(No Model.)

J. JAQUET.

MACHINE FOR COATING AND SANDING SHINGLES.

No. 398,332. Patented Feb. 19, 1889.

Fig. 1.

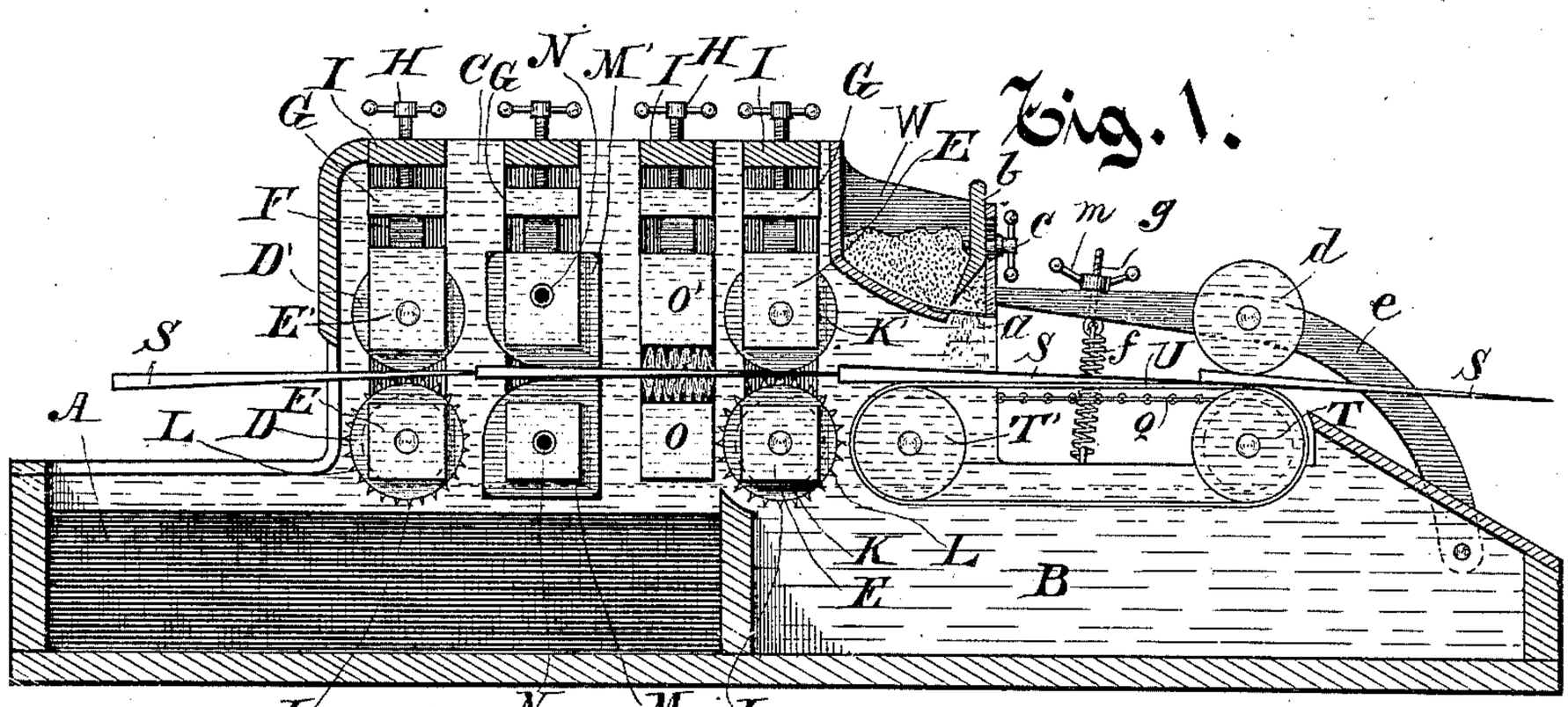

Fig. 2.

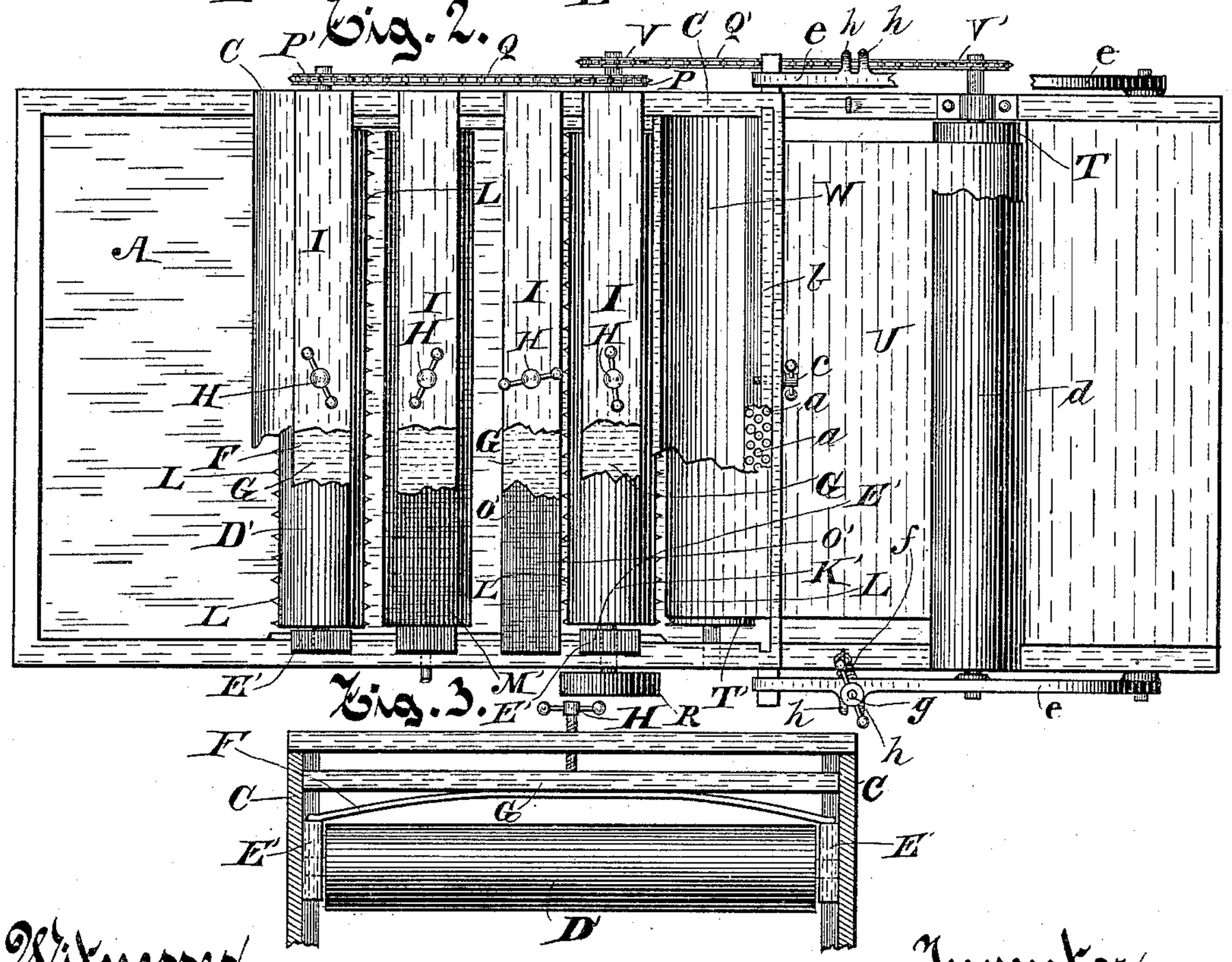

Fig. 3.

Witnesses.

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MACHINE FOR COATING AND SANDING SHINGLES.

SPECIFICATION forming part of Letters Patent No. 398,332, dated February 19, 1889.

Application filed September 24, 1888. Serial No. 286,290. (No model.)

To all whom it may concern:

Be it known that I, JULIUS JAQUET, of Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented a new and useful Machine for Coating and Sanding Shingles; and I do hereby declare the following to be a full, clear, and exact description of said invention, reference being had to the accompanying drawings, and to the letters or figures of reference marked thereon, which form a part of this specification.

My invention relates to the form and construction of the entire machine and of the various parts thereof, and to the location, arrangement, and combination of its several parts.

This machine is adapted for the production of a painted or dipped and sanded shingle.

In the drawings, Figure 1 is an elevation of my newly-invented machine, one side being removed to show the operative parts more fully. Fig. 2 is a plan view of the same machine, parts being broken away to show interior parts more fully. Fig. 3 is a detail.

The same letters refer to like parts in all the views.

A paint or liquid-asphaltum tank, A, and an adjoining sand-pit, B, are constructed integrally of wood or metal, and thereon and integral therewith is constructed the frame C, which supports the operative parts of my machine. A pair of presser-rolls, D and D′, one above the other, are journaled at their ends in journal-blocks E and E′, which journal-blocks are retained movably vertically in recesses therefor in the sides of the frame C. The lower journal-blocks, E E, are supported on the frame at the bottom of the recesses, and the upper journal-blocks, E′ E′, and their therein-carried roller D′ are held yieldingly downward to and upon the roller E by the elliptical spring F, which spring is attached centrally to the movable cross-bar G, which cross-bar is retained in vertical recesses in the frame. A hand-screw, H, turning through the cross-bar I, bears at its lower end against the cross-bar G, and is adapted by turning it down to increase the tension and power of the spring F, as desired. The cross-bar I is rigid to and forms a part of the frame C. This pair of presser-rolls D and D′ is located near the front of the machine, and there is another pair of presser-rolls, K K′, near the sand-box, which are in all respects, so far as their bearings and the spring and means of adjusting their pressure are concerned, the duplicate of the presser-rolls D and D′ and their attachments.

The lower presser-rolls, D and K, are provided with roughened surfaces or short teeth L L, adapted to sufficiently engage with the shingles passing over them to force the shingles forward as the rollers revolve.

Just in the rear of the presser-rolls D and D′ are arranged two distributing-bars, M M′, one above the other, which are also retained at their respective ends in vertical recesses therefor in the sides of the frame C, the lower distributing-bar being supported at the bottom of the recesses and the upper distributing-bar being movable vertically in the same recesses, being held yieldingly to the lower distributing-bar by means of an elliptical spring supported and operated in the same manner that the spring F is arranged and operated. The respectively-adjoining inner front edges of these two distributing-bars are preferably beveled or curved inwardly. These two bars are also usually constructed hollow, and provided with apertures N N for introducing steam into them, for the purpose of warming and thereby liquefying the asphaltum or any similar material that may be used for coating the shingles, the object of these two distributing-bars being to distribute the paint or liquid asphaltum on the surface of the shingles or force it into the crevices as the shingles are passed between the bars.

In the rear of the distributing-bars are located two brushes, O O′, one above the other and retained in recesses in the sides of the frame C, the upper brush, O′, being movable vertically and held yieldingly downward by an elliptical spring in the same form and operated in the same way as the spring F. These two brushes are adapted for still further spreading the paint or liquid-asphaltum coating on the shingles as they are passed between the brushes.

The rollers D and K are each provided with a sprocket-wheel, P P′, on which runs the

sprocket-chain Q, and the roller K is provided with a driving band-pulley, R, whereby the rollers are rotated, and whereby a shingle, S, introduced into the machine between the rollers D and D′, is forced through between the distributing-bars M M′ and the brushes O O′, and is carried forward between the rollers K K′.

A pair of rollers, T T′, located parallel and nearly horizontally with reference to each other, and located and supported above the sand-pit B, carry thereon an endless apron, U, upon which the shingle is received when discharged from between the rollers K K′, and whereon it is carried forward over the sand-pit B and discharged at the rear or tail of the machine. The rollers K and T are furnished with sprocket-wheels V and V′, on which runs the sprocket-chain Q′, whereby the roller T and the thereon-carried apron are operated by means of the power supplied through the band-pulley R.

Above the apron U, and over the sand-pit B, is a sand-box, W, provided at its lower edge with a series of apertures, *a a*, through which sand is permitted to fall upon the shingle as it travels forward on the apron U, whereby the freshly painted or coated shingle is covered with sand.

A gate, *b*, extends across the front edge of the sand-box W, and is adapted to be closed down upon and over the apertures *a a*, thereby closing them, so that no sand can escape therethrough. For the purpose of adjusting the gate *b* up or down, it is provided with a thumb-screw, *c*, turning into a screw-thread in the gate, the shank of which thumb-screw passes through a vertical slot in the front side of the sand-box W, whereby the gate is permitted to be raised or lowered, and a collar on the thumb-screw bears against the front side of the outer surface of the sand-box and holds the gate in position up or down when turned rigidly against the side of the box.

A sand-roll, *d*, having its journal-bearings in two swinging arms, *e e*, is adapted to be held down yieldingly upon the shank as it passes over the roller T, whereby the sand on the shingle is spread out evenly on its surface and is forced into the coating thereon, and to some extent the sand is forced into the surface of the shingle itself. The arms *e e* are pivoted at their rear ends to the sides of the sand-pit B, and at their front ends they are held yieldingly downward by the spiral springs *f f*, which springs are at their lower ends attached to the sides of the pit B and at their upper ends are provided with tangs *g g*, which tangs are adapted to enter between lugs *h h* on the arms *e e*, the tangs being screw-threaded and provided with hand-nuts *m m*, turning thereon, which hand-nuts bear against the upper side of the lugs *h h* and are adapted for varying the tension of the springs *f f* and for holding the springs *f f* in engagement with the arms *e e*.

By this method of connecting the springs *f f* with the arms *e e* the springs can readily be thrown out of engagement with the arms and the arms can be tilted rearwardly, throwing the sand-roll away from the roller T when desired, and this is preferably done when the shingles are being merely coated with paint or liquid asphaltum and sand is not being applied.

When sand is used, it is permitted to fall through the apertures *a a* upon the shingle as it passes along, and the excess of sand and such as falls beyond the sides of the shingles drops into the sand-pit B, and may be recovered and used afterward.

It will be understood that shingles are dipped singly in the liquid paint or asphaltum tank A and then thrust into the machine between the rollers D D′, and are by the rotation of these rollers carried forward between the distributing-bars M M′ and the brushes O O′, and are caught by the rollers K K′ and carried forward onto the traveling apron U, receiving sand there from the box W, and passing on under the presser-roll *d* and out at the rear of the machine. The distributing-bars M M′ and the brushes O O′ perform somewhat the same work, and this work will be accomplished to a fair extent by either the distributing-bars M M′ or the brushes O O′ alone.

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

1. The combination of one or more pairs of pressure-rollers and a pair of paint-distributing brushes located and adapted for the passage of shingles between them, with an endless apron traveling on rollers located and adapted to receive and carry forward a shingle after it leaves the pressure-rollers, and a sand-box located above the endless apron and provided with apertures in its bottom, substantially as described.

2. The combination of one or more pairs of pressure-rollers and a pair of paint-distributing bars or brushes located and adapted for the passage of shingles between them, with an endless apron located and adapted to receive such shingles from the pressure-rollers and carry them forward, a sand-box having an aperture for the discharge of sand therefrom, located above the apron, and a pressure-roller above and bearing yieldingly against a roller carrying the endless apron, between which rollers the shingles are carried on the apron after the shingles have received sand from the box, which rollers are adapted to distribute the sand and force it into the paint on the shingles, substantially as described.

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

JULIUS JAQUET.

Witnesses:
JAS. B. ERWIN,
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