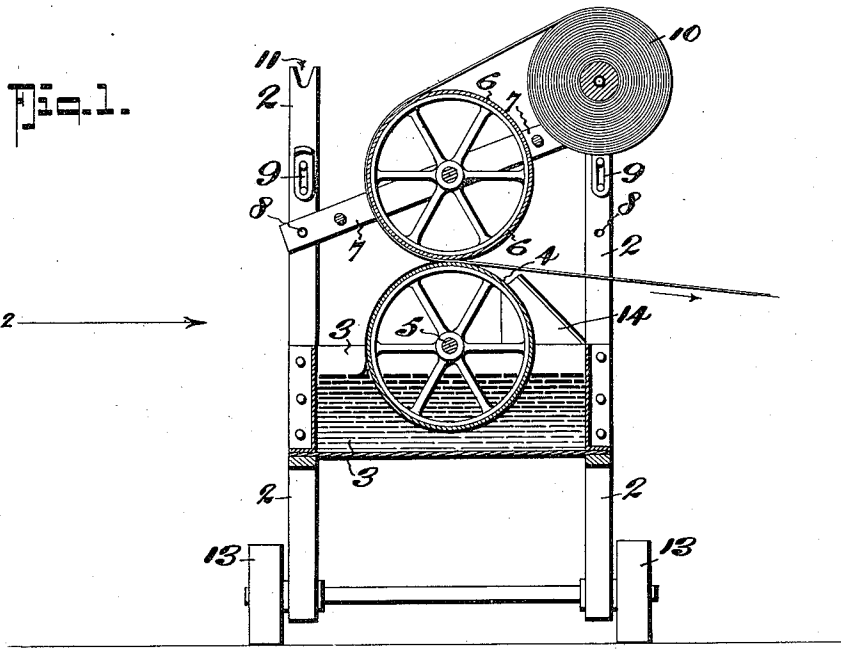
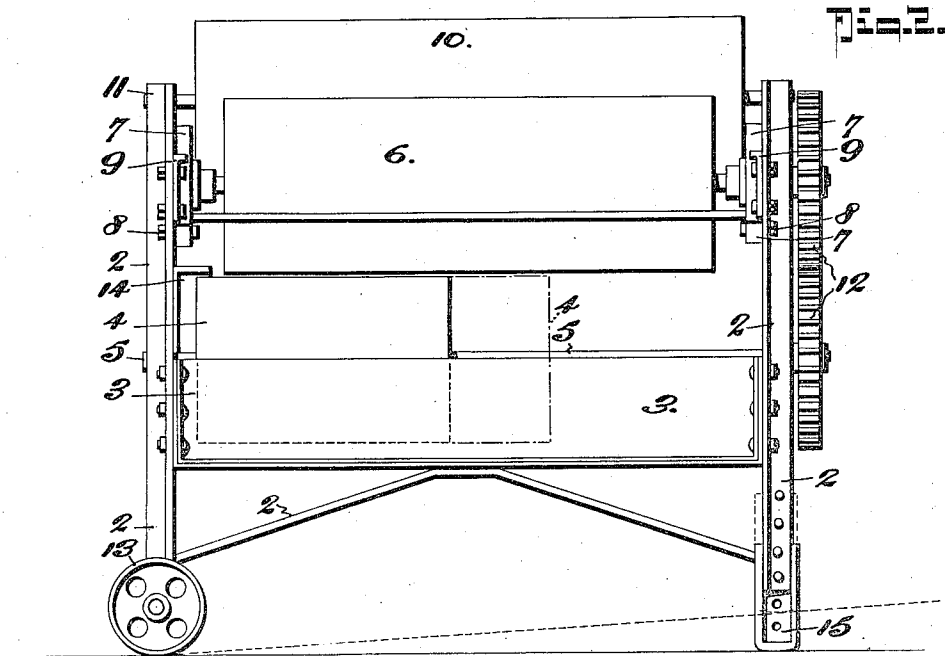


S. TROY & L. JACOBSEN.
 ROOFING PAPER MOPPING MACHINE.
 APPLICATION FILED APR. 13, 1917.

1,281,230.

Patented Oct. 8, 1918.



INVENTORS
Steven Troy,
Lew Jacobsen.
 BY
Fred G. Dulmus & Co.
 ATTORNEYS

UNITED STATES PATENT OFFICE.

STEVEN TROY AND LEW JACOBSEN, OF VANCOUVER, BRITISH COLUMBIA, CANADA.

ROOFING-PAPER-MOPPING MACHINE.

1,281,230.

Specification of Letters Patent.

Patented Oct. 8, 1918.

Application filed April 13, 1917. Serial No. 161,826.

To all whom it may concern:

Be it known that we, STEVEN TROY and LEW JACOBSEN, a subject of the Emperor of Austria, and a citizen of the Dominion of Canada, respectively, residing at Vancouver, in the Province of British Columbia, Canada, have invented certain new and useful Improvements in Roofing-Paper-Mopping Machines, of which the following is a specification.

This invention relates to a "mopping" machine for applying a coating of molten asphaltum or the like to the underside of a width of water-proofed or other fabric while delivering the same to be laid on a floor or roof in order that the laid material may adhere to the surface to which it is applied and be water-proof in that connection.

The improvements are directed to the provision of a light and simply operable device that will allow the strip of paper or the like to be withdrawn from the roll in which it is purchased, which roll is rotatably mounted on the machine and will afford it the required support while a coating of molten asphaltum is applied in a continuous band to the underside of it, either across its entire width or such fraction thereof as may be required, the thickness of the applied coating being adjustable to suit the requirements and is substantially uniform in its distribution.

The machine is fully described in the following specification, reference being made to the drawings by which it is accompanied, in which:

Figure 1 is a vertical section of the machine on the line 1—1 in Fig. 2, and Fig. 2 is an elevation in the direction of the arrow 2 in Fig. 1.

In these drawings 2 represents a simple structural frame, preferably of wrought metal, within which frame is supported a trough 3 adapted to hold molten asphaltum or a like adherent water-proofing material. In the ends of this trough 3 is journaled the axle 5 of a "mopping" roller 4, that the underside of the roller may be immersed in the asphaltum within the tank and the upper side project thereabove. This roller 4 is preferably made of thin sheet metal and its cylindrical form maintained intermediate of the spoke frames which support it from its axle, by similar frames or rings.

This light construction is adapted that

the thin metal of the roller may be more quickly heated by the molten asphaltum and render unnecessary the customary independent and supplementary heating of the roller by steam or otherwise. The construction also lends itself to the desirable feature of lightness for portability.

Immediately over the roller 4 a supporting and driving roller 6 is supported in a frame 7, which frame is pivotally connected to either side of the main frame at 8 and is supported at the other side on an adjustable stop 9 that will sustain the roller 6 at the required distance clear of contact with the "mopping" roller 4.

The roll 10 of paper or other fabric which it is required to apply to the surface of the floor or roof is mounted in bearings 11 on that side of the frame 2 toward which the "mopped" paper is to be delivered, and the paper 10 is taken from the underside of its roll and passed over and around the drive roller 6 and is delivered toward that side, that is, to the side on which the roll 10 is mounted.

The paper thus encircles the roller 6 to a sufficient extent to afford the required frictional grip to rotate the drive roller 6 and the "mopping" roller 4, which roller is rotated from 6 by gear wheels 12 secured on their respective axles or by other convenient means, such as will rotate the roller 4 in an opposite direction to that of 6 that the adjacent sides may travel together. Whatever driving means is used between the rollers 4 and 6 should be such as will permit slight variation in the distance between them, as although the rollers do not touch one another, or the paper on the rollers 6 does not touch the roller 4, the asphaltum or other material is lifted from the trough 3 by the roller 4 and is applied to the underside of the paper as it passes around the roller 6 and the thickness of this applied coating is regulated by the distance between the rollers and determined by the adjustable stops 9 against which the roller carrying frame 7 rests at one end.

To enable the paper to be taken from either side of the machine as required the bearings 11 for the axle of the paper roll and the fulcrum pin 8 and adjustable stops 9 are provided on both sides of the frame 2, so that the paper roll and the frame 7 may be reversed when desired.

As the roller 6 should be kept free from

any accumulation of asphaltum or other water-proofing material which would impair its action, its length, see Fig. 2, is less than the width of the paper to be "mopped" that the edges of the paper may project beyond the ends of the roller and thus prevent application of the asphaltum to the surface of the roller. This is an important feature differentiating this machine from any other used for the same or similar purpose.

One end of the mopping roller 4 should coincide practically with one edge of the paper and its length will depend on what width of the paper it is desired to "mop." As the width required is variable, in practice it may be desirable to construct this roller in short lengths that may be put together to "mop" any required width. Fig. 2 of the drawing shows the "mopping" roller as of a length to "mop" approximately the half width of the paper, and the dot and dash lines show a section added thereto to increase the "mopped" width to about three-quarters of the width.

The machine is light in construction so that it is readily portable and may be furnished with wheels 13 on one side to facilitate movement, which wheels it will be noted rotate in planes parallel to the axes of rotation of the "mopping" and drive rollers, so as to be movable across the lines in which the paper is being laid. On the other side of the machine the support legs are adjustable as at 15 to accommodate the slope of the roof.

In use, the machine is located at the extreme end of the length of roof under treatment and the paper from the roll 10 is taken from the underside of that roll, and over and partially around the roller 6 to deliver to the side on which is the roller 10. An arc of contact is thus provided sufficient to rotate the roller 6 and with it the "mopping" roller 4. The distance of the roller 6 from the "mopping" roller 4 is adjusted by the stops 9 on which one end of the supporting frame 7 of the roller 6 rests to apply a coating of the required thickness. The paper is drawn from the roll 10 by an attendant who holds up the end and moves away with it until the other end of the area to be covered is reached, and the paper as drawn off the roll is "mopped" to the required width and thickness as it passes under the roller 6. The withdrawn length of "mopped" paper is then laid down on the surface of the roof and is cut from the roll to a length sufficient to reach the other end of the area under treatment. The machine may then be moved away ready for the next strip and the end of the cut strip is lowered onto the roof floor and the entire length is rolled into close contact.

A guard 14 may be applied projecting over each edge of the roller 4 to prevent the

material being splashed over the edge of the tank from the edges of the rapidly rotating roller.

We are aware that prior to our invention "mopping" machines of this class have been used wherein an adherent water-proofing material has been applied to the underside of roofing paper or the like fabric, but such application has been made by causing the paper to pass in contact with a "mopping" roller or a traveling band which dips into the tank of water-proofing material, and being pressed into direct contact with the "mopping" roller or band, as the case may be, the thickness of the applied coating cannot be regulated.

Further, in all such machines with which we are acquainted the mechanism for traveling the paper and operating the "mopping" means has been more or less complicated and unnecessarily heavy for the purpose for which the machine has been designed.

Our device differs from all these in that the roller against which the paper is drawn while being "mopped" and which drives the "mopping" roller, does not contact with that roller but has provision limiting its movement toward the "mopping" roller whereby the thickness of the applied material may be regulated to what is required.

Having now particularly described our invention, we hereby declare that what we claim as new and desire to be protected in by Letters Patent, is:

1. A roofing paper mopping machine of the class described, comprising the combination with a suitable frame, of a tank adapted to hold a fluid water-proofing material, a drive roller rotatably mounted over the tank, means for mounting a roll of the paper to be mopped adjacent the drive roller that the paper may be taken off the roll and pass over, around and under the drive roller, and means operative by rotation of the drive roller without contact therewith and independently of the paper operated upon for lifting the water-proofing material from the tank and applying it to the underside of the paper as it passes under the roller, the rotation of the drive roller being effected by pulling the paper from the roll, and means for maintaining the driving roller spaced from the water-proofing material lifting means.

2. A roofing paper mopping machine of the class described, comprising the combination with a suitable frame, of a tank adapted to hold a fluid water-proofing material, a drive roller rotatably mounted over the tank, means for mounting a roll of the paper to be mopped adjacent the drive roller that the paper may be taken off the roll and under the roller delivering to the side on which the roll of paper is mounted, and means co-operative with rotation of the roller and in-

dependently of the paper operated upon for lifting the water-proofing material from the tank and applying it to the underside of the paper without contact of the lifting means therewith.

3. A roofing paper mopping machine of the class described, comprising the combination with a suitable frame, of a tank adapted to hold a fluid water-proofing material, a mopping roller rotatably mounted above the tank to dip the lower part of it into the water-proofing material therein, a drive roller rotatably mounted parallel to and immediately above the mopping roller, gearing for driving the mopping roller from the drive roller, means limiting movement of the drive roller toward the mopping roller short of contact therewith, and means for delivering a strip of paper around the drive roller and passing it between it and the mopping roller.

4. A roofing paper mopping machine of the class described, comprising the combination with a suitable frame, of a tank adapted to hold a fluid water-proofing material, a mopping roller rotatably mounted above the tank to dip the lower part of it into the water-proofing material therein, a drive roller rotatably mounted parallel to and immediately above the mopping roller, gearing for driving the mopping roller from the drive roller, means limiting movement of the drive roller toward the mopping roller short of contact therewith, provision for mounting a roll of paper adjacent and parallel to the drive roller that the paper may be taken over and under the drive roller and delivered to the side on which the roll is mounted.

5. A roofing paper mopping machine of the class described, comprising the combination with a suitable frame, of a tank adapted to hold a fluid water-proofing material, a mopping roller rotatably mounted above the tank to dip the lower part of it into the water-proofing material, a drive roller rotatably mounted parallel to and immediately above the mopping roller, said drive roller being of less width than the paper to be mopped, gearing for driving the mopping roller from the drive roller, means limiting movement of the drive roller toward the mopping roller short of contact therewith, and means for mounting a roll of paper adjacent the drive on the machine that the paper may be delivered over and under the drive roller.

6. A roofing paper mopping machine of the class described, comprising the combination with a suitable frame, of a tank adapted to hold a fluid water-proofing material, a mopping roller rotatably mounted above the

tank to dip the lower part of it into the water-proofing material, said mopping roller being of thin sheet metal maintained cylindrical by the spoked frame supporting it to its axle, a drive roller rotatably mounted parallel to and immediately above the mopping roller, gearing for driving the mopping roller from the drive roller, means limiting movement of the drive roller toward the mopping roller, and means for mounting a roll of paper on the machine that the paper may be taken from it and over and under the drive roller.

7. A roofing paper mopping machine of the class described, comprising the combination with a suitable frame, of a tank adapted to hold a fluid water-proofing material, a mopping roller rotatably mounted above the tank to dip the lower part of it into the water-proofing material, a drive roller rotatably mounted parallel to and immediately over the mopping roller in a frame which is pivotally mounted in the frame of the machine on either side of the mopping roller, means opposite the pivot of the frame for limiting movement of the drive roller frame to stop its roller short of contact with the mopping roller, and means for mounting a roll of paper on the opposite side of the frame of the machine to that on which the drive roller frame is mounted that the paper may be taken from the roll and passed over and under the drive roller for delivery from the machine.

8. A water-proof mopping machine of the class described comprising a suitable frame, a tank for the water-proofing material, a water-proofing material applying roller relatively fixedly journaled above said tank to project into the tank and above the same, a driving roller, means for mounting said driving roller above said applying roller, means for maintaining said driving roller spaced away from said applying roller a greater distance than the thickness of the paper to be coated, means for supporting a roll of paper to one side of the driving roller whereby the paper may be passed over, around and under the driving roller in contact therewith, and gear connections between the driving roller and the applying roller, all being arranged whereby as the paper is pulled from the roller the driving roller will be turned thereby and the motion of the driving roller will be transmitted to the applying roller substantially as shown and described.

In testimony whereof we affix our signatures.

STEVEN TROY.
LEW JACOBSEN.