

(Model.)

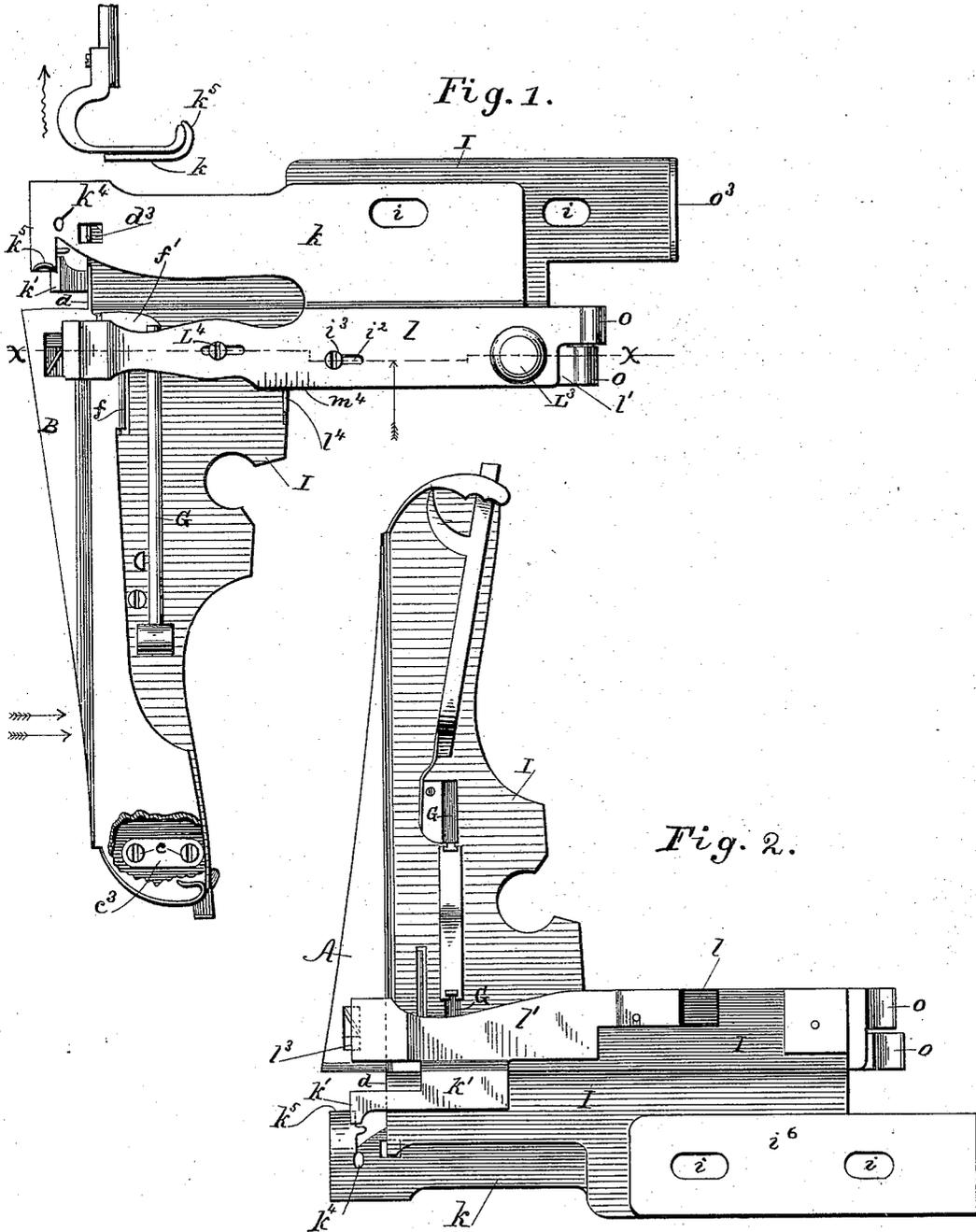
2 Sheets—Sheet 1.

R. HILGNER.

BINDING ATTACHMENT FOR SEWING MACHINES.

No. 310,822.

Patented Jan. 13, 1885.



WITNESSES:
Thos. Houghton.
Edw. W. Byrn

INVENTOR:
Robt. Hilgner
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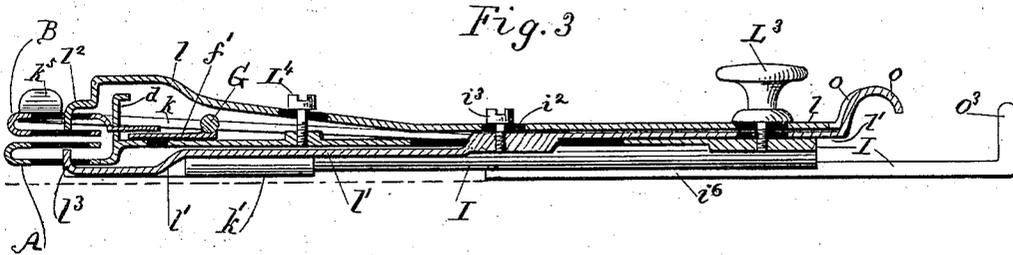


Fig. 3.

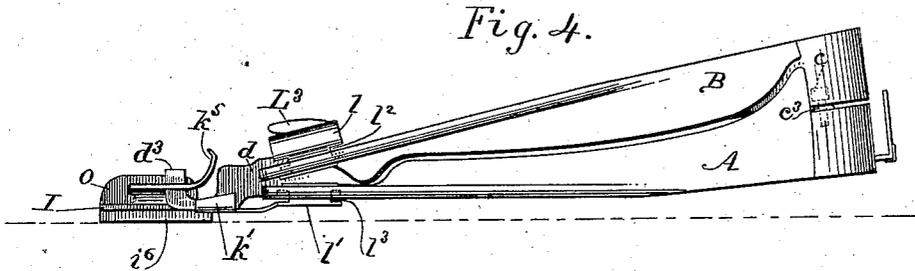


Fig. 4.

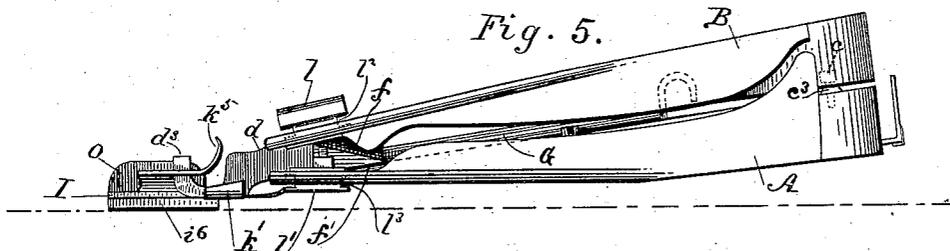


Fig. 5.

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UNITED STATES PATENT OFFICE.

ROBERT HILGNER, OF NEW ORLEANS, LOUISIANA, ASSIGNOR OF ONE-HALF
TO GEORGE B. LAWRASON, OF SAME PLACE.

BINDING ATTACHMENT FOR SEWING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 310,822, dated January 13, 1885.

Application filed June 28, 1884. (Model.)

To all whom it may concern:

Be it known that I, ROBERT HILGNER, a subject of the Emperor of Germany, residing at New Orleans, in the parish of Orleans and State of Louisiana, have invented certain new and useful Improvements in Binding Attachments for Sewing-Machines, of which the following is a description.

Figure 1 is a top plan view. Fig. 2 is an inverted plan view. Fig. 3 is an enlarged section through the line *xx* of Fig. 1. Figs. 4 and 5 are views looking in the direction of the twin arrows in Fig. 1, Fig. 4 showing the jaws A B shut, and Fig. 5 showing them open.

My invention relates to the binding attachment for sewing-machines for which Letters Patent No. 293,022 were granted me February 5, 1884; and it consists in several features of improvement thereon, designed to secure better work and a more convenient and complete system of adjustment, as hereinafter fully described.

I will first describe the general features of the binding attachment as already patented, and then describe and point out the improvements.

In the drawings, A and B represent two plates, which are folded upon themselves to form flattened tubes, which at the right hand in Figs. 4 and 5 are in a vertical plane and gradually turn to a horizontal plane as they proceed to the left, and are connected to each other by screws *c* on the right, which form a sort of joint or hinging-point about which the left-hand portions of the plates A and B open and shut, like jaws. These tubular plates form a channel for the braid, and the meeting edges of the tubes are of curved contour to prevent the braid from coming out. The outside face of these tubular plates forms the guide for the edge of the cloth being bound, and the braid in the channel-way is folded around or above and below its edge. To open these jaws, (or the horizontal parts of these plates A and B,) so as to permit the work to be placed in, the upper plate, B, has an inclined cam-edge, *f*, on its rear side, against which a sliding plate, *f'*, worked by rod G, is made to bear, as described in a previous patent. The lower plate, A, is formed with a right-angular exten-

sion, I, Figs. 1 and 2, to the upper portion of which is detachably and adjustably fastened a combined gage and guide, *k l*.

On the under side of the extension I is a somewhat similar gage and guide, *k' l'*. Both these combined gages and guides rest at right angles to the travel of the cloth, which moves in the direction of the waved arrow in Fig. 1, and the parts *l* and *l'* have flanges *l''* and *l'''*, (see Fig. 3,) which pass through slots or openings in the horizontal ends of the braid-channels A and B, and form gages which rest one against the edge of the braid above the cloth and the other against the edge of the braid below the cloth. The upper gage-plate, *l*, and lower gage-plate, *l'*, have an independent adjustment, so that their flanges *l''* and *l'''* may not always be the same distance from the edge of the cloth, but may occupy different distances from said edge, as when more of the binding is to show on one side of the cloth than the other. The other members, *k* and *k'*, of these plates have their ends bent to form guides for the edges of the braid near the needle, which passes through a hole, *k''*, in the upper guide-plate, *k*.

As so far described the construction of the binder does not differ from that already patented, and I will now proceed to describe my features of improvement.

On the lower side of the portion I of the main plate I make a downwardly-projecting thickness or base, *v*, Figs. 2 and 3, which, when the plate I is fastened to the sewing-machine by screws passing through holes *i*, holds the attachment firmly to place, but keeps the other portions of the frame I a little above the level of the table, so that gage and guide plates *k' l'* may be free to move beneath the frame I without being clamped between it and the table.

At the point where the sections A and B are fastened together by screws *c*, I also form an elevation or ridge, *e*, Figs. 1, 4, and 5, which enables the top and bottom plates, A and B, to move up and down with ease at the delivery end, thus forming a more freely acting hinge-point for the opening of the jaws. There was in the original construction an up-turned flange, *d*, formed on the end of the

plate I, near [the edge of the cloth, which occupied a position between the gage and guide k and l , (see Fig. 1,) and which bore against the middle of the binding as it lay folded about the edge of the cloth. I now make another similar flange, d^3 , on the edge of plate I in line with d , and cut a slot in the guide k , and allow this flange d^3 to protrude up through this hole, so as to continue to guide the materials together up to the needle, and thus prevent the binding from being drawn away from the needle when sewing around corners. I also form near this point on the top guide, k , a lug, k^5 , which is turned both upward and inward toward the needle, and which inturned lug hugs the end of the presser-foot of the machine, and by holding these parts together makes the adjustment more steady. I also make the upper combined gage and guide plate, $k' l$, and the lower combined gage and guide plate, $k' l'$, to have two different adjustments at right angles to the line of feed, one being an adjustment of the upper plate over the lower plate and the other an adjustment of the two together. For adjusting these plates over each other, so as to cause the binding to lap more on one side of the cloth than the other, a space is cut out of this plate I, and through it these plates are connected adjustably together by a slot, i^2 , and screw i^3 , Figs. 1 and 3, and then when adjusting both together for simply adapting them to bindings of different widths a separate set-screw, L^3 , is tapped into the plate I through slots in both the upper and lower plates, l and l' .

In the frame-plate I there is also tapped a set-screw, L^4 , which passes through a slot in the upper gage, l , and serves to set this higher or lower, so as to decrease or increase strength of spring, according to the thickness of the material being bound. I also form an upturned flange, o^3 , on the end of the frame-plate I, to form a handle and co-operate with the handles o in adjusting the guides and gages. On the edge of the gage l are also formed graduation-marks m^4 , Fig. 1, which are adapted

to register with an upturned index-lug, l^4 , of plate I, to indicate the amount of lap that is being given to the braid.

Having thus described my invention, what I claim as new is—

1. The plate I, having holes i , and an increased thickness or base, i^6 , in combination with the braid-channels A B and the underneath adjustable guide, $k' l'$, lying beneath the plate I, and removed from contact with the table by the thickness i^6 , as and for the purpose described.

2. The braid-channel sections A and B, having a ridge or projection, c^3 , between them at the point where they are fastened together for a hinging action, as described.

3. The braid-guide k , having a lug, k^5 , in advance of the needle, and turned upwardly and inwardly to receive and clamp the presser-foot of the machine, in combination with said presser-foot and the braid-folding devices, as described.

4. The combination, with the braid-folders A and B and the plate I, of the gage-plates l and l' , connected adjustably together by slot i^2 and screw i^3 , and a set-screw, L^3 , for connecting both to the frame I, as and for the purpose described.

5. The combination, with frame-plate I, the braid-folders A B, and the gage l , and means for fastening the gage l to the frame-plate, of the set-screw L^4 , for adapting this gage to the thickness of the material.

6. The combination of the frame-plate I, having upturned flange o^3 , the gage and guides $k l$ and $k' l'$, having handles $o o$, and the braid-folding devices, as and for the purpose described.

7. The frame-plate I, having index-lug l^4 , in combination with the gage l , having graduations m^4 , and the braid-folding devices, as and for the purpose described.

ROBERT HILGNER.

Witnesses:

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GEO. B. LAWRASON.