

J. RETTELL.
STRIP APPLYING DEVICE.
APPLICATION FILED MAY 18, 1916.

1,268,151.

Patented June 4, 1918.

2 SHEETS—SHEET 1.

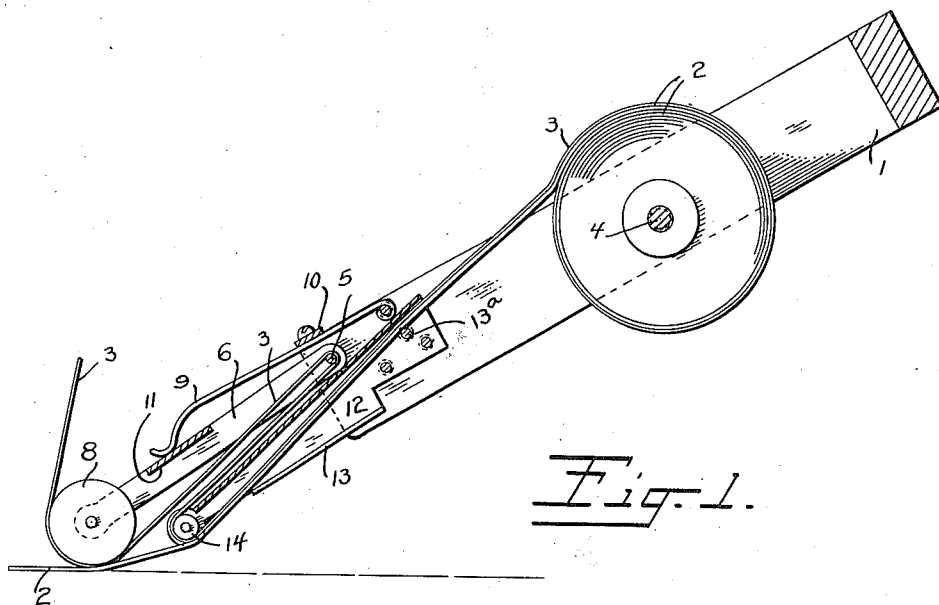


Fig. 1.

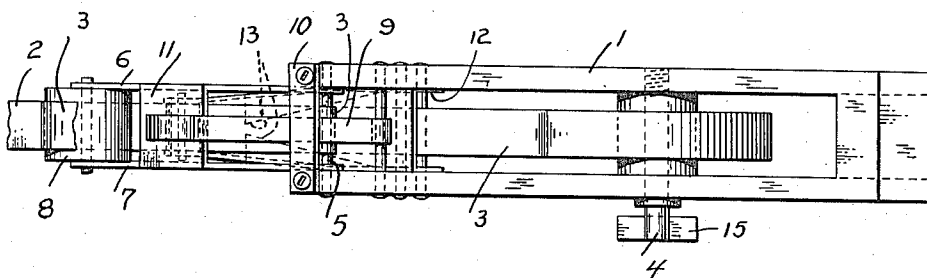


Fig. 2.

WITNESS:

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INVENTOR

Joseph Rettell,

BY

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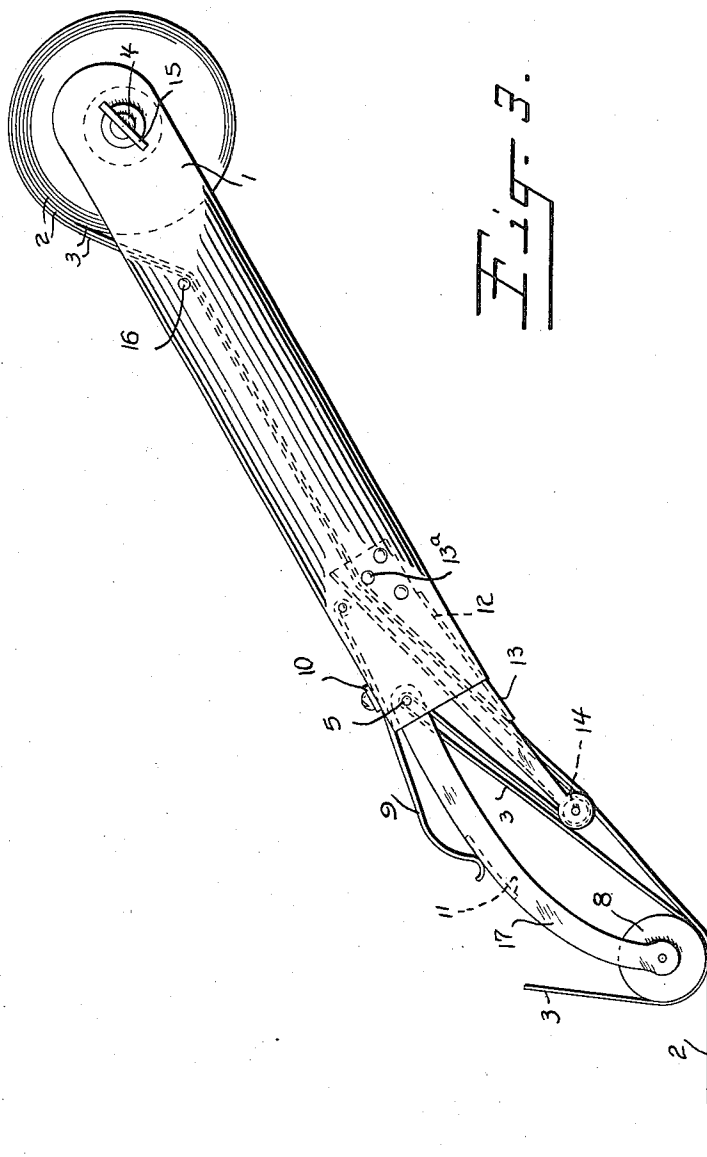


Fig. 3.

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JOSEPH RETTELL, OF DETROIT, MICHIGAN, ASSIGNOR TO MORGAN & WRIGHT, A CORPORATION OF MICHIGAN.

STRIP-APPLYING DEVICE.

1,268,151.

Specification of Letters Patent.

Patented June 4, 1918.

Application filed May 18, 1916. Serial No. 98,260.

To all whom it may concern:

Be it known that I, JOSEPH RETTELL, a citizen of the United States, residing at Detroit, county of Wayne, and State of Michigan, have invented certain new and useful Improvements in Strip-Appling Devices, of which the following is a full, clear, and exact description.

This invention relates to a device for applying adhesive material, and is more particularly directed to a device of this kind for applying a strip of rubber provided with a protective or liner-strip.

One of the objects of the invention is to provide a simple, efficient mechanism of the kind described which may be operated by hand and in which the pressure under which the application takes place shall be substantially uniform. Another object is to provide a device of the kind mentioned comprising an efficient means for separating the liner and rubber strip prior to their application to a surface. Another object is to provide a device in which the likelihood of wrinkling of the strip as applied shall be substantially prevented.

For a detailed description of a preferred form of my invention, reference may be had to the following specification and accompanying drawing forming a part thereof, in which—

Figure 1 represents a partial sectional elevation of the device;

Fig. 2 represents a plan view thereof; and

Fig. 3 represents an elevation of a modified structure similar to that shown in Figs. 1 and 2.

Referring now to the drawings the numeral 1 indicates a long narrow frame serving as a handle between the sides of which is supported a roll of a combined rubber strip 2, and protective or liner-strip 3. The rubber strip is preferably composed of uncured stock having an adhesive quality and the liner-strip is preferably made of a glazed fabric, for example Holland cloth, or similar material. The roll is supported by and rotates about an axle 4 whose extremities are mounted respectively in the sides of the frame 1.

Pivottally mounted about the shaft 5,

whose extremities are secured in the sides of the frame at the lower end thereof, are arms 6 and 7 which project beyond the frame. At the extremity of these arms, opposite their attachment to the frame, is mounted an applying-roller 8. This applying-roller is adapted to press upon the combined rubber and fabric strip which passes under it when the strip is being applied to a surface.

In the application of the strip to a surface, particularly a rubber surface where pressure may cause a sinking thereof, it will be observed that it is important to apply the adhesive strip with a substantially uniform pressure. The present device is intended to be hand-operated and hence the pressure of application exerted by an operator will tend to vary. To overcome this tendency to variation of pressure the pivoted arms 6 and 7 are provided with a leaf-spring 9 bolted to the side of the frame and held in position above the axle 5 by a bar 10 extending from side to side of the frame. The outer extremity of the spring contacts with a plate 11 which is fixed to the upper edges of the arms 6 and 7. According to this construction it will be observed that when the frame is grasped by the hand of the operator and pressure is exerted for the application of the strip, the arms are permitted to move about their pivotal points under the control of the spring which takes up a portion of the excess pressure and permits a substantially uniform pressure to be exerted upon the applying-roller.

In order that there may be no rumpling of the strip as applied and that the liner-strip may be separated without difficulty from the rubber strip, a combined separating and tensioning mechanism is provided projecting from the end of the frame just below the arms 6 and 7 and extending substantially parallel therewith. This mechanism comprises a substantially U-shaped guide trough 12 provided adjacent its outer extremity with inwardly projecting flanges 13 and at its inner end with a guide pin 13^a serving to guide and support the combined strip prior to its passage over the roller 14 which is located on the extremity of the

trough. The mechanism also includes the shaft 5. It will be observed that as the roller 14 is reached a separation of the rubber-strip and liner-strip occurs. The rubber strip passes directly to a position beneath the applying-roller 8, whereas the liner-strip passes upwardly around the roller 14 to the shaft 5, around the shaft 5 and then to a position underneath the applying-roller 8 lying between this roller and the rubber strip. According to this construction a separation of the rubber from one part of the liner-strip and its temporary contact with another part of the liner-strip occurs just prior to the application of the strip to a surface. This insures that an easy separation of the liner and rubber strips may take place after their application. Any sticking together of the strips may be noted before the application to the surface, and rectified. The passage of the liner-strip around the roll 14 and shaft 5 exerts a friction on the liner and causes it to remain taut. This tensioning thus avoids wrinkling or rumpling of the strip due to slack through the too rapid rotation of the supply roll.

In operation, a portion of a combined rubber and liner-strip is unrolled and brought to a position underneath the roller 14 where the rubber strip is separated from the liner-strip and passed to a position under the applying-roller 8. The liner-strip is then passed upwardly about the shaft 5, backwardly to a position past the applying-roller and the rubber strip. The frame is grasped by the hand of an operator and application of the adhesive strip is made to a surface in any desired and convenient manner. After application of the adherent strip the liner-strip is detached, such detachment taking place, if convenient, as the liner emerges from under the roller or after the entire strip has been applied, or in any desired manner.

When the roll of liner and rubber strip is exhausted a new roll may be inserted by removing the shaft 4, which is secured by screw threads to the frame 1, by turning the head 15. A new roll may then be inserted and the shaft secured in place.

In the modification shown in Fig. 3 the general features of the device, already described are included. The roll of rubber and liner-strip is, however, here shown positioned at the rear end of the frame 1 and the frame intermediate the ends thereof is rounded to permit it to be grasped more easily. To further facilitate handling the combined strip as it passes from the roll the strip is run under a pin 16 located sufficiently near the roll and below the upper edges of the frame to prevent the travel of the strip above these edges and into contact

with the hand of the operator. The applying-roller 8 in this embodiment is held in place by arms 17 which are longer than the arms heretofore described, and in addition are curved downwardly so that the roller 8 lies at a considerably greater distance below the roller 14 than shown in Figs. 1 and 2. Through this arrangement there is less chance of the strip prematurely lying on the surface to which it is being applied through accidental contact of the roller 14 with the surface when the arms 17 swing upwardly against the spring 9.

Having thus described my invention what I claim as new and desire to protect by Letters Patent is:

1. In a hand-tool for applying adhesive material, in combination, a handle, means mounted in said handle for supporting a roll of adhesive material, and applying-means secured to said handle and adapted to yield in a direction substantially transverse thereof to take up a portion of the pressure exerted by the hand of the operator upon said tool.

2. In a hand-tool for applying adhesive material, in combination, a handle, means mounted in said handle for supporting a roll of adhesive material, a tensioning device adapted to regulate the feed of said material, and applying-means secured to said handle and adapted to yield in a direction substantially transverse thereof to take up a portion of the pressure exerted by the hand of the operator upon said tool.

3. In a hand-tool applying device, in combination, a source of supply of adhesive and liner-strips, an applying member adapted to press upon said strips and to apply them to a surface, and means to separate said adherent strip from one part of said liner-strip and to bring it in contact with another part of said liner-strip just prior to its application to said surface.

4. In a hand-tool applying device, in combination, a source of supply of combined adhesive and liner-strips, an applying member adapted to press upon said strips and to apply them to a surface, and a combined tensioning and strip-separating means adapted to regulate the feed of said strips and to separate said adherent strip from one part of said liner-strip and to bring it in contact with another part of said liner-strip just prior to its application to said surface.

5. In a hand-tool applying device, in combination, a source of supply of combined rubber and liner-strips, an applying roller adapted to press upon said strips and to apply them to a surface, and a combined tensioning and strip-separating device comprising a tensioning roller positioned adjacent said applying-roller, and a tensioning member located remote therefrom, said

combined rubber and liner - strip being adapted to pass over said tensioning roller and to be separated immediately thereafter, said rubber strip being adapted to pass directly to a position below said applying-roller and to contact there with another portion of said liner-strip previously passed around said tensioning member and to a position between said applying-roller and said rubber strip. 10

Signed at Detroit, Mich., this 1st day of May, 1916.

JOSEPH RETTELL.