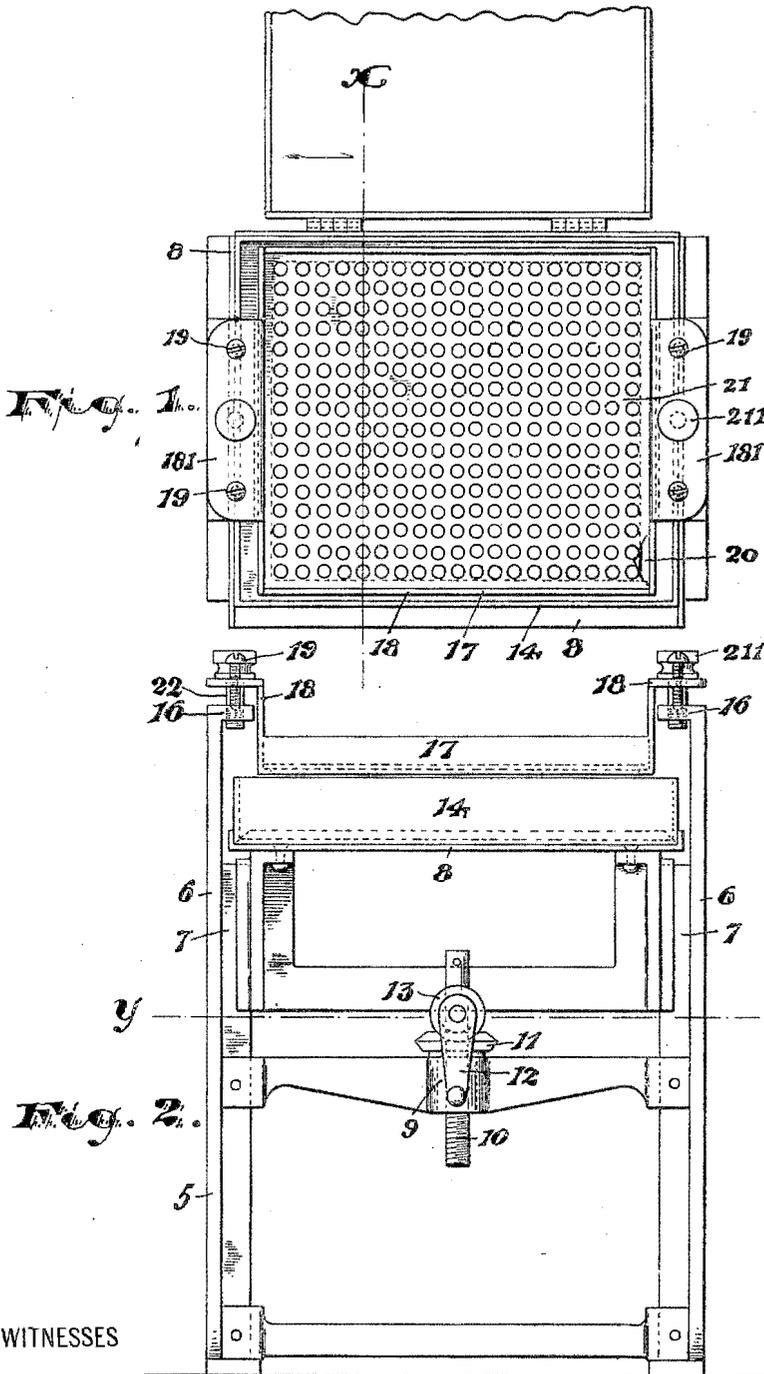


J. SCHREINER.
BRISTLE CEMENTING MACHINE.
APPLICATION FILED MAY 2, 1905.

2 SHEETS—SHEET 1.



WITNESSES

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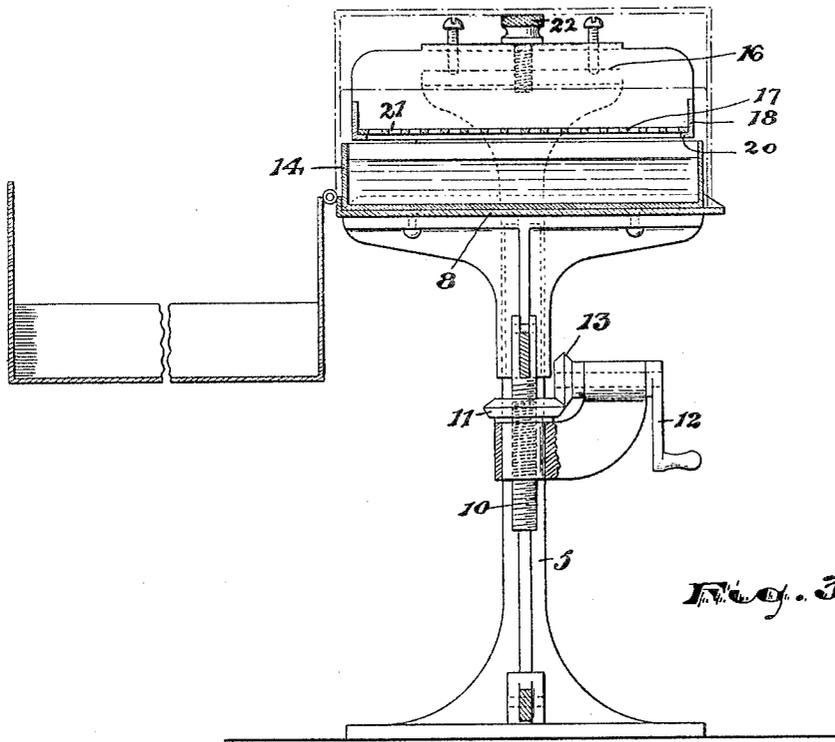


Fig. 3.

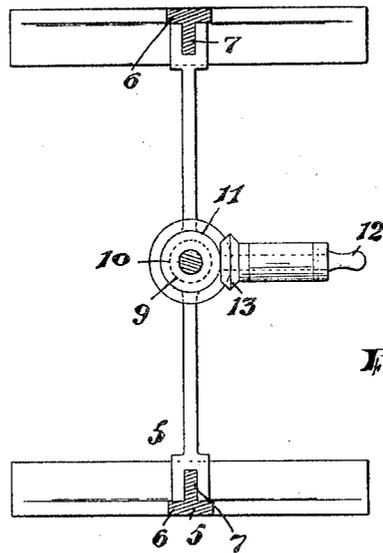


Fig. 4.

WITNESSES

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UNITED STATES PATENT OFFICE.

JOSEPH SCHREINER, OF IRVINGTON, NEW JERSEY, ASSIGNOR TO RUBBER AND CELLULOID HARNESS TRIMMING CO., A CORPORATION OF NEW JERSEY.

BRISTLE-CEMENTING MACHINE.

No. 802,827.

Specification of Letters Patent.

Patented Oct. 24, 1905.

Application filed May 2, 1905. Serial No. 258,460.

To all whom it may concern:

Be it known that I, JOSEPH SCHREINER, a citizen of the United States, residing at Irvington, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Bristle-Cementing Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to figures of reference marked thereon, which form a part of this specification.

The object of this invention is more particularly to facilitate the work of applying rubber cement to the bristles of brushes in the operation of fastening said bristles into brushes; to secure a more uniform product; to reduce the cost of constructing the brushes, and to secure other advantages and results, some of which may be referred to hereinafter in connection with the description of the working parts.

The invention consists in the improved bristle-cementing machine and in the arrangements and combinations of parts of the same, all substantially as will be hereinafter set forth, and finally embraced in the clauses of the claim.

Referring to the accompanying drawings, in which like numerals of reference indicate corresponding parts in each of the several figures, Figure 1 is a plan of the improved machine. Fig. 2 is a front elevation of the same, and Fig. 3 is a vertical section taken at line *x* of Fig. 1, and Fig. 4 is a horizontal section taken at line *y* of Fig. 2.

In said drawings, 5 indicates the frame of the improved machine providing vertical arms 6 6 at opposite sides thereof, said arms having vertical slideways 7 7 at their inner sides, on which a vertically-adjustable table 8 has its sliding bearings. The said frame 5 is provided between said arms with a bearing 9 for a threaded and beveled gear-wheel 11, carrying a screw 10, passing through said beveled gear-wheel 11, and the latter serving as a nut for raising or lowering the said screw therein as the said beveled wheel is turned. The said screw 10 supports an adjustable table 8, and the said nut 11 is operated by a hand-crank 12, having a gear-wheel 13, which meshes with the nut or beveled gear-wheel 11. The parts

are so arranged and disposed in their relations to one another that by turning the hand-crank 12 and gear-wheel 13 the nut 11 is turned, thereby moving the screw 10 vertically and with it the table 8, which latter slides on the slideways 7 to raise the said table and with it the tank 14, which may be arranged thereon. Said tank is a shallow receptacle containing or adapted to contain a solution of rubber, such as is sometimes used in fastening the bristles of a brush in place. Other cementitious liquids, however, may be employed, or the tank may contain other matters when the machine is used for other purposes than the one particularly specified.

At the top of the side arms 6 6 of the frame are bearings 16 for a bottomless bristle-supporter 17. Said supporter consists, preferably, of a frame 18, having raised opposite sides 181, which at their upper ends are bent horizontally and outwardly and project over the bearings 16, the said sides having adjusting-screws 19 therein, which project downward into engagement with the said bearing 16. Four of such screws are preferably employed, enabling the said supporter to be leveled or adjusted to hold all the bristles in the desired relation to the liquid. The said supporter interiorly is provided with lips or flanges 20, Figs. 1 and 3, upon which a perforated plate 21 is separately laid, said plate 21 serving to receive a large collection of bunches of bristles for the brushes to be subjected to the cementitious matter. The said supporter 17 after being properly adjusted can be locked in position by set-screws 211, which extend through the threaded bearing 16, as indicated in Fig. 2. The said bristles, bound together in bunches suited to the brushes, are placed so as to stand on the perforated plate 21, preparatory to receiving the cementitious liquid. The crank 12 is then turned, and the table 8 and its tank 17 are raised, so that the fluid matter enters through the perforated plate and into the bunches of bristles to the proper height therein, sufficient time being given for a thorough application of the liquid to the said bristles. The tank is then lowered, and the bunches of bristles may be removed to be otherwise manipulated in the construction of the brush. The raising of the tank by the means described enables the work to be performed with the greatest exactness and uni-

formity and without smearing the fluid upon the free upper ends of the bristles, as will be obvious.

Having thus described the invention, what I claim as new is—

1. The improved cement-applying machine herein described, comprising a suitable frame, a support for the bristles adjustable in its relation to said frame, a tank vertically movable beneath said support, and means for raising and lowering said tank, to bring the contents of said tank in contact with the bristles, substantially as set forth.

2. The combination with the frame, of a bristle-support adjustably seated on said frame, a tank and means for raising and lowering said tank, substantially as set forth.

3. The combination with the frame, of a perforated plate adapted to permit the even upflow of liquid through the perforations therein at all points of said plate and an even and quick drainage of surplus liquid, said plate being supported by upwardly-extending sides which at their upper ends are supported by said frame upon which the bristles may be seated, a tank adapted to contain cementitious matter, the support and tank being adjustable to one another whereby said cementitious matter may be applied to said bristles on said support, and means for adjusting said parts to bring said cementitious matter into contact with the bristles, substantially as set forth.

4. The combination with the frame having vertical slideways, of a table movable vertically on said slideways and having a separable perforated plate adapted to receive the bristles, a tank supported on said table, a bristle-support above said tank and means for bringing the bristles into contact with the fluid in said tank.

5. The combination with the frame having vertical slideways, of a table movable on said slideways, a tank supported on said table, a

bristle-support above said tank, having a perforated plate, and means for bringing the bristles into contact with the fluid in said tank.

6. The combination with the frame having vertical slideways, of a table movable on said slideways, a tank supported on said table, a bristle-support above said tank, a screw extending down from the table, a beveled and threaded gear-wheel and nut resting on said frame and on said screw and a crank having a cooperating gear-wheel meshing with the wheel first mentioned.

7. The combination with the frame having arms at opposite sides thereof, with slideways at their inner sides and bearings below the level of said arms, an adjustable table, slidably arranged on said slideways, a screw supporting said table and having a beveled gear-wheel nut and a crank having a cooperating gear-wheel, a tank on said table and a perforated bristle-support disposed at the top of said arms and adapted to enter said tank when the latter is elevated by said screw and connections, substantially as set forth.

8. The combination with the frame having arms upon which a plate-supporting frame is adjustably seated, said frame having a separable, perforated bristle-plate thereon, a table vertically adjustable beneath the plate-supporting frame, a tank separably supported on said table, means adapted to raise said table and tank to effect an entrance of said plate into said tank to submerge the lower ends of the bristles resting on said plate, said means including a hand-crank disposed below the said tank, substantially as set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 27th day of April, 1905.

JOSEPH SCHREINER.

Witnesses:

CHARLES H. PELL,
RUSSELL M. EVERETT.

RUBBERSET

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