Dec. 31, 1935. R. J. SAILER 2,026,484

BINDER FOR SEWING MACHINES

Filed April 18, 1935 2 Sheets-Sheet 1

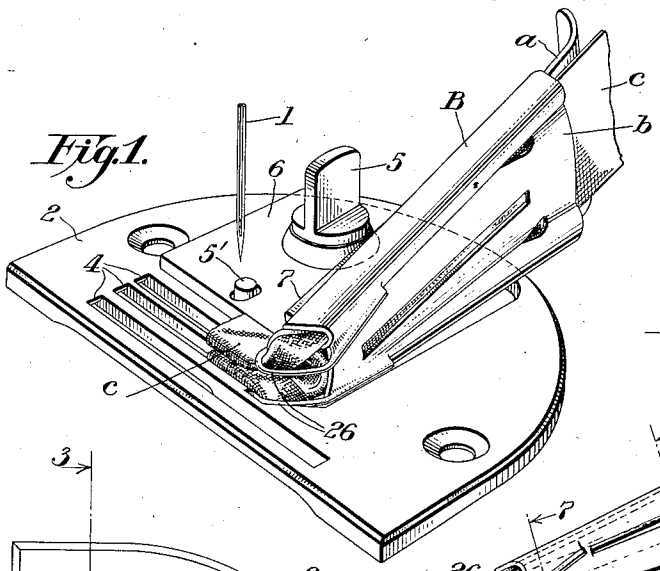


Fig. 1.

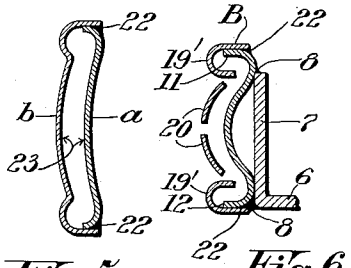


Fig. 5. Fig. 6.

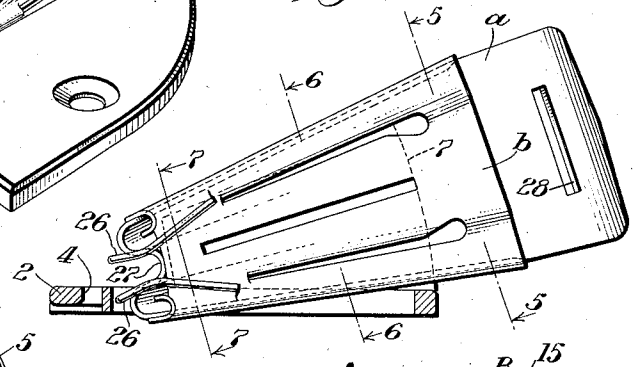


Fig. 4.

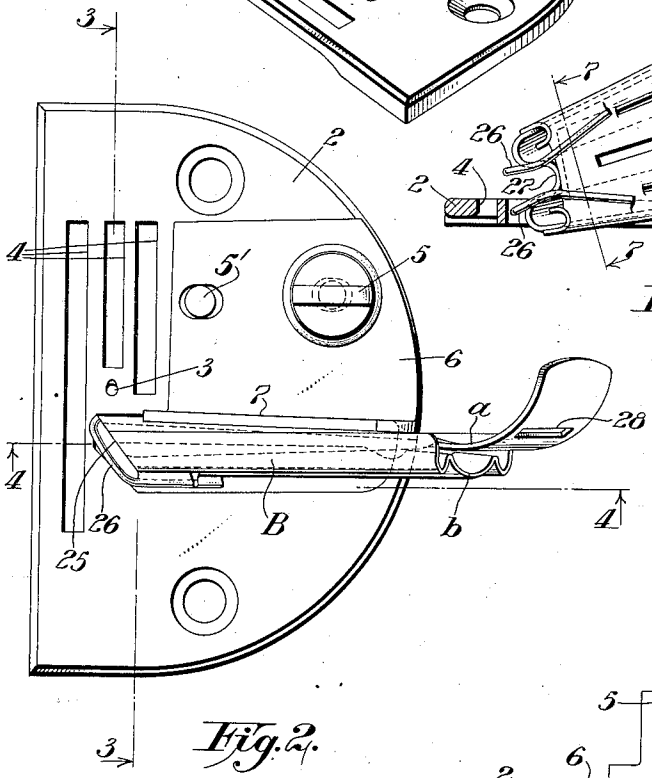


Fig. 2.

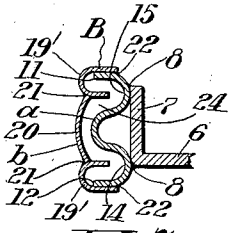


Fig. 7.

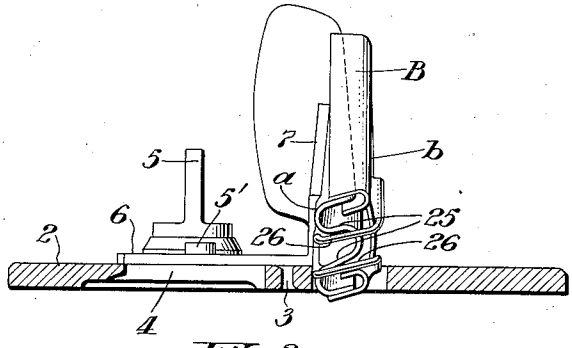


Fig. 3.

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BINDER FOR SEWING MACHINES

Filed April 18, 1935 2 Sheets-Sheet 2

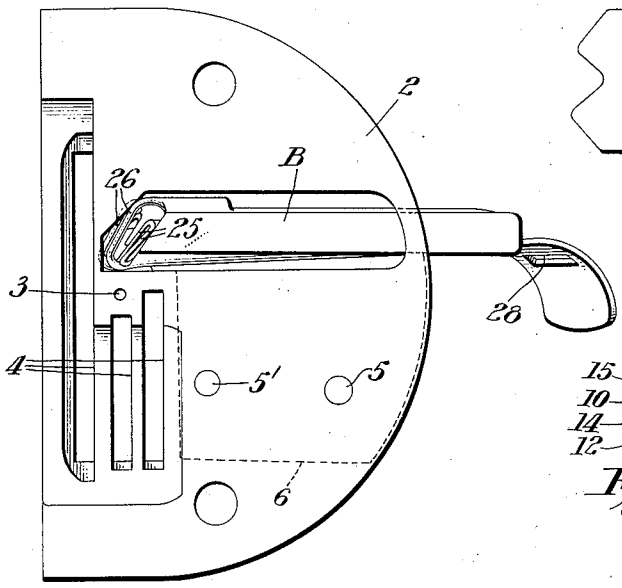


Fig. 8.

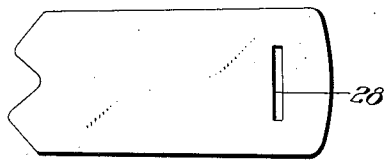


Fig. 9.

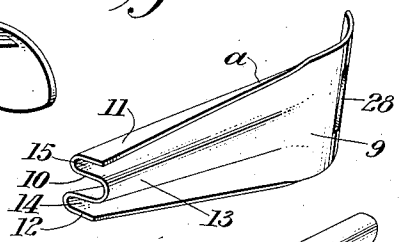


Fig. 10.

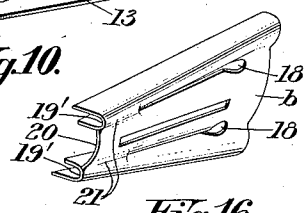


Fig. 16.

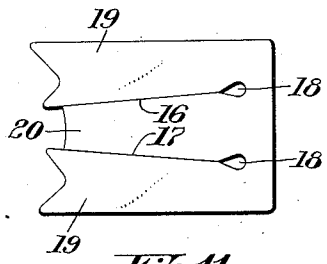


Fig. 11.

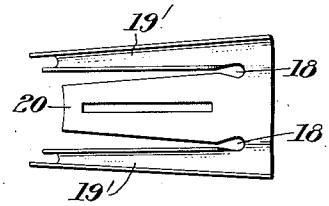


Fig. 12.



Fig. 13.

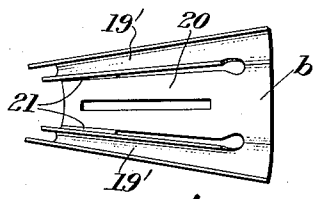


Fig. 14.

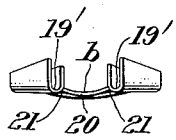


Fig. 15.

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Patented Dec. 31, 1935

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2,026,484

BINDER FOR SEWING MACHINES

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Application April 18, 1935, Serial No. 16,977

5 Claims. (Cl. 112—138)

This invention relates to sewing machine work-guiding attachments of the type known as binders which function to fold a strip of fabric longitudinally of itself into the form of a U and deliver it to the sewing machine needle in enveloping relation with the edge of a body-fabric to be bound.

The invention has for an object to provide a binder of simplified, inexpensive and sturdy construction which is easy to manufacture and which is efficient in its control of the binding strip; being adapted for the handling of either raw edged, pre-folded, or selvaged binding strips.

With the above and other objects in view, as will hereinafter appear, the invention comprises the devices, combinations, and arrangements of parts hereinafter set forth and illustrated in the accompanying drawings of a preferred embodiment of the invention, from which the several features of the invention and the advantages attained thereby will be readily understood by those skilled in the art.

In the accompanying drawings, Fig. 1 is a perspective view of a binder embodying the invention and applied to the throat-plate of a sewing machine. Fig. 2 is a top plan view of the parts shown in Fig. 1. Fig. 3 is a section on the line 3—3, Fig. 2. Fig. 4 is a section on the line 4—4, Fig. 2. Figs. 5, 6 and 7 are, respectively, sections on the lines 5—5, 6—6 and 7—7, Fig. 4. Fig. 8 is a bottom plan view of the parts shown in Figs. 1 and 2. Fig. 9 is a plan view of the sheet metal blank from which the rear section of the binder is made. Fig. 10 is a perspective view of the rear section of the binder bent from the blank shown in Fig. 9. Fig. 11 is a plan view of the sheet metal blank from which the front section of the binder is made. Figs. 12 and 13 are, respectively, plan and end views of the blank as initially bent in the formation of the front section of the binder. Figs. 14 and 15 are, respectively, plan and end views of the blank as finally bent in the formation of the front section of the binder, and Fig. 16 is a perspective view of the front section of the binder.

1 represents the reciprocatory needle of a sewing machine having a throat-plate 2 which is formed with the usual needle-hole 3 and feed-dog slots 4. Adjustably secured to the throat-plate 2 by the thumb-screw 5 and steady pin 5' is the slotted base 6 of an angle-bracket 7 to which the binder-head B is soldered at 8, as shown in Figs. 6 and 7.

The binder-head B is made from the two sheet metal blanks shown in Figs. 9 and 11. To form the rear section *a* of the binder, the blank shown in Fig. 9 is folded longitudinally of itself so as to taper progressively from a relatively wide flat form at its receiving end 9 to a relatively narrow W-form at its delivery end 10. The blank shown in Fig. 9, bent to the form shown in Fig. 10, has the upper and lower flanges 11, 12 and the intermediate forwardly convexed connecting wall 13 defining the channels 14 and 15.

To form the front section *b* of the binder, the blank shown in Fig. 11 is formed with spaced longitudinally extending slits 16, 17 extending from one end of the blank toward but stopping short of the other end of the blank; said slits terminating in the punched out apertures 18 and defining outer tongues 19 and an intermediate bridge 20. The two outer tongues 19 are each folded longitudinally into U-form as shown at 19' in Figs. 12 and 13. The U-shaped tongues 19' are then bent toward the tapering intermediate bridge 20 and soldered thereto at 21; the bridge 20 being arched between the U-shaped tongues 19', as shown in Figs. 6, 7 and 15.

The front section *b* is then applied to the rear section *a*, preferably with the flanges 11 and 12 of the rear section *a* entering the channels of the U-shaped portions 19' of the front section *b*, in overlapping contact relation with the top and bottom members of the respective top and bottom U-shaped portions 19' to which they are securely soldered at 22.

The described construction provides a binder head having a fully enclosed strip-guiding passageway which progresses from a substantially flat passageway 23, Fig. 5, at the receiving end of the device to a W-shaped passageway 24, Fig. 7, at the delivery end of the device.

It is to be understood that the binder head terminates at its delivery end in the usual strip-inverting edges 25, Fig. 3, which are disposed at an angle of approximately 45° to the direction of travel of the binding strip *c* through the folder; the strip *c* being inverted, as usual, over these edges 25 and its direction of travel changed 90°, as is common to the operation of strip-reversing or so-called "English" binders. Guard wires 26 may be soldered to the delivery end of the binder to prevent disarrangement of the infolded edges of the binding strip by the introduction into the channel 27 of the edge of body-material to be bound.

The rear section *a* of the binder is provided with a transverse slot 28 located at the receiving end of the binder-head. This slot serves as a receiving guide for a pre-folded or selvaged

binding strip and centralizes such a strip relative to the binder passageway.

The present binder head is so contrived that the component parts thereof may be machine punched and shaped or pressed to form by use of forming dies and without the necessity of doing any hand work thereon other than the final assembling operation. This results in a great saving in the cost of manufacture of the device.

Having thus set forth the nature of the invention, what I claim herein is:—

1. A binder for sewing machines comprising two sheet-metal sections each formed with outer edge flanges and intermediate walls spaced from said flanges to form channels, and means for securing said sections together with their outer edge flanges in overlapping contact relation.

2. A binder for sewing machines comprising two sheet-metal sections each formed with outer edge flanges and intermediate walls spaced from said flanges to form channels, and means for securing said sections together with their outer edge flanges in overlapping contact relation, the intermediate walls of one section having free edges disposed within and clear of the walls of channels in the other section.

3. A sewing machine binder comprising two bent sheet-metal sections one of which is W-shaped in cross-section and the other of which has two spaced portions of U-shaped cross-section joined by a bridge connected to the bends of said portions, said sections being joined together along their outer edges to form a strip passageway of W-shaped cross-section.

4. A binder for sewing machines comprising two pieces of sheet metal one piece (*a*) of which is bent longitudinally of itself into a form having a progressively narrowing W-shaped cross-section and the other piece (*b*) of which has two spaced portions of U-shaped cross-section connected by a longitudinally tapering bridge joined along its edges to the bends of said spaced portions, the open sides of said members being disposed face-to-face with the outer flanges of the member (*a*) joined to the outer flanges of the spaced portions of U-shaped cross-section of the member (*b*).

5. A binder for sewing machines comprising two sheet-metal sections one (*a*) of which is bent into a form having a progressively narrowing W-shaped cross-section providing two spaced channels and an intermediate convex connecting wall, the other section (*b*) being slitted longitudinally to form two outer tongues and an intermediate bridge, the outer tongues being each bent into channel formation of U-shaped cross-section and the bridge member being arched and connected along its edges to the bends of the outer tongues, said sections (*a*) and (*b*) being joined together with the concave face of the bridge member of section (*b*) facing but spaced from the intermediate convex connecting wall of section (*a*).

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