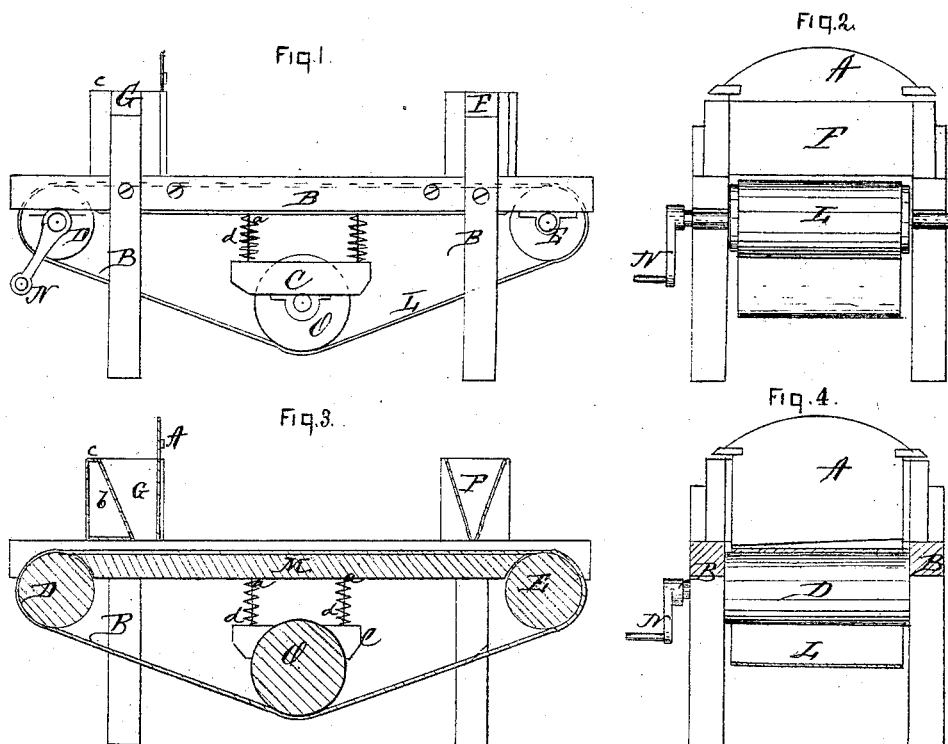


D. W. McCONNELL & W. W. PIERCE.
 Improvement in Apparatus for Making Roofing-Fabrics
 No. 114,174. Patented April 25, 1871.



Witnesses.
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Letters Patent No. 114,174, dated April 25, 1871.

IMPROVEMENT IN APPARATUS FOR MAKING ROOFING FABRICS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that we, DAVID W. McCONNELL and WILLIAM W. PIERCE, of Buffalo, in the county of Erie and in the State of New York, have invented certain new and useful Improvements in Apparatus and Compound for Making Composition Roofing; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon making a part of this specification.

The nature of our invention consists in the construction and arrangement of an "apparatus for spreading composition roofing," as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which our invention appertains to make and use the same, we will now proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figure 1 is a side elevation of our apparatus;

Figure 2 is an end elevation;

Figure 3 is a longitudinal vertical section; and

Figure 4 is a transverse vertical section of the same.

B represents the frame of our machine, in which frame is the bed M.

At the ends of the bed M, in suitable journal bearings in the frame B, are placed the rollers D E, one, D, of which is provided with a crank, N, for turning.

Around these rollers, and resting upon the upper surface of the bed M, is an endless belt, L, which belt also passes on the under side of a roller, O, placed below the center of the bed.

This roller has its bearings in blocks C C, from which rods *a a* pass upward into the frame B; or rather said rods are attached to the frame and pass through holes in the blocks and have spiral springs *d d*, surrounding, between the frame and the blocks, the roller O thus acting as a belt-tightener for the belt L.

The roofing material is placed in the spreader G at one end of the bed M.

This spreader consists of a box without bottom,

and along the rear side is attached a steam-box, *b*, provided with a supply-hole, *c*, through which steam is introduced for the purpose of keeping the roofing material hot.

The spreader with the steam-box sits on the felting in uprights of the frame B and allows the slides A, which forms the front of the spreader, to be shut down close onto the felt. This slide A can be worked up and down toward the belt to regulate the thickness of the layer of the roofing material to be run on the felt.

The lower edge of the slide A is cut to a bevel, as shown in fig. 4, so as to have the layer thinner on one side than the other, thereby making them lap more perfectly.

At the other end of the bed M is a sand-box, F, with which to sprinkle the sand upon the roofing material after it leaves the spreader.

This apparatus may be used for spreading any of the known and usual roofing compounds; but we contemplate using more particularly the following compound, namely:

From coal-tar deduct twenty per cent. of oil and naphtha, per gallon. To forty gallons of such distilled tar take six bushels of coal-ashes free from cinders; three bushels of iron cinders ground to a powder; and three bushels of clear sharp sand.

The felting upon which composition is to be spread is saturated with crude oil-tar.

Having thus fully described our invention,

What we claim as new, and desire to secure by Letters Patent, is—

The arrangement of the bed M, rollers D E, belt L, regulator O, spreader G with slide A, and steam-box *b*, and the sand-box F, all substantially as and for the purposes herein set forth.

In testimony that we claim the foregoing we have hereunto set our hands and seals this 8th day of March, 1871.

DAVID W. McCONNELL. [L. s.]
WILLIAM W. PIERCE. [L. s.]

Witnesses:

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