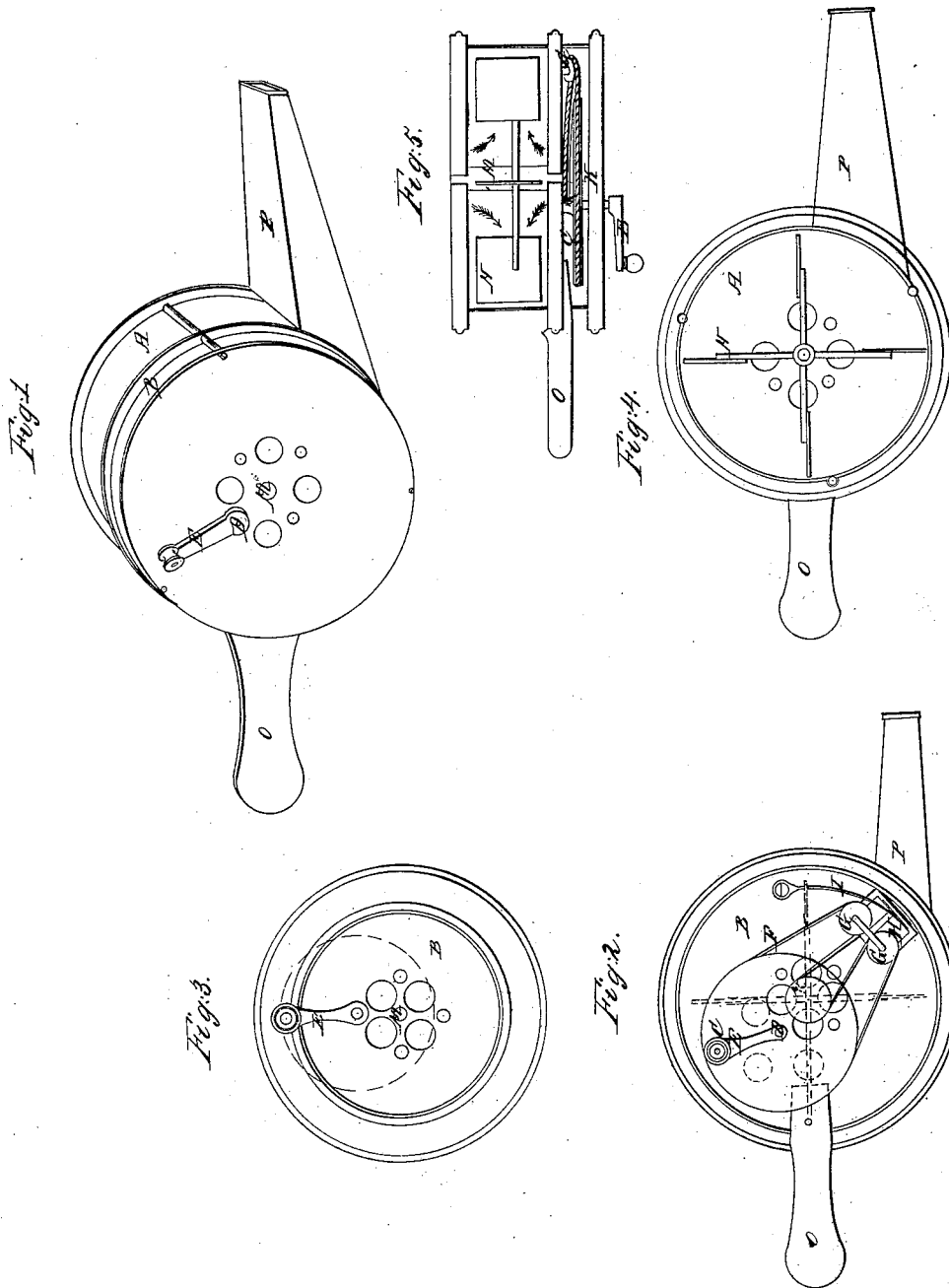


A. Ewing,
Hand Bellows.

N^o 1,393.

Patented Oct 31, 1839.



UNITED STATES PATENT OFFICE.

ALEXANDER EWING, OF NEW YORK, N. Y.

CONSTRUCTION OF PORTABLE BELLOWS.

Specification of Letters Patent No. 1,393, dated October 31, 1839.

To all whom it may concern:

Be it known that I, ALEXANDER EWING, of the city, county, and State of New York, have invented a new and useful Rotary Hand-Bellows for the Use of Braziers and other Artisans, which is described as follows, reference being had to the annexed drawings of the same, making part of this specification.

10 Figure 1, represents the exterior of the bellows; Fig. 2, one side of the additional case; Fig. 3, the other side of ditto; Fig. 4, interior of the common fan bellows; Fig. 5, cross section of the fan.

15 This improvement consists in adding to the side of the common fan bellows A used for raising the blast of furnaces a circular case B, in which is placed a large grooved pulley C, whose axle D turns in boxes in the ends of the case, which boxes are placed between the center of the case and the circumference thereof. This pulley is turned by a crank E fixed on one end of said axle projecting beyond the outer head of the additional case. Around the grooved pulley 25 is passed a band F, which is carried around two small pulleys G G turning on pins or studs s s inserted into a slide H moving

against the head, which slide is attached to a spring I fastened at one end to the head 30 of the fan case, and then said band F is carried around a small pulley K on the end of the axle M of the fan N, by which arrangement the fan is turned with great velocity by hand effected in a very small 35 space, the band being guided and kept tight by means of the aforesaid pulleys G G.

A handle O is fastened to the circumference of the fan case, on the opposite side to that on which the tangential tube P for 40 directing the blast is placed, by means of which the artisan can direct the bellows with his left hand in any manner desired, while with his right hand he turns the crank and thus produces the blast. 45

The invention claimed and desired to be secured by Letters Patent consists in—

The arrangement of the circular case containing the gearing in combination with the fan bellows for increasing the velocity of 50 the same, as before described.

ALEXANDER EWING.

Witnesses:

SAM B. WARNER,
JACOB L. DICKINSON.