

F. A. ALLEN.
Plaiting Apparatus.

No. 27,029.

Patented Feb. 7, 1860.

Fig. 1.

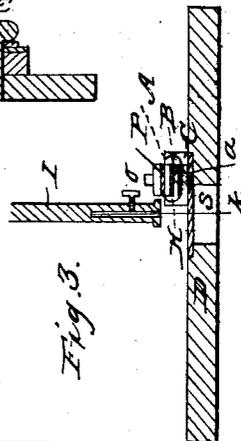
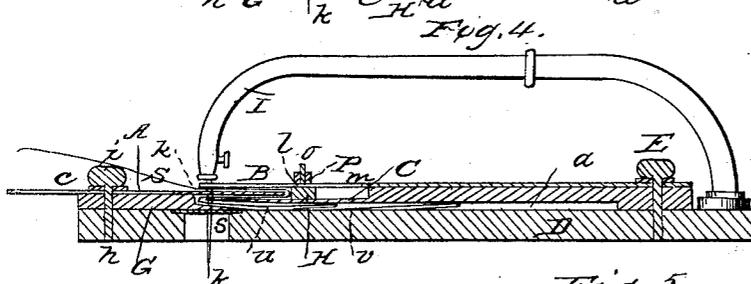
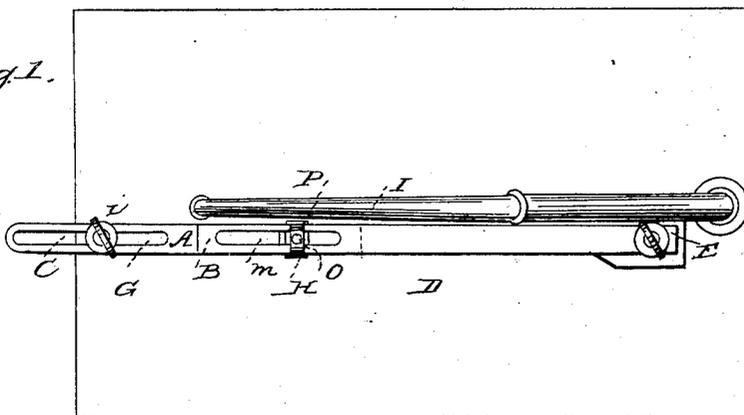
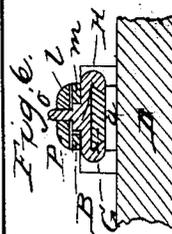
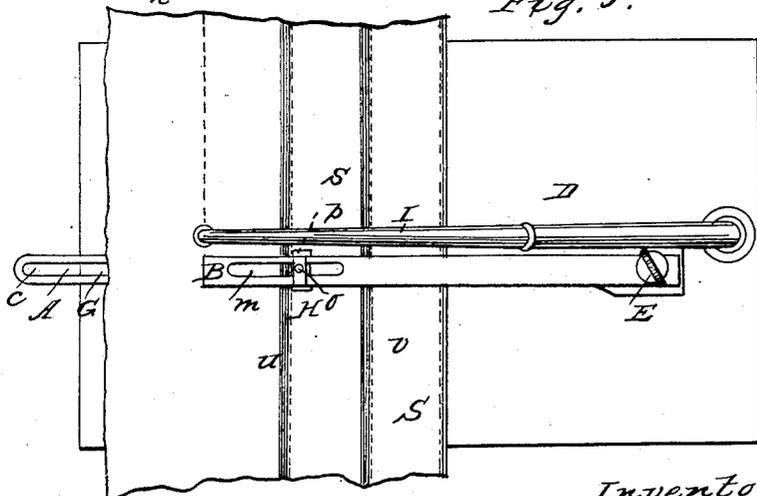


Fig. 5.



Inventor:

Frank A. Allen

Witnesses:
A. J. Paine
C. C. Otis

UNITED STATES PATENT OFFICE.

FRANK A. ALLEN, OF PORTSMOUTH, NEW HAMPSHIRE.

IMPROVEMENT IN MAKING PLAITS IN SEWING.

Specification forming part of Letters Patent No. 27,029, dated February 7, 1860.

To all whom it may concern:

Be it known that I, FRANK A. ALLEN, of Portsmouth, in the county of Rockingham and State of New Hampshire, have invented a new and useful Apparatus for Making Plaits in Cloth or Shirt Bosoms, &c.; and I do hereby declare that the same is fully described and represented in the following specification and the accompanying drawings, of which—

Figure 1 exhibits a top view of said plaiting apparatus as applied to the table of an ordinary sewing-machine. Fig. 2 is a longitudinal section of the same, while Fig. 3 is a transverse section taken through the needle-passage of the said table. Fig. 4 exhibits a longitudinal section, and Fig. 5 a top view of the apparatus having a piece of cloth laid in it.

The purpose of the said plaiting apparatus is to form in advance of the needle of a sewing-machine a plait in linen or other cloth while such cloth is being stitched or sewed, so as to confine the said plait in the cloth, such apparatus, with the sewing machinery, being intended particularly for the manufacture of shirt-bosoms.

The said plaiting apparatus consists in a combination of three folding bars, A B C, one of which—viz., B—is placed over another—viz., C—while the third bar, A, is extended between them a distance about the width of a plait to be made, the whole being as shown in the drawings. The two bars B and C are fastened to the bed-plate D of a sewing-machine by means of a clamp-screw, E, the lowermost bar being so constructed that there shall be a space, *a*, between it and the upper surface of the said bed, in order that the cloth may freely pass underneath the said bar. The bar A rests on a block or abutment, G, and is formed with a slot, *c*, extending longitudinally within it and for the reception of a screw, *h*, carrying a clamp-nut, *i*. By means of the slot, the screw, and nut, the bar A may not only be adjusted as respects the amount of its extension between the bars B and C, but it may be clamped firmly in position. The front third or portion of the bar C—viz., that marked *k*—is formed thinner than the remainder of the bar, and receives a slider or gage, H, which should be so applied to the bar as to be capable of being slid or moved thereon either toward or away from the bar A. For this purpose the slider H and the bar C may be constructed with a dovetailed

connection, as shown in Fig. 6, which is a transverse section of the said slider and the bars B and C. From the upper surface of the gage or slider H a projection, *l*, extends into a long slot, *m*, made in the bar B, as shown in the drawings. A screw, *o*, rises upward from the said projection, and has a clamp-nut or turn-button, *p*, screwed upon it, the same serving to confine the gage in any suitable position relatively to the bar A. The needle-carrier of the sewing-machine is represented at I as supporting a needle, K, the said needle being made to operate in the usual manner through a hole or aperture, *s*, formed through the bed or table of the machine, the position of such needle-passage with reference to the several parts of the plaiting apparatus, being essentially as represented in the drawings. The cloth is exhibited by red lines at S in the figures wherein it is shown as formed with two plaits, *u v*, for the purpose of exhibiting the arrangement of the gage H with reference to the edge of one of the plaits. The mode of folding the cloth between the bars is also represented in the drawings, the stitching being formed in the usual way at the back part of each fold. By drawing or feeding the cloth along in such manner that the edge of a made plait shall run against or directly underneath the rear edge of the gage H, the line of sewing will be rendered parallel to the edge of the plait.

I lay no claim to any of the devices shown in the United States Patent No. 20,245; nor do I claim any of the combinations of devices therein claimed, my invention consisting in an improved arrangement and application of folding guide-bars and gage, whereby plaits may be made in cloth and, by means of a sewing-machine, stitched or sewed therein. In my arrangement three strips or bars of metal are disposed longitudinally with respect to and one over the other, as shown in Fig. 4, and two of them have a sliding gage applied so as to extend between and embrace them, and be capable of being adjusted and clamped with respect to them, as specified. The cloth is guided by contact with the gage, and runs at right angles with the bars, each bar being straight without any bend. By means of the longitudinal arrangement of the bars they lap on the plaits transversely and hold the folds to better advantage than small bars or rods extending lon-

gitudinally into the folds, as shown in the said Patent No. 20,245. With my invention the cloth is not wrapped longitudinally around a tongue projecting from a stationary arm, as neither of the bars used by me is dependent upon any arm projecting above the table of the sewing-machine. My plaiting apparatus can be applied to any kind of sewing-machine now in use, it being secured directly to the bed of the machine, and not to an arm or presser carried by the arm of the machine. Its adaptability to the bed of the sewing-machine, to which it is to be directly fastened, is an advantage over a plaiting apparatus which has to be fixed to the presser or the arm supporting such.

I claim therefore—

1. My improved plaiting apparatus, as made,

with the arrangement and application of the bars A B C and the clamp-guide H, as described.

2. The arrangement of the recess *a* between the bar C, or the slider H, and the table D, when combined with the plaiting apparatus, constructed and operating substantially as specified, the same being so as not only to raise the bar off the table D, but enable the under surface of the bar to lap on the cloth transversely of the plaits formed thereon, the same serving to hold the cloth and plaits to great advantage.

FRANK A. ALLEN.

Witnesses:

STILLMAN B. ALLEN,

A. G. PAINE.