G. R. SMITH.

Binding Guide for Sewing Machines.

No. 40,127. Patented Sept. 29, 1863.

Fig. 3

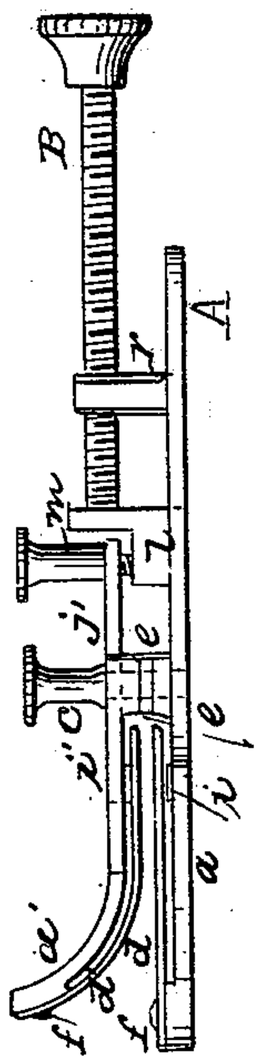


Fig. 4

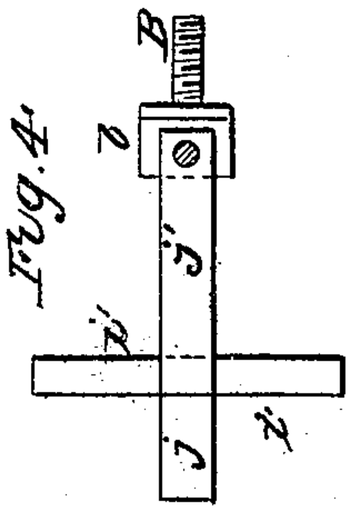


Fig. 1

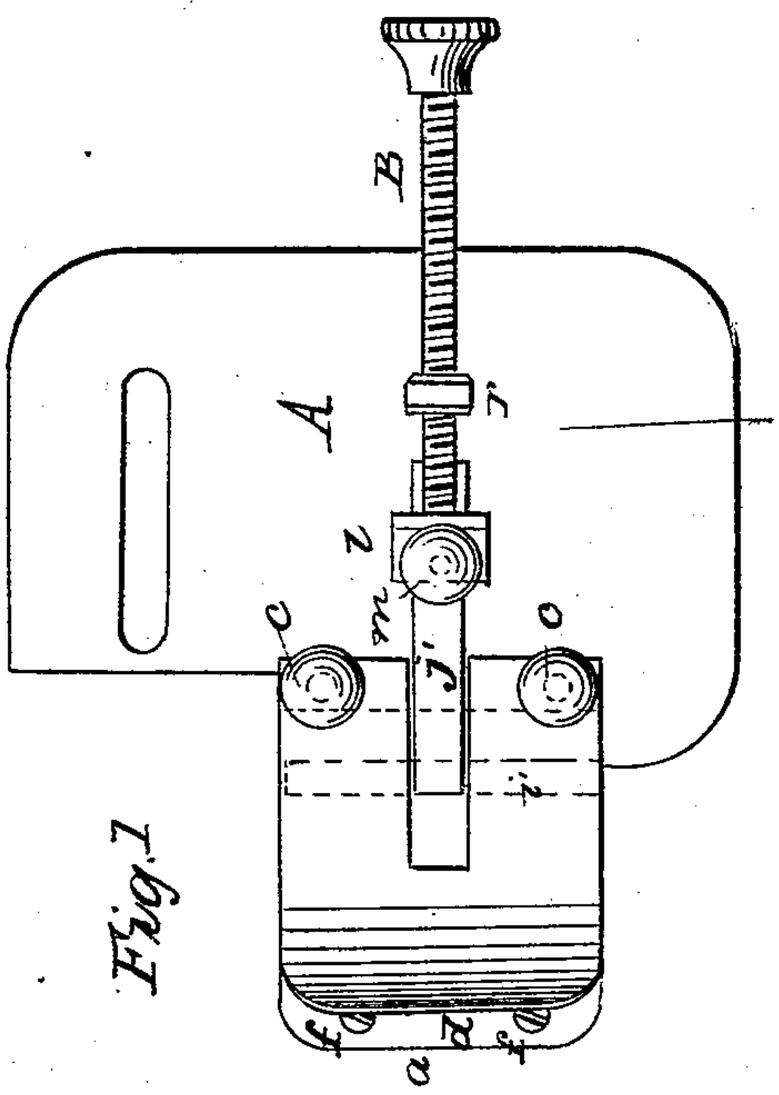
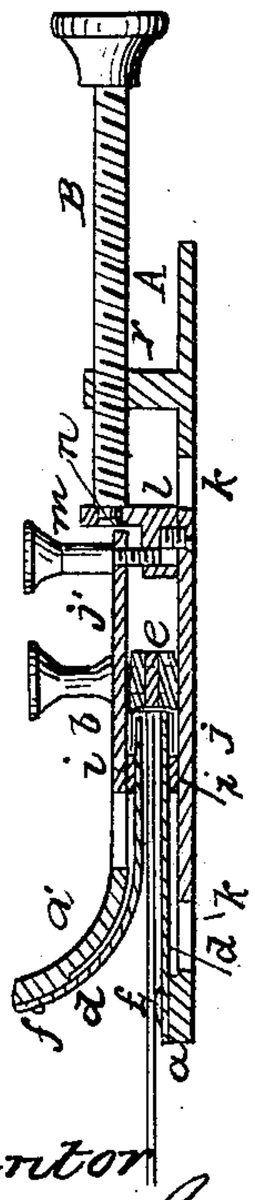


Fig. 2



Witnesses

J. W. Combs

G. W. Reed

Inventor

G. R. Smith

per Munn & Co

attorneys

UNITED STATES PATENT OFFICE.

GEORGE R. SMITH, OF DOWAGIAC, MICHIGAN.

IMPROVEMENT IN BINDING-GUIDES FOR SEWING-MAGHINES.

Specification forming part of Letters Patent No. **40,127**, dated September 29, 1863; antedated September 12, 1863.

To all whom it may concern:

Be it it known that I, GEORGE R. SMITH, of Dowagiac, in the county of Cass and State of Michigan, have invented a new and useful Improvement in Binders for Sewing-Machines; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, which form a part of this specification, in which—

Figure 1 is a plan of a binder with my improvement. Fig. is a transverse vertical section of the same. Fig. 3 is a side view of the same. Fig. 4 is a top view of the adjustable double gage.

Similar letters of reference indicate corresponding parts in the several figures.

The object of my invention is to make the same binder serve for applying binding of various widths to cloth or other materials of various thicknesses; and it consists in an improved construction of the binder to effect those results.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

A is a metal plate, which is intended to be secured by a screw to the bed-plate or work-plate of the sewing-machine, and a portion of which is made to constitute the fixed lower jaw, *a*, of the binder.

a' is the upper jaw, made of stout metal plate, and curved upward at its outer edge, as shown in Figs. 2 and 3, to facilitate the entrance of the material to be bound, and secured to the lower one by screws *c c*.

d and *d'* are two lining-pieces of thin steel plate, corresponding in form with the jaws, applied within the jaws and secured thereto by screws *f f* or other suitable means near the outer edges of the latter, and extending between the jaws into and nearly to the back of the throat *b* of the binder, but not attached to any part of the jaws except at the outer edges or entrance thereof. These lining-pieces, except where they are attached to the jaws, have spaces between them and their respective jaws wide enough for the free passage of the binding, and a space is left between the two lining-pieces sufficient for the passage of the cloth or other material to be bound. This space can be made wider or narrower, to suit material of greater or less thickness, by introducing or removing from between the jaws at the back of the throat one or more packing-pieces, *e*, which, when introduced, are held in place by the screws *c c*, which pass through the upper jaw and through the said packing-pieces and screw into tapped holes in the lower jaw. It is to provide for the introduction and removal of these packing-pieces that the upper jaw is made movable and secured by screws, for if this were not desirable the said jaw might be permanently secured to the lower one.

i i' are two similar straight-edged strips of metal, which constitute the principal portions of the adjustable gage fitted to slide between the jaws toward and from the throat *b*, and arranged parallel with each other and with the back of the throat, which is to be arranged parallel with the feed movement of the sewing-machine. The lower piece, *i*, is attached to a straight transversely-arranged slide, *j*, which is fitted to slide in a straight slot, *k*, in the plate A and jaw *a*, and the upper piece, *i'*, is attached to a similarly-arranged slide, *j'*, which is fitted to work in a similar slot, *k'*, in the upper jaw, *a'*, and the slides *j j'* are connected together by an upright standard, *l*, which is secured rigidly to the slide *j*, and a screw, *m*, which passes through the slide *j'* and screws into the standard *l*.

B is a screw arranged parallel with the slides *j j'*, screwing through a tappet-hole in a post, *r*, which is secured rigidly to the plate A, and having formed upon it a journal, *n*, which is fitted in such manner to a bearing in the standard *l* as to be capable of turning freely but not moving longitudinally therein, so that when the said screw is turned in the post *r* it moves the standard *l* and the slides *j j'* in one direction or the other, according to the direction in which it is turned, and is thus made to adjust the gage-strips *i i'* nearer to or farther from the throat *b* of the binder.

In the binding operation the binding, which is represented in Figs. 2 and 3 by a single red line, passes between the jaws *a a'* within the throat *b*, and is doubled or folded over the inner edges of the lining-pieces *d d'*, while the cloth or other material to be bound passes between the two lining-pieces.

The operation of putting on the binding is

substantially the same in this binder as in the other binders, which only serve for binding of one particular width and for cloth of a certain thickness.

To adjust the binder for a given width of binding the gage strips are brought to such a position that there is just room for the doubled or folded binding to pass between them and the back of the throat. with both its edges in contact with the said strips. To provide for the placing of a greater width of the binding on one side of the cloth than on the other, the upper gage-slide, *j'*, may be made adjustable relatively to the lower one, *j*, to set the strip *i'* farther from or nearer to the throat *b* of the binder than the strip *i*. To adjust the binder for binding materials of different thickness, one or more packing-strips, *e*, are inserted or removed from between the jaws *a a'*.

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

The combination, in the manner herein shown and described, of the lining-pieces *d d'* and guiding-strips *i i'* with the laterally and vertically adjustable jaws *a a'*, slides *j j'*, and plate A, all as set forth.

GEORGE R. SMITH.

Witnesses:
W. K. PALMER,
MOSES PORTER.