S. KINGAN.

MACHINE FOR THE MANUFACTURE OF FELTED FABRICS FOR ROOFING, &c.

No. 101,473. Patented Apr. 5, 1870.

Fig. 1.

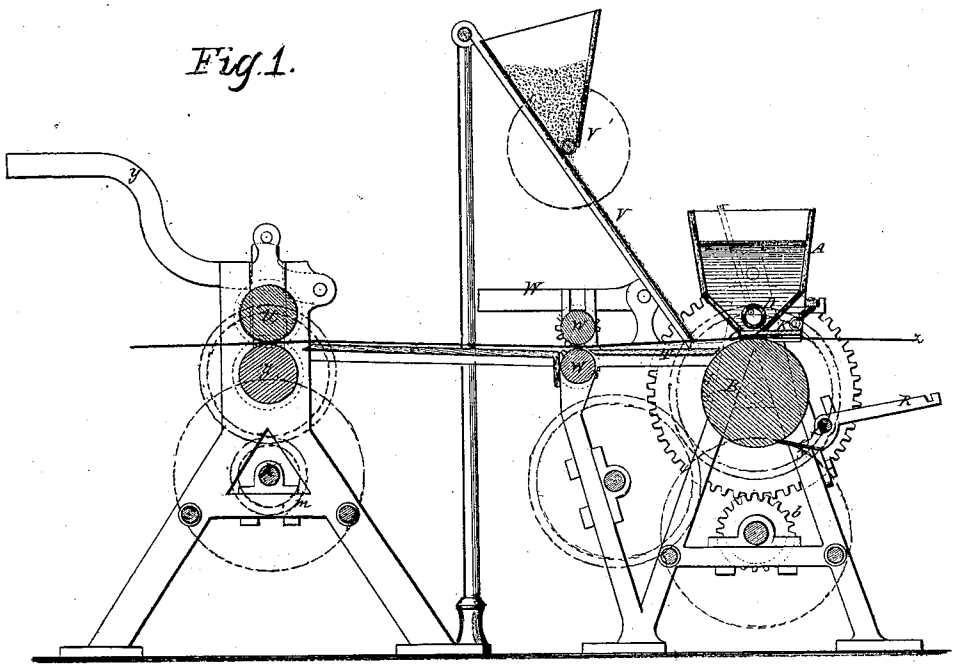
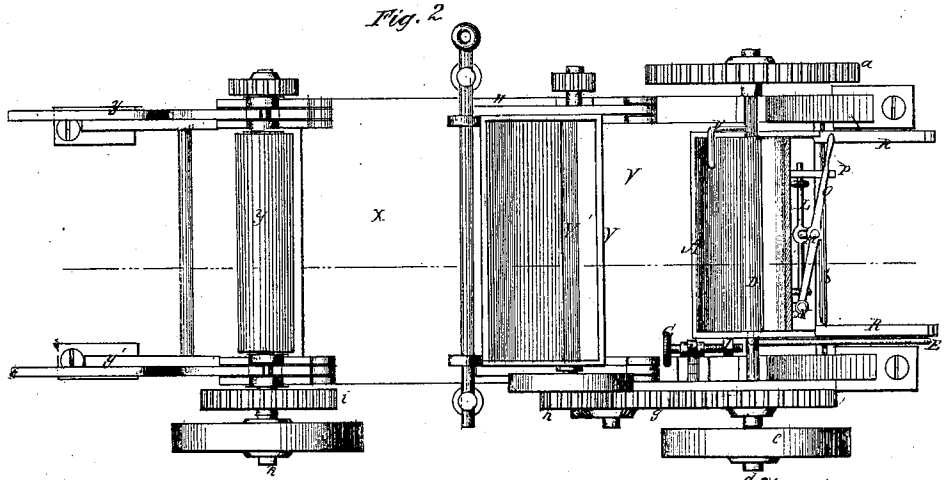


Fig. 2.



Witnesses:

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# United States Patent Office.

SAMUEL KINGAN, OF NEW YORK, N. Y., ADMINISTRATOR OF THE ESTATE OF JAMES ANDERSON, DECEASED.

*Letters Patent No.* 101,473, *dated April 5*, 1870.

## IMPROVEMENT IN MACHINES FOR THE MANUFACTURE OF FELTED FABRICS FOR ROOFING, &c.

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

*To all whom it may concern:*

Be it known that JAMES ANDERSON, deceased, late of Ballymaacarret, county of Doun, Ireland, did, during his lifetime, invent a new and improved Machine for Preparing Felted Fabrics for Sheathing, Roofing, and other purposes; and I, SAMUEL KINGAN, of the city, county, and State of New York, administrator of the estate of the said JAMES ANDERSON, deceased, do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings forming part of this specification.

This invention relates to improvements in machinery for the manufacture of sheathing and roofing-felt, by coating the same with a preparation of the native mineral pitch, asphaltum, purified, and softened and tempered according to a process described in an application for a patent filed by us, and bearing even date herewith, also, by mixing with the said preparation sand, chalk, or other substance to color the same, and to prevent the adherence of other substances.

The said improved machine is also applicable for coating the said felted materials with other similar mixtures.

Figure 1 represents a longitudinal sectional elevation of the said improved machine, and

Figure 2 represents a plan view of the same.

Similar letters of reference indicate corresponding parts.

A represents a trough for containing the pitch. It is mounted on any suitable framing, above a large roller, B, and provided with a narrow longitudinal opening, C, at the bottom, above which is a steam heating-pipe, D, having a supply-pipe, E, leading from the boiler, and a discharge-pipe, F. It is capable of oscillation on its supports, and is provided with an adjusting-screw, G, supported in a stud, H, rising up from the frame, and screwing through a stud, I, on the said trough.

By this means the mouth of the trough may be moved to or away from the highest part of the roller, whereby the delivering will be varied.

K represents a gate for the bottom of the trough, arranged to slide in and out, for opening and closing it, and connected by a rod and stud, M, to a hand-lever, O, for operating it.

The said lever is pivoted at N and works against a stop, P, to prevent drawing it out too far.

Q is a scraper, supported on an axis, S, and provided with weighted arms R for bearing it against the surface of the roller.

Beyond the roller and hopper is a table, T, above which is a sand-trough, V, and inclined chute V, leading down to the table near to the roller B and hopper A.

At the end of the table T is a pair of feeding and condensing-rollers, W, the upper one of which is weighted.

Beyond these is another table, X, and at the opposite end thereof a pair of larger condensing-rollers, Y, the upper one being also weighted.

Z represents the sheet of felt, which, being fed along to the roller B from any suitable feeding apparatus or from the felting apparatus, and, passing under the trough, it secures a coating of the substance contained in it, and, passing along, receives the sand, chalk, shores, or other substance from the trough V. the same is pressed into the coating substance and condensed as it is drawn along through the rollers W and Y, and delivered from the machine.

The said rollers may have any desired compressing force by means of weights applied to the levers W' *y'*.

The trough V is provided with a discharging-roller, V', at the bottom, for agitating and discharging the sand regularly.

The roller B is driven by a spur-wheel, *a*, pinion *b*, main driving-shaft *d*, and belt-wheel, *e*, and the roller W by a whirl, *f*, on the driving-shaft, an intermediate whirl, *g*, and pinion *h* on the lower roller.

The two rollers are geared together by toothed wheels at the opposite ends.

The sand-roller is provided with a belt-wheel, *i*, which may be operated by a belt from a pulley on any suitable moving shaft.

The rollers *y* are driven from a driving-shaft, *h*, by gear-wheels *l m*, and they are also geared together at the ends opposite the driving-gears, and other preferred arrangement of the driving-gears may be used.

Having thus described the invention,

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

1. The combination of the adjustable trough A, roller B, and hopper and chute, the feeding and condensing-rollers, and the tables, all substantially as specified.

2. The combination with the trough A of the steam heating-pipes, gate, and gate-operating devices, substantially as specified.

The above specification of the invention of JAMES ANDERSON, deceased, signed by me this 25th day of February, 1870.

SAMUEL KINGAN,
*Administrator of Estate of James Anderson, Deceased.*

Witnesses:
GEO. W. MABEE,
ALEX. F. ROBERTS.