

(No Model.)

2 Sheets—Sheet 1.

F. F. RAYMOND, 2d.

METHOD OF ATTACHING SOLES OF BOOTS AND SHOES.

No. 326,150.

Patented Sept. 15, 1885.

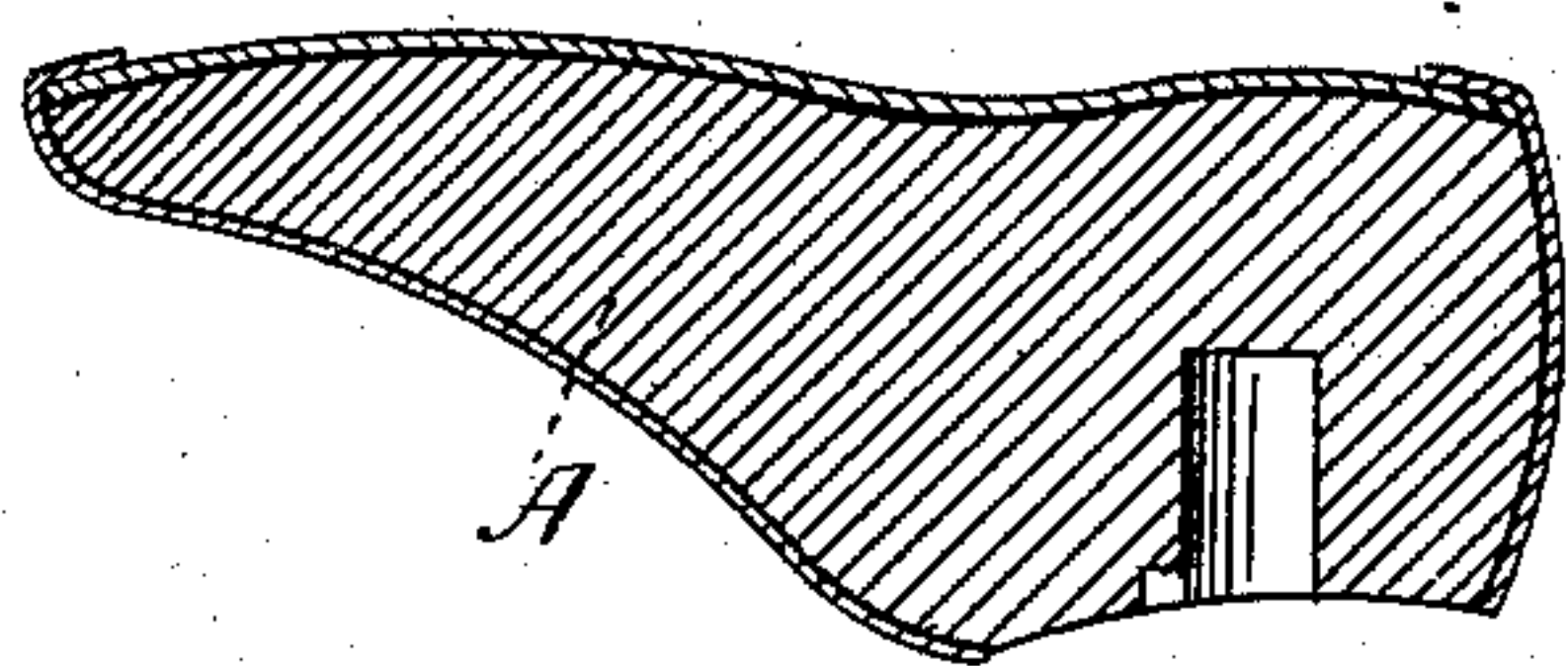


FIG. 1.

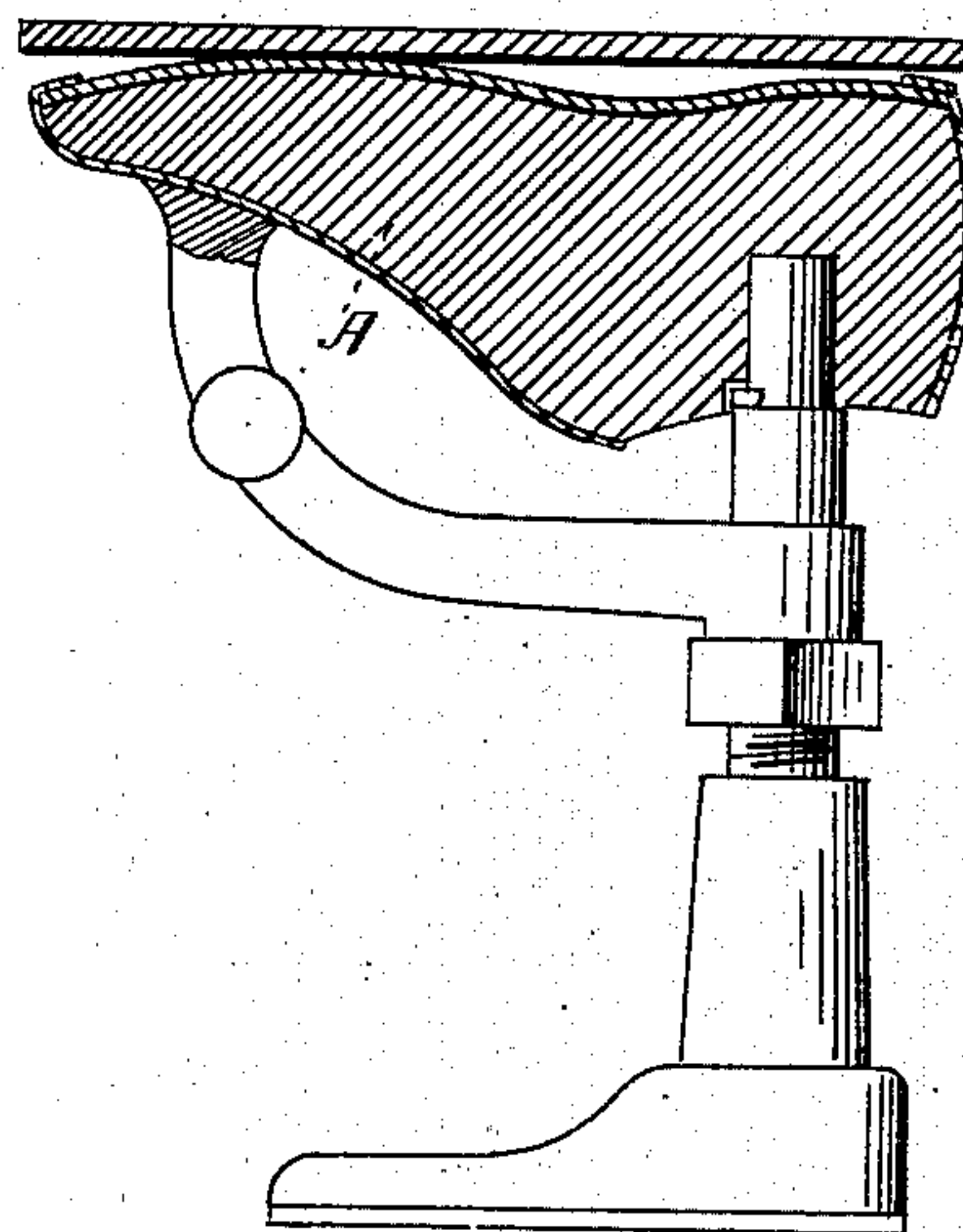


FIG. 2.

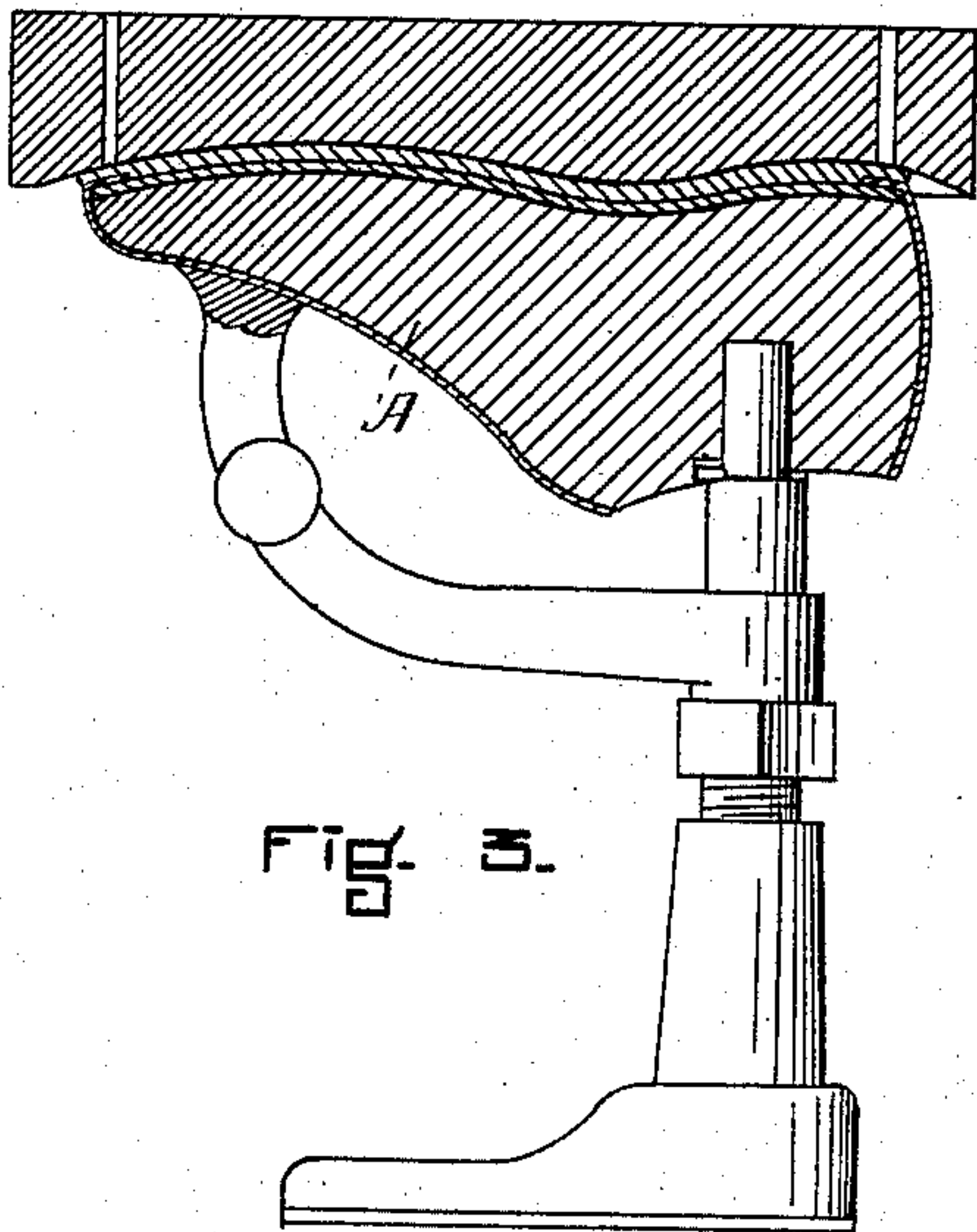


FIG. 3.

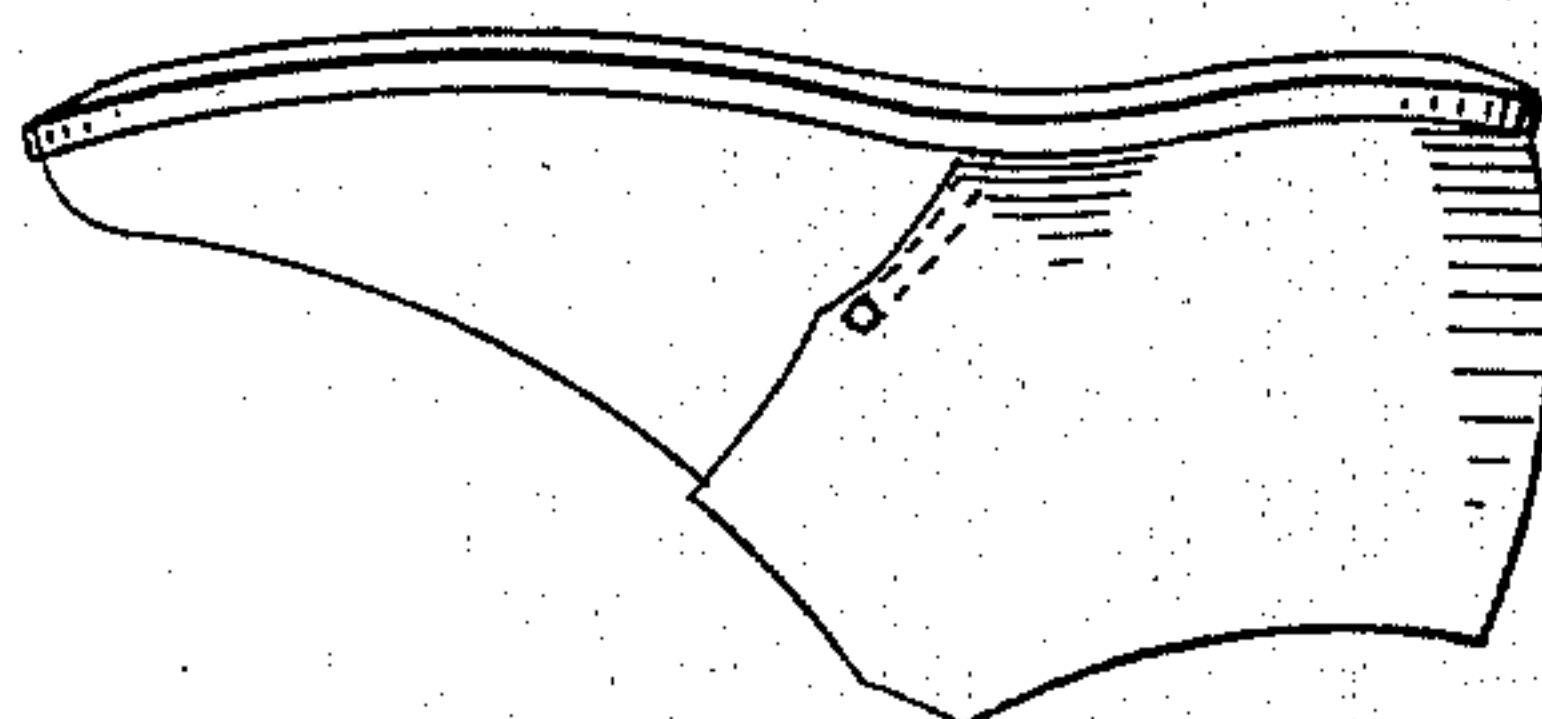


FIG. 4.

WITNESSES.

J. M. Dolan.
Fred. B. Dolan

INVENTOR.

F. F. Raymond

(No Model.)

2 Sheets—Sheet 2.

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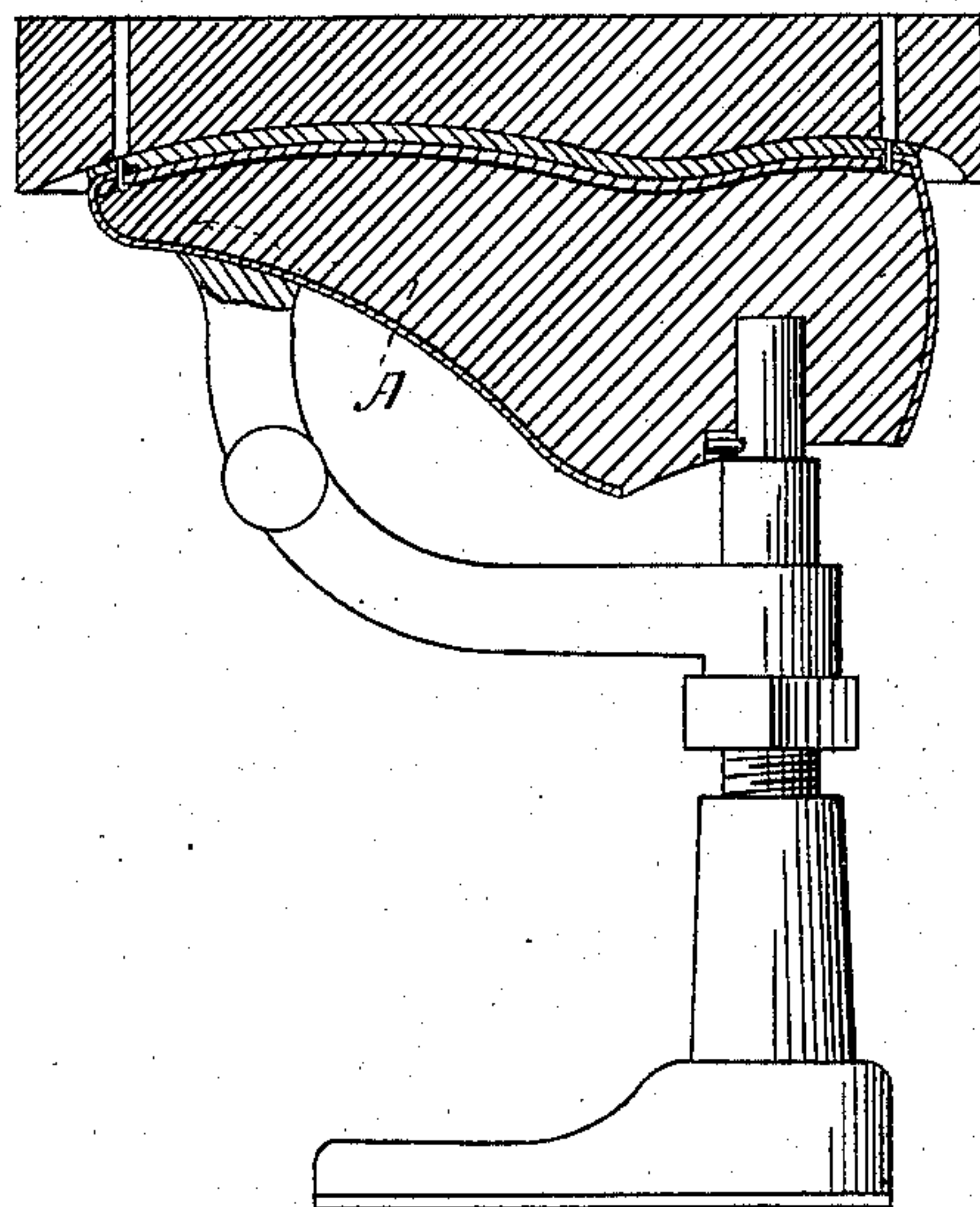
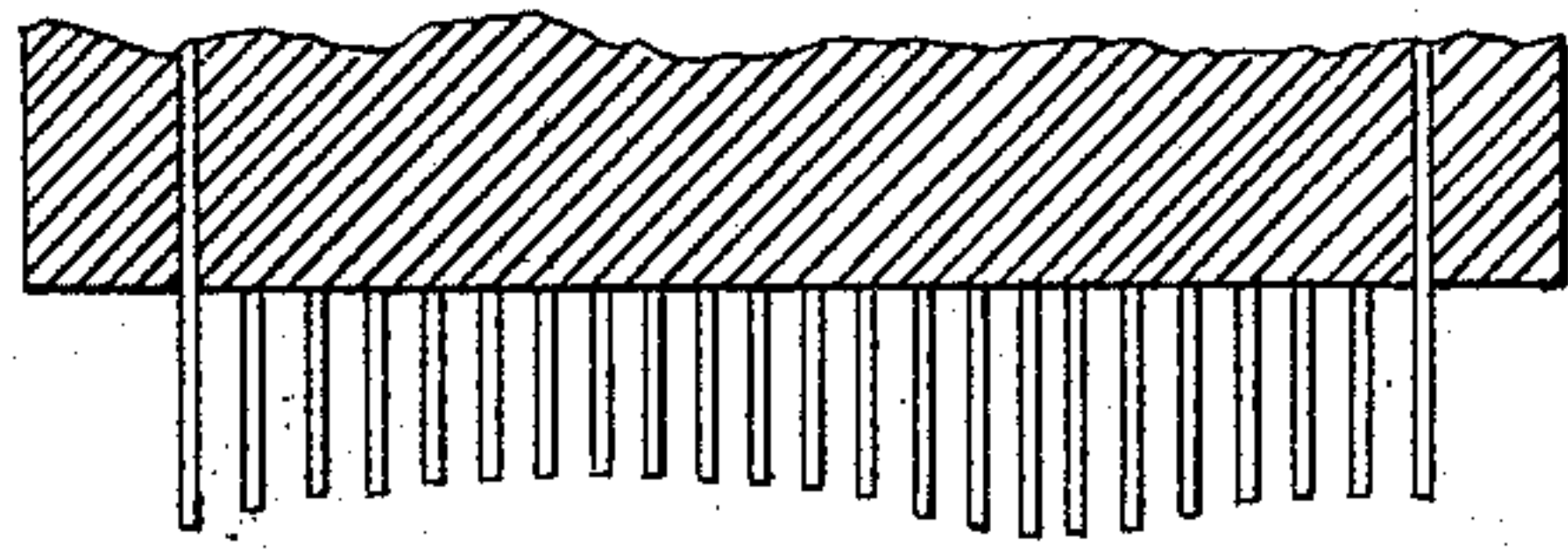


FIG. 5.

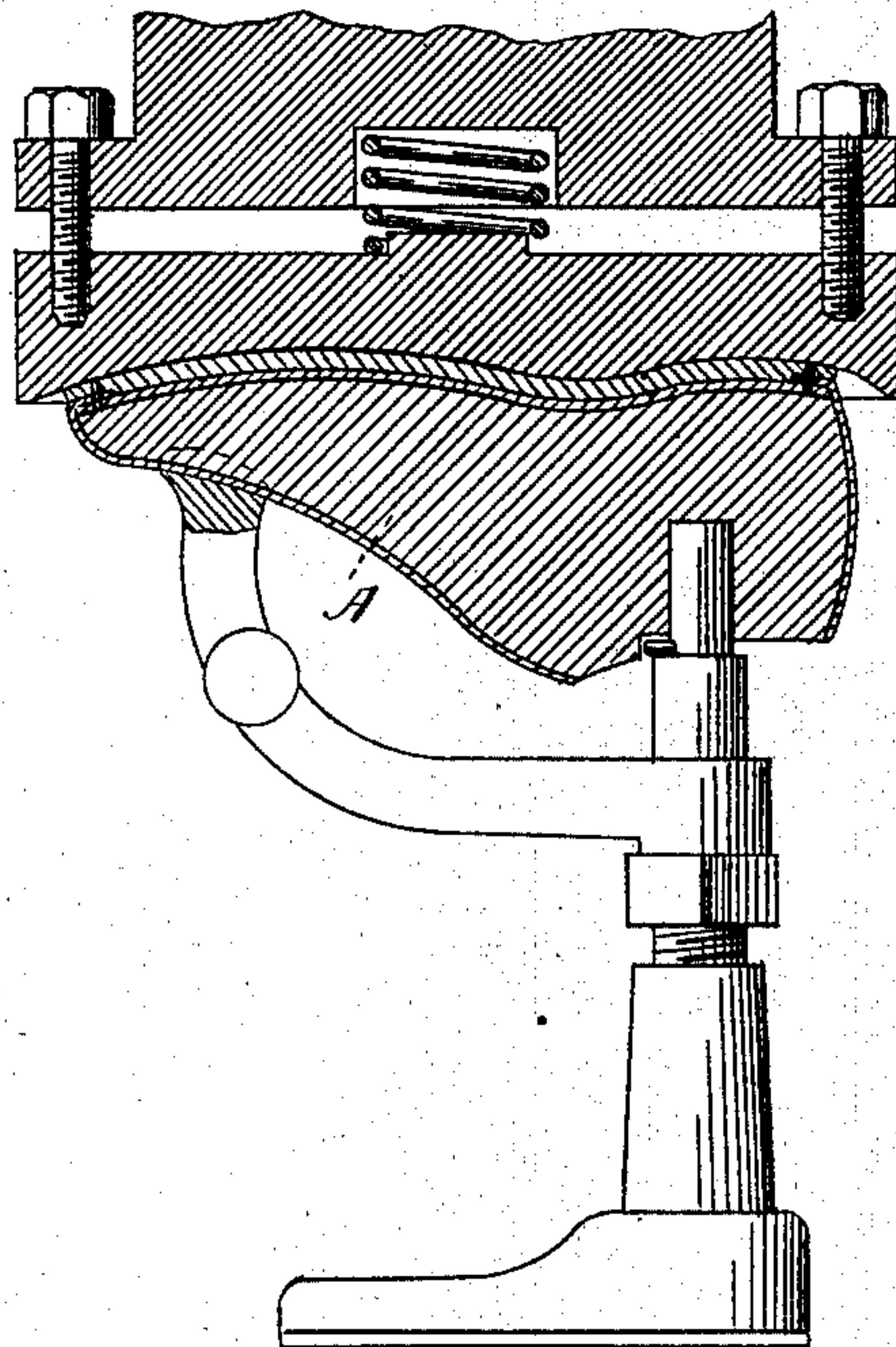


FIG. 6.

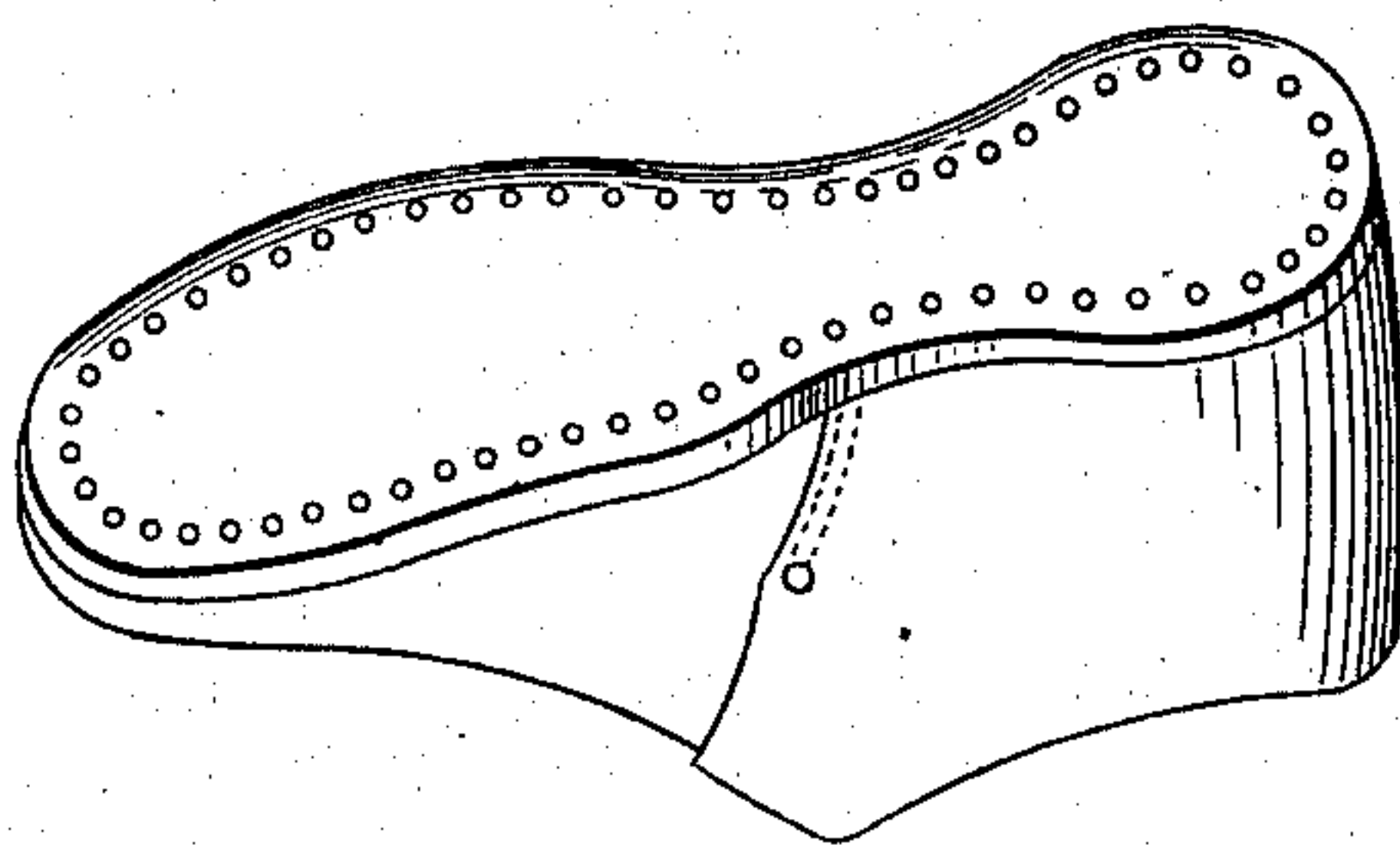


FIG. 7.

WITNESSES.

J. M. Dolan.
Fred. B. Dolan.

INVENTOR.

F. F. Raymond

UNITED STATES PATENT OFFICE.

FREEBORN F. RAYMOND, 2D, OF NEWTON, MASSACHUSETTS.

METHOD OF ATTACHING SOLES OF BOOTS OR SHOES.

SPECIFICATION forming part of Letters Patent No. 326,150, dated September 15, 1885.

Application filed July 20, 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, have invented a new and useful Improvement in the Process of Bottoming Boots or Shoes, of which the following is a full, clear, and exact description.

The invention relates especially to the process or method of applying outer soles to the insoles of the boot or shoe, whereby the operation of bottoming is simplified, expedited, and cheapened.

It consists in mounting the lasted upper and insole upon a last or work-support of the proper size and shape, and having a surface adapted to give shape to the outsole, and in then projecting the outsole and insole to a molding or shaping pressure, whereby the outsole is caused to conform to the surface of the last or work-support, and, while the outsole is thus held to the insole, shaped to the surface of the last or heel-support in uniting the outsole, upper, and insole together by a gang or group of fastenings simultaneously driven, and to then, without removing the boot or shoe from the last or work-support, subject it to the operation of a beating-out form or mold, whereby the final finishing and shaping of the outsole is obtained.

In practicing this invention I prefer to use the machine described in my application for Letters Patent of the United States filed April 25, 1885, Serial No. 163,440, or a suitable modification thereof.

In the drawings, Figure 1 is a vertical central section of a last with the upper and insole mounted thereon. Fig. 2 represents in vertical section a last with the upper and insole mounted thereon and an unformed outsole over the insole, and in side elevation a jack. Fig. 3 shows in vertical section a portion of a pressure or templet plate having holes arranged therein, through which the attaching-fastenings are driven, and the last with the shoe mounted thereon, and the jack in side elevation. The outsole is represented as formed or shaped to the surface of the last. Fig. 4 represents a side elevation of the shoe, showing the outsole thus shaped. Fig. 5 represents the parts shown in Fig. 3, also the gang or group

of drivers, and the outsole is shown as secured to the insole. Fig. 6 shows in side elevation and in vertical section a last and the shoe thereon, and above it the beating-out form or mold and a part of the arm supporting or carrying it. Fig. 7 is a perspective view of the complete shoe.

The jack and parts of the machine shown in the drawings are fully described in my said application for Letters Patent of the United States.

A represents the last or work-support. It is adapted to be mounted upon any suitable jack, and it preferably is made of cast-iron, and to have the characteristics of a beating-out form or last. Upon this last or work-support the lasted upper is mounted, as shown in Fig. 1, and the outsole is then placed thereon, as shown in Fig. 2, although the outsole may be temporarily secured to the insole before it is mounted upon said jack or work-support. Fig. 3 represents the shoe mounted upon the last or work-support with the outsole in position. The boot or shoe is then submitted to a sole shaping or molding operation, which shapes the outsole upon the insole to the surface of the last or work-support, preferably as described in my said application; and in Fig. 3 I have represented so much of the parts of said machine as are necessary to illustrate this step of the process. While the outsole is thus held shaped upon the insole and last or work-support it is fastened or secured to the insole by a gang or group of fastenings simultaneously driven; and in Fig. 5 I have represented the shoe having the outsole thus attached. The shoe is then submitted, without being removed from the last or work-support, to the action of a beating form or mold, whereby the sole is given its ultimate form, shape, and finish, and is properly solidified, and the nails caused to take a more uniform appearance and the leather of the outsole to be consolidated about them; and in Fig. 6 I have represented so much of said machine as is necessary to illustrate this step of the process; and in Fig. 7 I show the completed shoe.

It will be seen from the above statement that by mounting the lasted upper upon a last or work-support adapted for the subsequent op-

erations of simultaneously nailing and of beating out the shape of the shoe is maintained during these operations when it is most important to preserve in the upper the form of the last; also, that a saving in time is effected; also, that the same is done at much less expense, as the operations of the sole molding, fastening, and beating out can be done in one machine or apparatus, as described in my said application, and that it practically does away with the necessity of a separate tacking-on machine, sole-molding machine, and beating-out machine, the use of the same work-support or last and the devices described in my said application enabling me to perform these operations as successive steps in an expeditious manner.

It is not essential that the outsole be temporarily attached to the insole before the boot or shoe is mounted upon the last or work-support on the jack. The last or work-support may also be used in the lasting process, if so desired.

Having thus fully described my invention, I claim and desire to secure by Letters Patent of the United States— 25

The method of bottoming boots or shoes, consisting in mounting the lasted upper and outsole upon a last or work-support arranged upon a suitable jack, and then pressing the outsole to the form of the surface of said last or work-support, driving the fastenings or attaching-nails while the sole is thus held by the former or presser to said surface, and without removing the boot or shoe from the jack, and finishing and completing the shape of the outsole by submitting it to the action of a beating-out form or mold, all substantially as and for the purposes described. 30 35

FREEBORN F. RAYMOND, 2D.

Witnesses:

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FRED. B. DOLAN.