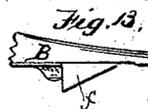
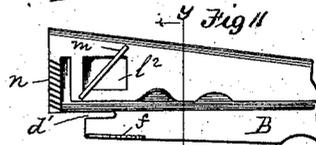
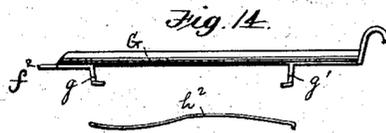
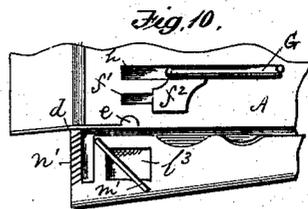
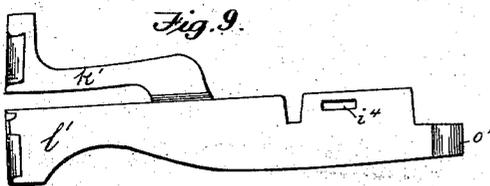
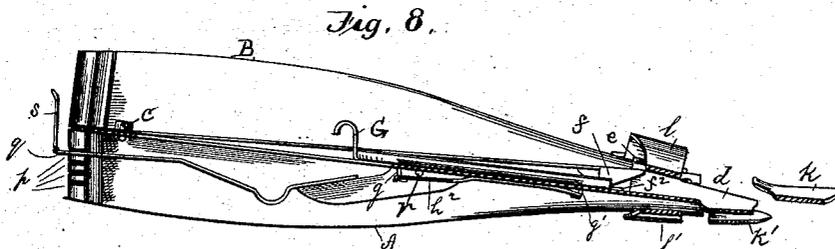
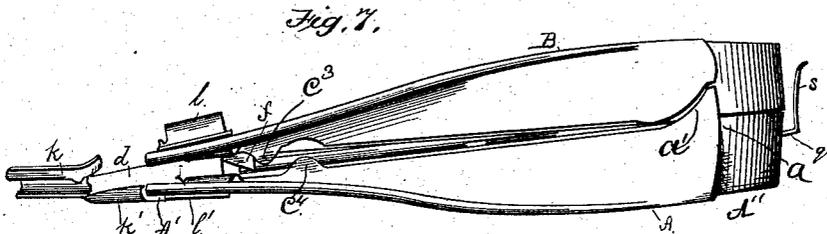
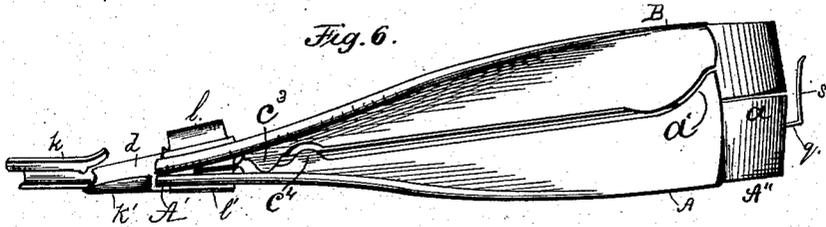


R. HILGNER.

BINDING ATTACHMENT FOR SEWING MACHINES.

No. 293,022.

Patented Feb. 5, 1884.



WITNESSES

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ROBERT HILGNER, OF NEW ORLEANS, LOUISIANA.

BINDING ATTACHMENT FOR SEWING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 293,022, dated February 5, 1884.

Application filed April 28, 1883. (Model.)

To all whom it may concern:

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

This invention relates to that class of binders which are used as attachments to sewing-machines to guide a binding to be sewed upon the edge of a garment; and it consists in the construction and combination of parts forming the sewing-machine binder hereinafter described and claimed, reference being had to the accompanying drawings, in which—

Figure 1 is a top view of my binder, and Fig. 2 is a bottom view of the same. Fig. 3 is a top view of the adjustable guide for the upper edge of the binding, and Fig. 4 is an edge view of the same. Fig. 5 is a section, part in elevation, at line *xx* of Fig. 3. Fig. 6 is a front view of the binder closed, and Fig. 7 is a similar view of the same open to receive the goods to be bound. Fig. 8 is a section, part in elevation, at line *zz* of Fig. 1. Fig. 9 is a top view of the guide for the lower edge of the binding. Fig. 10 is a top view of a portion of the lower plate near its discharge end, and Fig. 11 is an under side view of the adjacent face of a portion of the upper plate. Fig. 12 is a section at *yy*, Fig. 11. Fig. 13 is a rear view of the discharge end of the upper plate, and Fig. 14 is a side elevation of a sliding device for opening the plates.

A is the body or lower plate of the binder, adapted to rest on the sewing-machine plate, and to be there held by screws at *i i'* passing through the tang I of said plate A. A portion, A', Figs. 5 and 6, of plate A is bent back over itself, leaving a passage between for one edge of the binding. This bent edge and the passage made thereby are gradually twisted from a horizontal position at A' to a vertical position at A''.

B is an upper plate, secured upon plate A by two screws, *c*, Fig. 1, said plate being bent and twisted similarly and oppositely to plate A, mating the same to form one passage therewith for the binding to pass through. The binding is entered at *a*, and is kept from being drawn outward through the central

space by the curved point *a'* extending over it across its line of travel. A binding not wide enough to fill the passage *a* will be guided centrally therein by the spring-guide *g*, having an arm, *s*, to retain the binding-guide *g*. *s* has a spring-body secured at *r*, Figs. 2 and 8, to plate A, which is provided with notches *p*, to receive said guide *g* and hold it at a distance from the center of passage *a* corresponding to one-half the width of the binding, whatever the width may be. Guide *g* is provided with a hook, *g'*, to engage the edge of plate A at *s'*, which is a vertical rib or post of plate A, to prevent the guide from being strained or broken off by any sudden backward pull on the binding.

s'' is a projecting shelf, which, in connection with the edge *s'* and hook *g'*, prevents the guide *g* from being dislocated.

k and *l* represent the two arms of the upper guide. Each of these arms has a downward flange, *k''*, Fig. 2, and *l''*, Figs. 4 and 5, standing in line with each other, forming a double guide to the upper edge of the binding.

d, Figs. 1 and 2, is a bent-up portion of plate A, serving as a fixed back guide for the folded edge of the binding. The double guide *k l* is adjustably secured to the plate A by means of a binding-screw, *i'*, passing through a slot, *i''*, and one of the plate-securing screws passing through slot *i'*, permitting it to be set at different distances from the back guide, *d*, to receive bindings of different widths.

k' l' represent a similar guide, which may be set independently of the upper guide, so that one edge of the binding may, if so desired, be guided to lie farther onto the garment than the other edge; yet both, requiring to be set when beginning to work, are bound when set by the same screw, *i''*. The guide *k' l'* is provided with a handle, *o'*, and the guide *k l* with a similar handle, *o*, by means of which handles the two guides may be set. The arm *k* of the upper guide is provided with a lip, *k''*, to extend beneath the upper edge of the binding, to insure its lying out flat at the instant before it is sewed, and so prevent the edge of the binding from working out from the guide, said lip being just before the hole *k'* through which the needle plays. The arms *l* and *l'* enter the plates A and B through apertures *l''* and *l'*, respectively, and engage the edges of said apertures

as sliding ways, thus keeping said guides in a fixed relation to said plates and to the binding guided thereby. The said arms thus act as springs to hold plates A B together, and the guiding-edges of said plates are somewhat rigid on that account; but the associate guides k and k' are each free to spring as the thickness of the garment may require, so that they properly guide the binding just before it is sewed, whether the garment be plain or cross-seamed.

m and m' , Figs. 10 and 11, represent diagonal bars secured upon the inner faces of plates B and A at an angle with the path of the garment, acting like plowshares to crowd the edge of the garment into the binding, and to force that against the back guide, d .

n and n' represent diagonal serrations on other planes of the same plates, to act in a similar manner on the binding to stretch it smoothly onto the garment. The plate B has a downward-inclined edged projection, f , which passes through opening f' in plate A, to raise said plate B by means of a handle, G, adapted to slide a plate, f'' , Fig. 10, beneath said inclined edge. The sliding handle G is provided with a spring, h^2 , Fig. 2, secured thereto by means of studs g and g' , to act against plate A, causing sufficient friction to hold handle G wherever it is left. This raising of plate B is to admit the goods between it and plate A. The presser-foot of the sewing-machine springs down upon guide k , pressing it upon the goods.

In operation, the binding is placed behind arm s . Guide q is set to bring it central with passage a , into which it is entered and worked forward by means of any pointed instrument inserted in the middle space. When it projects beyond the serrations n n' , the edge of the garment is inserted between plates A B against extensions c^3 and c^4 of plates B and A, which project across the opening between said plates, to prevent the garment from coming in contact with the binding until the two pass simultaneously to be sewed, and both are drawn forward together, the edges of the binding being first guided behind the lips k'' and k^3 . Then the sewing may be done, the machine-feed drawing all parts of the work along together.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The plate A, adapted to be attached to a sewing-machine, substantially as described, in combination with the plate B, secured at its outer end to plate A, springing its inner end thereon, each plate being folded back nearly upon itself at one edge, each of said folded portions being twisted from a horizontal position at its inner end to a vertical position at its outer end, the original outer edges of the two folded portions being contiguous when folded and twisted as described, forming a pas-

sage whose inlet is a vertical plane and whose outlet is two parallel horizontal planes joined at one edge, as and for the purpose specified.

2. The plate B, folded and twisted as described, in combination with the plate A, folded and twisted as described, and having the point a' lying across the line of the opening between the adjacent edges of said plates.

3. The combination, with the plate A, having the notches p therein, of the guide q s , having an elastic body attached to said plate, adapted to spring into the aforesaid notches, as shown and described.

4. The plate A, having the notches p and rib s' , in combination with the guide q , having the hook q' , adapted to hook loosely over the rib s' , as shown and described.

5. The plate A, having a hole, f' , in it, and the plate B, having the inclined-edged projection f , adapted to pass through said hole f' , in combination with the slide G, provided with a plate, f'' , adapted to slide between plate A and projection f to raise the plate B, as shown and described.

6. The combination, with the plate A, having two slots in it, of the slide G, having two studs, g g' , and the spring h^2 , held by said studs, impinging upon one side of plate A to hold slide G in frictional contact with the other side, as described.

7. The folded and twisted plate A, having the extension c^1 , in combination with the folded and twisted plate B, having the extension c^2 , adjacent to each other, as shown and described.

8. The combination, with the guide l , having the flexible arm k , each provided with guiding-edges in line with the other, of the guide l' , having the flexible arm k' , each provided with guiding-edges in line with the other, substantially as described.

9. The flexible arm k , having the projecting lip k^3 , and a hole, k^4 , for the machine-needle to enter, and shaped to be secured to a sewing-machine beneath the presser-foot, in combination with means for feeding work thereto, substantially as shown and described.

10. The folded and twisted plate A, having the diagonal serrations n' at its delivery end, in combination with the folded and twisted plate B, having similar serrations, n , adjacent thereto, as shown and described.

11. The folded and twisted plate A, having the diagonal bar m' , secured on its upper face, in combination with the folded and twisted plate B, having the bar m , secured on its lower face adjacent to and practically parallel with said bar m' , as shown and described.

In testimony whereof I hereunto sign my name.

ROBERT HILGNER.

In presence of—

J. N. MÜLLER,
JOHN R. CONWAY.