(No Model.) 2 Sheets—Sheet 1.

H. W. BRETT.

CEMENTING MACHINE.

No. 479,699. Patented July 26, 1892.

Fig. 1.

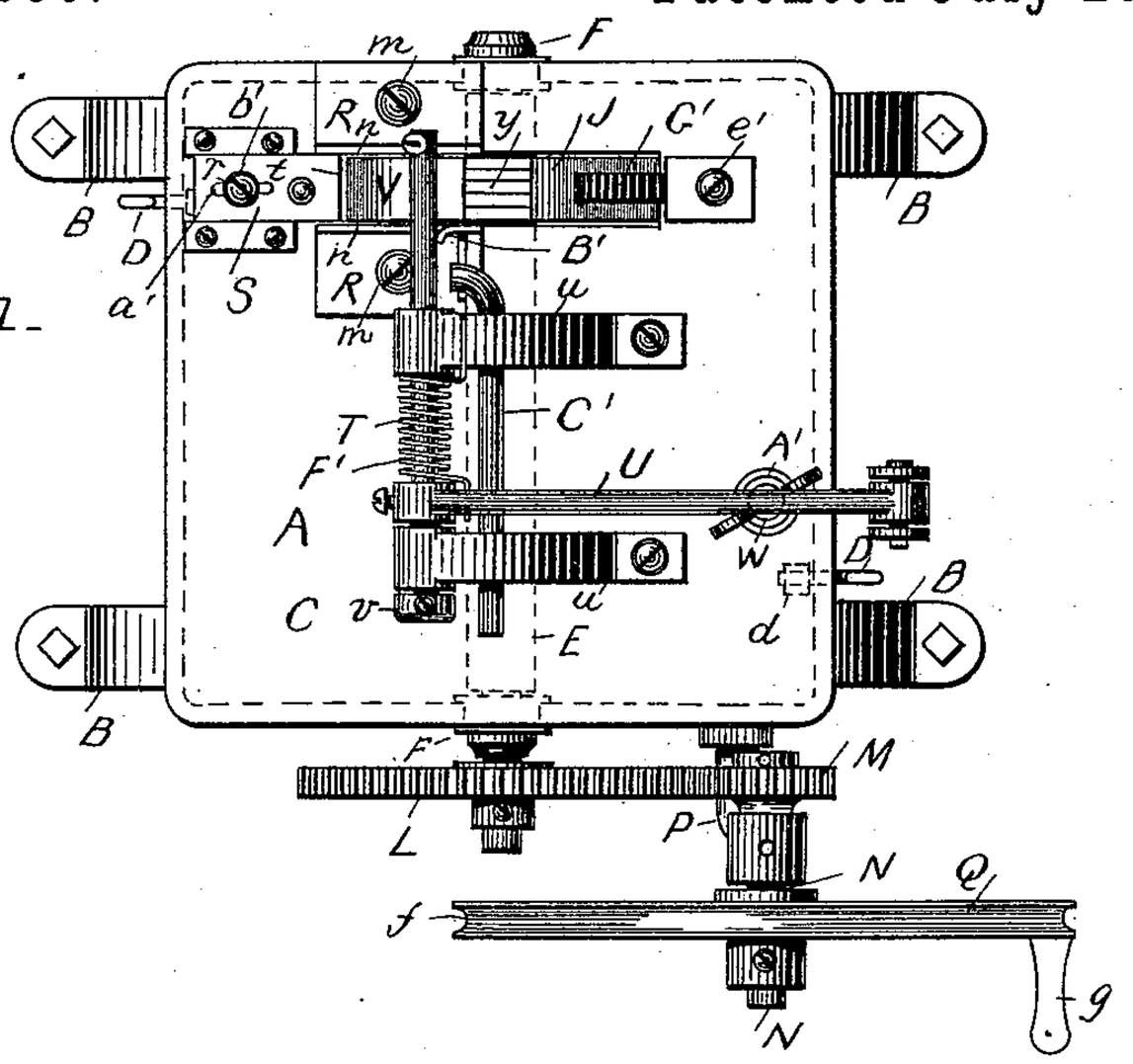
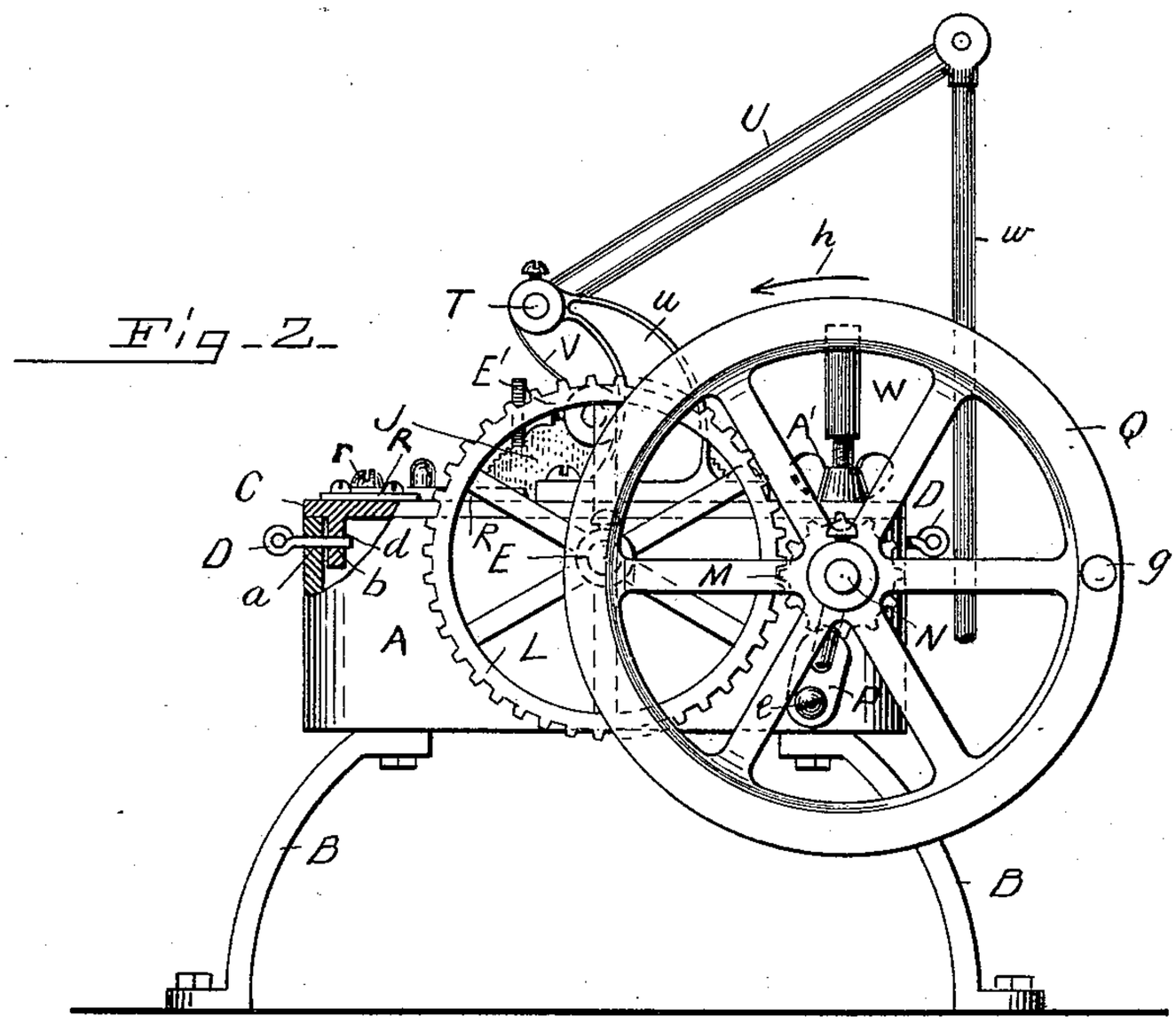


Fig. 2.



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(No Model.) 2 Sheets—Sheet 2.

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Fig. 3.

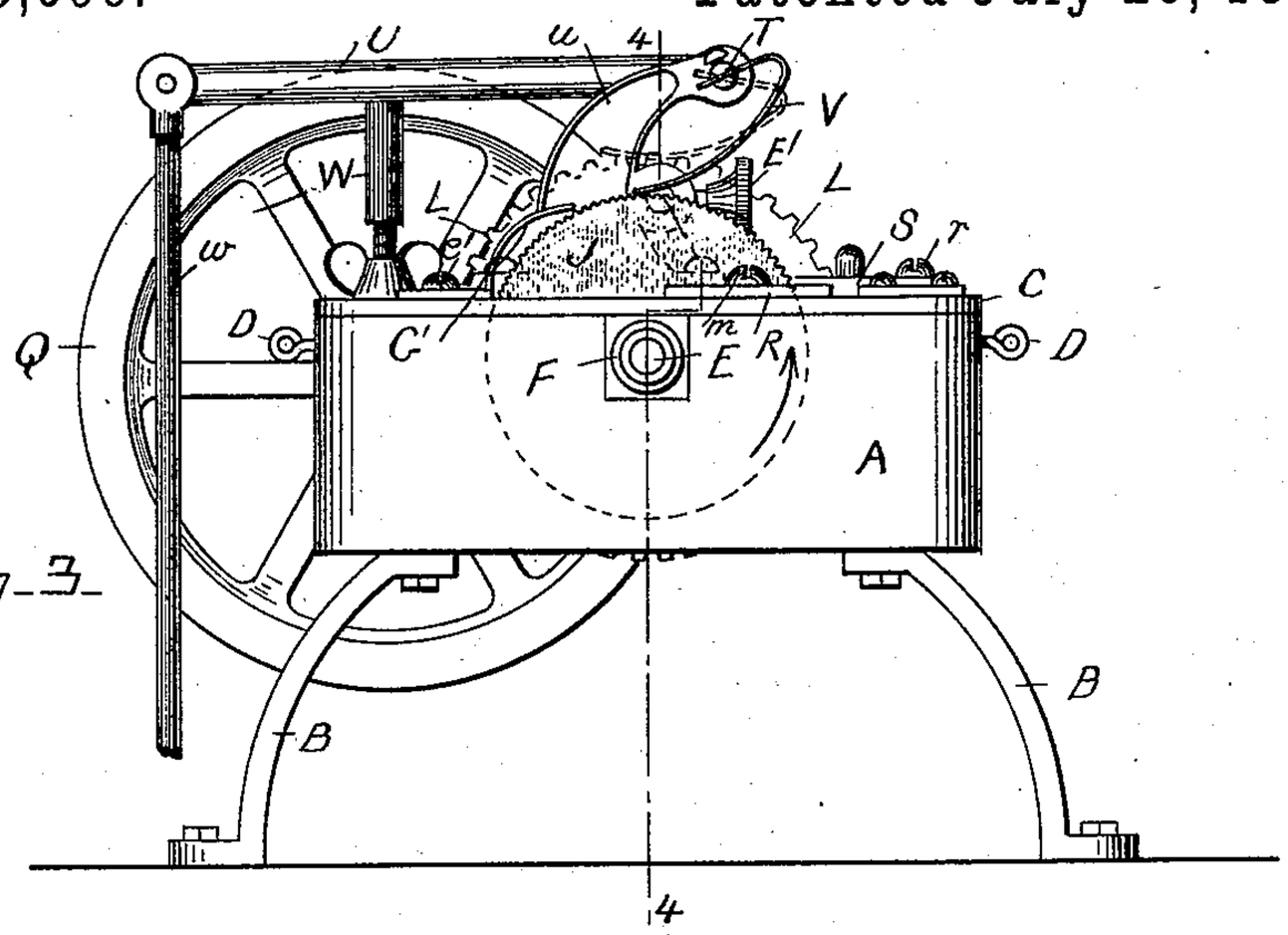


Fig. 5.

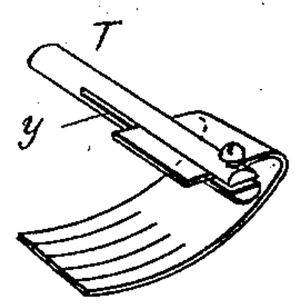
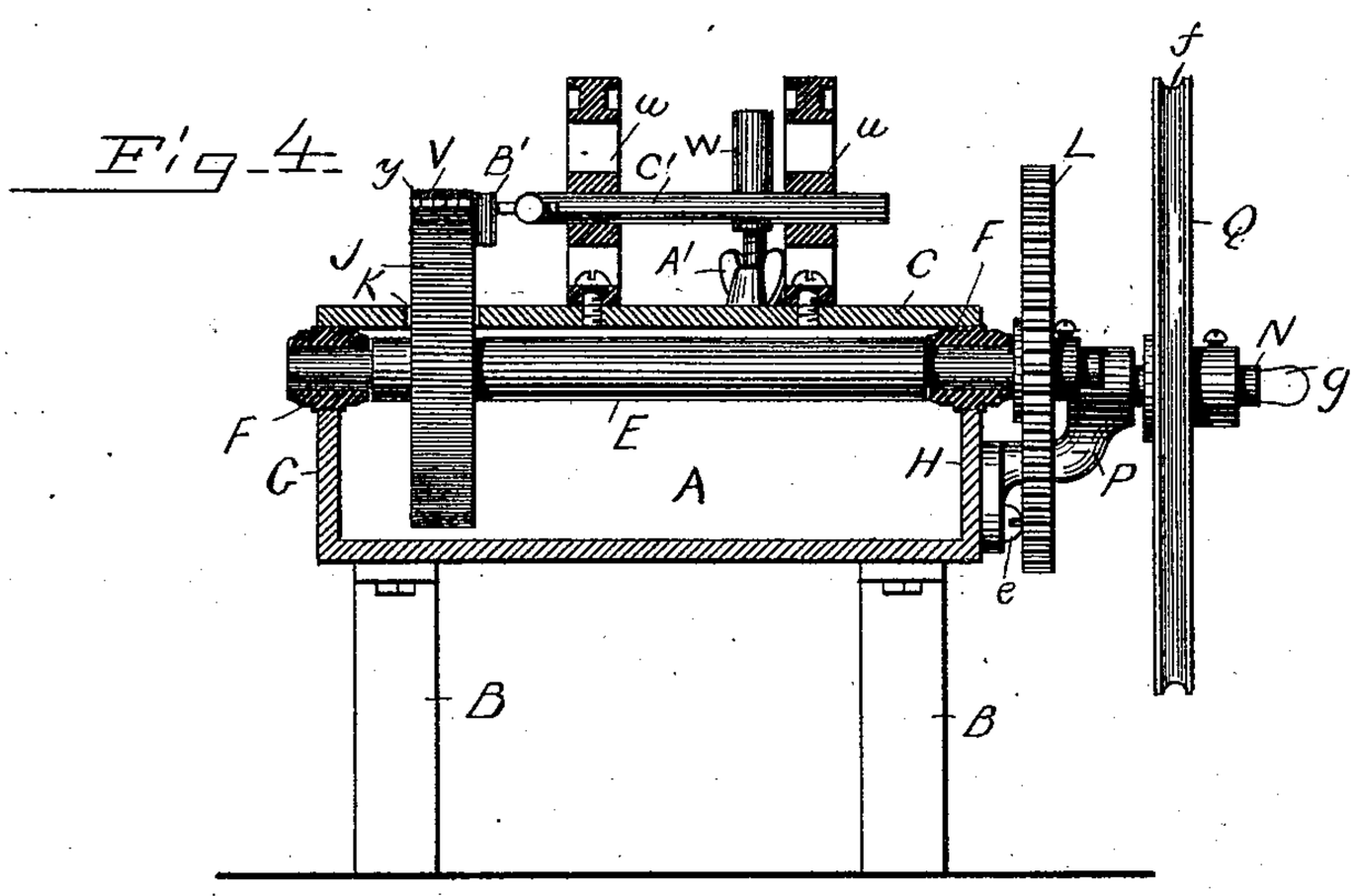


Fig. 4.



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UNITED STATES PATENT OFFICE.

HENRY W. BRETT, OF BOSTON, MASSACHUSETTS.

CEMENTING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 479,699, dated July 26, 1892.

Application filed April 23, 1892. Serial No. 430,383. (No model.)

To all whom it may concern:

Be it known that I, HENRY W. BRETT, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Machines for Cementing, of which the following is a full, clear, and exact description.

The tops of boots and shoes have their top and front edges folded over a short distance and secured by cement; and the object of the present invention is to provide a machine for applying on one side of the tops of boots and shoes, at and along the edges, a cement, preferably made of india-rubber, in a simple, practical, and expeditious manner; and the invention consists, in combination with a receptacle for holding the cement or other suitable liquid adhesive material, of mechanism so constructed and arranged as to automatically take up some of the cement and apply the same to the top of the upper of the boot or shoe or other article to be cemented, all substantially as hereinafter fully described, reference being had to the accompanying sheet of drawings, in which is illustrated a machine constructed in accordance with this invention.

Figure 1 is a plan view of the machine. Fig. 2 is an end view. Fig. 3 is an end view opposite to Fig. 2. Fig. 4 is a vertical cross-section on line 4 4, Fig. 3.

In the drawings, A represents a receptacle for the cement or other liquid adhesive material, resting on legs B, which are adapted to be secured to a suitable bench, the receptacle having a cover or flat top C, secured thereto by pins D, which pass through holes *a* in the sides into holes *b* in lugs *d* on the inside of the cover, as shown more particularly in Fig. 2, allowing the cover to be easily removed when desired to fill the receptacle with the cement.

E is a horizontal shaft turning in bearings F in the ends G H of the receptacle and having secured to it within the receptacle a wheel or disk J of sufficient width for the purpose of its use, to be described farther on, which wheel is of a diameter to project above the cover a short distance, extending up through an opening K in the cover or top, as shown in section in Fig. 4. The shaft extends out through the end H of the box, and on its outer end is secured a gear-wheel L. This gear-wheel L engages with a smaller gear-wheel M, secured to a short shaft N, parallel with the shaft E and turning in bearings in a bracket P, secured to the side of the receptacle by a screw *e*. Secured on the outer end of this shaft N is a pulley Q, having a circumferential groove *f* for a small belt and a crank-handle *g*, by which to turn it by hand, if desired, and which is turned in the direction of the arrow *h*, Fig. 2. Turning this pulley Q, the wheel L is caused to be revolved in the direction of the arrow, Fig. 3.

In using the machine the receptacle is filled with any suitable cement, preferably an india-rubber cement, at a height above the bottom portion of the wheel, so that the wheel as it is turned will revolve in the cement, to which it adheres on its periphery or circumference, and to facilitate such the periphery is preferably serrated or grooved transversely, as shown. The opening K in the cover, through which the wheel J projects, is large enough to prevent the wheel from touching it on its edge and sides, and near the front side, or that part of the wheel which rises from the receptacle, on each side of the wheel, is a plate R, secured to the cover by screws *m*, their edges *n* being close to the sides of the wheel, so that as the wheel is revolved whatever cement is on the sides is scraped of by the plates R and thrown back into the receptacle and prevented from coming above the cover, while at the front of the wheel is another plate S, secured by a screw *r* to the cover, its edge *t* being close to the periphery of the wheel, the plate being adapted to be adjusted forward and backward to allow of more or less of the cement adhering to the periphery of the wheel, as desired, as it is intended that the cement shall be carried up on the periphery of the wheel, but not at the sides.

T is a rock-shaft adapted to rock in bearings in two upright arms or brackets *u* of the cover, the shaft being prevented from longitudinal movement therein by a collar *v*, secured to the shaft outside of the bracket, and an arm U, secured to the shaft the other side of the bracket, which arm extends backward beyond the receptacle and has a pitman-rod *w* secured at its outer end, to which rod is connected at its lower end a treadle. (Not shown in the drawings.) This rock-shaft T extends out over the cement-wheel, and secured in a longitudinal slit *y* in the end of the shaft is a flat spring-presser V, which extends back and

is bent under and forward, as shown in Fig. 3, its free end being slit and divided longitudinally into several strips or fingers, the free end of these spring-fingers lying just above the cement-wheel, and when the arm U is pulled down to turn its shaft T it swings or moves the spring, so that its free ends will lie and press upon the wheel, as shown in Fig. 3 more particularly.

In the operation of the machine the receptacle is filled, preferably, with india-rubber cement and the pulley Q revolved, which turns the cement-wheel J in the direction of the arrow, Fig. 3. The arm is then pulled down, which moves down the spring-presser V to bear upon the wheel, pressing them down thereon firmly. The top of the upper of the boot to be coated with cement is inserted by its edge between the wheel J and the spring-presser V, and as the wheel is turned it is carried along by it over the wheel between it and the spring-presser, and, being pressed against the wheel by the spring-presser as it so passes along, its under side, or the side next the wheel, will be coated with more or less of the cement from the wheel, when another top is run through and coated with the cement, and so on, one after another.

W is an upright post, which screws into the cover under the arm U, against which the arm abuts and rests when pulled down to limit its movement and also the pressure of the spring-presser V on the wheel.

The post W can be screwed in or out to adjust its height, and when adjusted a set-screw thereon is screwed down on the cover, which sets the post and prevents it accidentally moving.

At the right of the wheel J is a plate B′, which is in line with one side of the wheel and is attached to the bent portion of a horizontal arm or rod C′, arranged to rock in the two brackets *u*, and is secured from movement by a set-screw E′. This plate serves as a guide to the edge of the boot-top as it is run through the machine to regulate its movement therethrough, so that the under side of the material will be covered in the right place with the cement.

The front plate S has a central longitudinal slot *a′*, through which the screw *b′* passes, securing it in place, but so it can be moved farther from or nearer to the wheel, according as it is desired that more or less cement shall be left on the wheel-periphery for its deposit on the boot-top, as desired.

On the rock-shaft T is a spiral spring F′, secured by one end to the rock-shaft arm U and by its other end to the bracket *u*, which acts when downward pressure is relieved upon the arm to turn the shaft sufficiently to raise the spring-presser V from the wheel J when not in operation.

Back of the wheel J is secured by a screw *e′* to the cover a strip G′, which extends up and just over the wheel, as shown in Figs. 1 and 3, which serves as a guide to move the boot-top, after being cemented, away from the wheel to prevent injury thereto.

The spring-presser can be all in one piece in lieu of several fingers; but a series of narrow spring-fingers is preferable to use, as by such a pressure will be exerted upon all parts of the material to insure that whatever irregularities there may be in the thickness of the material its desired surface will surely be fully covered with the cement. The pulley can be turned by hand or by belt, as desired.

Having thus described my invention, what I claim is—

1. In combination, a receptacle for cement or any suitable adhesive material, a wheel secured to a revolving shaft adapted to turn in said receptacle, and a spring-presser secured to a suitable support and arranged to bear by its free end on the periphery of the wheel.

2. In combination, a receptacle for cement or any suitable adhesive material, a wheel secured to a revolving shaft adapted to turn in said receptacle, and a spring-presser comprising a series of spring-fingers secured to a suitable support and arranged to bear by their free ends on the periphery of the wheel.

3. In combination, a receptacle for cement or any suitable adhesive material, a wheel secured to a revolving shaft adapted to turn in said receptacle, a spring-presser secured to a suitable support and arranged to bear by its free end on the periphery of the wheel, and a guide-plate for guiding the article through the machine.

4. In combination, a receptacle for cement or any suitable adhesive material, a wheel secured to a revolving shaft adapted to turn in said receptacle, a spring-presser secured to a rock-shaft and arranged to bear by its free end on the periphery of the wheel, and an arm secured to said shaft connected to means for operating said arm, for the purpose specified.

5. In combination, a receptacle for cement or any suitable adhesive material, a wheel secured to a revolving shaft adapted to turn in said receptacle, a plate secured to the cover on each side of the wheel, and a plate secured to the cover in front of the periphery of said wheel, for the purpose specified.

6. In combination, a receptacle for cement or any suitable adhesive material, a wheel secured to a revolving shaft adapted to turn in said receptacle and having its periphery serrated or grooved transversely, and a spring-presser secured to a suitable support and arranged to bear by its free end on the periphery of the wheel.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

HENRY W. BRETT.

Witnesses:
EDWIN W. BROWN,
CARRIE E. NICHOLS.