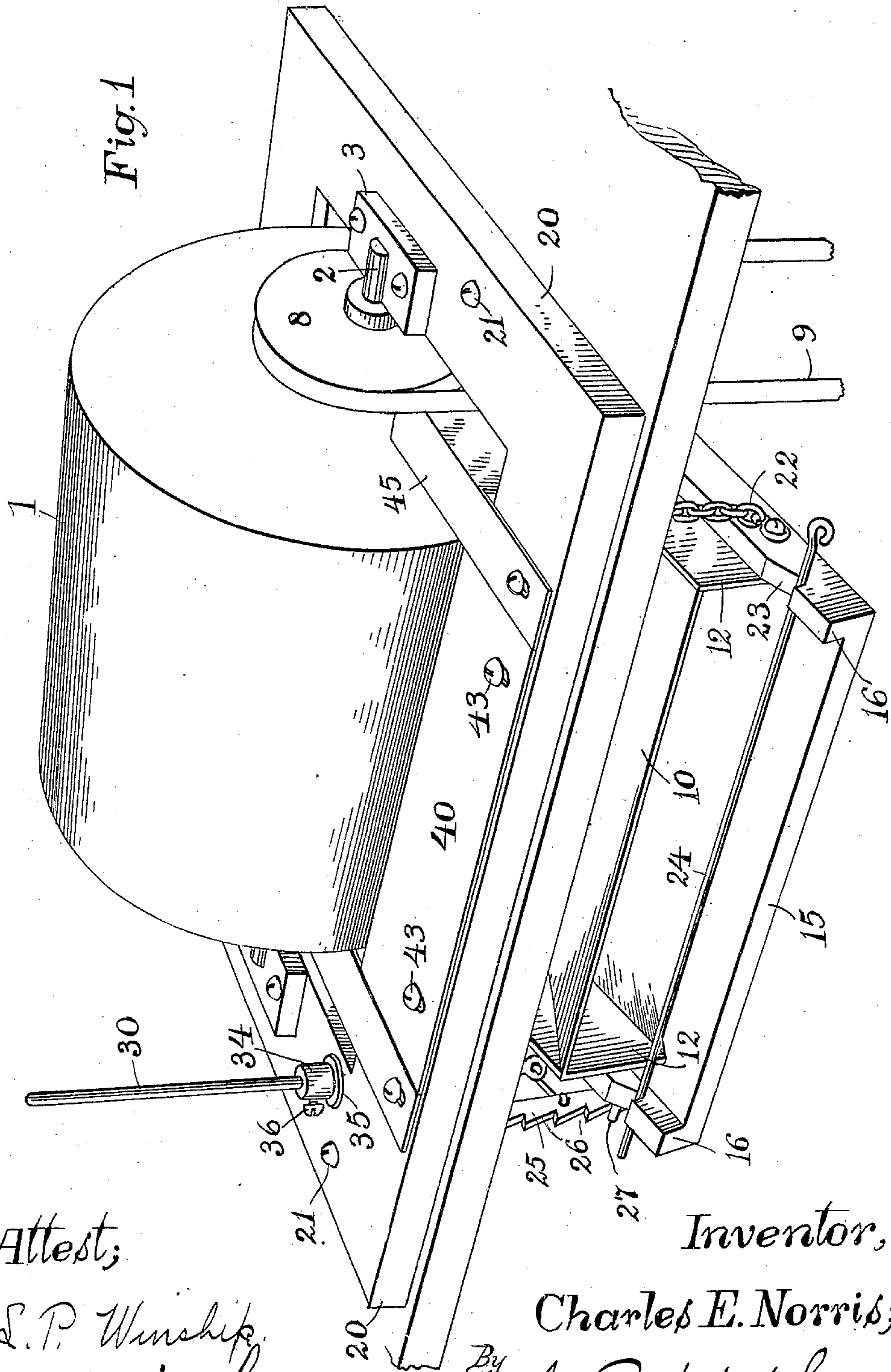


No. 863,429.

PATENTED AUG. 13, 1907.

C. E. NORRIS.
CEMENT APPLYING DEVICE.
APPLICATION FILED JULY 16, 1908.

4 SHEETS—SHEET 1.



Attest;

S. P. Winship.
M. W. Upham.

Inventor,

Charles E. Norris;

By

A. B. Upham,
Attorney

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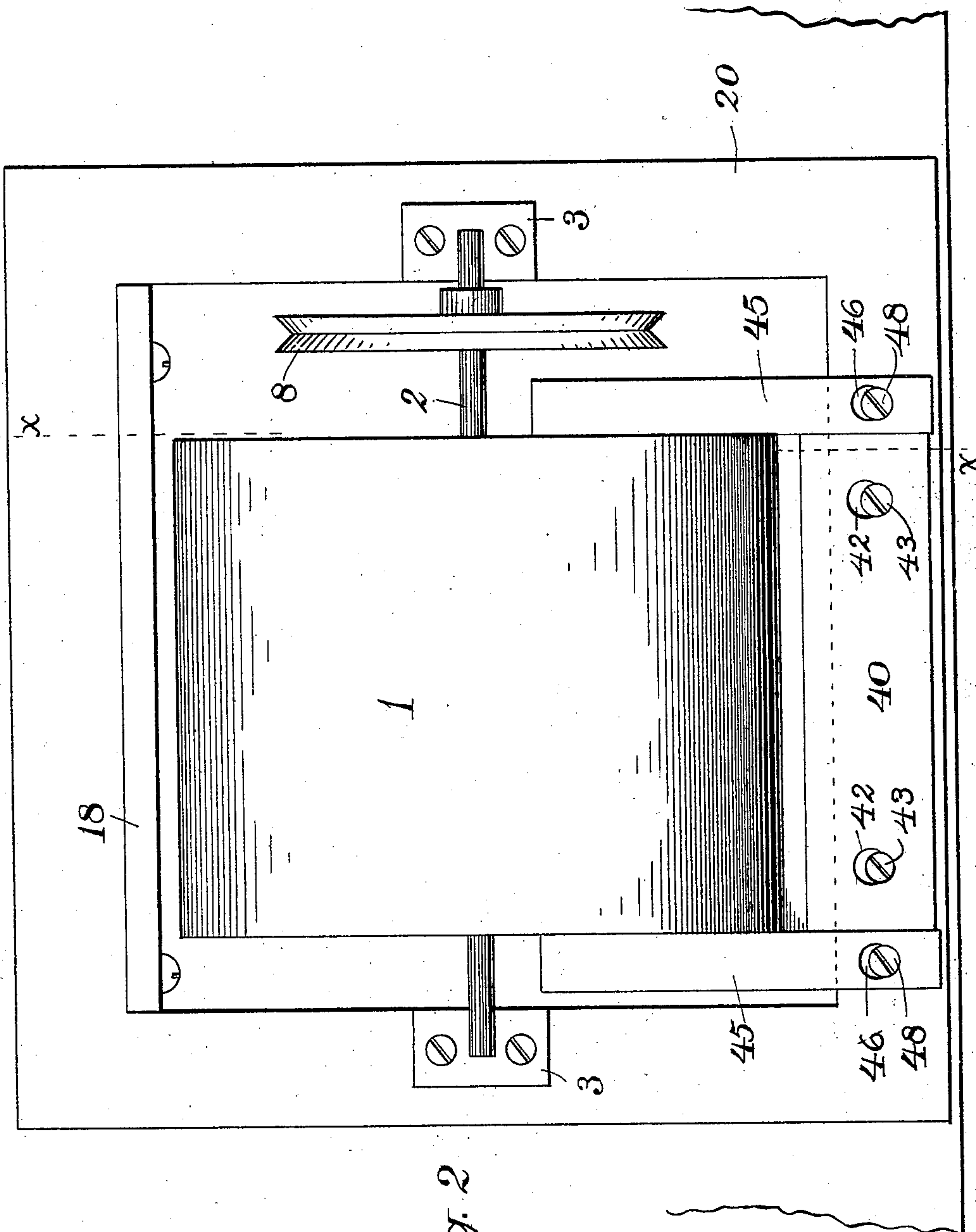


Fig. 2

Attest;
L. P. Winship.
M. E. Upham.

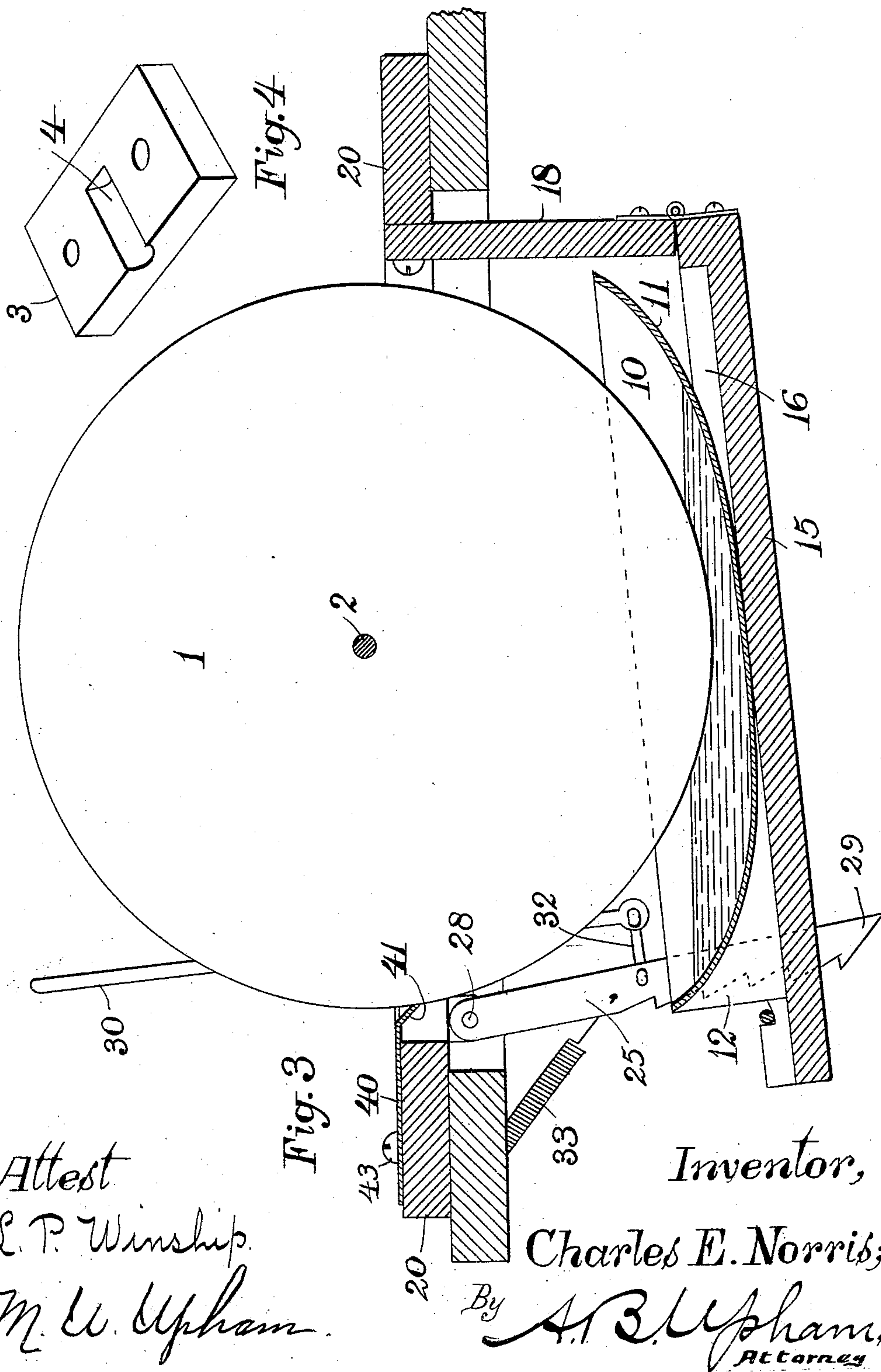
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4 SHEETS—SHEET 3.



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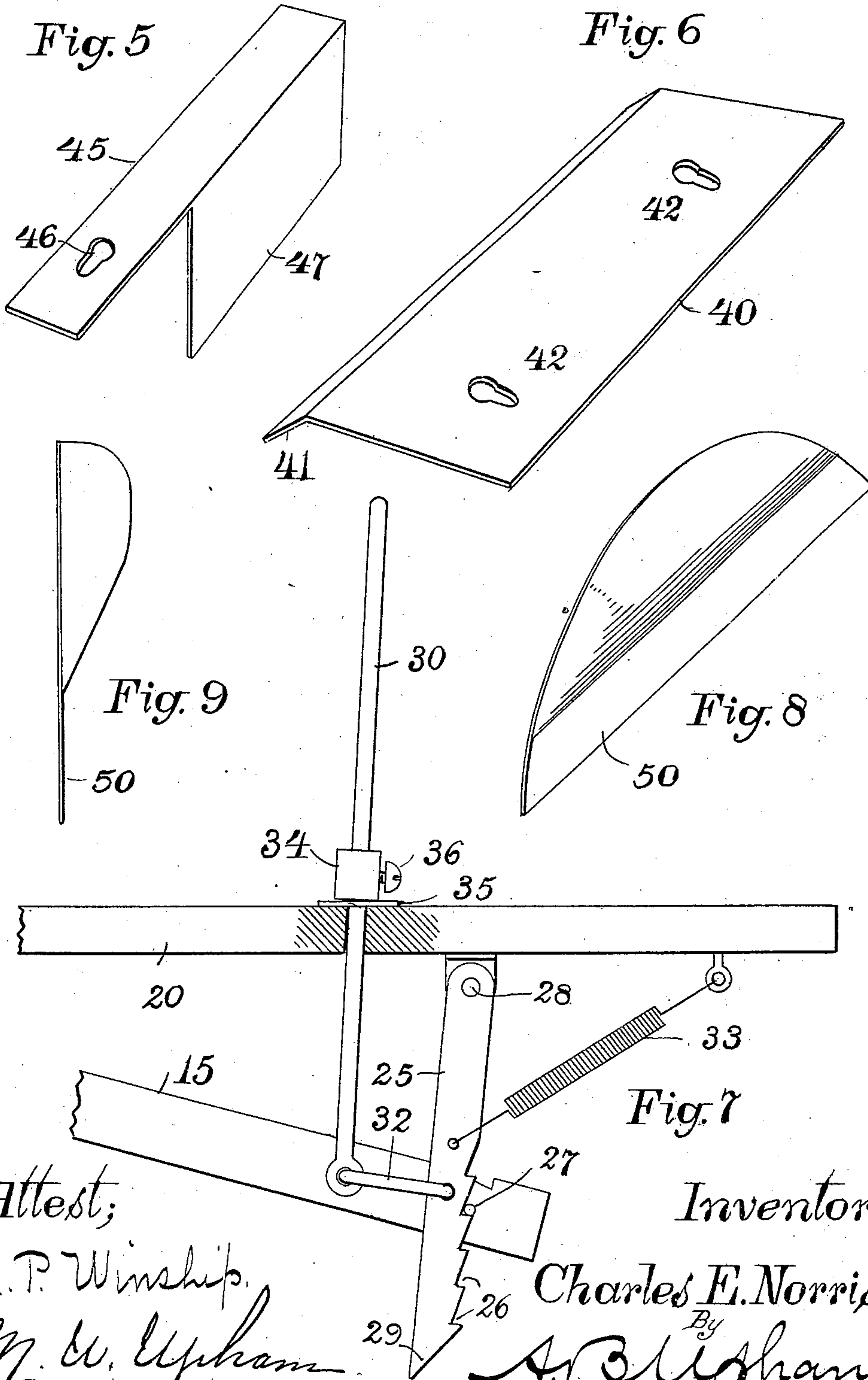
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4 SHEETS—SHEET 4.



Attest;
L. P. Winship.
M. W. Upham

Inventor,
Charles E. Norris;
By
A. W. Upham,
Attorney

UNITED STATES PATENT OFFICE.

CHARLES E. NORRIS, OF PORTSMOUTH, NEW HAMPSHIRE, ASSIGNOR OF ONE-HALF TO H. CLINTON TAYLOR, OF PORTSMOUTH, NEW HAMPSHIRE.

CEMENT-APPLYING DEVICE.

No. 863,429.

Specification of Letters Patent.

Patented Aug. 13, 1907.

Application filed July 16, 1906. Serial No. 326,320.

To all whom it may concern:

Be it known that I, CHARLES E. NORRIS, a citizen of the United States, and a resident of the city of Portsmouth, in the county of Rockingham and State of New Hampshire, have invented certain new and useful Improvements in Cement-Applying Devices, of which the following is a full, clear, and exact description.

The object of this invention is the construction of improved means for applying paste, or cement as it is termed in the trade, to the vamps and quarters used in the manufacture of boots and shoes. Heretofore, an endless apron having the fresh cement upon its surface has been used for the purpose; the vamps and quarters being put into partial contact with such surface and thereby having the paste applied to them. Among other drawbacks to such arrangements were their expense, and the difficulty of keeping them clean, and the necessity of frequent repairs. What I have endeavored to accomplish has been to produce an inexpensive device for the purpose; one which can be kept clean and clear of hardened cement, which shall last indefinitely, and in addition be capable of certain positive advantages hereinafter set forth.

Referring to the drawings forming part of this specification, Figure 1 is a perspective view of a cement-applying device embodying my invention. Fig. 2 is a plan view of the same. Fig. 3 is a side-sectional view through the line X—X in Fig. 2. Fig. 4 is a perspective view of one of the bearings for the drum-axle. Fig. 5 is a perspective view of one of the side-scrapers of the paste-drum. Fig. 6 is a perspective view of the peripheral scraper for said drum. Fig. 7 is a side elevation showing the tray-adjusting mechanism. Fig. 8 is a perspective view of the scraper by means of which the paste-tray is emptied, and Fig. 9 is an end view of the same.

The improved device consists essentially of a drum 1 revolving with its periphery dipping in a quantity of paste or cement, and provided with scrapers for rendering uniform the amount of such cement brought up into position to have a shoe vamp or quarter pressed against it and so receiving the desired adhesive material. This drum is fixed upon a shaft 2 terminally supported in open bearing-blocks 3 screwed to the square frame 20. These bearings being open, as shown in Figs. 1 and 4, the drum and shaft can be readily removed therefrom whenever desired. Inasmuch as the drum revolves very slowly, and all the forces applied thereto have a downward pressure, there is no danger of the drum's accidental dislodgment from its bearings.

The means for the rotation of the drum consists of a grooved pulley 8 fixed upon the shaft 2 and receiving any suitable round belting 9 coming up thereto from

any suitable source of power below; as indicated in Fig. 1.

The cement-holding tray 10 rests upon the shelf 15 hinged at its rear end to the board 18 which is screwed to the inner edge of the rear bar of the square frame 20; the sides of said shelf being formed with raised edges 16 to retain said tray in place laterally. Notches 23 in said edges or sides 16, and a rod 24 lying therein, keep the tray from sliding forward when said shelf is lowered to an abrupt angle. My arrangement for adjustably supporting said shelf consists of the bar pivoted at 28 to the under surface of the frame 20, and formed with a plurality of notches 26 engaged by a pin 27 projecting from the shelf; a coiled spring 33 acting to press said bar against said pin. To disengage said pin from said bar and thereby permit the shelf to drop to its lowest position,—which is one determined by the flexible link or chain 22 (see Fig. 1),—I provide the lever 30 penetrating, and fulcrumed by, the frame 20, and having its lower end joined to the bar 25 by a suitable link 32. By pulling upon the upper end of said lever, the notched bar is withdrawn from engagement with the pin 27 and the shelf permitted to drop. As shown in Fig. 7, said lever is held in place by a washer and collar 35, 34, and the hole in the frame through which it passes is so arranged that such lever cannot be affected by the pull of the spring 33 enough to move the pointed end 29 of the bar 25 so far back as to fail of engagement with the pin 27 when the shelf is raised from its lowermost position.

As shown in Fig. 3, the tray 10 is formed with a curved bottom 11; such curvature being substantially cylindrical. The sides 12 conform to the curved bottom at the rear end alone, the front edge being straight. This causes the sides to be runner-shaped; the advantages obtained thereby being numerous. In the first place, by cutting away the rear ends of the sides 12 to conform with the tray-bottom 10, the tray can be put in place and removed therefrom through the restricted space between the shelf and the under face of the drum 1. Were the front ends of the sides cut away in a similar manner, the tray would not remain stationary upon the shelf, but would be easily rocked and the contents spilled upon the shelf and the floor. Further, the square corners of the front ends furnish a sure contact with the rod 24, and a consequent positive retention upon the shelf even when the latter is dropped to its lowermost position. Another advantage of the runner-shape of the tray-sides is that after the tray has been removed from the shelf and its contents scraped out by a suitable scraper, as one shown in Figs. 8 and 9, the tray can then be deposited in a shallow body of water by first dipping it in rear-end first and so filling it with the water as it enters.

The scraper for the periphery of the drum consists of a sheet-metal plate 40 having its contacting edge 41 bent downward at an angle of approximately 45 degrees, as shown in Fig. 3, while through it are two key-hole shaped holes 42 for the reception of the fastening screws 43. In applying this scraper, it is brought down upon the screws 43, with the latter entering the enlarged sections of the holes 42, and then the plate pressed forward until its bent edge 41 reaches the drum. If necessary, said screws can be tightened by a suitable screw-driver in order to insure the retention of the plate in position.

The ends of the drum are provided also with scrapers 45 for the purpose of preventing an accumulation of cement thereon; each scraper consisting of a blade removably held in position by a key-hole slot 46 and screw 48, and each blade being provided with a vertical downward bend 47 at its back, or the edge opposite to the operative one. The purpose of this bend or apron is to aid in the drip of the cement from the blade back into the tray. Without it, the cement scraped off from the end of the drum would accumulate and harden along the under surface of the blade, and both render the same unclean, and interfere with its scraping function.

In use, the tray 10 is first filled with the paste or cement, and then slid in upon the shelf 15; the latter being raised until its pin 27 engages that notch of the bar 25 which supports the tray with its contents slightly more than touching the periphery of the drum. Then the drum is set in motion and the cement applied to the vamps and quarters by contact with the surface of the drum in the usual way. As the contents of the tray are used up, the shelf is pulled up a notch higher to keep the drum in touch therewith. Ordinarily it is unnecessary to refill the tray, as I design it to be of ample capacity for one day's use.

At the close of the day, or whenever else the device is to remain unused for a substantial length of time, the tray 10 is removed, its contents wholly scraped out by the scraper 50, and the tray deposited beneath or in a body of water. Then the scrapers 40, 45 are removed and deposited in the water; the belt 9 slipped off, and the drum also taken out and washed. If desired, it can be placed in a bucket of water, and so its surface kept clear and clean for its next time of use.

By supporting all the parts on the frame 20, the device is complete and ready to be used as soon as received; all that the recipient requires to do being to cut a square hole through a bench or table, a little smaller than the outer dimension of the frame; place the frame down thereon, and fasten it in position by means of a couple of screws 21. It will hence be seen that this device is economical to manufacture, durable in use, convenient in employment, and capable of being kept clean and neat with the minimum of exertion and bother. It can also be safely and cheaply shipped, and readily mounted in position for use.

A further, if not principal, function, performed by the scrapers 40, 45 is that of immediately removing from the surface of the drum whatever lint or threads adhere thereto when the vamps and quarters are touched thereon. After such lint has unduly accumulated on the scrapers, the latter are removed and cleansed, and then returned to place.

What I claim as my invention and for which I desire Letters Patent is as follows, to wit;—

1. A liquid applying device comprising a revolving drum, a shelf hinged at its rear edge beneath said drum, means for adjustably supporting the front edge of said shelf, and a removable tray located on said shelf; said adjustable supporting means consisting of a notched bar pivotally supported at its upper end, a pin projecting from said shelf into engagement with said notches, and a spring holding said bar in contact with said pin.

2. A cement applying device comprising a revolving drum, a shelf hinged at its rear edge beneath said drum, means for adjustably supporting the front edge of said shelf, and a removable tray located on said shelf; said tray being formed with curved bodies, and sides which are curved at their rear ends evenly with said bottom, but whose front ends are rectangular.

3. A cement applying device comprising a rectangular frame, a shelf hinged at its rear edge and supported by said frame, a cement-containing tray held by said shelf, a revolving drum supported by said frame with its periphery in said tray, a notched bar pivotally held by said frame, a projection from said shelf into engagement with said notches, a means resiliently pressing said bar against said pin, a lever penetrating said frame, a collar adjustable on said lever and supporting the latter, and a link joining the lower end of said lever and said bar.

In testimony that I claim the foregoing invention, I have hereunto set my hand this 11th day of July, 1906.

CHARLES E. NORRIS.

Witnesses:

CHARLES J. DUNCAN,
NORA M. GREELEY.