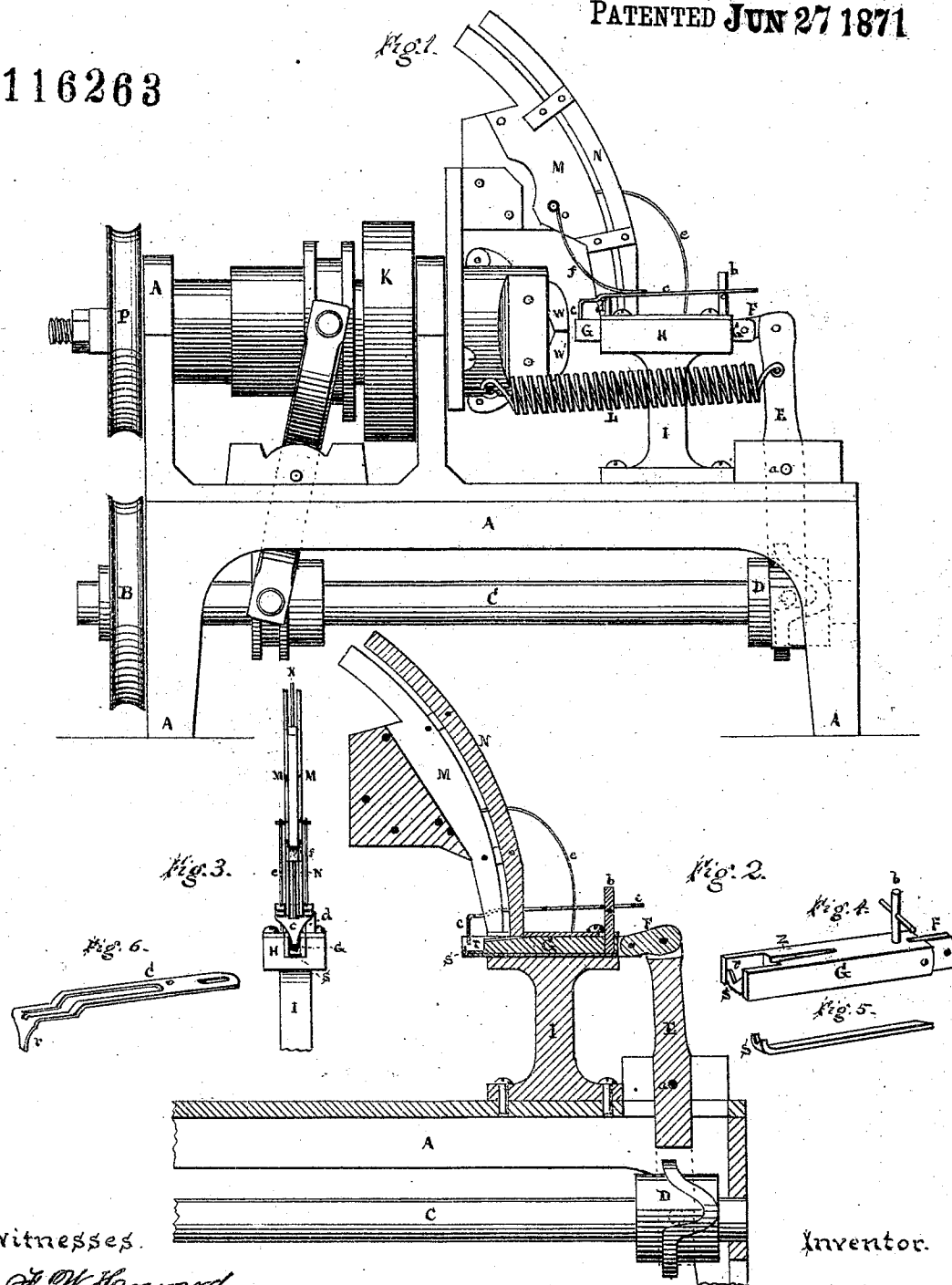


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Feed Motion for Screw Machines
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PATENTED JUN 27 1871

116263



Witnesses.

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IMPROVEMENT IN FEEDING DEVICES FOR WOOD-SCREW MACHINES.

Specification forming part of Letters Patent No. 116,263, dated June 27, 1871.

To all whom it may concern:

Be it known that I, ANSEL BUCKMINSTER, of Boston, in the county of Suffolk and State of Massachusetts, have invented a new and Improved Feeding Device for Screw-Machines; and I do hereby declare the following to be a full and correct description of the same, reference being had to the accompanying drawing, in which—

Figure 1 is a side elevation of my feeding device, shown in its relation to the spindle of a screw-machine. Fig. 2 is a central longitudinal vertical section of the same. Fig. 3 is an end view of the sliding carrier and the parts directly connected therewith. Fig. 4 is a perspective view of the sliding carrier detached. Fig. 5 is a separate view of the spring of the sliding carrier, and Fig. 6 is a separate view of the slotted sliding plate *c*.

The nature of this invention consists in the construction and mode of operation of the sliding carrier and the connected devices for receiving, supporting, and centering the screw-blank, and delivering it to the jaws of the spindle to be threaded, all as hereinafter set forth.

In the drawing, A marks the frame of the machine, by which the working parts are supported. K is a pulley attached to the spindle, which receives motion by a band from any suitable prime mover. A pulley, P, at the end of the spindle, by means of a band or cord, communicates motion to pulley B on the end of the cam-shaft C, to which is attached the cam D. This cam operates the upright lever E which has its fulcrum at *a*. To the upper end of lever E is pivoted the link F, which unites it to the rear end of the sliding carrier G. This, which is represented in Figs. 1, 2, and 4, slides in a box, H, supported upon the stanchion I, and alternately receives the screw-blanks from the conducting-trough M, and delivers them to the gripping-jaws W W'. The sliding carrier G, as shown in the drawing, is an oblong bar having a groove on its upper side, and a recess, *r*, in its forward end, for the reception of the screw-blank. In the bottom of this recess lies a delicate spring, *s*, having an upright, Y, or notch, at its forward end, the rear side of which is beveled off so as to allow the head of the screw-blank to ride upon it and press down the spring, when the for-

ward end of the blank is held by the jaws W and the slide is retracted. A stud, *b*, is situated upon and near the rear end of the slide, and supports a plate, *c*, which has a back-and-forth motion with the slide G, and at its forward end an up-and-down motion by reason of its inclined shoulder sliding over the dog *d*. This plate *c* is held down by the spring *f*, and pressed backward by the spring *e*. The forward end of the plate *c* is bent downward so as to enter the recess *r* in the slide G, and form with the catch of the spring *s* a gripping device for holding and centering the screw-blank until it enters and is gripped by the jaws W W' of the spindle. (See Figs. 2 and 6.)

The blanks are fed to the machine through a trough or conductor, M, composed of parallel plates, placed far enough apart to admit the shanks of the screw-blanks, but to exclude their heads, the blanks being kept from dropping out by the plate N. When the blank reaches the bottom of the trough it drops into the groove *z* on the top of the sliding carrier G, (see Fig. 4,) with the head at I and the shank resting in the groove *z*, and, as the slide recedes, it is pushed by the lower end of plate N into the recess *r*, the head of the blank being toward the back of the recess, and the point of the shank resting in the notch or Y on the forward end of the spring *s*. This spring is so set as to raise the blank to the exact position to be gripped by the jaws W W' of the spindle. The blank is held down upon spring *s* by the forward end of the plate *c*, which descends as the slide moves forward, its inclined shoulder sliding down on the dog *d*. When the carrier G is at the end of its forward motion the jaws W W' of the spindle seize the end of the screw-blank. At the same time the sliding carrier G begins its backward movement, and the blank is released from it by the action of the head of the blank pressing down the spring *s*, and by the rise of plate *c* on the dog *d*. The operation is then repeated.

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

1. The combination of the sliding carrier G, having the recess *r*, groove *z*, and spring *s*, with the clamping-plate *c* and mechanism to operate

said devices, in the manner substantially as described.

2. In combination with the subject-matter of the preceding claim, the plate *N* for pushing forward the screw-blank into the recess *r*, as specified.

3. The combination, with a sliding carrier of a screw-machine, of the clamp *c*, springs *ef*, stud

b, and dog *d*, constructed, arranged, and operating as and for the purpose stated.

The above specification of my said invention signed and witnessed at Boston this 29th day of March, A. D. 1871.

Witnesses: ANSEL BUCKMINSTER.

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