(No Model.)

2 Sheets—Sheet 1.

H. A. HENDERSON.

HEEL NAILING MACHINE.

No. 332,798. Patented Dec. 22, 1885.

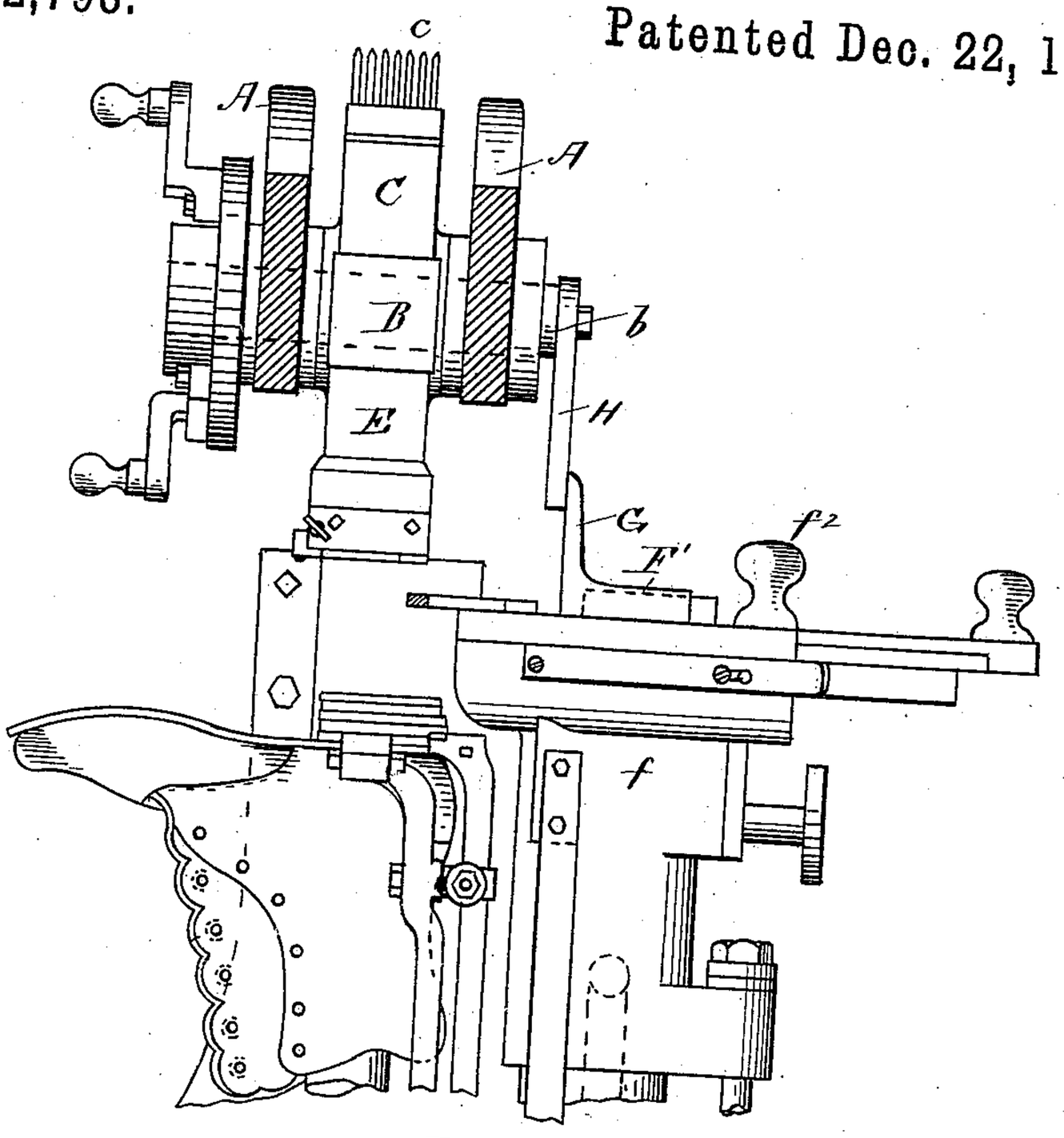

Fig. 1.

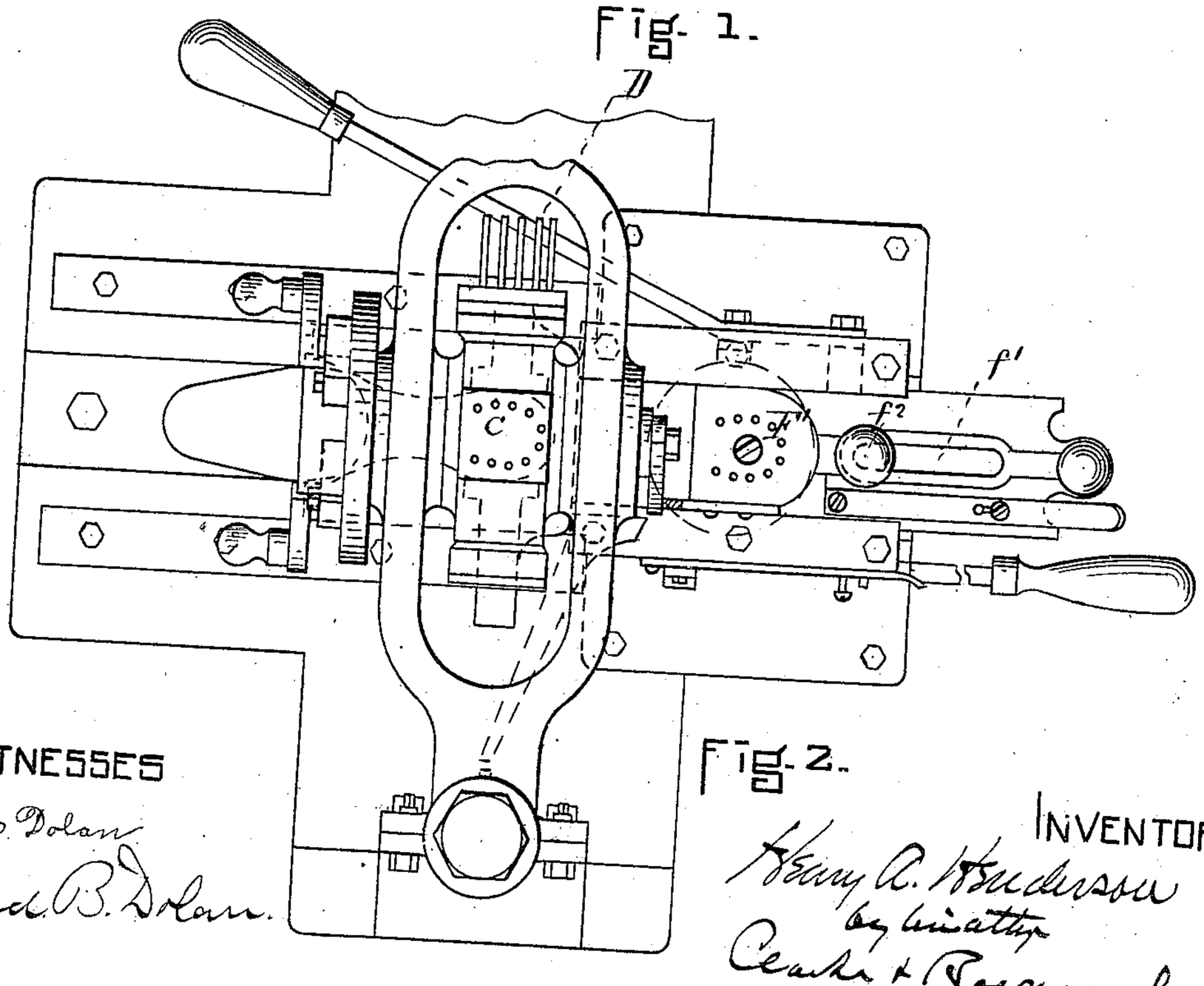

Fig. 2.

WITNESSES

L. McDolan

Fred. B. Dolan.

INVENTOR

Henry A. Henderson

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Cooke & Raymond.

(No Model.) 2 Sheets—Sheet 2.

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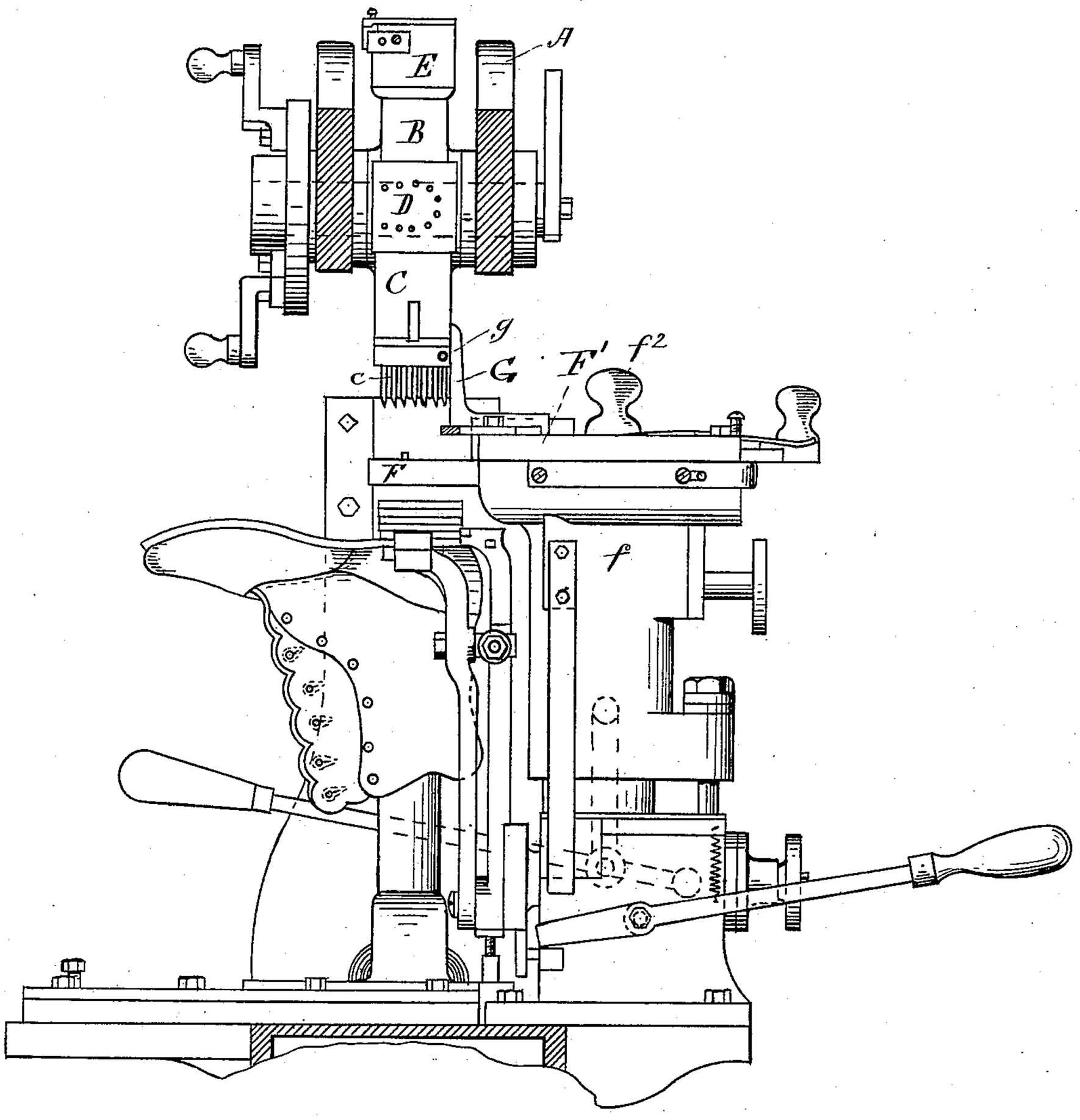

Fig. 3.

WITNESSES

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UNITED STATES PATENT OFFICE.

HENRY A. HENDERSON, OF LYNN, MASSACHUSETTS, ASSIGNOR TO THE NATIONAL HEELING MACHINE COMPANY, OF PORTLAND, MAINE.

HEEL-NAILING MACHINE.

SPECIFICATION forming part of Letters Patent No. 332,798, dated December 22, 1885.

Application filed October 26, 1885. Serial No. 180,933. (No model.)

To all whom it may concern:

Be it known that I, HENRY A. HENDERSON, of Lynn, in the county of Essex and State of Massachusetts, a citizen of the United States, have invented a new and useful Improvement in Heel-Nailing Machines, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part of this specification, in explaining its nature, in which—

Figure 1 is a view, part in side elevation and part in vertical section, of portions of the "National Heel-Nailing Machine," so called, containing my improvements. Fig. 2 is a plan view of the parts of the machine showing my invention. Fig. 3 is a view, part in vertical section and part in side elevation, representing a different position of the parts from that shown in Fig. 1.

The invention consists in providing stops whereby the movements of the sliding plates are prevented, except at predetermined intervals.

Referring to the drawings, A represents the cross-head of the machine; B, the revolving head; C, an arm carrying the gang or group of awls *c;* D, an arm carrying the gang or group of drivers *d;* E, an arm carrying the spanker and top-lift holder. F is the sliding templet, supported by the table *f;* and F″, the nail-holder. These parts are like corresponding parts in my Patent No. 316,894. The head is revolved by the operator, and the plates are moved by the attendant; and it is essential that the templet-plate may be moved into position for operation with the awls and with the drivers; but the nail-holder plate should not be moved into position when the awls have been moved into place for use, but only when the drivers have been revolved into position; and to prevent the movement of the nail-holder plate when the awls are in position I have attached to the nail-holder plate an angle iron or piece, G, which is fastened to the edge of the nail-holder plate by screws, and which projects outward and upward from the front end of the plate to come in contact with the pin *g* upon the block carrying the gang or group of awls, so that the plate cannot be moved horizontally into operative position when the awls are in place. Upon the movement of the awls out of position and the bringing of the drivers into place the nail-holder can be moved by the drivers, as the angle-stop is placed upon one side of the nail-holder, so as to move by the side of the driver-block unless restricted by a stop. It is also necessary to prevent the templet and nail-holder, plate from being moved into operative position after the drivers have been removed and the spanker and top-lift holder brought into place; and to prevent such movement I have secured to the shaft *b* of the revolving head the arm H, which, upon the revolution of the head, is brought down into line with the angle-piece G, attached to the nail-holder, so that a movement of the nail-holder forward will bring the angle-stop in contact with the arm and prevent a further forward movement. The position which these parts bear to each other when the spanker-block is in position is well shown in Fig. 1. Of course it will be understood that the nail-holder plate is drawn out upon the templet-plate when both are withdrawn from the heel after the nails have been driven in order to bring the nail-holder in a suitable place to receive the nails, and that this movement brings the front end of the slot *f′* of the plate in contact with the operating-knob f^2 of the templet, so that the templet-plate cannot be moved inward without also moving the nail-holder plate—that is, when the plates are in a position shown in Figs. 1 and 2—and that therefore the arm H acts as a barrier in preventing the movement of either plate when brought into the position shown in Fig. 1.

Having thus fully described my invention, I claim and desire to secure by Letters Patent of the United States—

1. In a heel-nailing machine, the combination of the gang or group of awls adapted to be moved into and out of operative position, a sliding templet, a sliding nail-holder, and a stop on the nail-holder and awl-carrier, substantially as set forth, for preventing the movement of the nail-holder while the awls are in operative position, all substantially as described.

2. In a heel-nailing machine, the combination of a spanker adapted to be moved into and out of operative position, a sliding nail-

holder, a sliding templet, and a stop on the revolving shaft and nail-holder for preventing the movement of the nail-holder and templet while the spanker is in operative position, all substantially as described.

3. In a heel-nailing machine, the combination of the nail-holder having the angle-piece G and the arm C, having the stop *g*, all substantially as described.

4. In a heel-nailing machine, the combination of the nail-holder having the angle-piece G with the revolving shaft *b*, having the arm H, substantially as described.

HENRY A. HENDERSON.

In presence of—
F. F. RAYMOND, 2d,
J. M. DOLAN.