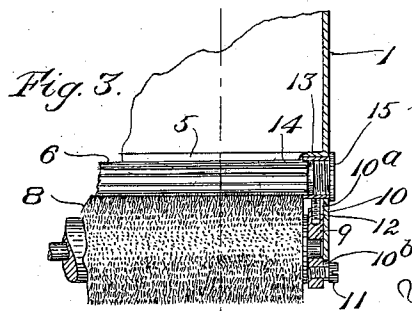
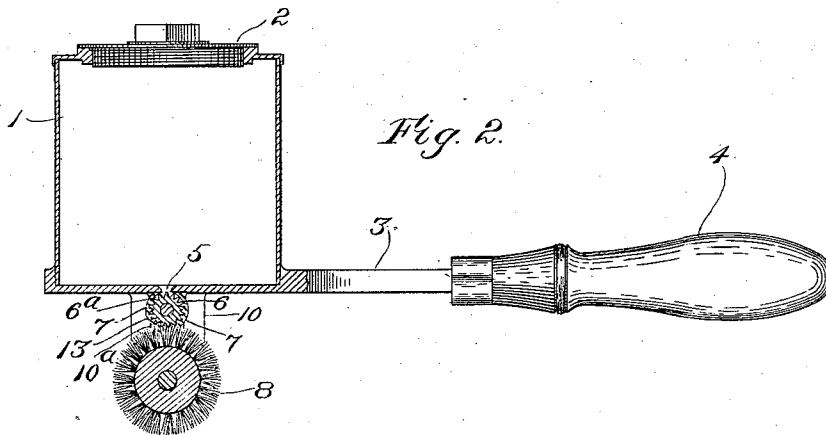
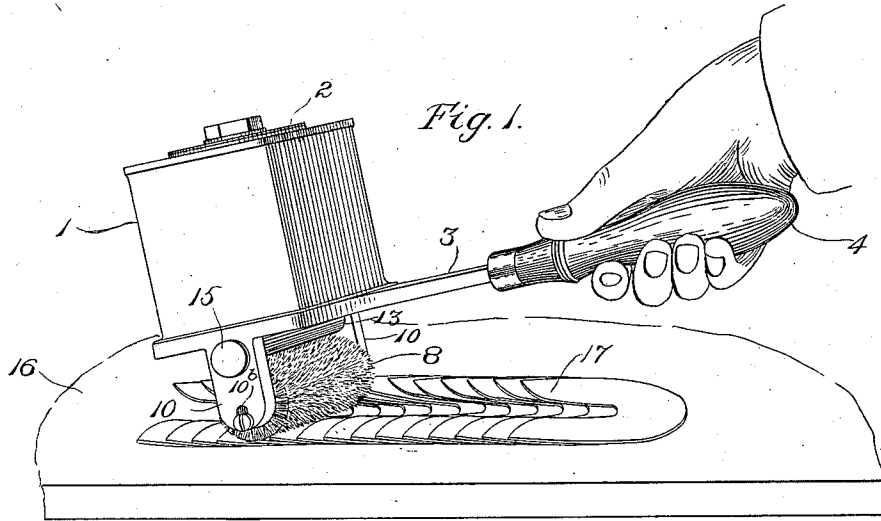


V. P. BUCK.
HAND OPERATED CEMENTING MACHINE.
APPLICATION FILED MAY 17, 1911.

1,014,618.

Patented Jan. 9, 1912.



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UNITED STATES PATENT OFFICE.

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HAND-OPERATED CEMENTING-MACHINE.

1,014,618.

Specification of Letters Patent.

Patented Jan. 9, 1912.

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To all whom it may concern:

Be it known that I, VERTRUDE P. BUCK, a citizen of the United States, residing at Boston, in the county of Suffolk, State of Massachusetts, have invented a certain new and useful Improvement in Hand-Operated Cementing-Machines, of which the following is a specification, reference being had therein to the accompanying drawings.

The invention consists in a portable hand-operated machine of novel construction which I have devised for use more especially in applying rubber cement to portions of the leather pieces that are employed in the manufacture of shoes. It is equally adapted, however, to be employed in distributing cement upon the surfaces of pieces of other materials, and in distributing other fluid substances besides cement.

An embodiment of the invention is shown in the drawings, in which latter,—

Figure 1 is a perspective view illustrating the said embodiment and one mode of using the same. Fig. 2 is a view of the machine in vertical section. Fig. 3 is a sectional view of details at one side of the machine.

The machine is constructed with a container, represented at 1, for the cement or other substance to be applied by the machine. To enable the container to be filled, an opening is made in the top thereof. As the solvent employed in rubber cement is volatile and very inflammable the said opening is furnished with a tightly-fitting closure to confine any gas that may separate from the cement, and prevent loss by volatilization. In this instance, the said closure consists of a disk-cover 2 that is screwed into the opening, the said cover being peripherally flanged, and the flange being arranged to project radially around the top of the opening, and to fit down tightly against the said top. A handle to be taken hold of in lifting the machine, and in moving it about in applying, spreading, and working-in the cement (or other substance) is conveniently combined with the container, as, for instance, by providing the base of the container with a lateral extension 3 and attaching the handle, 4, to such extension. An outlet slit 5 is formed in the lower portion of the container, in this instance in the base thereof. This slit extends transversely of the container. Regulated outflow of the contents of the container is permitted to oc-

cur through the said slit in the use of the machine. In connection with the outlet slit a roll 6 is employed. This roll acts as a valve and as a feed-roll for the contents of the container. It occupies a chamber 6^a between walls 7, 7, depending from the base. The slit 5 opens into the said chamber, and the said walls are concentric with the roll 6, the periphery of which fits close to the surfaces of the walls. An opening exists between the lower edges of the walls, through which the lower portion of the periphery of the roll 6 is exposed. Preferably, though not necessarily in all cases, the roll 6 is grooved or channeled longitudinally to form pockets which receive cement from the container, and in which the cement is carried around with the roll as the latter rotates. The cement fills in between the inner surfaces of the walls 7, 7, and the edges of the raised portions or ribs so as to prevent escape of cement by leakage past the roll 6.

The means of applying the cement (or other substance) to the piece or pieces of material which is to be operated upon by the machine consists of a roll 8 which revolves in contact with the feed-roll 6, and also is intended to rest and roll upon the surface to which the cement (or other substance) is to be applied. This roll receives the cement (or other substance) from the feed-roll and transfers and applies it to the said surface. Preferably it consists of a cylindrical brush having radially-disposed stiff bristles, inasmuch as the weight of the machine and of the contents of the container causes the ends of the bristles to act to work and drive the cement into the pores and interstices of the leather or other material operated upon as the brush rolls over the same. The brush roll 8 is rotated through the contact of its periphery with the surface on which it rests, and through the engagement of its periphery with that of the feed-roll 7 its rotation produces that of the said feed-roll.

The grooves of the feed-roll 6 carry an ample supply of cement to the distributing roll 8 to enable the work of applying the cement to the surfaces which are to receive it to be done quickly. The size of the grooves will be proportioned to the rate of supply desired, in practice. The grooving is advantageous, also, inasmuch as it provides for driving engagement between the

bristles of the distributing roll 8 when the latter consists of a brush, and the feed-roll 6, without the use of the gearing which I employ when I use a smooth feed-roll.

5 The distributing roll 8 is revolvably mounted in connection with blocks 9, which are mounted upon opposite lugs 10 projecting downward from the base of the container. The said roll 8 is made adjustable
10 toward and from the roll 6, to provide for securing the proper contact and engagement of their peripheral portions with each other. In this instance, for the purposes of such adjustment, each lug 10 is grooved vertically
15 at its inner side, at 10^a, and in the groove the corresponding block 9 is seated. A slot 10^b, open at its lower end, is made in the lug, to receive the stem of a clamping-screw 11, the threaded-portion of such stem entering
20 a threaded hole that is tapped in the block 9 while the flange of the head of such screw lies against the outer surface of the lug. By tightening up the said clamping-screw, the block is clamped in the desired position
25 of adjustment within the groove 10^a. The clamping-screw may be used alone, but preferably, in order to insure against loss of adjustment of the distributing roll during use, I apply to the upper end of the block 9 an
30 adjusting-screw 12. The threaded stem of the said screw works in a threaded hole that is tapped in the upper end of the block, while the head-end of the screw projects above the block and engages with a fixed
35 surface at the upper end of groove 10^a. This engagement prevents the distributing roll 8 and feed-roll 6 from being forced closer together by pressure acting during the use of the machine.

40 In constructing the machine I bore holes in line with each other, partly within the base and partly within the upper portions of the lugs 10. Within these holes I mount and fix securely in place a tube 13, which is
45 formed in its upper side with a slot registering with slit 5 in the base, and cut away at its underside, except at its extreme ends, to expose the lower portion of the periphery of the feed-roll. Upon each end of the
50 feed-roll I fix a collar 14, corresponding in diameter with the body of the said roll. The collars have a bearing fit within the end-portions of the tube, other bearings being dispensed with. They also close the
55 grooves of the feed-roll at the ends of the latter, and the said end-portions of the tube, so as to prevent cement from working outward at the ends of the feed-roll. Cylindrical plugs 15 screwing into the ends of the
60 tube, close such ends, the said plugs having flanges which fit against the outer surfaces of lugs 10.

The mode of using the machine is shown in Fig. 1. In such figure, 16 is a work-
65 bench upon which is laid a series of shoe-

vamps 17, one overlapping another shinglewise, exposing the portions which are to receive the application of cement. The operator grasps the handle of the machine with one hand and places the machine upon
70 the said exposed portions, resting the distributing roll thereon. He then moves the machine back and forth, rolling the said distributing roll over the exposed portions of the vamps until such portions have become
75 sufficiently charged with the cement. The action in applying the cement has been set forth.

Advantages of my machine are that it obviates exposure of the cement to the air, with resulting evaporation of the solvent and risk of explosion and fire. Also, that it saves cement and time. Usually heretofore, in practice, cement has been applied
80 by means of a hand-brush to the pieces after they have been spread out, the supply of cement being contained in a dish. The dish is kept at one end of the work-bench. Aside from the evaporation and its disadvantages, much cement is wasted by being dripped
85 from the brush in carrying the latter from the dish, after being dipped into the contents thereof, to the place where the application of cement is to be made.

I claim as the invention:

1. A portable hand-operated cementing-machine having a handle by which to move the same about, a container for cement, a delivery-slit in connection with the said container, a feed-roll constituting a valve
95 for such delivery-slit, and a distributing-roll in peripheral contact and driving engagement with the feed-roll whereby the distributing-roll in rotating takes cement from the feed-roll and in addition rotates
100 the latter, the said distributing-roll adapted to rest upon the surface to which cement is to be applied and to be pressed thereagainst by the weight of the machine and the cement contained therein, and being rotated through
105 its contact with such surface, in being rolled about thereon.

2. A portable hand-operated cementing-machine having a container for cement, a delivery-slit in connection with the said container, a feed-roll constituting a valve for such delivery-slit and having its periphery recessed to carry cement, and a distributing-roll taking cement from the feed-roll and rotating the latter, the said distributing-roll adapted to rest upon the surface to which cement is to be applied and to be pressed thereagainst by the weight of the machine and the cement contained therein, and being rotated through its contact with such surface in being rolled about thereon.
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3. A portable hand-operated cementing-machine having a container for cement, a delivery-slit in connection with the said container, a longitudinally-grooved feed-roll
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constituting a valve for such delivery-slit, and a distributing-roll taking cement from the feed-roll and in addition rotating the latter, the said distributing-roll adapted to
5 rest upon the surface to which cement is to be applied and to be pressed thereagainst by the weight of the machine and the cement contained therein, and being rotated through being rolled about upon such sur-
10 face.

4. A portable hand-operated cementing-machine having a container for cement, a delivery-slit in connection with the said container, a feed-roll constituting a valve for
15 such delivery-slit, and a distributing-roll taking cement from the feed-roll and in addition rotating the latter, the said distributing-roll consisting of a cylindrical brush adapted to rest by the ends of its bristles
20 upon the surface to which cement is to be applied and to be pressed thereagainst by the weight of the machine and the cement contained therein, and being rotated through

its peripheral contact with such surface in being rolled about thereupon. 25

5. A portable hand-operated cementing-machine having a container for cement, a delivery-slit in connection with the said container, a longitudinally-grooved feed-roll constituting a valve for such delivery-slit, 30
and a cylindrical brush constituting a distributing-roll, the said brush taking cement from the feed-roll and through its rotation rotating the latter, and adapted to rest upon the surface to which cement is to be applied 35
and to be pressed thereagainst by the weight of the machine and the cement contained therein, and being rotated through being rolled about upon such surface.

In testimony whereof I affix my signature 40
in presence of two witnesses.

VERTRUDE P. BUCK.

Witnesses:

CHAS F. RANDALL,
NATHAN B. DAY.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,
Washington, D. C."