

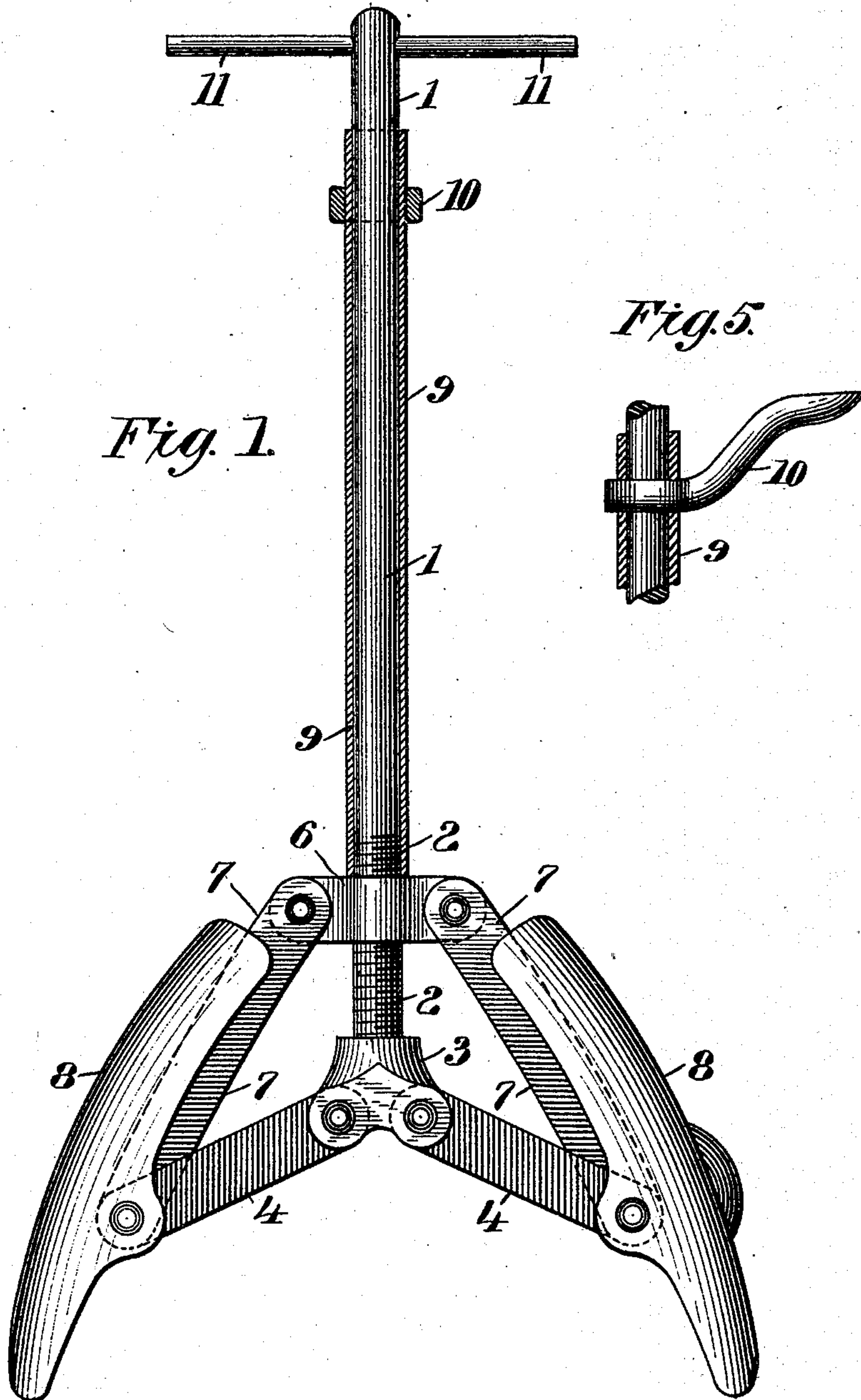
(No Model.)

3 Sheets—Sheet 1.

A. W. CASH.
SHOE STRETCHER.

No. 416,775.

Patented Dec. 10, 1889.



Witnesses
Wm. J. Danner
H. S. Shelton Jr.

Inventor
Arthur W. Cash
by his attorney *J. H. Hubbard*

(No Model.)

3 Sheets—Sheet 2.

A. W. CASH.
SHOE STRETCHER.

No. 416,775.

Patented Dec. 10, 1889.

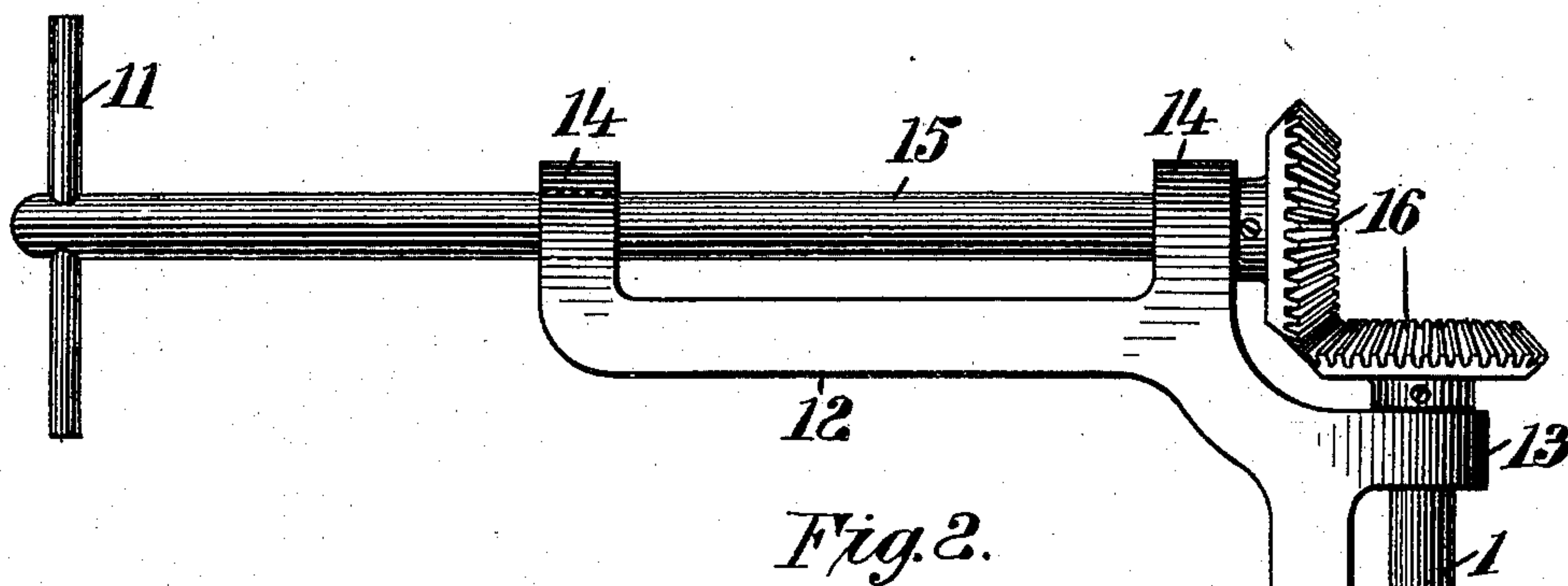
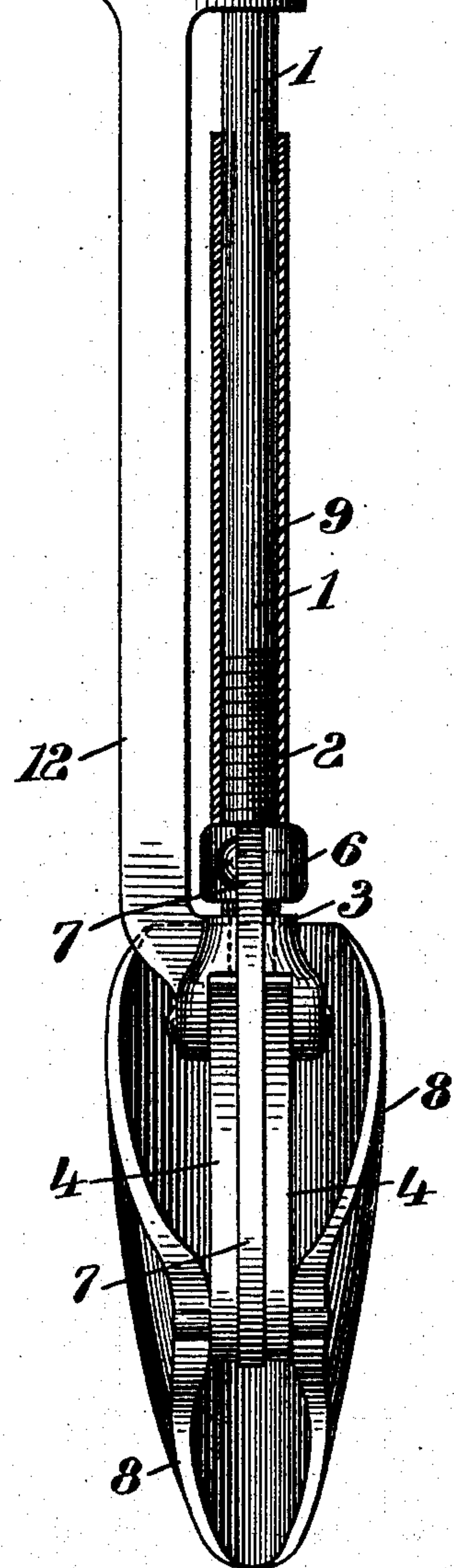


Fig. 3.



Witnesses
Wm. J. Panner
H. J. Shelton Jr.

Inventor
Arthur W. Cash
By his attorney
S. H. Hubbard

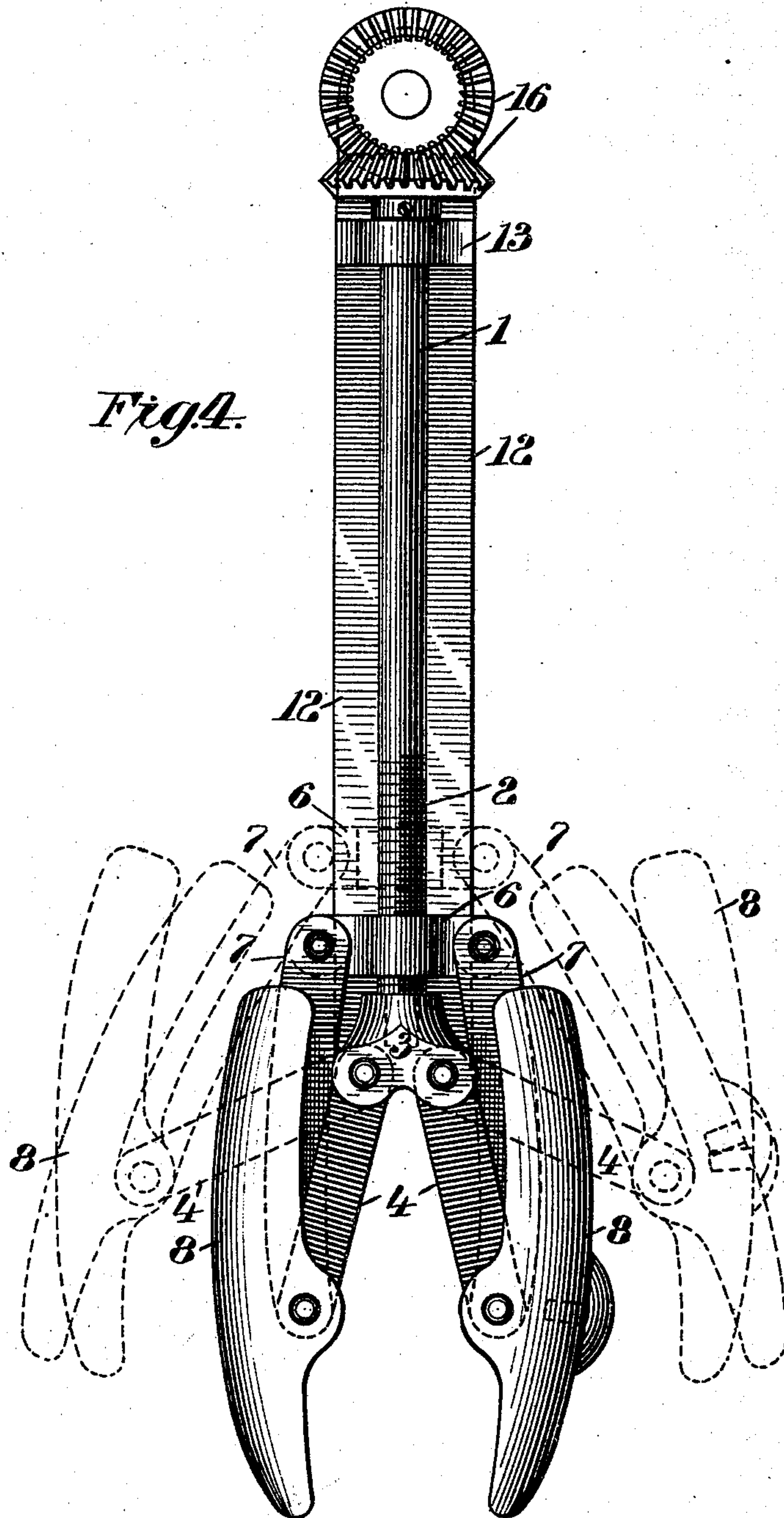
(No Model.)

3 Sheets—Sheet 3.

A. W. CASH.
SHOE STRETCHER.

No. 416,775.

Patented Dec. 10, 1889.



Witnesses
Wm. J. Panner
N. D. Shelton Jr.

Inventor
Arthur W. Cash
by his attorney
A. H. Hubbard

UNITED STATES PATENT OFFICE.

ARTHUR W. CASH, OF BRIDGEPORT, CONNECTICUT, ASSIGNOR TO FRANK ARMSTRONG, OF SAME PLACE.

SHOE-STRETCHER.

SPECIFICATION forming part of Letters Patent No. 416,775, dated December 10, 1889.

Application filed March 20, 1889. Serial No. 304,001. (No model.)

To all whom it may concern:

Be it known that I, ARTHUR W. CASH, a citizen of the United States, residing at Bridgeport, in the county of Fairfield and State of Connecticut, have invented certain new and useful Improvements in Shoe-Stretchers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to certain new and useful improvements in shoe-stretchers, and has for its object to provide a device of this description which shall be simple in construction and both powerful and positive in its operation, and which may, moreover, be employed in the stretching of high boots as well as shoes; and with these ends in view my invention consists in the details of construction and combination of elements hereinafter fully explained, and then recited in the claims.

In order that those skilled in the art to which my invention appertains may fully understand the construction and operation thereof, I will describe the same in detail, reference being had to the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a plan view of the stretcher adapted for use upon shoes and opened widely; Fig. 2, a side elevation of a shoe-stretcher adapted for use upon boots, one of the stretchers being removed; Fig. 3, a longitudinal section through one of the stretcher-levers; Fig. 4, a bottom plan view, various degrees of expansion of the stretchers being shown in dotted lines; and Fig. 5, a detail showing the heel-brace and its arrangement around the rod and sleeve.

Like numerals denote the same parts in all the figures of the drawings.

1 is a rod threaded externally near one end, as seen at 2, and having its extremity rotatably secured in a small cast head 3.

4 are stretcher-levers grooved longitudinally as to their outer edges, as seen at 5,

Fig. 3, and pierced at each end for the reception of rivets. At their inner ends these levers are pivoted to the head 3, hereinbefore referred to.

6 is a traveler interiorly screw-threaded and engaging with the screw-threaded portion of the rod 1. To this traveler are pivoted links 7, whose outer ends rest in the grooved levers, and, together with said levers are pivoted to the stretchers 8. These latter are of cast metal, and, when separated by the levers and links, bear against the leather of the shoe.

9 is a sleeve surrounding the rod 1, and fitted to and adapted to slide on said sleeve is a depending brace 10.

For use upon shoes, the construction may be completed by a handle, as 11; but in order that the instrument may be used for boots as well as shoes, I prefer to attach to the head 3 a right-angled frame 12, provided with bearings 13 14, in the former of which bearings the outer end of the rod 1 is journaled, and in the latter of which bearings an auxiliary handled rod 15 is mounted, the extremities of said rods being connected by a pair of beveled gears 16.

In the operation of my invention, when the rod 1 is rotated to the right, the traveler is caused to move lengthwise on the rod, thereby through the links throwing out the stretcher-levers and the stretchers which are mounted upon the ends thereof. Reversed rotation of the rod closes the stretchers in like manner. The grooving of the outer edges of the stretcher-levers permits the links, when the device is closed, to lie in said grooves, so that the closing may be more perfect.

The brace upon the sleeve 9 is intended to be engaged with the rear of the shoe-counter, and thereby check any tendency of the stretchers, when expanded, to back out into the wider portion of the shoe. The sleeve merely forms a support for the brace, so that the latter may remain stationary notwithstanding the rotation of the rod.

By means of the auxiliary handled rod 15 the stretcher may be operated perfectly lon-

itudinal of the foot portion of a boot, while at the same time the stretcher thus constructed may be used for shoes as well.

I claim—

5 1. In a shoe-stretcher, the combination, with a threaded operating-rod, of a head in which the end of said rod is pivoted, the stretcher-levers hinged to the head, the stretchers mounted on said levers, the links connected
10 to the levers near their outer ends, and the traveler on the screw-threaded rod for the operation of the links, substantially as set forth.

15 2. In a shoe-stretcher, the combination, with the stretchers and means for operating the same, of the rod threaded only at its lower end, the sleeve loosely mounted upon the unthreaded portion of said rod and adapted to slide freely thereon, and the brace sur-

rounding and freely adjustable lengthwise 20 of said sleeve, substantially as set forth.

3. The combination, in a shoe-stretcher, with the threaded rod, the head in which the end of said rod is arranged to turn, and the levers and stretchers operated by said rod, of 25 the right-angled frame secured to the head, the auxiliary operating-rod journaled therein, and means, as a pair of beveled gears, for imparting the movement of the auxiliary rod to the screw-threaded rod, substantially as 30 set forth.

In testimony whereof I affix my signature in presence of two witnesses.

ARTHUR W. CASH.

Witnesses:

S. H. HUBBARD,
G. ANDREWS.