

(No Model.)

W. GORDON.

SOLE CHANNEL CEMENTING APPARATUS.

No. 390,773.

Patented Oct. 9, 1888.

FIG. 1.

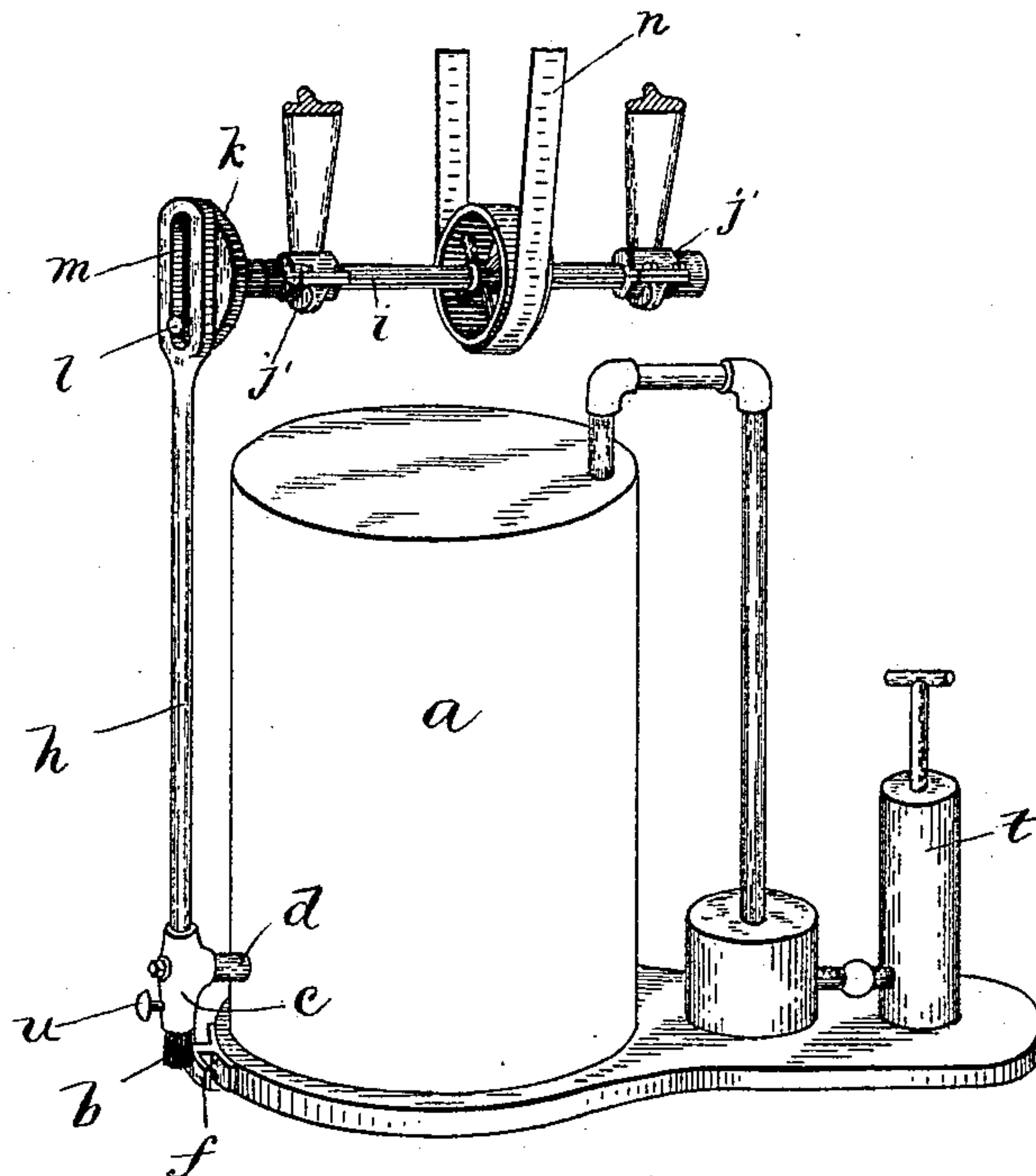
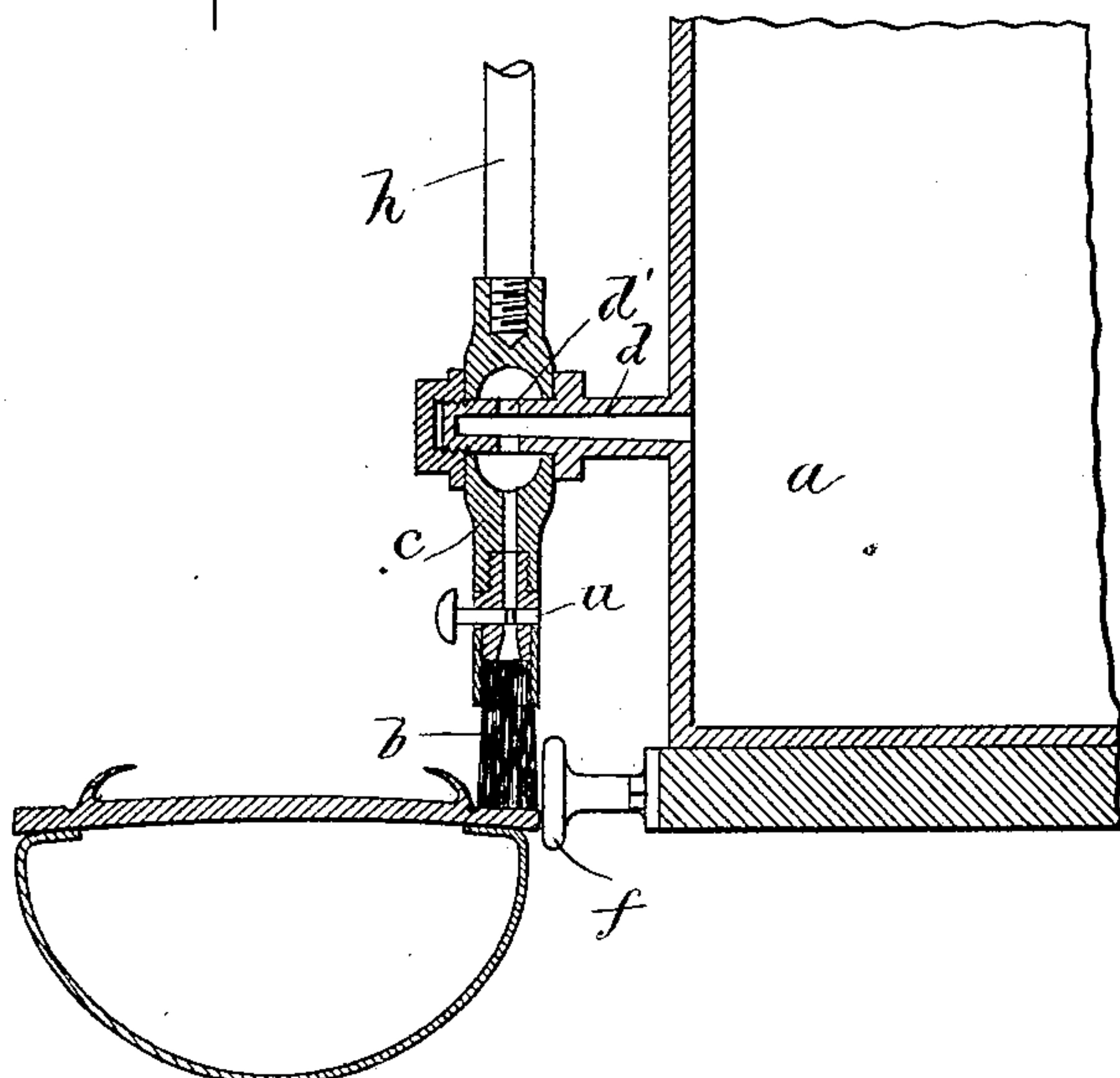


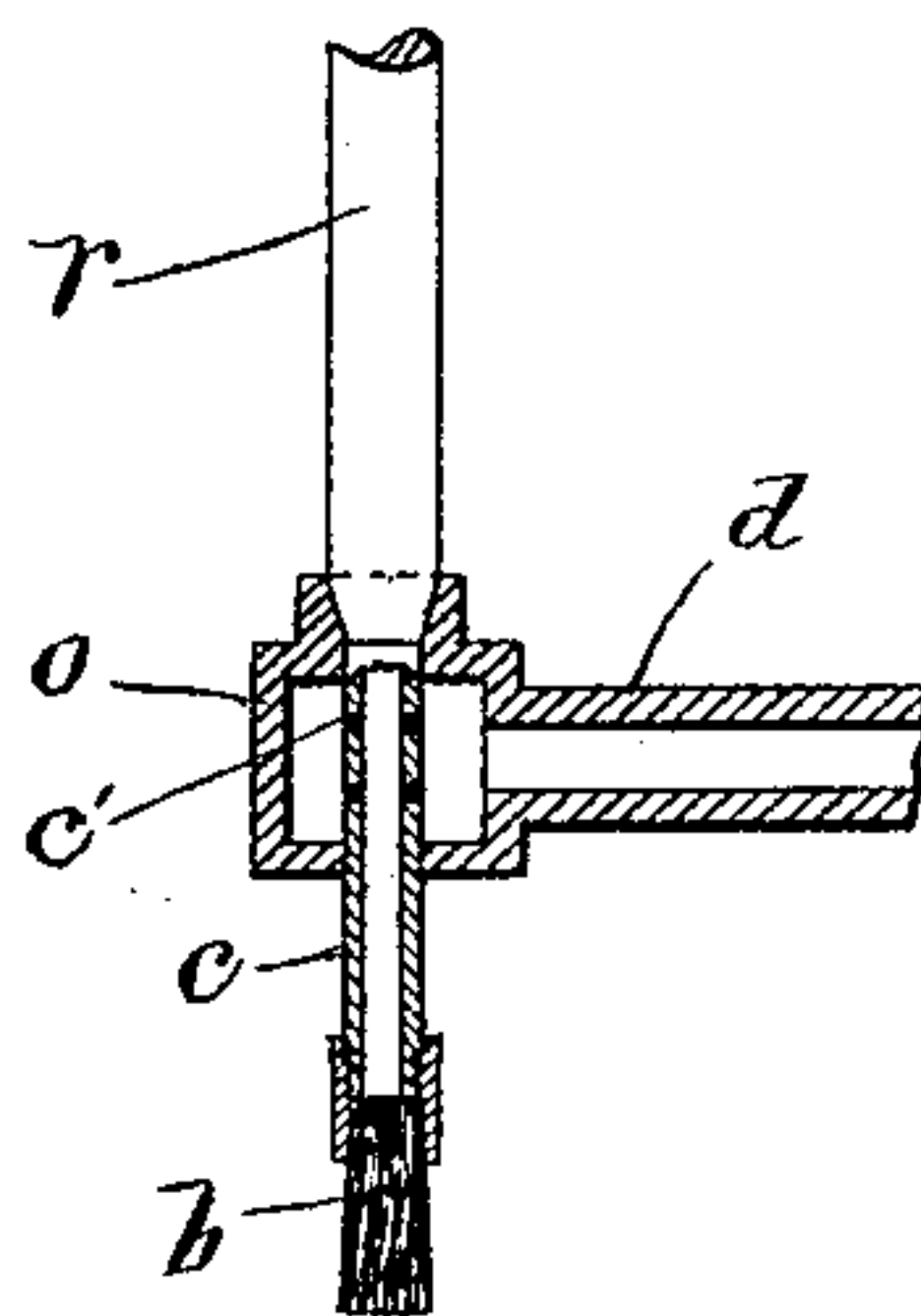
FIG. 2.



WITNESSES.

H. Brown
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FIG. 3.



INVENTOR.

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UNITED STATES PATENT OFFICE.

WILLIAM GORDON, OF MELROSE, MASSACHUSETTS.

SOLE-CHANNEL-CEMENTING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 390,773, dated October 9, 1888.

Application filed May 26, 1888. Serial No. 275,180. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM GORDON, of Melrose, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Sole-Channel-Cementing Apparatus, of which the following is a specification.

This invention relates to apparatus for applying to the channels of boot and shoe soles the cement whereby the flap which covers the channel is secured to the sole in position to close the channel.

The invention consists in the combination, with a reservoir for cement, of a brush communicating with the reservoir, so that the cement will flow from the reservoir into and through the brush, and means for moving the brush, the arrangement being such that the operator, holding the boot or shoe in his hands, can present the sole to the brush, which is caused by the movement imparted to it to lay the cement upon the sole, the operator moving the sole as required to present all parts of the channel to the brush.

The invention also consists in the combination, with a reservoir and a brush connected therewith, of a rest or guide to support the edge of the sole in the proper relation to the brush, all of which I will now proceed to describe and claim.

Of the accompanying drawings, forming a part of this specification, Figure 1 represents a perspective view of an apparatus having my improvements. Fig. 2 represents a sectional view of the brush and its connection with the reservoir. Fig. 3 represents a similar view of a modification.

The same letters of reference indicate the same parts in all the figures.

Referring to Figs. 1 and 2, *a* represents a tank or reservoir to contain cement. *b* represents the brush, which is provided with a tubular shank, through which cement may flow to the bristles of the brush. Said shank is secured to a tubular arm or conduit, *c*, adapted to convey cement to the shank, said arm inclosing and being adapted to move upon the perforated end of a tube, *d*, which is connected with the lower portion of the reservoir, the perforations *d'* in said tube permitting the

cement to flow from it into the arm *e* and through the latter to the brush. The brush projects downwardly, and is arranged so that the operator, holding a boot or shoe sole upward in his hands, can present the sole to the brush and move the sole about to subject all parts of the channel to the action of the brush.

I prefer to provide a rest, *f*, against which the operator may hold the edge of the sole, said rest being affixed to any suitable support and arranged to support the sole with the channel in the proper relation to the brush.

To insure the sufficiently rapid flow of the cement through the brush and the uniform spreading of the cement on the channel, I provide means for moving the brush. The means shown in Figs. 1 and 2 are adapted to oscillate the brush in a short arc, and consist of a lever, *h*, attached to the arm *c*, and a shaft, *i*, journaled in bearings *j*, and having a disk or crank, *k*, at one end, the wrist-pin *l* of which enters a slot, *m*, in the lever *h*. The shaft is rotated by power applied in any suitable way, as by a belt, *n*, and its rotation causes the wrist-pin to oscillate the lever *h*, arm *c*, and brush *b*, the arm *e* being mounted to oscillate on the tube *d*.

I do not limit myself to an oscillating motion of the brush, but may adapt it to be rotated, as shown in Fig. 3, by providing the outlet-tube *d* with a vertical bearing, *o*, for the arm *c*, said bearing being chambered out to permit the cement to flow around the arm *e*, said arm having perforations *c'*, through which the cement flows to the brush. The arm *c* in this case has a shaft, *r*, attached to it instead of the lever *h*, said shaft being journaled in bearings and rotated by any suitable means, so as to rotate the brush on its axial center. Any other suitable means may be adopted for moving the brush without departing from the spirit of the invention.

To insure the flow of the cement to the brush, an air-pump, *t*, is arranged to force air into the upper part of the reservoir, and thus exert pressure on the cement, which tends to force the latter to the brush. A suitable valve, *u*, is provided, whereby the flow of cement to the brush may be shut off.

The apparatus herein described may be used for applying cement to the entire surface of a

sole instead of to the channel only. The brush may be made wider than hereshown, if desired.

I claim—

1. In a sole-channel-cementing apparatus, 5 the reservoir having a tube projecting therefrom and the vertically-disposed brush having a tubular arm pivoted on and having connection with said tube, whereby cement is conveyed from said reservoir through said brush, substantially as shown and described. 10

2. In a sole-channel-cementing apparatus, the combination, with a reservoir for cement and an outlet-tube therefor, of a vertically-disposed arm communicating with and held by 15 said tube, and a brush secured to the lower end of said arm, and means for moving the arm and brush on said outlet-tube, substantially as shown and described.

3. The combination of a reservoir for cement, 20 an outlet-tube, *d*, therefor, a tubular arm fitted to oscillate on said tube and communicating

with the latter through perforations therein, a brush secured to said arm, and the slotted lever *h* and shaft *i*, having a crank-pin working in the slot of said lever, whereby said arm 25 and brush are oscillated, as set forth.

4. In a sole-channel-cementing apparatus, the reservoir having a tube projecting therefrom, the vertically-disposed brush *b*, having a tubular arm pivoted on and having connection 30 with said tube, and the rest *f*, secured to the base immediately adjacent said brush *b*, substantially as described.

In testimony whereof I have signed my name to this specification, in the presence of two sub- 35 scribing witnesses, this 23d day of May, A. D. 1888.

WILLIAM GORDON.

Witnesses:

C. F. BROWN,

A. D. HARRISON.