Sept. 21, 1943. W. E. BALOUSEK 2,330,023

TOOL

Filed Jan. 8, 1941

Fig. 1.

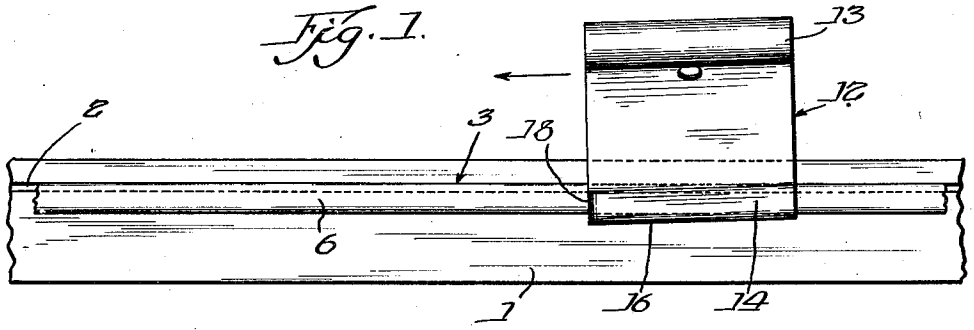



Fig. 2.

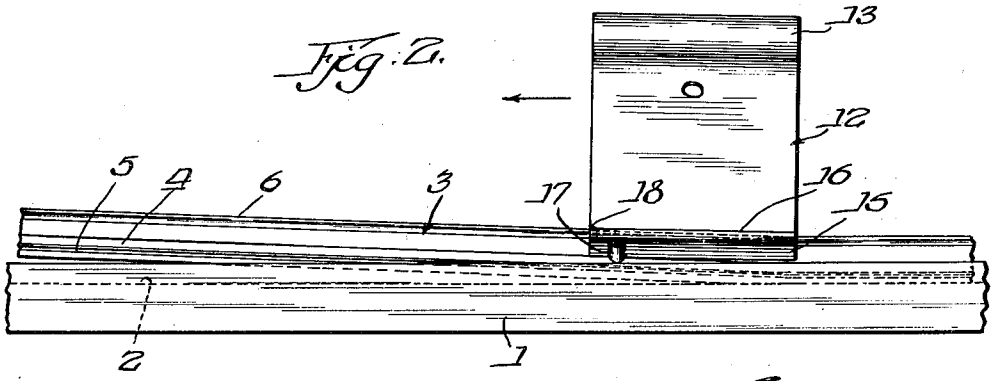



Fig. 3.

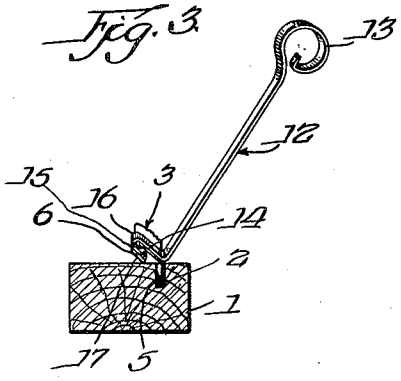



Fig. 4.

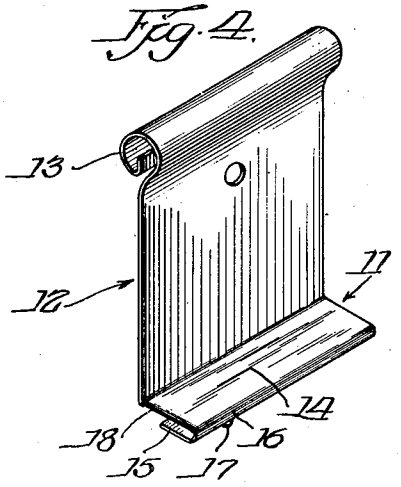
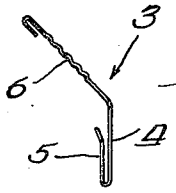



Fig. 5




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By: Lee & Lee Attys.

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# UNITED STATES PATENT OFFICE

2,330,023

## TOOL

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Application January 8, 1941, Serial No. 373,653

5 Claims. (Cl. 29—84)

The invention relates generally to tools for applying metallic strips to objects and more particularly to the tool especially adapted for applying weather stripping of the so-called drive in type to closure members or the like.

The invention has among its objects the production of such a tool which is so constructed that with its use weather stripping may be installed with a minimum of time and effort.

A further object of the invention is the production of such a tool which is simple and durable in construction, inexpensive to manufacture, and very efficient in operation.

Another object of the invention is the construction of such a tool by means of which the weather stripping may be uniformly and evenly applied without injury or undesired deformation of the strip.

Many other objects and advantages of the invention herein shown and described will be obvious to those skilled in the art from the disclosure herein given.

To this end my invention consists in the novel construction, arrangement and combination of parts herein shown and described and more particularly pointed out in the claims.

In the drawing wherein like reference characters indicate like or corresponding parts:

Fig. 1 is a top plan view of a portion of weather stripping and the member to which it is to be applied, with the tool illustrated in operable position;

Fig. 2 is a side elevational view of the same;

Fig. 3 is an end elevational view of the tool in operating position with the strip and member shown in section;

Fig. 4 is a perspective view of the tool; and

Fig. 5 is a sectional view of a strip of the general type which may be readily applied with the tool.

One of the types of weather stripping employed in many instances is that of the so-called drive-in type which is adapted to be mounted in a rabbet or groove in the supporting member. This type of strip is provided with a portion which is inserted in the groove and engaged with the sides thereof to firmly secure the strip to the supporting member. It has been customary in the past in applying this strip to manually press the same into the groove, using the thumb and fingers, and if necessary a hammer and block to drive the strip into its final position. When installing the strip in this manner, the latter often becomes dented and distorted so that the efficiency of the strip is reduced. It is, therefore, necessary to use considerable care in inserting the strip to avoid injury thereof, which obviously increases the amount of time required to properly install the strip. With the present invention the strip may be installed in a single operation requiring but a fraction of time formerly necessary.

Referring to the drawing, 1 represents the supporting member to which the strip is to be applied. In actual use the member 1 would be a part of the closure which is to be sealed. The member is provided with a longitudinally extending groove 2, of a size to receive a portion of the sealing strip 3, the construction of which is clearly shown in Fig. 5. The strip illustrated comprises a flat body portion 4 and a laterally extending elongated retaining portion 5 formed adjacent one longitudinal edge thereof, and positioned normally at an acute angle with respect to the body portion. Formed along the opposite longitudinal edge of the body portion 4 and extending laterally therefrom is a contact portion, indicated as a whole by the numeral 6. The groove or rabbet 2, in the member 1 is provided with subtsantially parallel sides and is of a size to receive an edge of the body portion 4 and the retaining portion 5, which is forced into the groove in a manner to flex the retaining portion toward the body portion, and due to the resiliency of the material provides a binding action of the body portion and retaining portion within the groove, as clearly illustrated in Fig. 3. It will be noted that lateral dimensions or width of the retaining portion 5 is somewhat less than the depth of the groove 2, and it will be apparent from such an arrangement that the retaining portion is positioned entirely within the groove so that the outer edge of the retaining portion will tend to bite into the material of the member 1 and retain the strip in place without the use of screws, nails, or other fastening means.

One embodiment of the present invention is illustrated in Fig. 4. In this construction the tool is formed from a single piece of sheet metal, or the like, and comprises a U-shaped strip receiving portion, designated generally by the numeral 11, to which is secured a handle, designated generally by the numeral 12, the free edge of the latter terminating in a rolled portion 13 to eliminate a sharp edge. The upper leg 14 of the U-shaped portion 11, to which the handle 12 is secured, is engageable with the upper face of the contact portion 6 of the strip, as illustrated in Fig. 3, by means of which pressure may be brought to bear on the strip to force the same into the groove 2. The lower leg 15 and connecting wall 16 of the portion 11 provides means for aligning the tool on the strip in proper operating relation.

The device is operated in the following manner:

The strip 3 is placed in proper position relative the groove 2, and the tool is applied to the strip as shown in Figs. 1, 2, and 3, the contact portion 6 of the strip being positioned in the portion 11, of the tool, the latter being inclined

as shown in Fig. 3 to maintain the strip 3 in proper position relative the groove 2. Pressure is then applied to the tool in a direction towards the supporting member 1, thereby engaging the contact portion 6 of the strip with the leg portion 14 of the tool to force the strip into the groove. At the same time the tool is drawn longitudinally along the strip so that the latter will be firmly forced into the groove throughout its length. It will be noted that the tool is held in such position relative the strip that the trailing edge of the tool is applying the greatest pressure. This prevents the leading edge of the tool from applying sufficient pressure to the strip to bend or distort the same. Likewise, the leading end portion of the connecting wall 16 of the channel 11 is spaced slightly from the edge of the contact portion 6 when the tool is in operative position on the strip so that there will be no tendency of said leading end portion of wall 16 to dig into the edge of the metal or otherwise retard the easy action of the tool. To facilitate this operation the lower leg 15 may be provided with a projection or bead 17, adjacent the leading end of the device, which is adapted to ride upon the supporting member 1, thus raising the leading end the desired amount. Likewise, the leading edge of the leg 14 of the channel 11 may be flared upwardly slightly as shown at 18 to present a smooth surface to meet and contact the strip. The wall or leg 14 preferably is approximately the same width as the lateral dimension or width of the contact portion 6 of the strip, thereby bringing the juncture section of the handle 12 with the channel 11 approximately in line with the juncture line of the body portion 4 and the part 6 of the strip 3. Thus, the downward pressure of the tool is applied more or less edgeways relative to the body portion 4 of the strip where it is primarily required to force the part 4 of the strip 3 into the groove 2 of the support 1. The size and relative proportions of the device may be varied to fit individual requirements.

It will be apparent from the above description that I have provided a tool which is simple in construction and exceedingly efficient for the purposes intended and by means of which a weather strip may be easily applied to a supporting member in a minimum of time without injury to the strip.

Having thus described my invention, it is obvious that various immaterial modifications may be made in the same without departing from the spirit of my invention; hence, I do not wish to be understood as limiting myself to the exact form, construction, arrangement, and combination of parts herein shown and described or uses mentioned.

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

1. A tool for inserting a metal weather strip into a recessed support therefor, comprising a flat pressure plate having a handle top, a flange secured at an angle to the bottom of said plate and adapted for movement along the surface of said support, said flange and plate being disposed to lie in the longitudinal direction of said weather strip, and a channel having one side connected with the free end of said flange to extend over the edge of said weather strip to force the latter into said recess as pressure is applied to said plate, said channel coacting with said strip to hold said flange and plate in their longitudinal position with respect to the strip as the same are operated longitudinally along said strip.

2. A tool for driving a weather strip into a recess in a support therefor comprising a flat sheet of material providing a finger bearing member for applying pressure on the weather strip, a flange member connected at an angle with said bearing member and along one edge thereof, and a channel member having one side thereof connected with the free end of said flange, said channel member providing an elongated guideway for receiving an edge of the strip and to align the bearing member in operative relation to said strip, and a handle connected with another edge of said bearing member to provide a hand rest and grip means whereby said tool may be manually operated with the channel member disposed in the longitudinal direction of the weather strip.

3. A tool for driving a weather strip into a recess in a support therefor comprising a plate providing a finger bearing portion to apply pressure to the strip, a flange secured at an angle to the bottom of said plate, a channel having one side thereof connected with one edge of the flange, said channel providing a guideway extending in parallel relation to the face of the bearing portion of the plate and adapted for receiving an edge of the strip and to align said bearing portion in operative relation to said strip and at an angle to the adjacent surface of said support, and a handle connected with said plate at a side opposite to said channel and disposed substantially in the plane of the bearing portion of the plate to provide means by which said tool may be manually operated.

4. A tool for driving a thin metallic weather strip into a groove in a support therefor, comprising a finger plate for applying pressure on the strip, a strip engaging channel adapted for riding along the surface of said support and having a leg thereof connected in longitudinal relation with the bottom edge of said plate for aligning the plate in a direction longitudinal of the strip, a projection on the support contacting side of the channel to tilt the latter and the plate relative to said support in strip receiving position, said channel having at least a portion of the leading edge thereof flared to guide said strip into said channel, and means on said plate for manually moving said tool along said support during the application of said weather strip.

5. In a tool for applying weather strip to a support, the combination of a plate, a flange secured at an angle to the bottom thereof, a channel member having one side thereof secured to said flange and said channel member being adapted for overhanging an edge of the weather strip, said channel member having the free side thereof terminating in spaced relation to the juncture of the flange and plate to permit said channel member to be angularly disposed relative to the adjacent surface of said support, the closed end portion of the channel member providing a bearing for riding on said strip, said channel member and flange providing means for aligning the bearing portion longitudinally with respect to the length of the weather strip, and an operating member connected with said plate for moving said channel member along said strip in applying the latter to the support.

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