

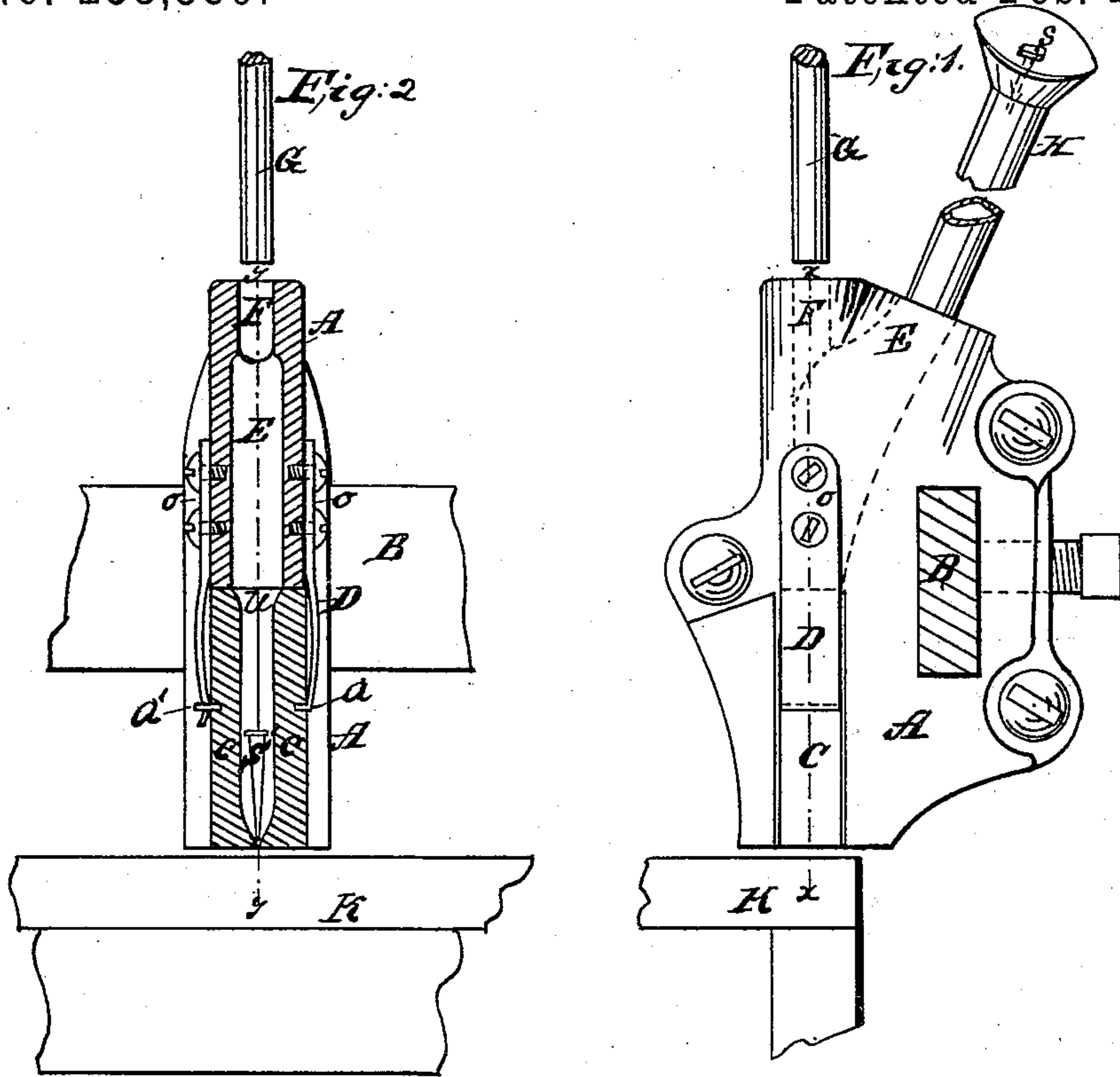
(No Model.)

T. L. SMITH & W. S. DOIG.

NAIL BOX.

No. 253,559.

Patented Feb. 14, 1882.



Witnesses:
Christian Wehr
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UNITED STATES PATENT OFFICE.

THOMAS L. SMITH AND WILLIAM S. DOIG, OF BROOKLYN, NEW YORK.

NAIL-BOX.

SPECIFICATION forming part of Letters Patent No. 253,559, dated February 14, 1882.

Application filed December 5, 1881. (No model.)

To all whom it may concern:

Be it known that we, THOMAS L. SMITH and WILLIAM S. DOIG, of Brooklyn, county of Kings, State of New York, have invented a new and useful Improvement in Nail-Boxes, which is fully set forth in the annexed specification and drawings.

Our improvement relates to that class of nail-boxes used on box-nailing machines for the purpose of directing the nail in the proper direction.

The object of our invention is to contrive a cheaper and surer arrangement of clamps or dies than has been heretofore made for holding the nail in a proper position to be driven or forced into the material desired, as hereinafter more fully described, reference being had to the accompanying drawings, in which—

Figure 1 represents a side elevation of a nail-box in position. Fig. 2 represents an end view section through *x x*, Fig. 1.

Similar letters refer to similar parts throughout the several views.

A represents the nail-box; B, bar for supporting same in position; C, the dies or clamps; D, springs. E is channel or groove for reception of nails S. F is an opening for punch G. S' is a nail in position for driving; H, nail-feeding tube; K, the material into which the nail is to be driven.

The clamp or die C is in two parts, and so arranged as to allow the nail S' to be easily pushed between them into the material K below, and as the punch is drawn back they are forced back and retained in their proper position by the springs D, which are secured to the nail-box A at O, the springs D, as shown in Fig. 2, being bent or formed to be inserted in the groove *a* in the back of the dies or clamps C, intermediate their ends, to prevent said clamp from being displaced by the friction of the nail S' and punch G while passing through said clamps; or a pin may be used, as shown in Fig. 2. As the boxes are constructed at present the dies or clamps C operate in an opposite direction to what is shown in the drawings, Fig. 1. With the dies or clamps C operating in this manner it frequently occurs that the nail coming in contact with a knot or some other hard substance will glance off and come

out of the side, as the material is placed under the box A in the manner shown, whereas if they are operated crosswise of the box A, as shown in Figs. 1 and 2, and the course of the nail should be at an angle, it will not come out of the side. It may be considered an advantage, as shown. This plan also greatly facilitates the taking out of the clamps for repairs, for this is a serious loss of time in some cases at present.

The tops of the clamps or dies C are made funnel-shaped, as shown at U, and corresponding to the large opening E, thereby allowing free access for the nails to pass into their proper place.

By suspending the dies or clamps C intermediate their respective ends free lateral movement at the opening U is obtained, whereas in the present mode of construction very little, if any, lateral movement is allowed at the top of the dies or clamps C.

It frequently occurs that the nail and the punch G meet in the opening U at the same time. Therefore, if the die or clamp C is limited in lateral movement, the punch G will foul or wedge with the nail S, which causes a break in some part of the machine, and entails a considerable loss of time to repair such breakage.

We are aware that prior to our invention nail-boxes with vertical dies, clamps, or nail-receivers have been used, and that Letters Patent therefor were granted to Messer July 15, 1879, No. 217,472. We do not therefore claim the vertical laterally-yielding nail-receivers or dies and spring-clasps; but

What we claim, and desire to secure by Letters Patent, is—

In a box-nailing machine, the combination, with the nail-box, of the clamps or dies C C and supporting-springs D D, the upper ends of which are attached to the box and the other end supporting the clamps or dies and allowing them to yield laterally crosswise with the box, substantially and for the purpose set forth.

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Witnesses:

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