April 15, 1930. W. H. CADY 1,755,049

PROCESS FOR COATING AND SURFACING PREPARED ROOFING

Filed March 19, 1926

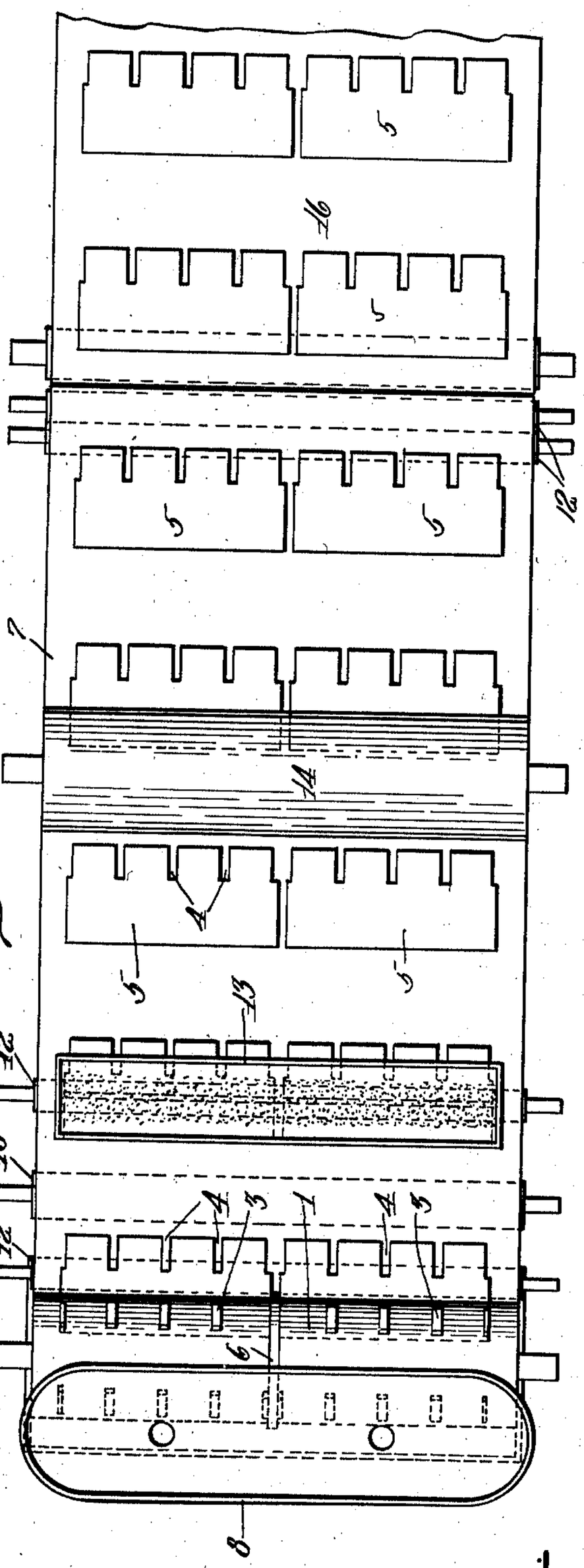

Fig. 1.

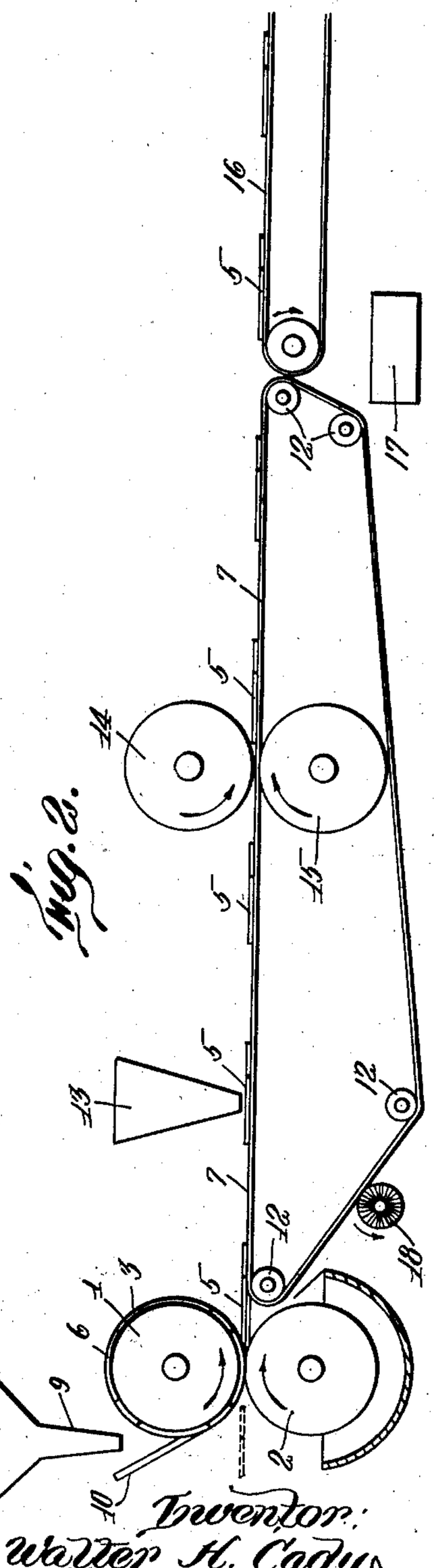

Fig. 2.

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UNITED STATES PATENT OFFICE

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PROCESS FOR COATING AND SURFACING PREPARED ROOFING

Application filed March 19, 1926. Serial No. 95,820.

This application is a continuation of application Serial No. 526,329, filed December 31, 1921, now Patent No. 1,599,512, Sept. 14, 1926, as to all subject matter common to both.

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 rooting 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 surface 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 drawings, 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 edges 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. The process of treating individual shingle units cut from prepared roofing and having butt and adjacent side edges which includes the successive steps of coating all portions of the units uniformly with waterproofing bituminous material and applying granular surfacing material to the units in a continuous operation.

2. The process of treating individual shingle units cut from prepared roofing and having butt and adjacent side edges, which process includes the successive steps of coating portions of the unit including the butt and side edges with bituminous material and applying granular surfacing material to the units in a continuous operation.

In testimony whereof I have affixed my signature.

WALTER H. CADY.