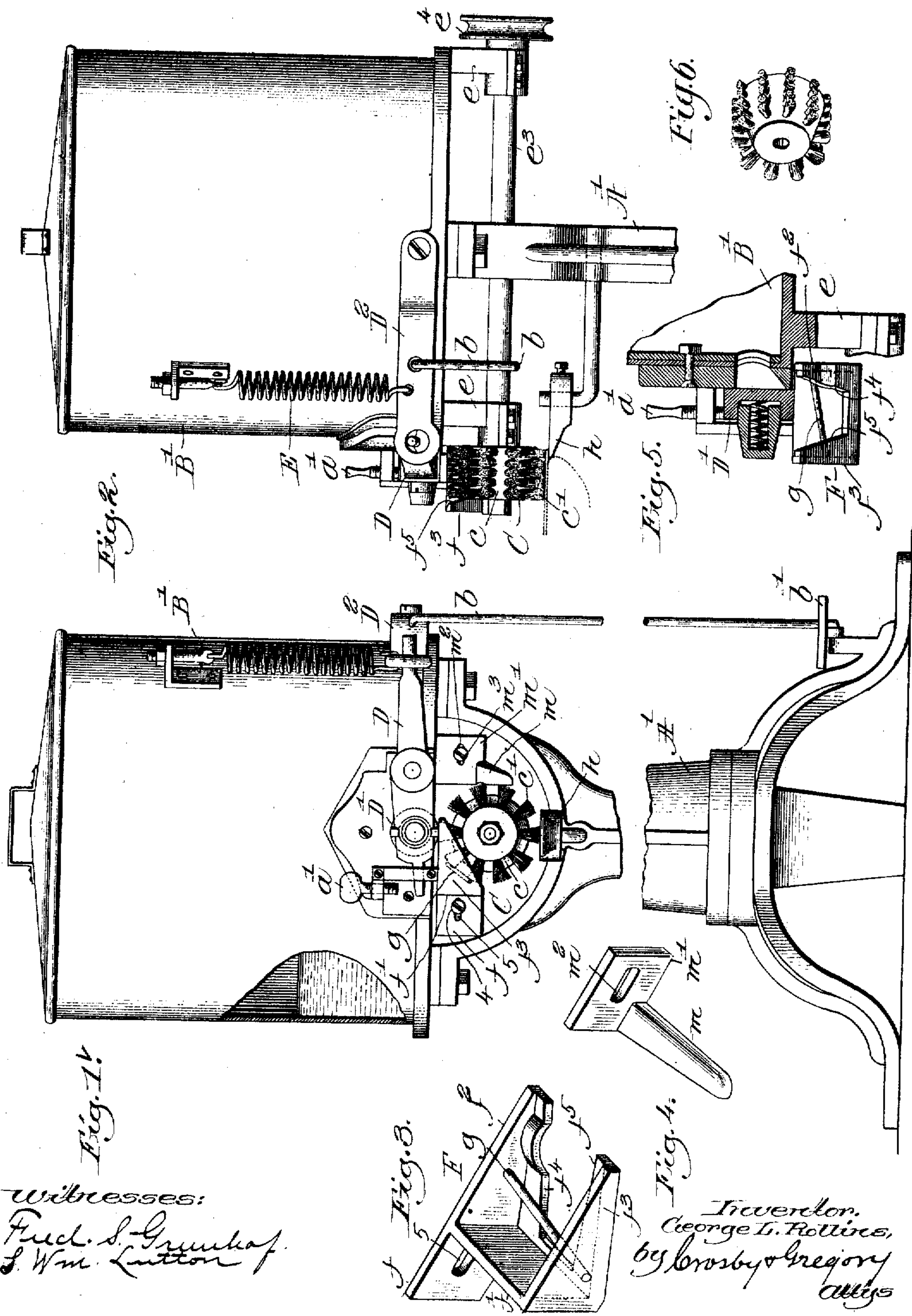


No. 829,432.

PATENTED AUG. 28, 1906.

G. L. ROLLINS.
CEMENTING APPARATUS.
APPLICATION FILED JULY 15, 1904



Witnesses:
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UNITED STATES PATENT OFFICE.

GEORGE L. ROLLINS, OF BRIDGEWATER, MASSACHUSETTS.

CEMENTING APPARATUS.

No. 829,432.

Specification of Letters Patent.

Patented Aug. 28, 1906.

Application filed July 15, 1904. Serial No. 216,659.

To all whom it may concern:

Be it known that I, GEORGE L. ROLLINS, a citizen of the United States, residing at Bridgewater, in the county of Plymouth and State of Massachusetts, have invented an Improvement in Cementing Apparatus, of which the following description, in connection with the accompanying drawings, is a specification, like characters on the drawings representing like parts.

This invention has for its object the production of novel apparatus for cementing stock in the manufacture of boots and shoes and other articles wherein it is desired to cause one part to adhere to another part by the use of cement.

United States Reissue Patent No. 12,246, dated July 26, 1904, and granted to me shows and describes cementing apparatus designed more especially for cementing the channels and channel-flaps of outer soles to cause the channel-flaps to be retained in position to cover the fastenings employed to unite the outer sole to the welt or inner sole.

In the manufacture of boots and shoes it is common before applying the outer sole to coat with cement the surface on which the inner side of the outer sole is laid preparatory to securing the outer sole to the shoe, and generally the surface so coated with cement varies in material and is composed of leather and leather chips or ground cork, and for the best results in supplying the cement that portion of the brush which contacts with the leather chips or cork should be more flexible or softer than the portion that applies cement to the leather, such as the welt and in-seam.

It is essential to cover the surface evenly with cement, and to secure this I have combined with the brush upon which the cement is deposited a means whereby the cement is distributed across the brush in one and preferably then in the opposite direction, so that the bristles of the brush are uniformly supplied as far as possible with cement.

Figure 1 represents in front elevation, partially broken out to save space on the drawing, a cementing apparatus containing my present invention in one of the best forms now known to me. Fig. 2 is a side elevation of the upper part of the apparatus shown in Fig. 1. Fig. 3 shows the combined wiper and distributor detached and enlarged. Fig. 4 shows the auxiliary or rear distributor detached and enlarged; and Fig. 5 is a section

through the tank and valve showing the wiper and distributor in elevation. Fig. 6 is a perspective view of the brush detached.

The standard A', tank B', valve-carrying lever D, upon which is mounted the valve D', the adjusting device a', the lever D', the rod b, connecting said lever with the foot-treadle b', the spring E, the rotating shaft e', having a pulley e' to receive a belt by which the shaft may be rotated, and the bearings e for said shaft are and may be all as provided for in my said patent.

The shaft e' in this present instance of my invention is provided with a brush C, composed of a truncated body c and a series of bristles c', the bristles at the inner end of the body where the same is of largest diameter being preferably shorter or stiffer than the bristles at the outer or smaller diameter of the body, the construction of the bristles being such that the bristles nearest the outer end of the body of the brush, which bristles are to contact with the leather chips or cork filling laid upon the middle portion of the inner sole, shall act with less tendency to disturb the material than the bristles at the inner end of the body of the brush, which latter bristles act upon the welt or in-seam. It will be understood that the longer the bristle of the brush the more gently the cement is applied to the stock of the shoe, and a longer bristle is therefore especially desirable for applying cement to the chips and ground cork, which are more easily disturbed by brushing over the same. By employing stiffer bristles at the inner end of the brush I find that the quantity of cement applied to the welt and in-seam may be so controlled as to prevent the cement overflowing the edge of the welt, and it will be understood that the more the bristles are bent the more freely they will discharge the cement.

To the front end of the apparatus I have secured by a bolt 4 the combined wiper and distributor F. (Shown detached in Fig. 3.) This device has a slot 5 in an ear f thereof for the reception of the bolt 4. The device f in the form in which I have herein chosen to illustrate the same is represented as an open box having an end f' and two sides f' f'. These arms are substantially triangular in shape, the lower edge being shown as inclined to cross the brush between the longitudinal axis thereof and the ends of the bristles, and these lower edges are preferably intumed to present flanges f' f', the opening

between said flanges being V-shaped, whereby the bristles of the brush are squeezed together during the rotation of the brush in supplying the cement between the entrance
5 of the bristles into the open mouth of the box and the retirement of the bristles from said box.

The box and the flanges so far described are substantially such as illustrated in my
10 said patent with the exception that the flange f^4 is semicircular for part of its length to enable the body of the brush to run clear of and not contact with the box. The flanges described in connection with the wiper-box
15 constitute an important and valuable feature, but are not essential to the invention in all its uses, as appears from the claims herein.

The box sustains between its sides a distributor g , shown as a rod that crosses the
20 box diagonally with relation to the end f' , and, as shown, the outer end of the distributor is lower than the inner end thereof, so that cement applied to the bristles of the brush, as fully provided for in said patent,
25 through opening the valve D' will be deposited upon the distributor and will be made to flow lengthwise thereover, so that all of the bristles throughout the entire length of the brush may be supplied with cement and ap-
30 ply the same to the surface over which it rotates. The body of the brush may be of any desired length to apply cement to a surface of whatever width, it being understood that
35 different sizes of shoes vary in width from the outer edge of the inner sole to the middle line of the shoe in relation to its length.

In the present apparatus the operator holds the shoe in hand, the welt having been applied and the chips and cork or whatever
40 filling is used being also in place, and moves the shoe around, forcing the junction of the upper with the welt against an edge-gage h , (see Fig. 2,) the cement being applied substantially throughout the shoe from one to its
45 other end, or starting from the heel at one side the cement is applied about the shoe toward its toe end and back again to its heel end. I find in practice that the cement when applied to the bristles of the brush at one point
50 must be worked lengthwise the body of the brush, whatever the length of the body, that all the bristles may receive cement, and also as there is a considerable quantity of cement on the brush after it has contacted with the
55 surfaces to which the brush should apply cement the cement needs for the best results to be worked backwardly over the brush, such action securing more uniform distribution of the cement and saving cement that
60 might be lost or wasted if the distribution of the cement over the bristles of the brush was in but one direction.

To secure a backward distribution of the cement, I employ a distributor m , that I have
65 designated as an "auxiliary" distributor, and

I have shown the same as an inclined finger connected with a plate m' , provided with a hole m^2 , for the reception of a bolt or set-screw m^3 by which to secure said distributor in correct operative relation to the brush. 70
This distributor m receives the cement carried by the bristles of the brush after the bristles have swept over the stock, and the edge of the distributor m next the brush is so shaped and located that the cement travels
75 upwardly and backwardly toward the rear end of the body of the brush.

I consider it essential for the successful operation of a cementing-machine of the class herein described to employ a distributor
80 upon which cement applied to and carried by the bristles of the brush may be deposited and be carried through said distributor longitudinally with relation to the axis of rotation of the brush to thereby supply all the
85 bristles with cement, and consequently I desire to claim, broadly, a distributor for distributing the cement from one toward the opposite end of the brush. The essential feature of the distributor, whether it be
90 placed before or behind or elsewhere with respect to the brush or whether one or more be used, is that it shall present an edge in close proximity to and preferably slightly within the peripheral surface of the brush and in-
95 clined with respect to the axis of rotation of the brush.

Having described my invention, what I claim as new, and desire to secure by Letters Patent, is— 100

1. In an apparatus of the class described, a rotary brush, a wiper located to act against the sides of the brush between the axis and the ends of the bristles to wipe the cement toward the ends of the bristles, combined
105 with a distributor presenting an edge in close proximity to the peripheral surface of the brush and inclined with respect to the axis of rotation of the brush.

2. In apparatus of the class described, a
110 rotary brush, a wiper located at one side of the longitudinal axis of the brush, said wiper acting against the sides of the brush between the axis and ends of the bristles, and a distributor located at the opposite side of the
115 longitudinal axis of the brush, said distributor presenting an edge in close proximity to the peripheral surface of the brush and inclined with respect to the axis of rotation of the brush. 120

3. In apparatus of the class described, a rotary brush, a wiper located to act against the sides of the brush between the axis and the ends of the bristles to wipe the cement toward the ends of the bristles, a distributor
125 located at one side of the longitudinal axis of the brush, said distributor presenting an edge in close proximity to the peripheral surface of the brush and inclined with respect to the axis of rotation of the brush, and a similar 130

distributor located at the opposite side of the longitudinal axis of the brush, said distributors acting oppositely in distributing the cement over the bristles of the brush.

5 4. In apparatus of the class described, a rotary brush having a truncated body, combined with a wiper having at its lower edge inturned flanges crossing the bristles between the body of the brush and their ends,
10 the space between the inner edges of said

flanges being V-shaped, one of said flanges being curved upwardly to receive the larger end of the body of the brush.

In testimony whereof I have signed my name to this specification in the presence of 15 two subscribing witnesses.

GEORGE L. ROLLINS.

Witnesses:

GEO. W. GREGORY,
MARGARET A. DUNN.