

No. 849,894.

PATENTED APR. 9, 1907.

A. FULLER.
SHOE TREE.

APPLICATION FILED JULY 23, 1906.

FIG. 1.

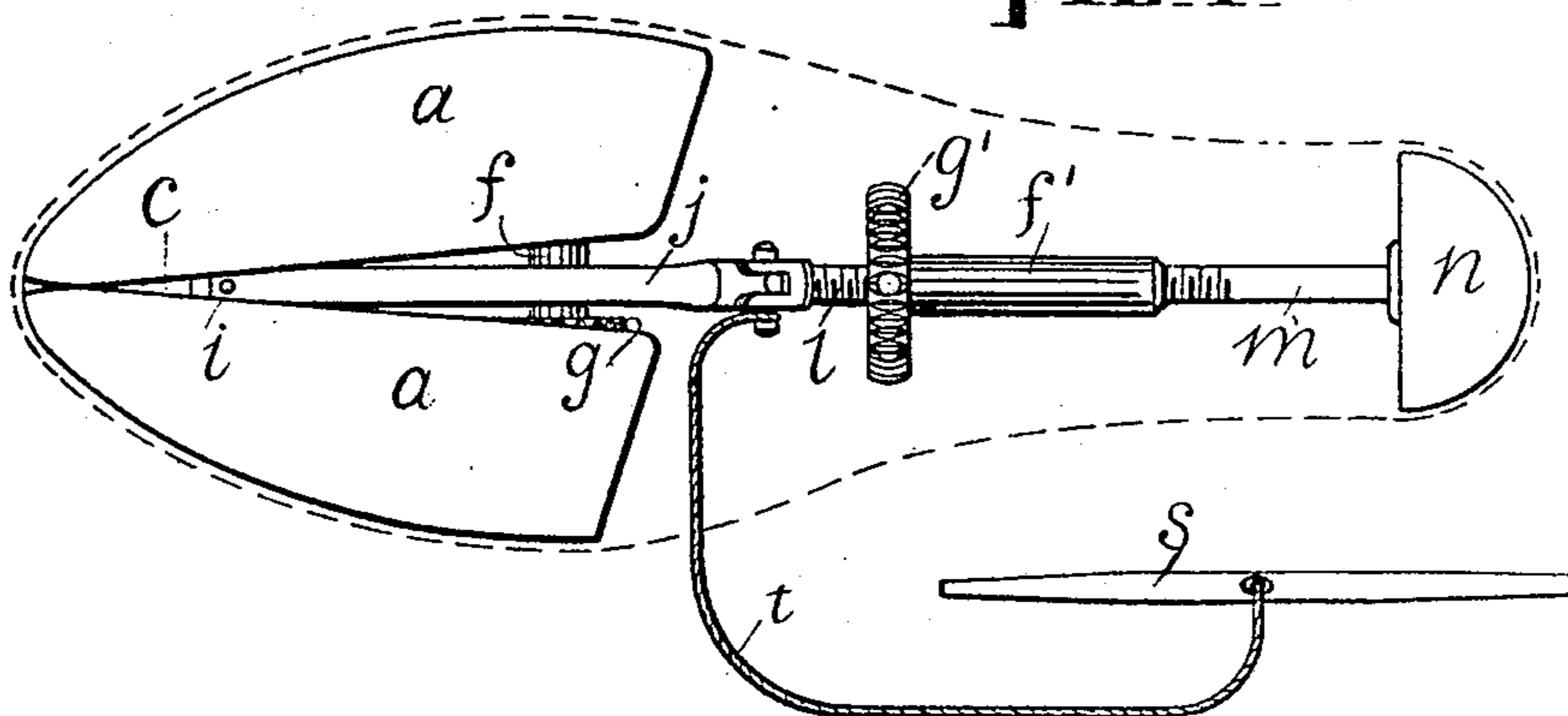


FIG. 2.

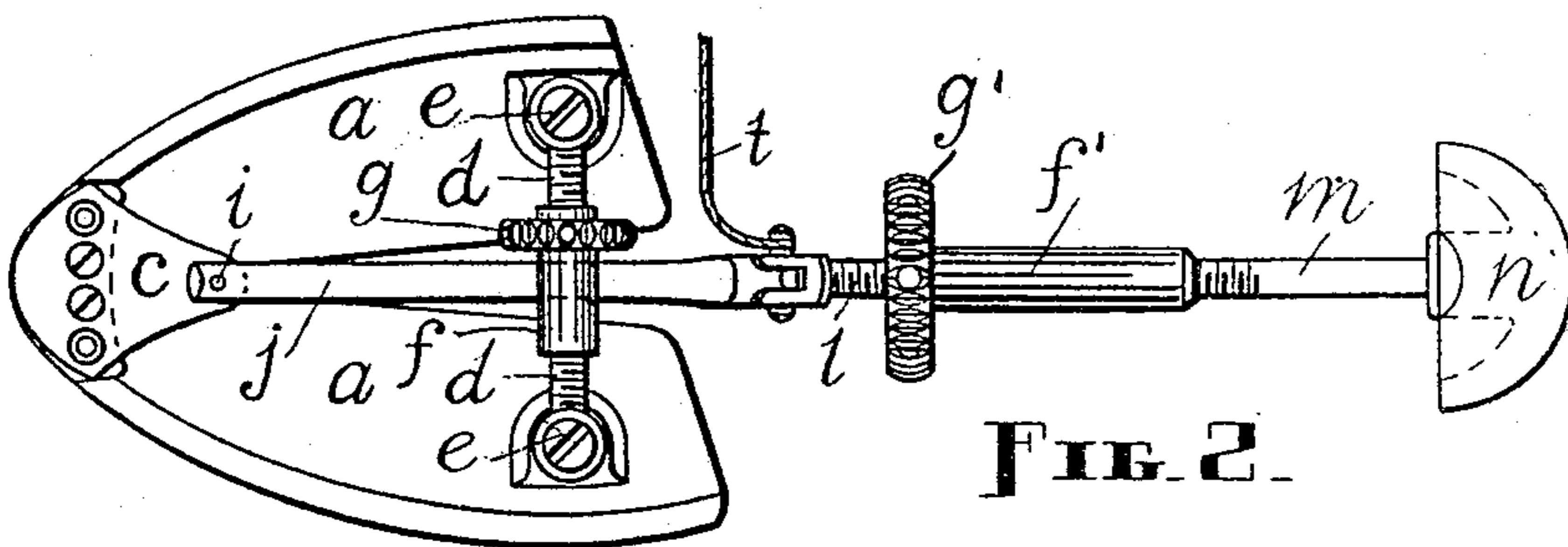


FIG. 3.

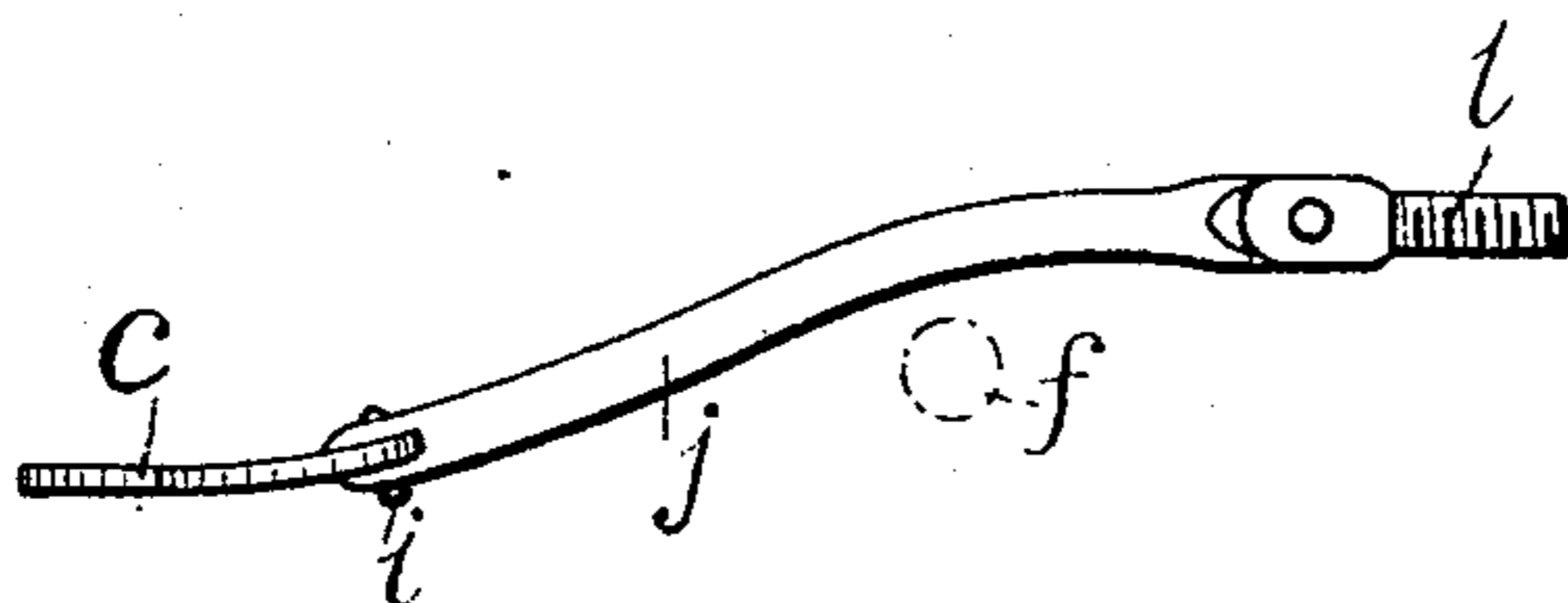


FIG. 4.

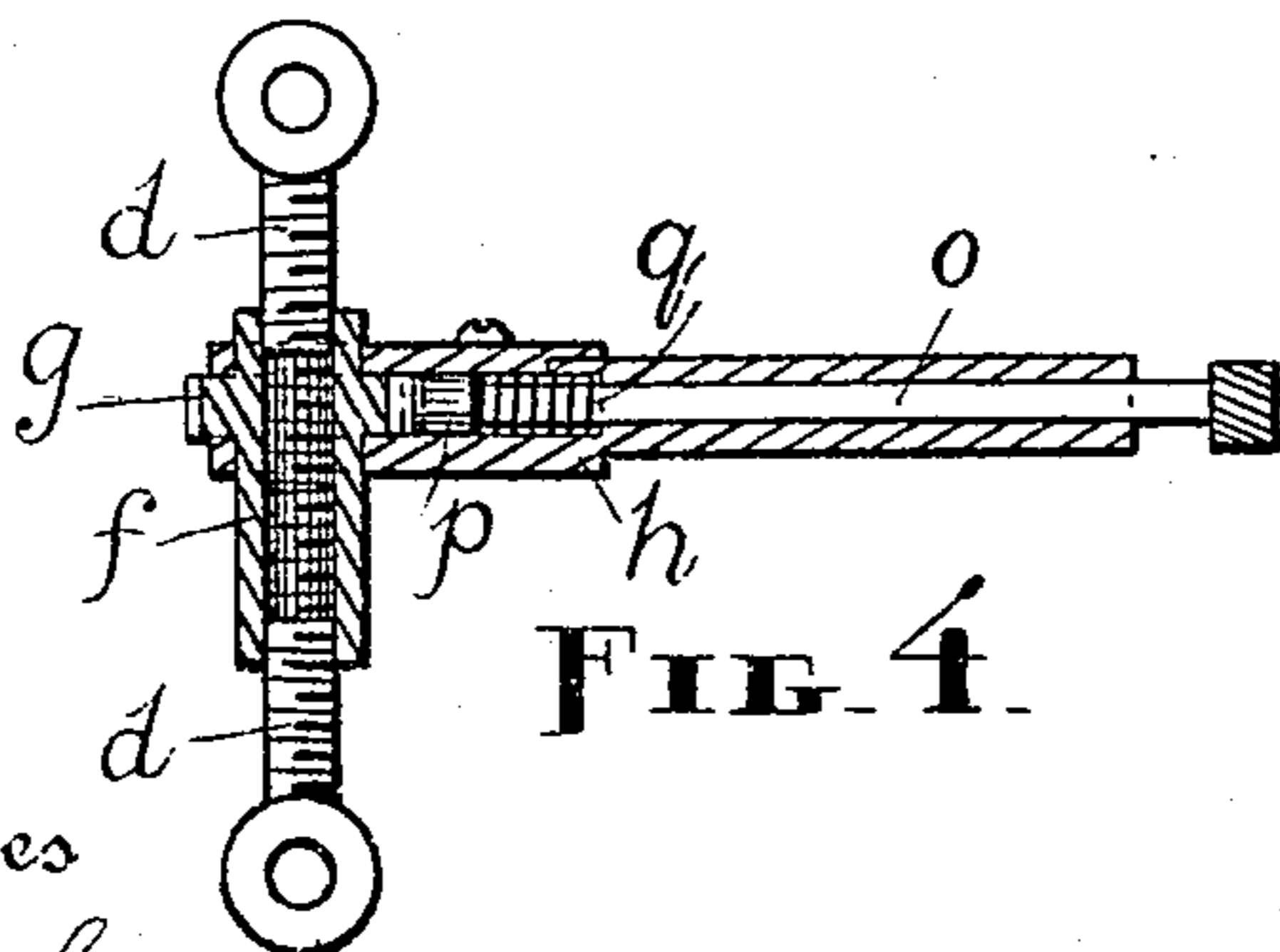


FIG. 5.



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SHOE-TREE.

No. 849,894.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, APOLLOS FULLER, a citizen of the United States of America, residing at Pasadena, in the county of Los Angeles and State of California, have invented new and useful Improvements in Shoe-Trees, of which the following is a specification, reference being had to the accompanying drawings and letters of reference marked thereon.

10 The object of my invention is to produce a shoe-tree adapted for a large field of usefulness in that one device may be employed with shoes of many sizes.

15 The objects are, further, to provide a device simple in construction, inexpensive in cost of manufacture, and simple and effective in operation.

I accomplish the objects of my invention by the construction herein shown.

20 In the accompanying drawings, in which like letters of reference indicate like parts, Figure 1 is a top or plan view of the device. Fig. 2 is a view of the device as seen from the under side. Fig. 3 is a side view of one of the
25 rods of the device with attached members, showing how said rod is curved to clear the adjacent turnbuckle. Fig. 4 is an enlarged view in section of a ratchet device which may be employed to aid in operating the
30 turnbuckles, and Fig. 5 is a side view of the pawl.

The construction and operation of my device will be readily understood on reference to the drawings, wherein I show in Fig. 1 a
35 plan view of the device as applied to a shoe, the latter being shown in outline in dotted lines, and in Fig. 2 I show a reverse view of the device, wherein it will be seen that the toe-sections *a a* are pivotally connected at
40 their forward ends to a plate *c* and that the rear end portions of the sections have threaded rods *d*, pivotally connected with the sections at the points *e*, which rods extend toward each other and are oppositely threaded.
45 A tubular member *f* is provided to receive the threaded sections of the rods *d*, said tubular member being threaded in reverse directions, so that when said tubular member is rotated in one direction the rods are forced
50 outwardly and the sections *a* moved in like direction, and when the tubular member *f* is rotated in the opposite direction the rods *d* are drawn inwardly and the sections moved in like direction. I mount a member *g* on
55 the tubular member *f*, the member *g* consisting, preferably, of a disk of sufficient diame-

ter and width to be conveniently grasped between the thumb and finger, this being permanently attached to the tubular member *f*, so that the same may be rotated conveniently. A rod *j* is pivotally connected with the plate *c* at the point *i* and extends rearwardly where it is pivotally connected with the threaded rod *l*, as shown in the drawings. A heel-plate *n* is provided, the same being
60 properly shaped to bear against the counter of the shoe and from the central portion of which a rod *m* projects toward the rod *l*. These two rods are oppositely threaded and enter a turnbuckle or tubular member *f'*,
65 this being oppositely threaded in like manner, so that the rotation of the member *f'* in one direction forces the heel-plate *m* and the toe-sections in an opposite direction, while the rotation of the member *f'* in a reverse
70 direction draws these members toward each other. The member *f'* is also provided with the finger-piece or disk *g'*, constructed substantially as before described with reference to the member *g*, the member *g'*, however,
75 being preferably of larger diameter. The finger-pieces *g* and *g'* are provided with openings in their peripheries for the reception of a pin, which pin may be inserted in these openings and the members *g* and *g'* turned in
80 either direction, the pin serving to furnish additional leverage, so as to give to the members the requisite pressure against the parts of the shoe. Such a pin is shown at *s* in
85 Fig. 1, one end of which is adapted to fit the openings in the finger-piece *g* and the other end of which is adapted to fit the openings in the finger-piece *g'*. A chain or cord *t*, to which the pin *s* is fastened, is attached at
90 some convenient point to the device, as to the pivot-pin for the rods *j* and *l*, and serves to prevent accidental loss of said pin *s*.
95

For convenience in operation in some instances, and especially because of the fact that with some constructions the tubular
100 member *f* is located under the overhanging portion of the sections *a*, so that it might not be convenient to reach the same with the thumb or finger, I provide a ratchet device comprising a hollow member *h*, having a stem-
105 provided pawl *p*, the stem *o* of which projects through the part *h* and is provided at its outer end with a finger-piece, a spring *q* being arranged to force the pawl outwardly, as shown. The member *h* is provided with re-
110 cesses in its end portion so as to set over the member *f* and to rest upon both sides of the

member *g*, and as the periphery of the member *g* is provided with serrations or projections it will readily be seen that the pawl device may be readily applied and the member *f* or *f'* rotated in either direction, depending only upon the manner in which the pawl is placed in position, as the pawl *p* has an incline on one face, so that when the device is actuated in one direction the pawl rides over the teeth or serrations on the member *g*, and when the device is actuated in the opposite direction the pawl engages the teeth and turns the finger-piece. To turn the finger-piece in the opposite direction, simply turn the pawl half-way around before commencing to move the outer end of the member *h* back and forth.

Various modifications may of course be made without departure from my invention.

The plate *c* is loosely pivoted to the sections *a a*, so as to permit freedom of movement and permit the sections to adjust themselves to the shoe. The plate *c* is also provided with two or more sets of openings for the reception of pivot-screws, so that the forward ends of the sections may be pivoted at various points of separation, thus enabling me to adapt the device to wide or narrow toed shoes.

It will readily be seen that the field within which the device may be employed is limited only by the extremes of adjustment and that this is determined by the extent of the threaded turnbuckle connection.

Having, therefore, described my invention, what I claim, and desire to secure by Letters Patent, is—

1. The combination, in a shoe-tree, of the toe-sections *a a* pivotally connected at their

forward ends, a rod *j* extending from the forward portion of the toe-sections rearwardly, a heel-plate, a rod *m* projecting forwardly therefrom, a rod *l* pivotally connected with the rod *j*, the rods *l* and *m* being screw-threaded in opposite directions, a tubular member *f'* threaded to engage the threads on said rods, and means to separate the rear ends of the toe-sections, substantially as shown.

2. The combination, in a shoe-tree, of toe-sections pivotally connected to a plate *c*, a rod *j* in pivotal connection with said plate and extending rearwardly, a rod *l* in pivotal connection with the rod *j*, the rod *l* being exteriorly threaded, a heel-plate and a rod *m* connected therewith, said rod being also threaded in reverse direction from the thread on the rod *l*, a tubular member *f'* threaded in reverse directions to engage the threads on the rods *l* and *m*, and a turnbuckle construction arranged to move the rear portions of the toe-sections inwardly or outwardly, as shown.

3. The combination, in a shoe-tree, of toe-sections pivotally mounted at the forward end, a heel-plate, rods extending between the heel-plate and the forward end of the toe-sections, and a turnbuckle therebetween, threaded rods pivotally mounted on the rear portion of the toe-sections, and a turnbuckle construction therebetween, whereby the toe-sections may be separated by rotating the turnbuckle therebetween and the toe and heel sections may be separated by rotating the turnbuckle therebetween.

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