June 12, 1934. A. S. JOHNSON 1,962,148

COATING MACHINE

Original Filed March 12, 1929

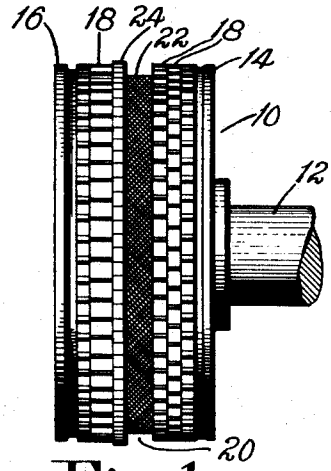


Fig:1.

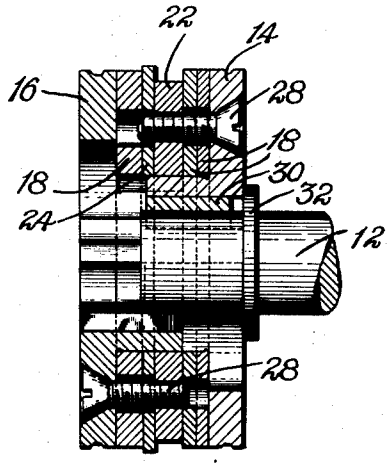


Fig:2.

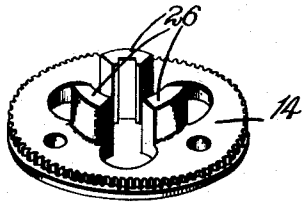


Fig:4.

Fig:3.

INVENTOR

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By his Attorney,

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1,962,148

UNITED STATES PATENT OFFICE

1,962,148

COATING MACHINE

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Original application March 12, 1929, Serial No. 346,383. Divided and this application August 5, 1931, Serial No. 555,335

10 Claims. (Cl. 91—67.8)

This invention relates to rolls for use in applying a coating to a work piece and is herein illustrated as embodied in a roll adapted for use in applying adhesive to the margin of an upper and to a binding strip attached to the marginal portion of the upper.

In certain types of shoes, particularly women's shoes, the edges of the component parts of a shoe upper are commonly finished with a so-called French edge in order to conceal the raw edge of the leather and to improve the appearance of the finished shoe. This French edge is produced by attaching a fabric binding strip to the outer face of a shoe part, in a position wholly overlying the shoe part, by means of a row of stitches located close to the edge of the shoe part. After the fabric strip has been stitched to the shoe part the strip is straightened to cause it to extend outwardly from the piece of work in a plane slightly above the plane of the shoe part so that the strip extends out from the shoe part at a level above the level of the lower surface of the shoe part. A coating of cement is applied to the margin of the inner face of the work piece and to a corresponding inner face of the binding strip. The binding strips employed by different manufacturers vary somewhat in width and, furthermore, the desires of various manufacturers, as to the width of the bands of cement relatively to the pieces of work, differ. It is, therefore, necessary to supply cement rolls of different dimensions to meet these demands.

With this in view, a feature of the invention resides in a construction and arrangement of a built-up cement roll in which, by the provision of standard parts sufficient to make up the widest roll needed, it is possible to put together a series of rolls of different dimensions and arrangements out of a limited number of component parts. To this end, as illustrated, the cement applying roll comprises end flanges provided with hub-like projections which are cut away to allow the projections to be interlocked at variable distances and body sections mounted on the hub-like projections and provided with a plurality of equally spaced holes, the flanges being provided with a less number of registering holes, and fastening screws being inserted through each of the end flanges and threaded into only a single intermediate body section within the body of the roll.

This and other features of the invention will now be set forth in detail with reference to the accompanying drawing, in which

Fig. 1 is a view in side elevation of a cementing roll illustrating one embodiment of the invention;

Fig. 2 is a section of the cementing roll;

Fig. 3 is an exploded view, partly in section, showing details of the construction of the roll; and

Fig. 4 is a perspective view of one of the hub sections of the roll.

A cement applying roll 10 is herein shown as secured to one end of a shaft 12 which may be mounted in suitable bearings for use in a cementing machine of the type disclosed in United States Letters Patent No. 1,242,925, granted October 16, 1917, on application of John W. Cosgrove, or of the type disclosed in my copending application, Serial No. 346,383, filed March 12, 1929, of which the present application is a division.

The cement roll 10 is provided with like end flanges 14 and 16 and with intermediate disks 18. One of the intermediate disks 22 is of smaller diameter than the other disks so as thereby to form a groove 20 in the periphery of the roll to prevent injury to a cooperating work engaging part of a machine such, for example, as one of the type illustrated in the parent application referred to above. Associated with this smaller disk 22 is a thin disk 24 having feeding projections and the other disks 18 are substantially alike except that they are of different thicknesses and may be interchanged or selected so as to bring the feeding disk 24 and the smaller disk 22 at just the desired position in the cement roll, according to the work which is to be done.

A construction is employed for holding together the parts of the cement roll which renders it easier to assemble the roll and makes it possible for a manufacturer to obtain rolls of varying characteristics by means of a limited stock of parts which can be kept on hand. A cement roll is built up from the end flanges 14 and 16 each of which is provided with three inwardly extending hub-like projections 26. Each of these projections is a sixth part of an annulus and the projections are so arranged that they may be intermeshed or interlocked and still allow for axial adjustment of the flanges 14 and 16 with respect to each other. The intermediate disks 18, 22 and 24 are cut out at the center to slide over these projections 26 and each of them is provided with six equally spaced holes for the reception of fastener screws 28. Only the holes in the intermediate disk 22 are threaded while the others are large enough to pass freely over the shanks of the screws and the arrangement provides for the insertion of three equally spaced oppositely directed screws 28 through each end flange which pass

through the openings of some of the various disks and are threaded into and thereby interlock with the intermediate disk 22. The group of screws passing through one of the flanges cooperates with the intermediate disk 22 to pull together said disk and the flange in question, thereby also clamping the interposed disks. By their combined effect, the groups of oppositely directed screws hold the roll together. The arrangement provides a compact, readily assembled group of parts in which the securing screws 28 are of standard length, such that they will be long enough to reach the intermediate disk 22 for the widest roll but are not long enough to project through the whole roll when some of the disks are removed. A groove is cut in the inner surface in one of the segmental projections 26 to receive a key 30 in the end of the shaft 12, which shaft is also provided with a shoulder 32 against which the flange 14 of the assembled roll rests.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent of the United States is:

1. A cement applying roll comprising end flanges and a plurality of perforated intermediate disks, and oppositely directed securing members extending through the perforations and mechanically joining each end flange to an intermediate disk and acting to pull together said disk and one of the flanges thereby, by their combined effect, to hold the entire roll together.

2. In a cementing machine, a cement applying roll comprising end flanges and a plurality of perforated intermediate disks, and securing members coacting with only a single intermediate disk in securing the end flanges and the intermediate disks together.

3. A cement applying roll comprising a pair of end flanges and a plurality of perforated intermediate disks, one of said intermediate disks being provided with threaded holes, and securing means extending inwardly from each of the flanges through the perforations of some of the disks to engage with said threaded holes.

4. A cement applying roll comprising end flanges provided with hub-like projections which interlock to determine the relative position of said end flanges circumferentially of the roll, perforated intermediate disks mounted on said hub-like projections, said end flanges being perforated in registration with only part of the holes in said intermediate disks, and securing means extending inwardly through the perforations of each of said end flanges and interlocked with a common intermediate disk whereby said roll is held together by the combined effect of said securing means.

5. A work roll comprising a pair of end flanges having interlocking projections between said flanges, a plurality of disks between the flanges to form the body of the roll, and securing means extending inwardly from each of the flanges coacting with a disk and passing through only a fractional part of the distance between the flanges of the roll.

6. In a cementing machine, a shaft, a work roll adapted to be mounted on said shaft and driven thereby comprising an end flange having a driving connection with said shaft, another end flange, each of said end flanges having interlocking projections forming the hub of the roll, roll sections interposed between said flanges, and securing screws extending inwardly from each end flange and threaded through one of said sections.

7. In a cementing machine, a cement roll comprising end flanges having interlocked, inwardly projecting members, body sections mounted between said flanges, one of said intermediate sections being provided with a plurality of threaded holes, and screws inserted through each of the end flanges and threaded into the holes of said intermediate section.

8. A cement applying roll comprising end flanges provided with hub-like projections which are cut away to allow said projections to be interlocked at variable distances, a roll body comprising sections mounted on said hub-like projections, said body sections being provided with a plurality of spaced holes and said flanges being provided with a less number of registering holes, and fastening screws inserted through each of the end flanges and threaded into the body.

9. A cement applying roll made of end flanges, a plurality of interposed body sections, and fasteners inserted inwardly through the flanges to draw the flanges and sections together, one of said body sections having securing means receiving and coöperating with said fasteners.

10. For use in a cementing machine, a cement roll comprising end flanges having interlocking, hub-like projections, nonalined perforations in the respective flanges, body sections mounted on said hub-like projections and provided with perforations registering with the perforations in both of said flanges, and securing means passing through the perforations in each flange and gripping a common body section thereby to hold the roll in assembled relation.

ARTHUR S. JOHNSON.