A. S. SPIEGEL.

SHINGLE CUTTING MACHINE FOR COMPOSITION ROOFING.

APPLICATION FILED MAR. 26, 1917.

1,249,544. Patented Dec. 11, 1917.

Fig. 1.

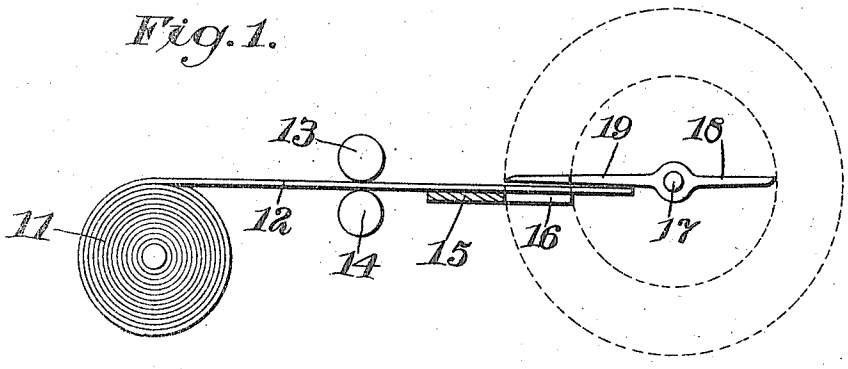


Fig. 2.

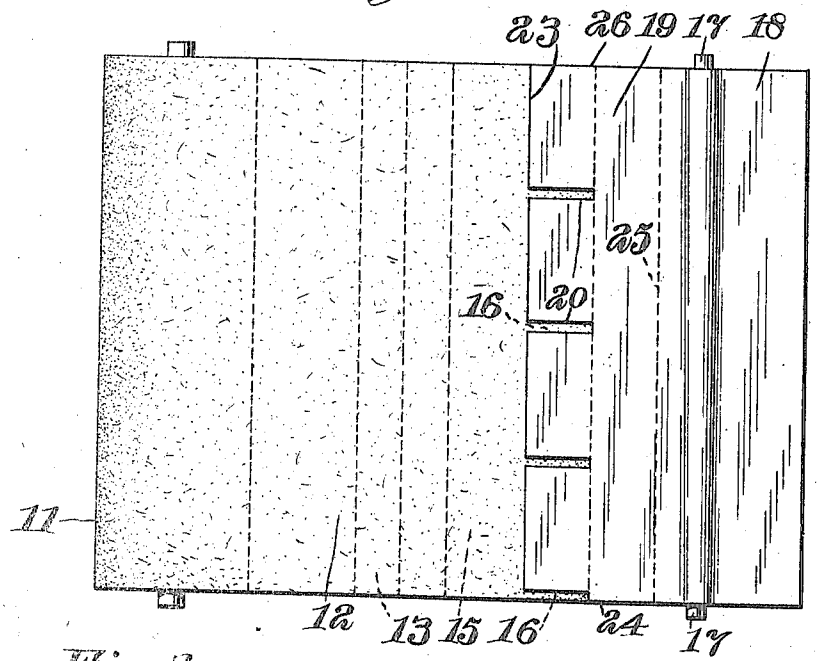


Fig. 3.



Inventor:
Alexander S. Spiegel,
Spear Middleton Donaldson & Spear
Atty's.

UNITED STATES PATENT OFFICE.

ALEXANDER S. SPIEGEL, OF CHICAGO, ILLINOIS.

SHINGLE-CUTTING MACHINE FOR COMPOSITION ROOFING.

1,249,544. Specification of Letters Patent. Patented Dec. 11, 1917.

Application filed March 26, 1917. Serial No. 157,548.

To all whom it may concern:

Be it known that I, ALEXANDER S. SPIEGEL, a citizen of the United States, and resident of Chicago, Illinois, have invented certain new and useful Improvements in Shingle-Cutting Machines for Composition Roofing, of which the following is a specification.

This invention relates to cutting strips of shingles from a roll of composition roofing. Machines have been devised for carrying out this operation but their operation has not been sufficiently speedy for the enormous production required.

The roofing material must be cut while hot and heretofore the knives would gum up so that a poor looking article resulted. Again, it has been difficult to make the notches between the shingles absolutely the correct size because the roofing would slip between the feed rollers.

The object of this invention is to devise a machine that will overcome all these obstacles and it consists essentially in a two-bladed rotary knife whose blades are different in width and in shape.

The invention has been illustrated in the accompanying drawing, in which,

Figure 1 is a diagrammatic side elevation of the machine.

Fig. 2 is a plan view of the machine, and Fig. 3 shows a modified form of cutting knife.

In the drawings, the numeral 11 represents a roll of composition roofing 12, adapted to be fed by means of rollers 13 and 14 over a table 15, equipped with fingers 16, projecting from its cutting edge. The cutting knife is carried by a shaft 17, suitably journaled and rotated. The knife is the full width of the roofing 12 to be cut and is composed of a narrower blade 18, carried diametrically opposite another blade 19, which has recesses 20 in its cutting edge adapted to register with the fingers or projections 16 of the table 15. In the modified form of knife shown in Fig. 3 the narrow blade 21 is similar to 18 and the wider blade 22 is similar to 19, except that the blades 21 and 22 are at an angle to each other, instead of in the same plane as in Fig. 1.

The lines indicated by 23, 24, 25, 26 and 20 comprise the shape of the completed strip of shingles.

In operation the roofing 12 is fed from the roll 11 by the rollers 13 and 14 over the table 15 into the position shown in Fig. 1 when the blade 19 rotates and by cleavage action cuts out a strip of shingles outlined by the lines 20 and 23 to 26 extending transversely of the roofing 12. The strip falls from the table from whence it is conveyed away. Removal of this strip leaves fingers 16 projecting from the roofing material but as the material is continually fed forward, by the time the knife has rotated enough to bring the narrow blade 18 around to cutting position, the roofing has advanced just the length of the fingers 16 and this blade cuts them off, leaving a straight edge 25 for the next shingle strip. This operation is then repeated indefinitely.

If it is desired to vary the length of the body of the shingle strip, then the blades must be placed at an angle to each other, as shown in Fig. 3, to permit more roofing material to be fed over the table 15 before the wide blade makes its cut.

As the blade which cuts the notches between the shingles chops the waste clear of the opening there is no chance for the gumming up experienced in previous machines. It is to be understood that the forms of the invention disclosed are illustrative only and should not be considered as limiting the scope of the invention.

What I claim is:

1. A device of the class described including a support for the roofing to be cut, a cutting table, means for feeding the roofing thereto, slotted knife means for cutting a multi-shingle transverse strip from the roofing, and a second knife of less width than the first for cutting off the waste, substantially as described.

2. A device of the class described including a support for the roofing to be cut, a cutting table, means for feeding the roofing thereto, knife means the width of the roofing recessed for cutting a multi-shingle shaped transverse strip from the roofing and knife means having a straight edge for cutting the remaining waste from the roofing.

3. A device of the class described including a support for the roofing to be cut, a cutting table provided with projecting fingers, means for feeding the roofing thereto, knife means provided with slots to register with the fingers of the cutting table for cut-

ting a multi-shingle shaped transverse strip from the roofing and means for cutting the remaining waste from the roofing.

4. For use in a device of the class described a two bladed rotary knife, one blade having a recessed cutting edge and the other blade having a straight cutting edge and of less width than the first, substantially as described.

ALEXANDER S. SPIEGEL.

Witnesses:
WM. HARTMANN,
C. H. SLOCUM.