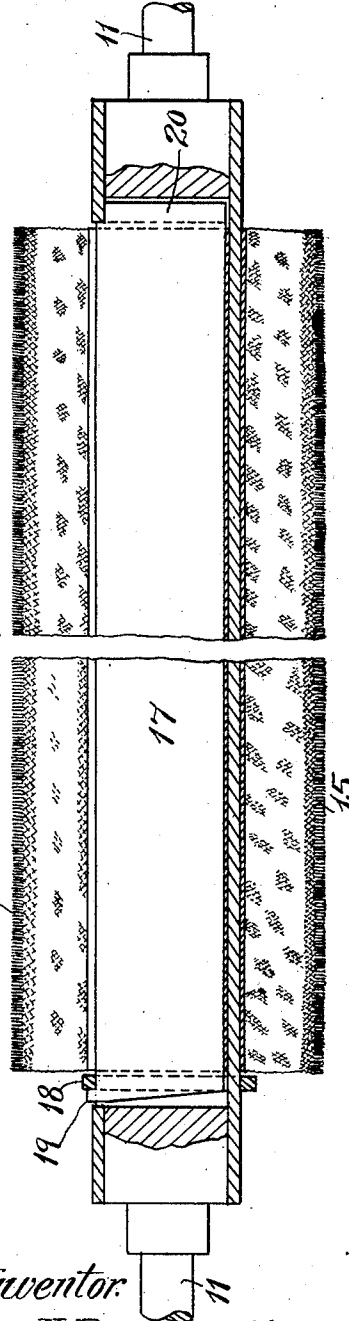
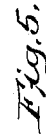
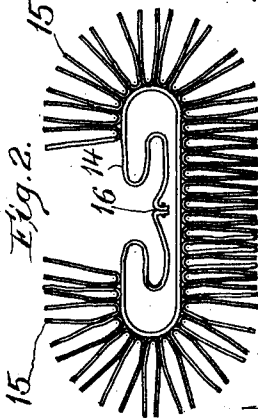
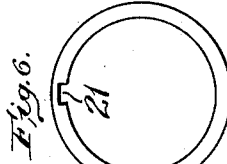
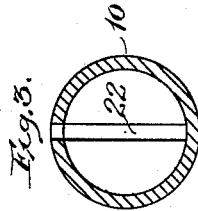
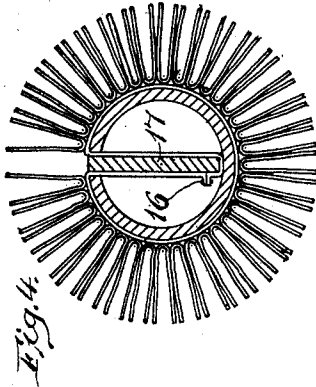
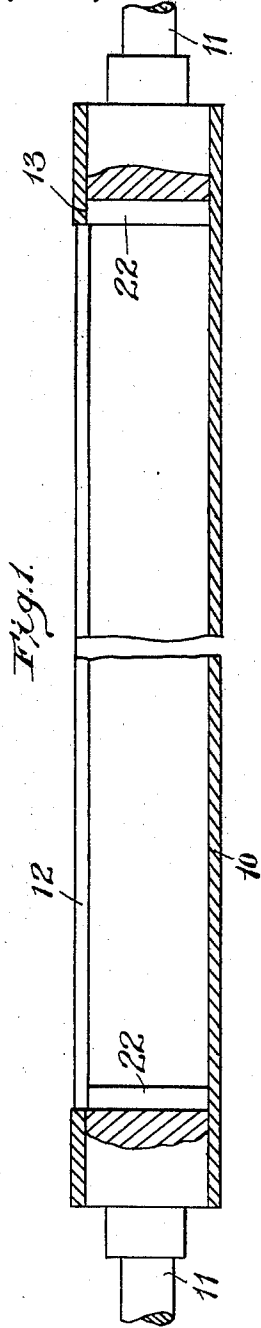


M. H. PIPER, DEC'D.
O. F. PIPER, ADMINISTRATRIX.
DUSTING ROLL.
APPLICATION FILED NOV. 11, 1910.

Patented Sept. 19, 1911.

1,003,647.



Witnesses:
H. L. Allen
P. W. Pyette

Inventor.
Myron H. Piper, Dec'd.
Clara F. Piper, Adm'x.
by Wright Brown Lumley & May
William Lumley

Attys.

UNITED STATES PATENT OFFICE.

MYRON H. PIPER, DECEASED, LATE OF WALPOLE, MASSACHUSETTS, BY CLARA F. PIPER, ADMINISTRATRIX, OF WALPOLE, MASSACHUSETTS, SAID MYRON H. PIPER, IN HIS LIFETIME HAVING ASSIGNED TO UNITED PRINTING MACHINERY COMPANY, OF BOSTON, MASSACHUSETTS, A CORPORATION OF MAINE.

DUSTING-ROLL.

1,003,647.

Specification of Letters Patent. Patented Sept. 19, 1911.

Continuation of application Serial No. 504,638, filed June 28, 1909. This application filed November 11, 1910. Serial No. 591,844.

To all whom it may concern:

Be it known that I, MYRON H. PIPER, late a citizen of the United States, and resident of Walpole, in the county of Norfolk and State of Massachusetts, did invent certain new and useful Improvements in Dusting-Rolls, of which the following is a specification.

This invention relates to dusting rolls such as those used in machines for applying pulverulent coloring material to previously coated sheets. The function of the dusting rolls is to remove excess coloring material from the sheets.

One object of the invention is to provide a dusting roll comprising a body, a jacket therefor provided with strips for engaging the paper sheets, and means adapted to be interlocked with the body of the roll and with the jacket for the purpose of securely fastening the jacket upon the roll. The jacket-securing means is constructed in such a way that it may be readily applied and removed without the use of a tool.

Dusting rolls, as employed in bronzing machines, for example, are rotated at a relatively rapid rate and it is necessary that their weight should be evenly distributed so that they may be always in perfect balance so as to avoid unduly vibrating the machine.

A further object of the present invention is to construct the roll and the interlocking means for securing the jacket according to such proportions as to insure perfect balance of the roll when the several parts are assembled.

Of the accompanying drawings which illustrate one form in which the invention may be embodied: Figure 1 is a longitudinal section of the body of a dusting roll. Fig. 2 is an end elevation of a detached jacket therefor provided with a plurality of longitudinal strips of woven fabric. Fig. 3 is a transverse section of the body of the roll. Fig. 4 is a transverse section of the roll with the detachable members assembled thereon. Fig. 5 is a longitudinal section of the assembled roll. Fig. 6 is an elevation of locking ring.

The same reference characters indicate the same parts wherever they occur.

The body of the roll, as shown, is of tubu-

lar formation, being formed of a tube 10 in each end of which is rigidly secured a trunnion for the purpose of rotatably mounting the roll in suitable bearings. The body 10 is formed with a longitudinal slot 12 at one end of which is an overhanging shoulder 13.

Experience has demonstrated that a most efficient dusting roll may be made by increasing the body portion in a jacket provided with a plurality of longitudinal strips of woven fabric attached in parallel relation at their median lines so that they are adapted to present their longitudinal edges to the work. A jacket with strips of this character is shown by Fig. 2, in which the jacket is indicated at 14 and the strips at 15. The jacket itself may be composed of woven fabric, which is first cut in the form of a strip of slightly less length than the slot 12 in the body of the roll. The strip is of sufficient width to surround the body of the roll and to extend in double thickness into the roll through the slot 12 and to the opposite wall of the body as shown by Fig. 4. The edges of the strip are fastened together in any desired way such as by stitches 16. The strips 15 are preferably cut bias for the purpose of avoiding to a considerable extent their liability of fraying. They are preferably arranged upon the jacket 14 in close parallel relation and may be attached on their median lines by stitches or any other preferred form of fastening means. By so arranging the strips, the dusted surface receives the benefit of both longitudinal edges.

The means herein shown for attaching the dusting jacket comprises a clamping bar 17 and an annular ring 18 adapted to loosely surround the body of the roll. One end of the bar 17 is formed with a nose 19 and the other end 20 is cut away in such a manner as to adapt it to fit inside the shoulder 13 of the roll. The jacket and clamping bar are assembled by first slipping the jacket over the roll and then forcing the excess material between the strips 15 through the slot 12 into the interior of the roll. The loose portion of the jacket may be forced into the roll by means of the end 20 of the clamping bar, said end being inserted under the shoulder 13 as shown by Fig. 5. The

other end of the clamping bar is then forced through the groove 12 into the interior of the roll until its outer edge lies flush with the exterior surface of the roll. The jacket 14 is preferably of such proportion as to be stretched tight when the clamping bar is inserted, and the two members thus assembled may be readily locked in place by slipping the ring 18 upon the roll and over the projection 19. A recess 21 is formed in the inner face of the ring to enable the ring to pass over the projection 19 and the ring may thereafter be interlocked by turning it so as to move the recess out of register with the projection.

That side of the body of the roll which has the groove 12 is obviously lighter than the side diametrically opposite, but this inequality of weight is substantially neutralized when the clamping bar 17 is inserted in the slot. The clamping bar is so deep as to extend diametrically across the axis of the roll to the opposite wall thereof, and it may be held in a central position by forming grooves 22 in the inner ends of the trunnions 11 in which the ends of the bar may lie.

The present invention is illustrated and described in the application of Myron H. Piper (deceased), Serial No. 504,638, filed June 28, 1909, abandoned September 21, 1910.

Having thus explained the nature of the invention and described a way of constructing and using the same, although without attempting to set forth all of the forms in which it may be made or all of the modes of its use, I declare that what is claimed is:

1. A dusting roll comprising a tubular body formed with a longitudinal slot, a jacket adapted to encircle the body and to extend doubly through said slot into the body, a plurality of strips attached to the jacket, a bar adapted to be introduced into

the roll through said slot and there to hold the jacket in a taut condition, and means for confining the bar within the roll.

2. A dusting roll comprising a tubular body formed with a longitudinal slot, a woven fabric jacket therefor provided with longitudinal strips of woven fabric, and means for detachably clamping the jacket on the body, said means comprising a bar adapted to enter said slot, an overhanging shoulder on the body for confining one end of the bar, and an annular ring adapted to surround the body and confine the other end of the bar.

3. A dusting roll comprising a tubular body formed with a longitudinal slot, a flexible jacket adapted to loosely surround the body, a clamping bar adapted to press the jacket into said slot, means on the body adapted to interlock with one end of the bar, and means adapted to be moved into engagement with the other end of the bar and to become interlocked therewith.

4. A dusting roll comprising a tubular body formed with a longitudinal slot, a flexible covering adapted to loosely surround the body, a clamping bar adapted to enter the tubular body through said slot, said covering being adapted to be drawn tightly about the body by said bar, and said bar being formed to counterbalance the greater weight of the roll automatically opposite said slot, whereby the roll may rotate without vibration, and means for interlocking the ends of the bar within the body.

In testimony whereof I have affixed my signature in presence of two witnesses.

CLARA F. PIPER,
Administratrix of the estate of Myron H. Piper, deceased.

Witnesses:

WALTER P. ABELL,
FRANK O. PILSBURY.