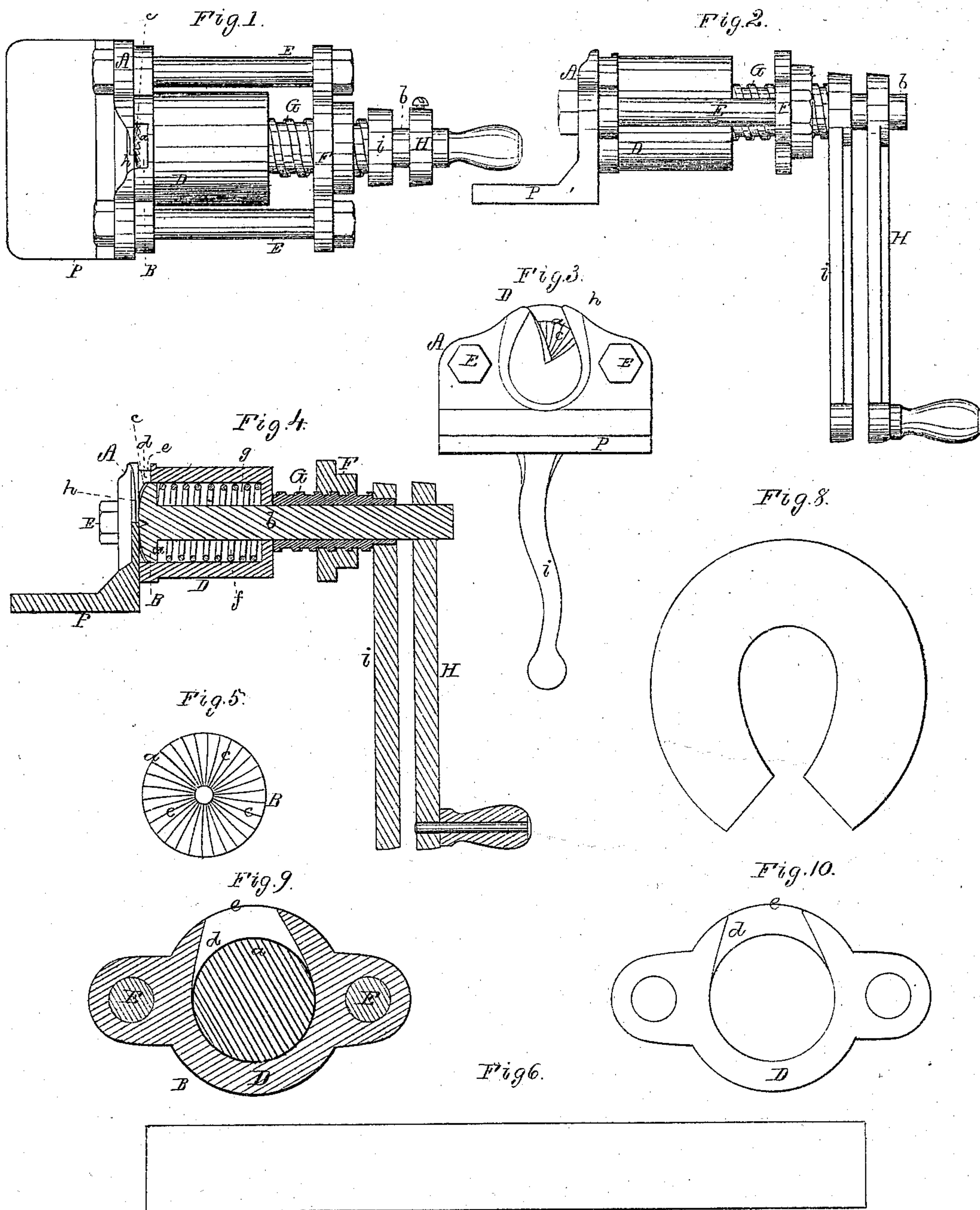


J. B. JOHNSON & G. W. MOULTON.

Machines for Turning Heel Rands.

No. 138,257.

Patented April 29, 1873.



Witnesses.

S. W. Piper.

L. N. Miller.

Fig. 7.



Joseph B. Johnson.

and

George W. Moulton.

by their attorney.

R. H. Cary



# UNITED STATES PATENT OFFICE.

JOSEPH B. JOHNSON AND GEORGE W. MOULTON, OF LYNN, MASSACHUSETTS.

## IMPROVEMENT IN MACHINES FOR TURNING HEEL-RANDS.

Specification forming part of Letters Patent No. **138,257**, dated April 29, 1873; application filed December 10, 1872.

*To all whom it may concern:*

Be it known that we, JOSEPH B. JOHNSON and GEORGE W. MOULTON, of Lynn, of the county of Essex and State of Massachusetts, have invented a new and useful or Improved Machine for Turning Heel-Rands; and do hereby declare the same to be fully described in the following specification, and represented in the accompanying drawing, of which—

Figure 1 is a top view; Fig. 2, a side elevation; Fig. 3, a front-end view; and Fig. 4, a vertical and longitudinal section of such machine. Fig. 5 is front-end view of its rand-turner. Fig. 6 is a side view, and Fig. 7 a transverse section of a rand as it appears before being turned by the machine. Fig. 8 represents the rand as turned.

In the drawing, A denotes the abutment or base, with which the rand-turner B operates. This rand-turner consists of a circular head, *a*, and an arbor, *b*, arranged as shown, such head being convex, and provided with radial teeth *c* upon its outer surface or that next the abutment. The rand-turner B is arranged concentrically in a box or case, D, fitted to slide upon two parallel rods, E E, projecting from the abutment and connected by a cross-head, F, all as shown. Fig. 9 is a transverse section of the case D, such section being taken through the head *a*, and the rand guide-chamber *d* within which it is arranged. This chamber is circular in section and concentric with the head *a*, and is provided with a mouth, *e*, formed through its periphery, as shown, an end view of the case D being represented in Fig. 10. Within the case D, or the chamber *g* thereof, is a helical spring, *f*, which encompasses the arbor *b*, and bears at one end against the head *a*, and at the other against the rear end of the said chamber *g*. Furthermore, there may be a discharging-opening, *h*, made in the abutment, or arranged therein as shown. The arbor *b* goes through a tubular screw, G, which screws into and through the cross-head F, and against the rear end of the case D, and is provided with an arm, *i*, the latter being extended from the screw in manner as

represented, and close to a crank, H, fixed upon the arbor *b*. The spring *f* serves to keep the rotary turning-head *a* pressed against the rand, while the latter may be in the act of being turned. It also serves to effect the discharge of the rand from the guide-chamber, or to press the case back upon the arbor of the rand-turner while the screw is being turned back, and until the arm *i* may bring up against the crank.

In using the machine the case is first to be forced up into contact with the abutment. Next, the rand, at one end, is to be introduced into the mouth *e* of the guide-chamber *d*, and between the abutment and the teeth of the head *a*, after which the crank is to be turned so as to revolve the part B. This will cause the rand to be driven around within the guide-chamber *d*, and bent in a circle. Next, the arm *i* and the crank are to be simultaneously turned backward until the head *a* may be forced out of the rand-chamber, and drawn far enough away from the abutment for the rand to fall or be discharged from between the two. The rand after being bent may be discharged through the opening in the abutment. To effect this the attendant has only to watch for the end of the rand to make its appearance at the said opening, and to seize such end turn it outward through the opening, when the continued rotary motion of the head *a* will cause the rand to be discharged through the opening. While such a discharge may be taking place a fresh rand may be inserted in the mouth of the rand guide-chamber and be in the act of being turned. The abutment is provided with a lip or base, P, by which it may be fixed to a table or work-bench either by screws or suitable clamps, the inner edge of the abutment being adjusted in the vertical plane of the edge of the table or bench.

In practice the machine is exceedingly efficient for the purpose of turning rands.

We claim as our invention as follows, viz:

1. The combination of the abutment A, provided with or being without the discharging-passage *h*, the rand-turner B, the case D, having the rand turning and spring cham-

bers, as shown, the spring *f*, the screw G, the cross-head F, the arm *i*, and the crank H, all arranged and combined essentially in manner and to operate as and for the purpose specified.

2. The combination of the abutment A and the discharge-opening *h* thereof with the rand-turner B and the rand guide-chamber *d*,

provided with a mouth, *e*, for reception of the rand, as set forth.

JOSEPH B. JOHNSON.  
GEORGE W. MOULTON.

Witnesses:

R. H. EDDY,  
J. R. SNOW.