

(No Model.)

F. F. RAYMOND, 2d.
HEEL ATTACHING MACHINE.

No. 322,126.

Patented July 14, 1885.

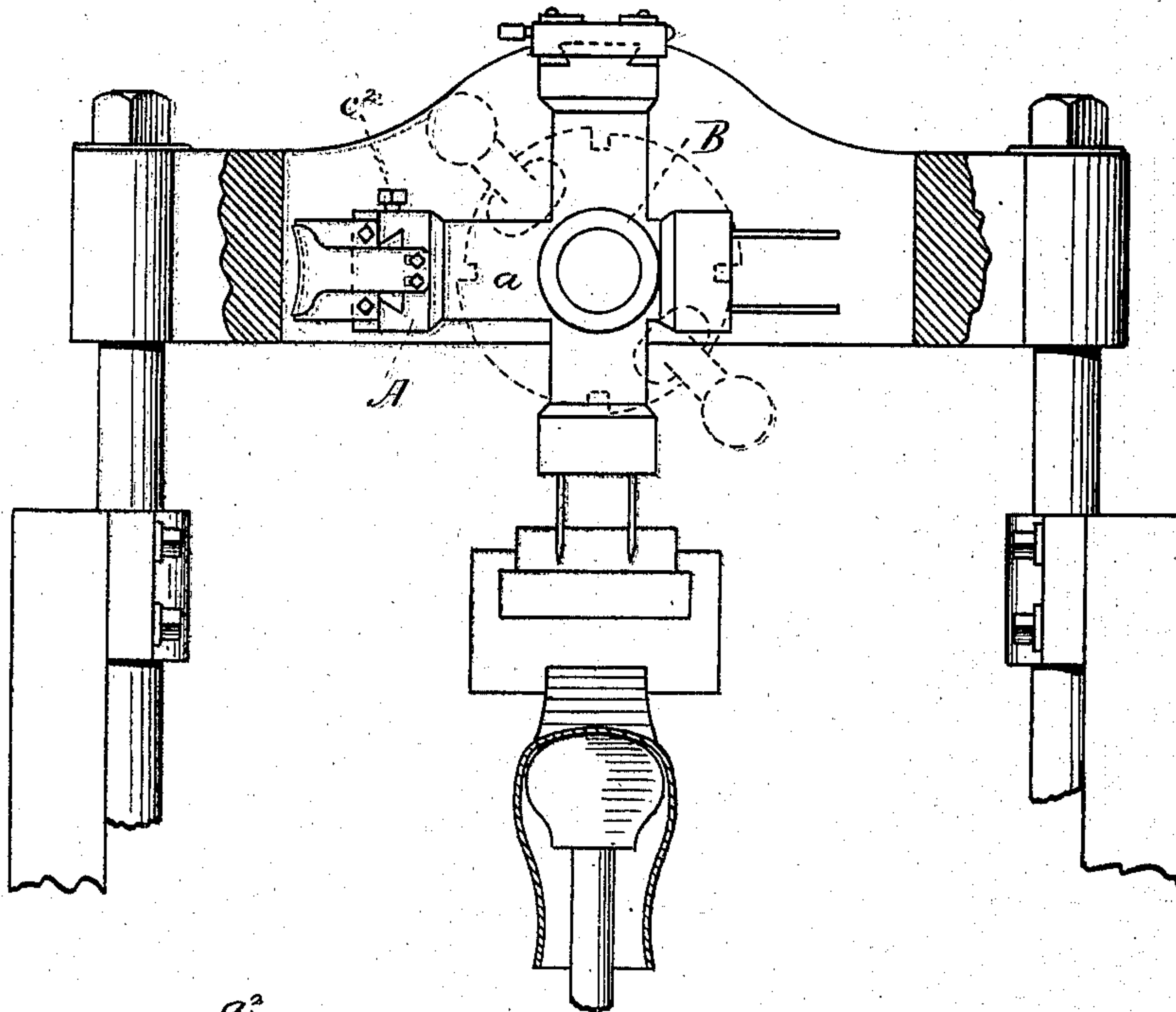


Fig. 1.

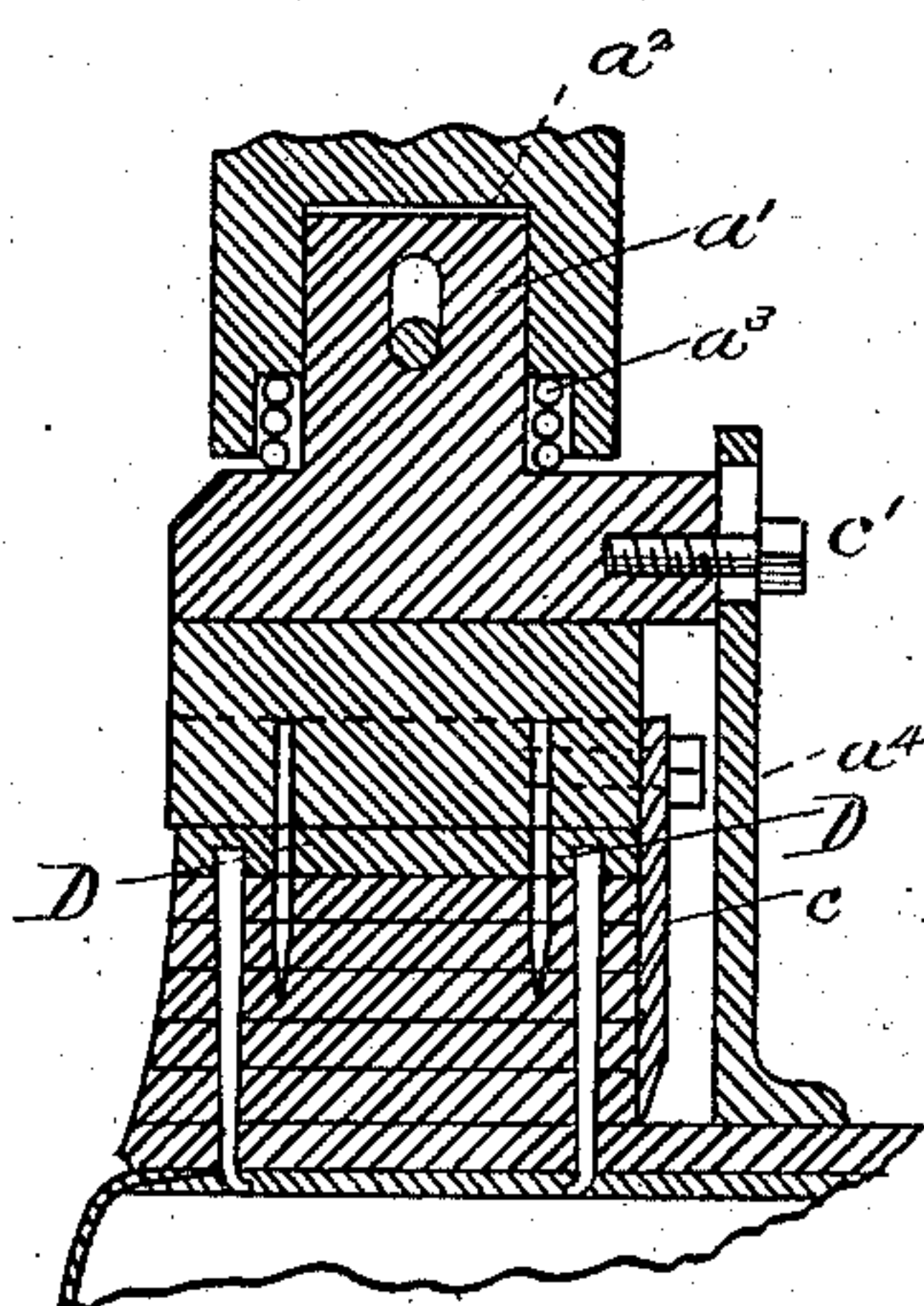


Fig. 3.

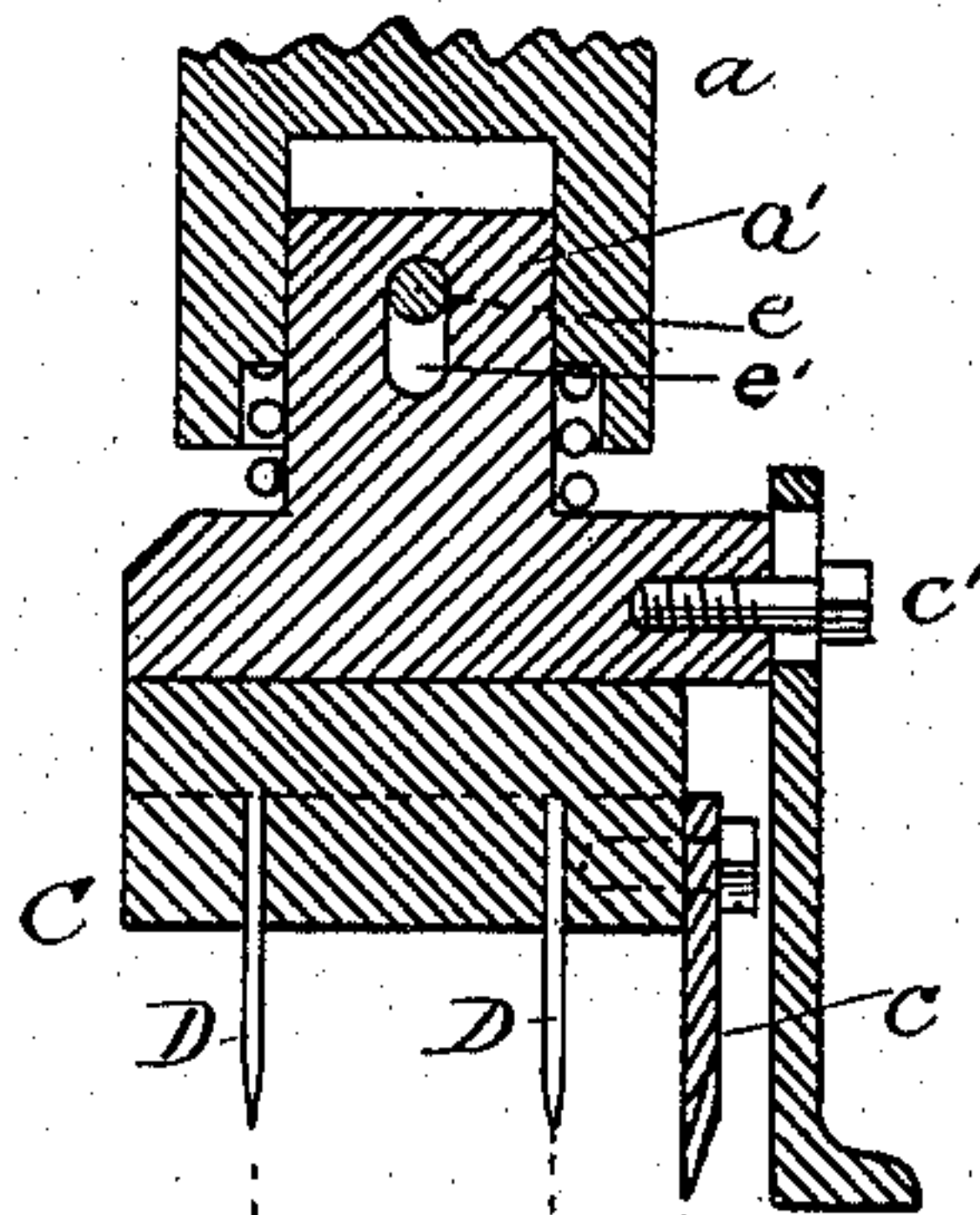


Fig. 2.

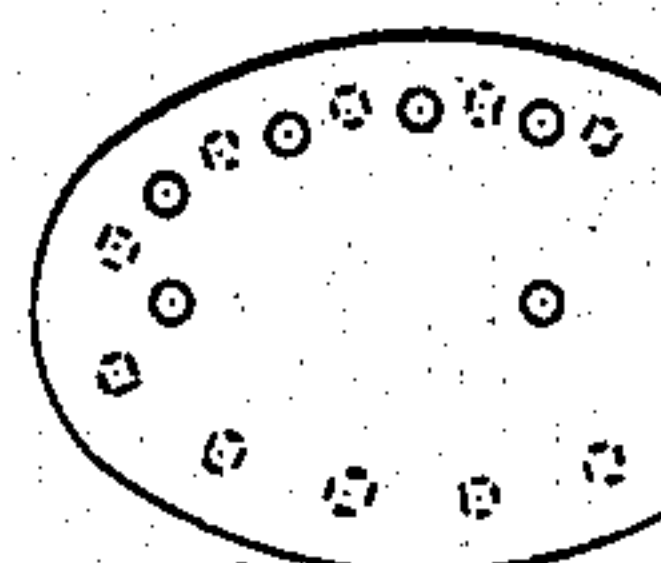


Fig. 4.

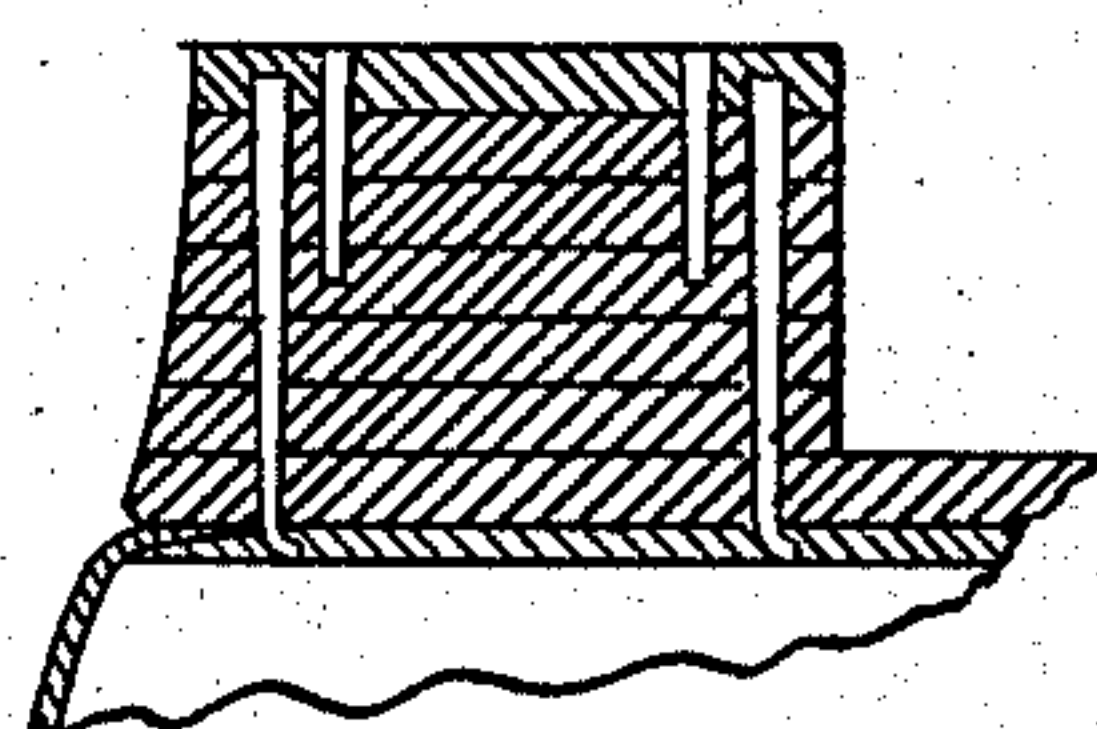


Fig. 5.

WITNESSES.

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HEEL-ATTACHING MACHINE.

SPECIFICATION forming part of Letters Patent No. 322,126, dated July 14, 1885.

Application filed January 30, 1885. (No model.)

To all whom it may concern:

Be it known that I, FREEBORN F. RAYMOND, 2d, of Newton, in the county of Middlesex and State of Massachusetts, a citizen of the United States, have invented a new and useful Improvement in Heel-Attaching 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.

Figure 1 shows in elevation and section a portion of the upper part of a "National Heel-Attaching Machine." Fig. 2 is a vertical section showing the position of the breasting-knife before it operates. Fig. 3 is a vertical central section through the breasting device, its support, and the heel, representing the position of the parts after the breasting is finished, but before the knife is withdrawn. Fig. 4 is a plan view of the top of the completed heel, and Fig. 5 is a vertical section of the completed heel.

The invention is an improvement upon that described in my application for Letters Patent dated April 25, 1884, Serial No. 129,212; and it relates especially to the operation of breasting. In said application I have shown the arrangement and combination in an organized machine of nail-driving, heel-spanking, and heel-breasting appliances. The device herein described is a substitute for the breasting apparatus described in said application, and is adapted to be used in combination with the nail-driving and heel-spanking devices.

Referring to the drawings, A represents a block attached to the arm *a* of the revolving head B. This block is either rigidly secured thereto, or has a post, *a'*, which extends upward into a hole, *a''*, in the arm, and a spring, *a'''*, surrounding the post for forcing the block away from it when the knife is not being operated. When this latter construction is used, it is desirable to attach to the block a presser-foot, *a''''*, such as shown in Figs. 1, 2, and 3.

The block A has a dovetail recess into which the dovetail projection of the knife-holding block C, projects, and the knife-hold-

ing block holds a straight knife, *c*, or knife having a straight vertical movement. It is secured thereto by the bolts *c'* passing through slots therein.

The knife-holding block C also carries one or more awls, D, for forming holes in the heel at the same time that the breasting-knife is operating.

The revolving head also has the arm A', which supports the block carrying a gang or group of awls, the arm A'', which carries the block supporting a gang or group of drivers, and the arm A''', which supports the spanker-block and the top-lift holder.

It is quite necessary for certain classes of work to form holes in the heel-blank after the top lift has been applied to receive additional nails, sometimes known as "top-lift nails," which are used for more firmly securing the top lift in place, or for purposes of ornamentation, or to improve the wear of the tread of the heel, and it is of course an advantage to form these holes at the same time that the heel is breasted.

The block supporting the breasting-knife is provided with a horizontal adjustment upon the arm supporting it, and is locked in any desired place by the screw *c''*.

The movement of the block A is limited by the slot *e'* and pin *e*, which enters it.

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

1. In a heel nailing or attaching machine, in combination with nail-driving devices for driving the attaching-nails by which the heel is secured to the boot or shoe, the reciprocating block C, carrying the supplemental awls D, and breasting-knife *c*, adapted to be brought into operation after the driving of the attaching-nails, all substantially as and for the purposes described.

2. The combination in a heel-nailing or attaching machine of a gang or group of awls, a gang or group of drivers and the block C, carrying the supplemental awls D and the breasting-knife *c*, adapted to be brought successively into operative position and reciprocated, and the work-support or jack, all substantially as and for the purposes described.

3. In a heel-nailing machine, the combination of suitable nail-driving devices for driving the nails used in attaching the heel-blanks, the top-lift attaching devices, and a supplemental gang or group of awls operated after the top lift has been attached to form holes in the heel for the reception of additional

nails, all substantially as and for the purposes described.

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Witnesses:

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