

No. 791,499.

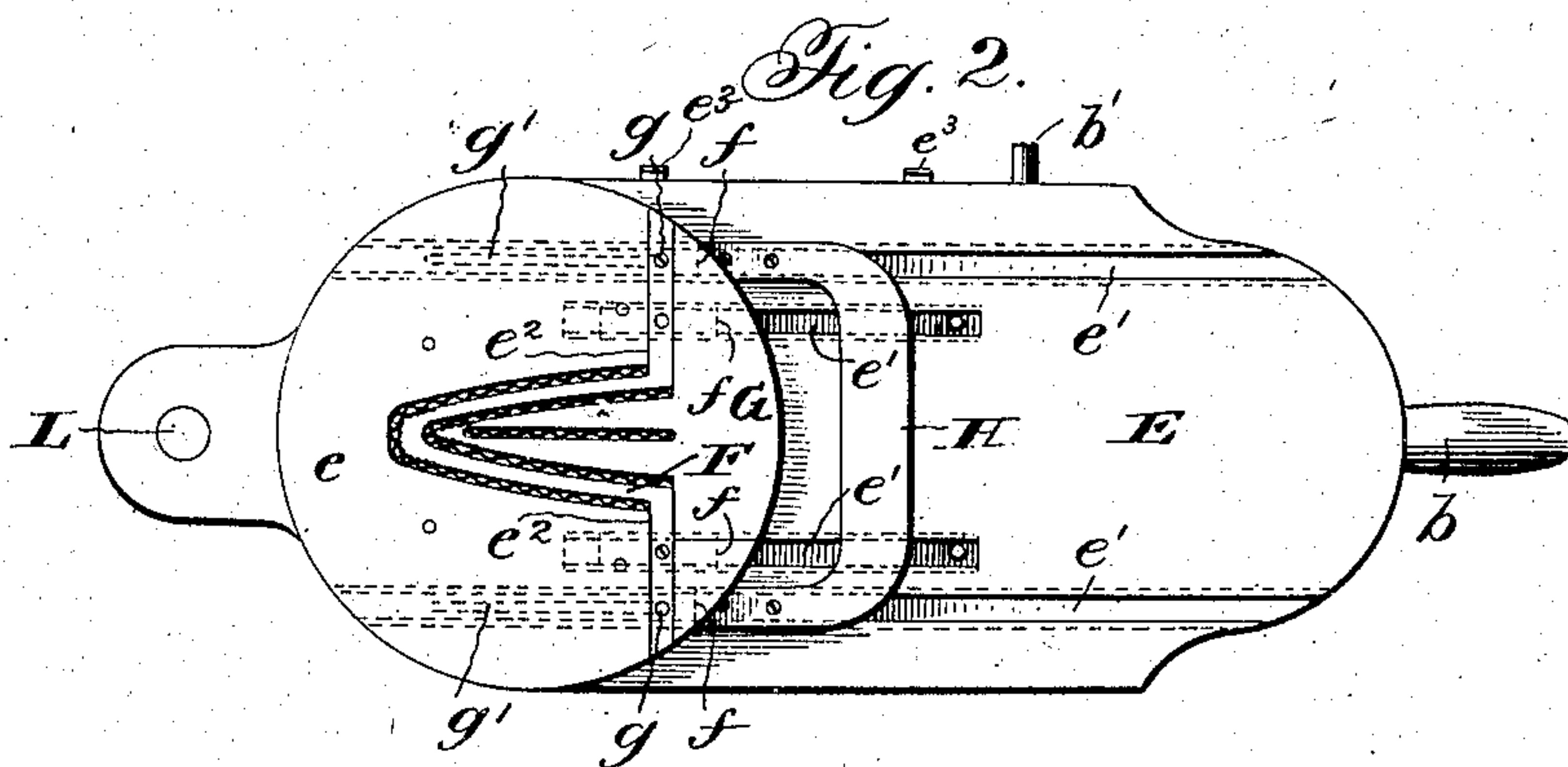
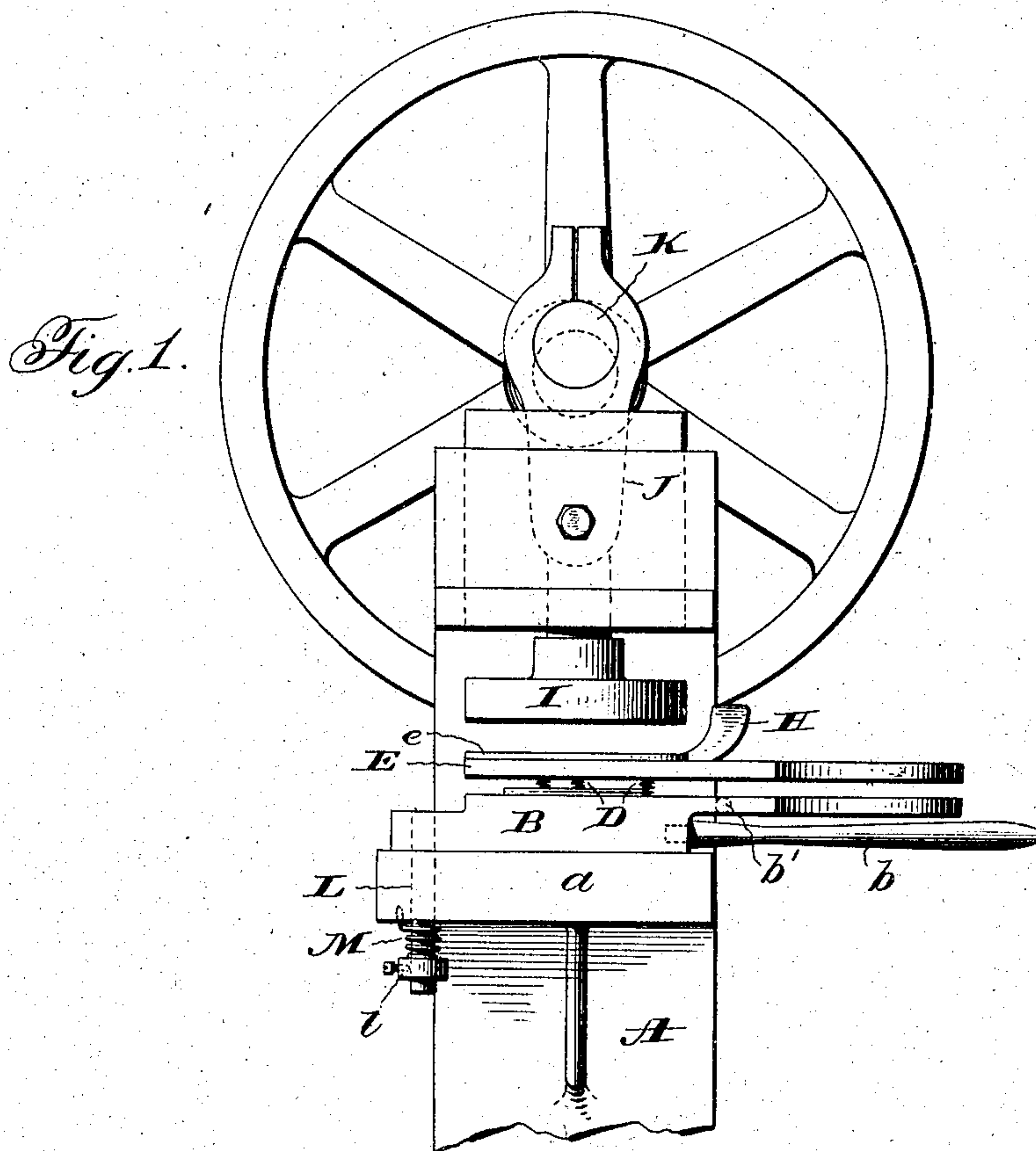
PATENTED JUNE 6, 1905.

R. A. REGESTER.

MACHINE FOR INSERTING PROTECTORS INTO HEELS OR SOLES OF SHOES.

APPLICATION FILED JUNE 1, 1903.

2 SHEETS—SHEET 1.



Witnesses:
Jas. E. Hutchinson.
J. L. Lawlor.

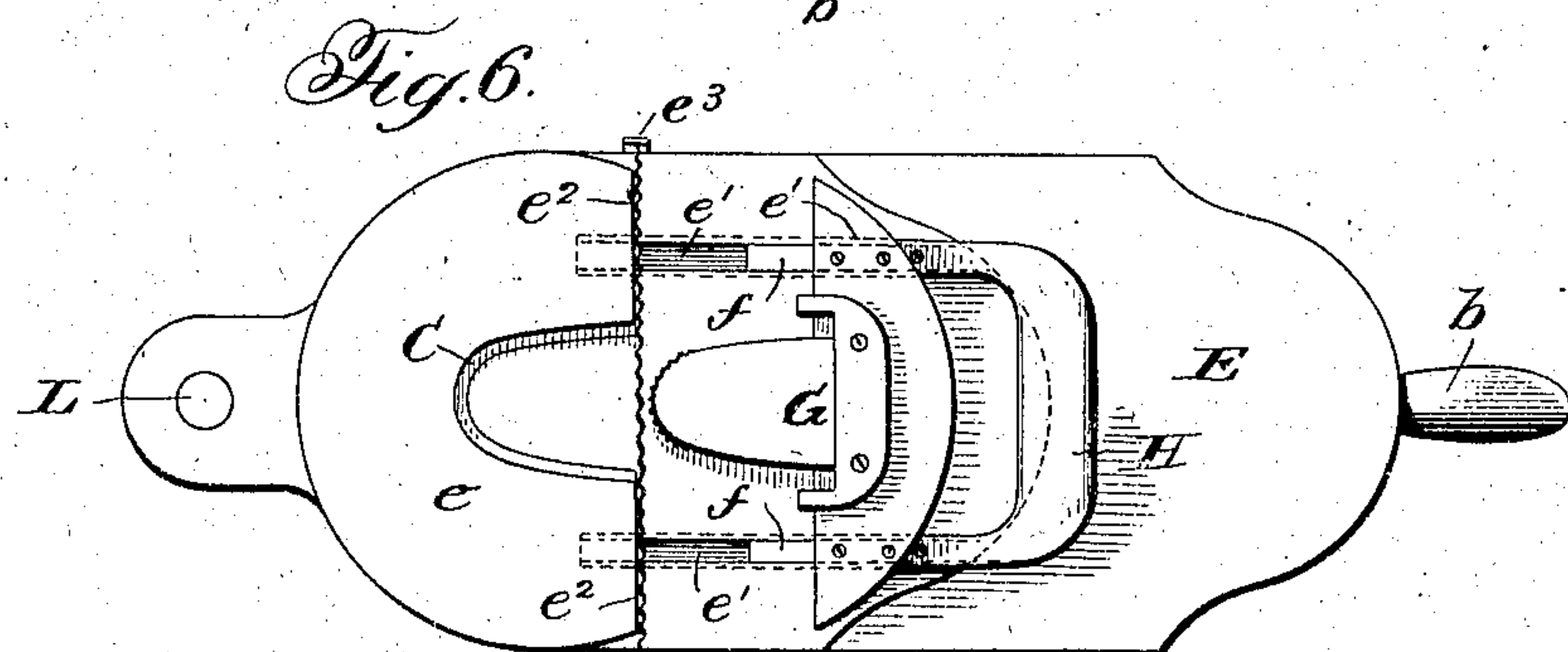
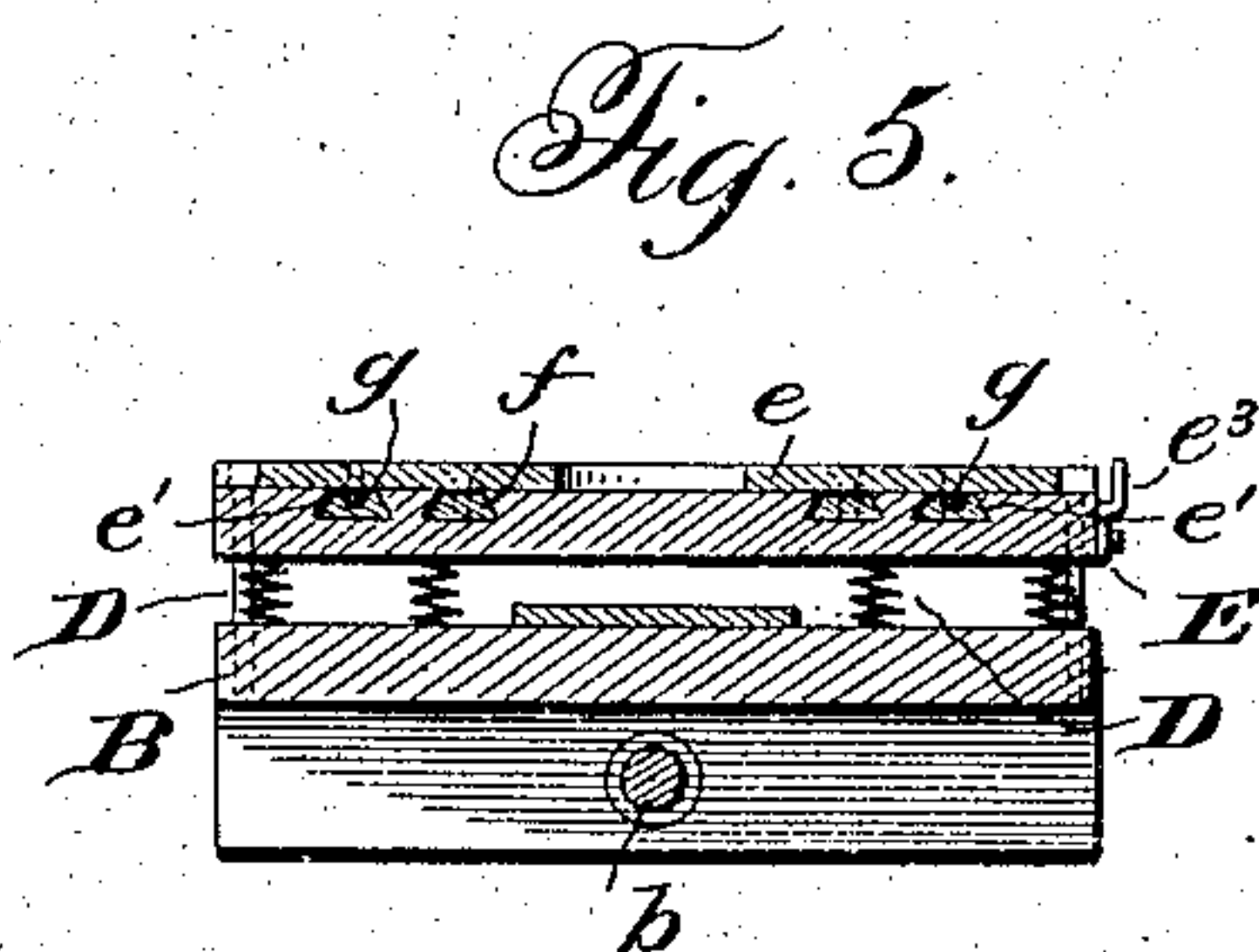
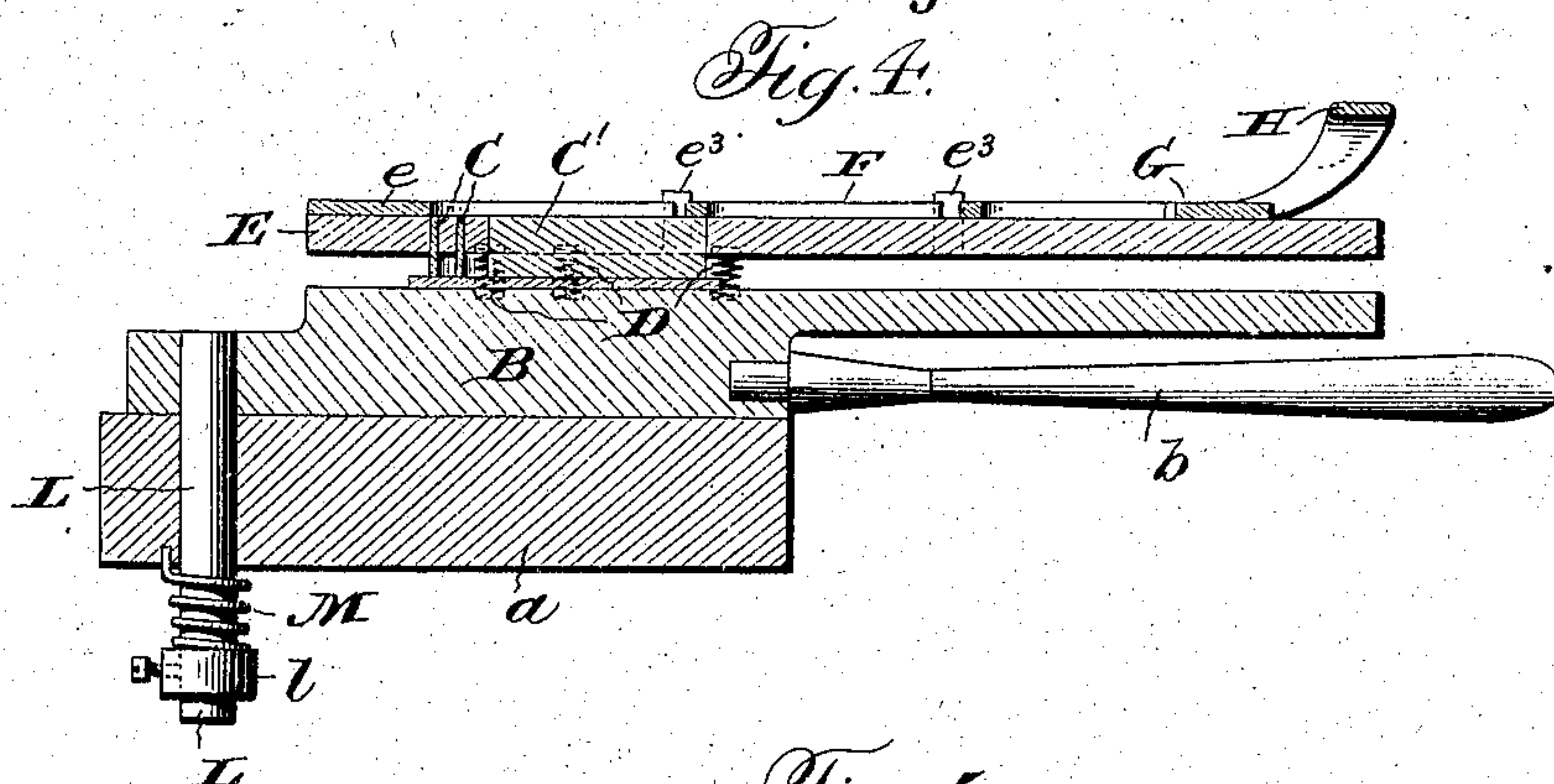
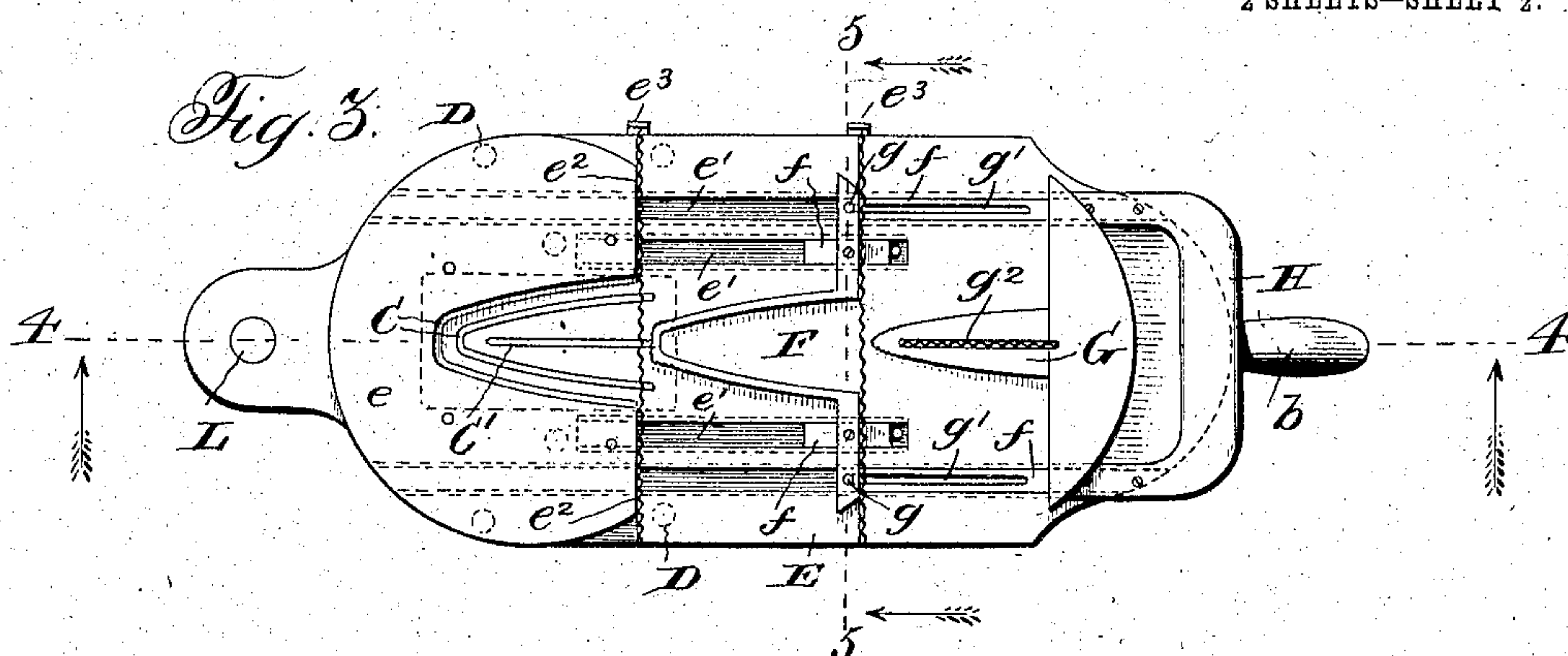
Inventor:
Robert A. Regester,
by Edwin J. Prindle,
Attorney.

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2 SHEETS—SHEET 2.



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Jas. E. Hutchinson
J. L. Lawlor.

Inventor:
Robert A. Regester,
by Edwin J. Prindle, Atty.

UNITED STATES PATENT OFFICE.

ROBERT ASBURY REGESTER, OF BALTIMORE, MARYLAND, ASSIGNOR TO
ACME HEEL PROTECTOR MANUFACTURING COMPANY, OF BALTIMORE,
MARYLAND, A CORPORATION OF MARYLAND.

MACHINE FOR INSERTING PROTECTORS INTO HEELS OR SOLES OF SHOES.

SPECIFICATION forming part of Letters Patent No. 791,499, dated June 6, 1905.

Application filed June 1, 1903. Serial No. 159,646.

To all whom it may concern:

Be it known that I, ROBERT ASBURY REGES-
TER, of Baltimore, in the State of Maryland,
have invented a certain new and useful Im-
5 improvement in Machines for Inserting Protec-
tors into Heels or Soles of Shoes; and I here-
by declare that the following is a full, clear,
and exact description thereof, reference be-
ing had to the accompanying drawings, in
10 which—

Figure 1 is a front elevation of a machine
embodying my invention; Fig. 2, a top plan
view of the protector shaping and support-
ing mechanism, the construction being such
15 as is adapted for applying protectors to
shoe-soles; Fig. 3, a like view with the shap-
ing mechanism opened; Fig. 4, a longitudi-
nal section on the line 4 4 of Fig. 3; Fig. 5, a
cross-section on the line 5 5 of Fig. 3; and
20 Fig. 6, a top plan view, similar to Fig. 2,
showing the invention embodied for applying
protectors to shoe-heels.

The object of my invention is to render
easy to the operator the doing of the work
25 and to increase the speed of machines for in-
serting protectors in the heels and soles of
shoes; and to this end my invention consists
in the machine for applying protectors con-
structed substantially as hereinafter speci-
30 fied and claimed.

The type of protector for operation upon
which my machine has been especially de-
signed is one that consists of a transversely-
corrugated or sinuous metal strip from which
35 project teeth or tangs. As applied to the
heels, and usually to the soles, of shoes, the
protector is given a curved form correspond-
ing substantially to the outline or contour
of the heel or sole, as the case may be, and in
40 machines heretofore used for inserting such
protectors it has been necessary to bend the
corrugated or sinuous strip by hand to the
desired shape before placing it in the driving
or inserting machine. As will be evident,
45 such a procedure is both slow and uncom-
fortable to the operator, for by reason of its
form the hands are apt to be scratched or
cut in the work of bending the strip into

shape. By my invention the strips in the
straight transversely-corrugated or sinuous 50
form in which they come from the machine
for making them are applied to the inserting
or driving machine and are given the de-
sired curved form without the tedious and
uncomfortable hand manipulation which has 55
heretofore been employed.

In respect of the protector-inserting mech-
anism the machine which I have selected to
illustrate an embodiment of my invention is
similar to the machine forming the subject 60
of United States Patent No. 696,289, dated
March 25, 1902, which comprises a station-
ary support for the protector corresponding
in form thereto, a yielding table for the heel
lift or tap into which the protector is to be 65
inserted, and a ram for applying pressure to
the heel lift or tap to cause the entrance
therein of the protector.

In the machine illustrated in the drawings
there is a frame or standard A, having a shelf 70
or bracket *a*, upon which is mounted a plate
B. Resting upon and supported by the lat-
ter are one or more rib-form pieces or bars,
which form the supports for the protectors
to effect their insertion into the shoe part, 75
one only being employed where a single pro-
tector is to be driven—as, for instance, in case
of a heel-lift—and several being employed for
simultaneously driving a number of protec-
tors, as in the case of shoe soles or taps. The 80
protectors having a curved form, the bars C
are likewise curved.

Supported above the plate B yieldingly or
movably by a proper number of coiled springs
D is a table that receives and supports the 85
shoe part into which the protectors are to be
inserted, said table having a slot for the ac-
commodation of each protector-supporting
bar C. Said table comprises a plate E, hav-
ing upon its upper side a curb or wall *e*, hav- 90
ing a contour like the contour of the outer
side of the outermost protector-supporting
bar C, where several are employed, as illus-
trated in Figs. 2 to 4, and one or more sliding
members, (according to the number of pro- 95
tectors to be inserted,) each in the form of a

plate, such sliding members being slidably connected to the plate E in any desired way—such as, for example, by dovetail bars or gibs *f* and grooves *e'* in the plate. The machine as illustrated in Figs. 2 to 4 is for driving two curved protectors simultaneously, and therefore there are two sliding sections F and G, one of which, F, has an outer edge that corresponds in form to the inner edge of the outermost protector-supporting bar C and an inner edge that corresponds to the outer edge of the innermost protector-supporting bar C, while the second sliding section, G, has an outer edge that corresponds to the inner edge of the innermost protector-supporting bar C. Attached to the last-named movable section is a handle H, by which such section may be moved, and pins *g*, projecting downward from the other sliding section, and slots *g'* in the gibs *f* of the section to which the handle is attached, into which slots said pins *g* project, constitute means whereby movement from the section having the handle may be imparted to the other section.

The purpose of the construction of table just described is to enable the placing in the machine of the straight transversely-corrugated or sinuous protector-strips and their bending into the desired curved shape. One of the sliding sections being withdrawn wholly from within the curb or wall *e* and the other sliding section being wholly withdrawn from the other sliding section, as illustrated in Fig. 3, a straight strip is laid upon the table in front of each sliding section, straight edges or surfaces *e²* on the table forming guides or gages therefor to fix their positions sidewise and lips or projections *e³* on the plate E engaging their ends to fix their positions longitudinally. The handle H being taken hold of and the sliding section G, to which it is attached, being moved toward the other sliding section, the portion of the protector-strip between the two sections will be forced by one sliding section into the other, and the second sliding section being also moved by reason of the pressure to which it is subjected through the interposed strip it will engage the second strip and force it into the space surrounded by the curb or wall *e*. The two sliding sections being moved as far as they can be, the two strips will be bent to a conformation corresponding with the respective curved bars C, and they will be placed in position over the same. The strips being thus bent to the required shape and placed in position for driving, the driving operation is effected by the descent of a ram or plunger I, which is connected by a pitman J with a crank-shaft K, mounted in bearings on the top of the frame or standard A and suitably revolved by power. To prevent the accidental displacement longitudinally of the strips when they are engaged by the ends of the sliding sections, such ends are roughened,

as by being provided with small teeth. To withdraw the sliding sections, the handle H is caught hold of and pulled outward, resulting in drawing outward the section to which it is attached and through the slot-and-pin connection with the other section drawing the latter outward.

The base-plate B, upon which the table is mounted, is movable in order to enable the table to be moved from position beneath the ram or plunger I for more convenient access to the table and back again, and for this purpose such plate is pivoted at one end to a stud or post L on the bracket or shelf *a*, and it is provided with a handle *b*, by which it may be conveniently manipulated. A spring M, coiled about the stud or post L, beneath the bracket or shelf *a* and having one end fastened to the latter and the other fastened to a collar *l* on the stud or post L, acts to normally swing the plate to a position from beneath the ram or plunger, so that after the protectors have been inserted the operator has merely to let go the handle *b*, whereupon the table is automatically moved from position beneath the ram or plunger. The machine operates with such rapidity that the presence of the work beneath the plunger is required for but a very short time, and this makes it unobjectionable for the operator to hold on to the handle to keep the table with the work upon it in position for action of the ram or plunger. A stop bar or pin *b'*, attached to and projecting from the plate B, is provided to fix the position of the parts when the plate is swung to place the work in position for the action of the ram or plunger.

As shown in Fig. 6, the machine is adapted for forming and driving but a single protector at a time, as in the case of protectors for heels, in which case, as is illustrated, but a single sliding section G is required.

As shown in Fig. 3, if it be desired to drive a straight or uncurved protector this can be done by providing a straight slot *g²* in the outer sliding section G or the one to which the handle H is applied, in which the strip is placed before said section is moved into position for the operation of the machine and providing a straight supporting-bar C'.

Although I have shown and described with some particularity the details of construction of a machine embodying my invention and as designed for operating on a protector of a particular construction, it is to be understood that the invention may be embodied in machines differing in construction from what is shown and for operating upon protectors of other form.

Having thus described my invention, what I claim is—

1. In a driving mechanism, the combination of a bent support for the thing to be driven, a curb or wall adjacent the support, and corresponding in shape to the support, and

means for giving to the thing to be driven a form similar to said support by pressing it against said wall or curb.

5 2. The combination of driving mechanism, comprising a movable support for the object to receive the driven thing, a stationary support for the thing to be driven, and means for giving to the thing to be driven a shape corresponding to the support therefor.

10 3. The combination of driving mechanism, comprising a ram, a movable support for the object to receive the driven thing, and a stationary support for the thing to be driven, and means for giving to the thing to be driven a shape corresponding to the support therefor.

15 4. The combination of a driver comprising in part a rest or support, a curb or wall contiguous thereto, and a plate movable toward said curb or wall to conform thereto the thing to be driven, and simultaneously placing it in position to be acted upon by the driving mechanism.

20 5. The combination of a driving mechanism, comprising a curved stationary support for the thing to be driven, and means for giving to the thing to be driven a form corresponding to that of said support, and placing it upon the latter.

25 30 6. The combination of a driving mechanism, and means for shaping and positioning an article to be driven comprising a plate having a curb or wall corresponding to the contour to be given an article, and a second

plate similarly shaped and movable into and out of the other. 35

7. The combination of a driving mechanism and means for shaping and positioning an article to be driven comprising a plate having a curb or wall corresponding to the contour to be given an article, a second plate similarly shaped and movable into and out of the other, and having a roughened surface to engage the article to be shaped. 40

8. The combination of a stationary plate having a curb or wall corresponding to the contour to be given an article, a second movable plate having inner and outer surfaces corresponding to articles to be shaped, and a third movable plate shaped in correspondence with the inner surface of the second plate. 45 50

9. The combination of a stationary plate having a curb or wall corresponding to the contour to be given an article, a second movable plate having inner and outer surfaces corresponding to articles to be shaped, a third movable plate shaped in correspondence with the inner surface of the second plate, and means for transmitting movement from one movable plate to the other. 55 60

In testimony that I claim the foregoing I have hereunto set my hand.

ROBERT ASBURY REGESTER.

Witnesses:

D. W. JAMES,
HENRY B. GEDDES.