July 21, 1936. W. H. CADY 2,048,597

PREPARED ROOFING

Original Filed March 19, 1926

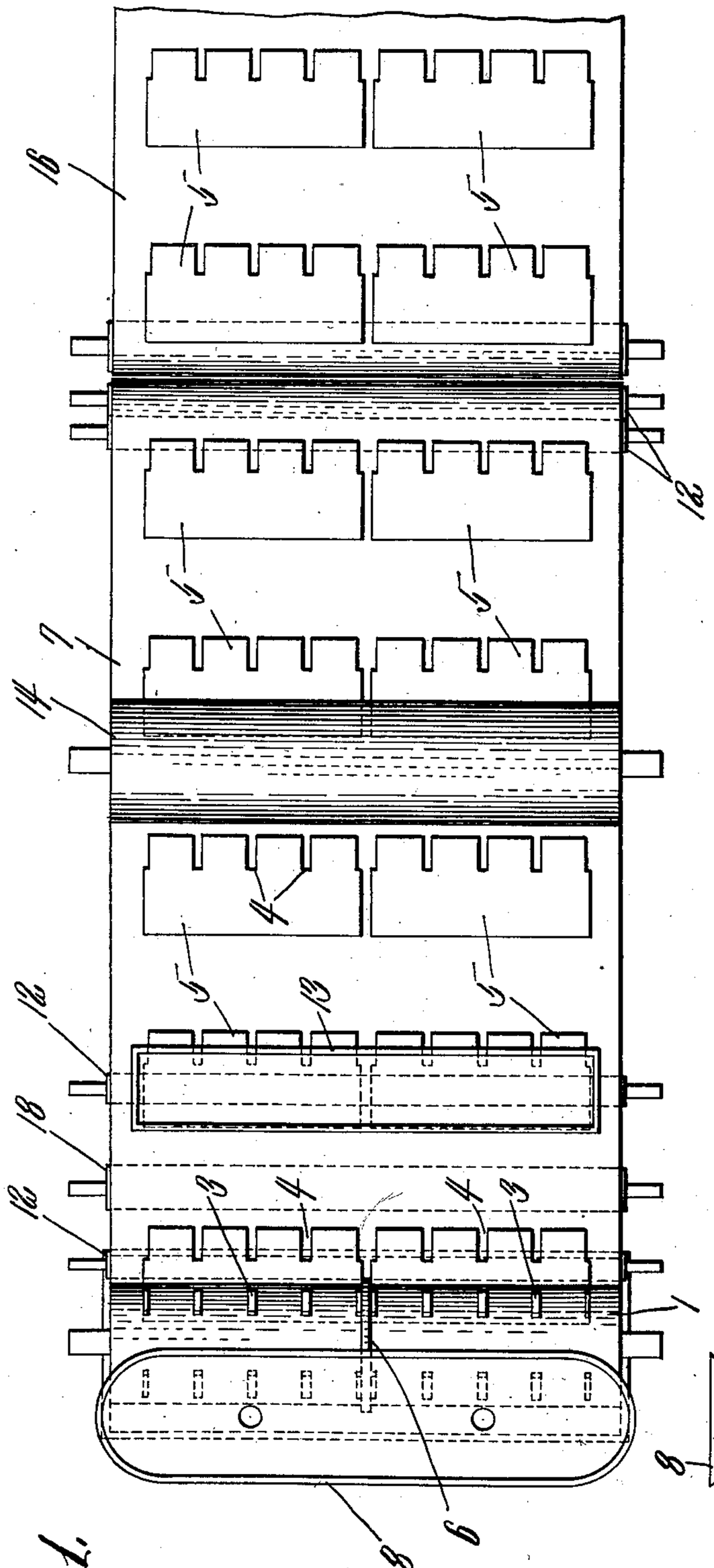

Fig. 1.

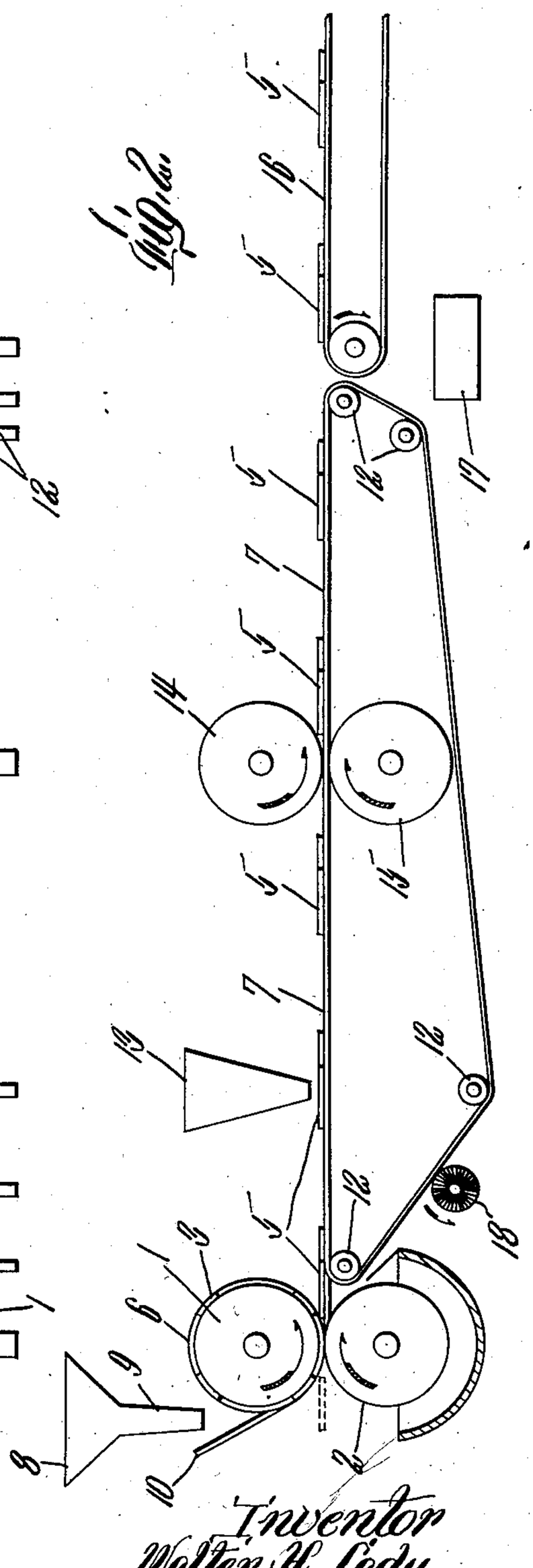

Fig. 2.

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PREPARED ROOFING

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Original application March 19, 1926, Serial No. 95,820, which in turn is a continuation of Serial No. 526,329, December 31, 1921. Divided and this application January 2, 1930, Serial No. 418,206. Renewed October 31, 1935

8 Claims. (Cl. 108—7)

This application is a division of my application Serial No. 95,820, filed March 19, 1926, which, in turn, is a continuation of my application Serial No. 526,329, filed December 31, 1921.

The invention relates to a process and machine for coating and surfacing prepared shingles and refers more particularly to a process and apparatus in which prepared roofing in the form of roofing units, such for example as strip shingles, may be thoroughly coated and surfaced subsequent to their being cut into shingle units.

An important object of the invention is the fact that all surfaces and edges of the strip shingles are completely covered and that any waste material is recovered to be recycled in the covering of other shingles.

Figure 1 is a plan view of the apparatus.

Figure 2 is a side elevation with a substantial part of the machine omitted for clearness in showing the salient points of the invention.

Referring to the drawing, strip shingle blanks cut from prepared roofing material common in the art, such as sheets of unsaturated felt or sheets of saturated felt which have been coated with asphalt and surfaced with crushed slate or other crushed mineral material, are introduced between the rolls 1 and 2, being engaged by the upper roll by lugs 3 positioned thereon in a manner to register with the cut-out portions 4 of the strip shingles 5. A central guide 6 in the center of the upper roll 1 serves to properly feed the shingle units and to prevent their lateral displacement as they progress onto the endless belt 7 which may be made of any suitable material. The strip shingles as they are fed between the rolls are coated over all their surfaces and edges with a molten bituminous mastic substance, such as asphalt, or other waterproofing substances which are ordinarily used to coat prepared roofing. The asphaltic coating substance is maintained in a tank 8 which is positioned over the rolls so that the heated asphaltic coating in a fluid or semi-fluid condition flows down through the funnel-like spouts 9 and collects behind a doctor knife 10 which serves to spread the waterproofing substance evenly over the surface of the roll so that it will be uniformly fed as a coating substance onto a strip shingle. It also prevents the collection of accumulations of the waterproofing substance on the upper roll. Any excess waterproofing substance will be carried off into the lower pan or container which is situated below the lower roll. The endless belt 7 runs over a plurality of spools 12 and passes under a hopper 13 and between pressure rolls 14 and 15, the strip shingles after being coated, while passing between the rolls 1 and 2, progress with the belt until they reach a position beneath the hopper 13. This hopper contains granular surfacing material, such as ground slate, which is fed onto the adhesive coating on the upper surface and all the edges of the shingle, the excess surfacing collecting upon the belt. The shingles then pass on between the pressure rolls 14 and 15 where the surfacing material is pressed into the coating to form the completed product.

After leaving the pressure rolls, the shingles leave the endless belt and pass onto a receiving belt 16 which conveys them to a refrigerator. Beneath the end of the endless belt 7 is a pan or hopper, as shown at 17, in which collects the excess surfacing material which is deposited upon the belt during its passage under the hopper 13. At 18 is situated a cleaning brush which is rotated in a manner to thoroughly clean the surface of the belt prior to its return to receive the coated shingles from the rolls 1 and 2.

The driving mechanism of the respective rolls and spools for running the belts has been purposely omitted as it forms no part of the invention. It is understood, however, that the rolls must be operated at relative speed so that the strip shingles will be properly fed and progressed at a uniform rate through the process of coating and surfacing.

In this manner, strip shingles which have been cut from the initial sheet may be readily coated and surfaced, all portions of the shingle unit receiving a complete coating of the mastic, an outer layer of crushed slate being partially embedded in the coating on one face and the edge of each shingle. The lugs 3 on the roll 1 in registering with the cut-out portions of the shingle units keep the cut-out portions free of excess coating material which would tend to collect and form a web across the cut-outs as the strip shingles pass through the initial coating stage. The lugs, being covered with coating material from the container 8 and being somewhat smaller than the cut-outs, carry sufficient coating material into the cut-outs to coat their edges thoroughly. The films of coating material on the rolls 2, 3 meet around the outer edge of the shingle and thus complete the encasing of the unit with an envelope of coating material over its entire surface, and this coating is surfaced with the slate or other grit.

I claim:

1. A roofing element comprising a felted fibrous base of sheet material cut to desired size

and shape, a sealing coat of waterproofing material overlying both faces and all the edges of the element, and a masking layer of grit partially embedded in the coating on the surface and edges of the element which are exposed to the weather when the element is laid on a roof.

2. An individual shingle unit to be used for building construction cut from prepared roofing and having butt and adjacent side edges and being provided with vertical slots to provide shingle simulating tabs and a continuous protective bituminous coating covering at least the exposed portion of the upper face and the exposed butt and side edges and the edges of said slotted portions of the unit and a coating of comminuted grit applied to the upper face of said exposed butt and side edges.

3. A shingle strip having slots forming tab defining elements, said slots extending upwardly from the butt edge toward the head thereof, said strip being provided with an asphalt coating, a layer of grit embedded therein, a second layer of asphalt coating disposed thereon and covering at least a portion of the exposed upper face thereof and extending above the terminals of said slots, and a second layer of grit applied thereto and embedded therein, said second layer of grit covering at least a portion of the upper face of the shingle.

4. A shingle strip having slots forming tab defining elements, said slots extending upwardly from the butt edge toward the head thereof, said strip being provided with an asphalt coating, a second layer of asphalt coating disposed thereon covering at least a portion of the exposed face thereof and extending above the terminals of said slots, and a layer of grit applied to the upper face of the uppermost layer of asphalt and covering at least the exposed upper face of said shingle.

5. A roofing element comprising a felted fibrous base of sheet material cut to the desired size and shape, a sealing coat of waterproof material overlying both faces and the exposed butt and side edges of the element, and a masking layer of grit partially embedded in the coating on the surface and said edges of the element, at least, which are exposed to the weather when the element is laid upon the roof.

6. A shingle strip having slots forming tab defining elements, said slots extending upwardly from the butt edge toward the head thereof, said strip being provided with an asphalt coating, a layer of grit embedded therein, a second layer of asphalt coating disposed thereon and covering at least a portion of the exposed upper face and the butt and side edges thereof and extending above the terminals of said slots, and a second layer of grit applied thereto and also covering at least a portion of the exposed face.

7. A roofing element comprising a felt fibrous base of sheet material cut to the desired size and shape, a sealing coat of waterproofing material covering at least the exposed face of said element, a masking layer of grit partially imbedded in the coating on the surface of said element, at least, which is exposed to weather when the element is laid upon the roof, and means to seal both the exposed butt and side edges of said element, said means comprising a sealing coat of waterproofing material.

8. A shingle comprising a felted fibrous base of sheet material provided with an asphalt coating, a layer of grit imbedded therein, a second layer of asphalt coating disposed thereon and covering all of the upper surface of said shingle which is exposed and at least a portion of the upper surface which is overlapped when the shingle is laid with others in overlapping courses and a second layer of grit applied thereto and imbedded therein, said second layer of grit covering at least a portion of the upper face of the shingle.

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