2 Sheets—Sheet 1.

J. MORRISON.

FOLDING GUIDE FOR SEWING MACHINES.

No. 39,160. Patented July 7, 1863.

Fig:1

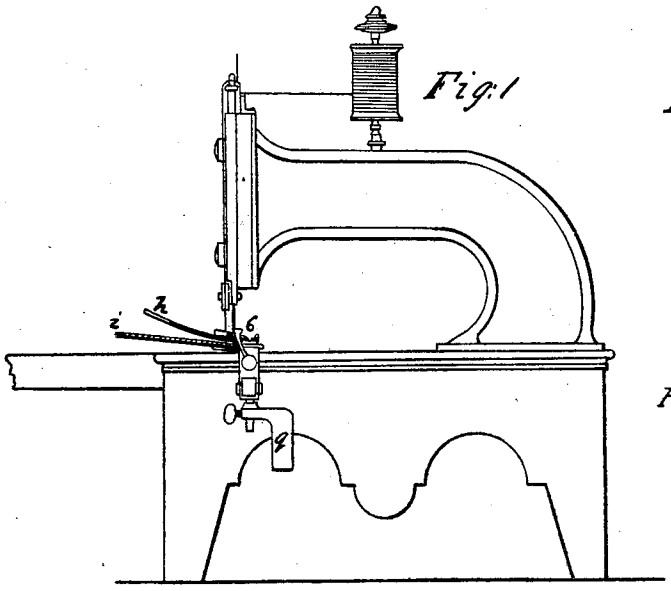


Fig:2

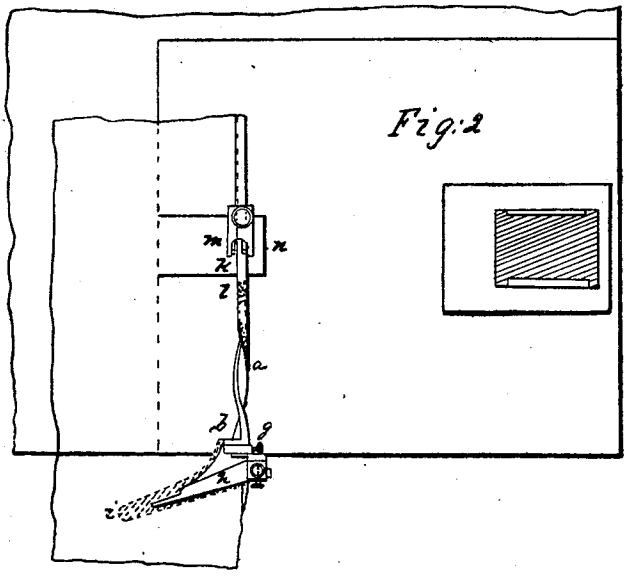


Fig:7

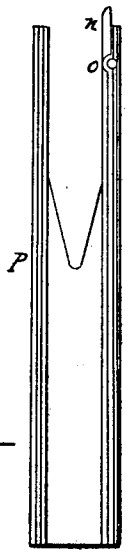


Fig:8

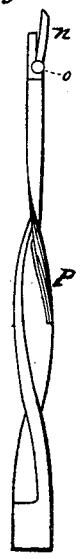


Fig:5

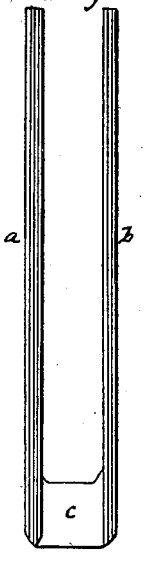
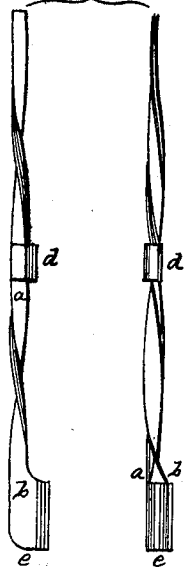


Fig:6



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2 Sheets—Sheet 2.

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FOLDING GUIDE FOR SEWING MACHINES.

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Fig: 3

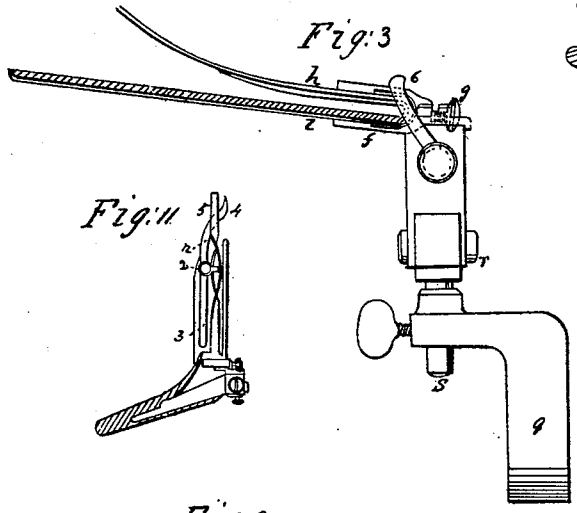


Fig: 4

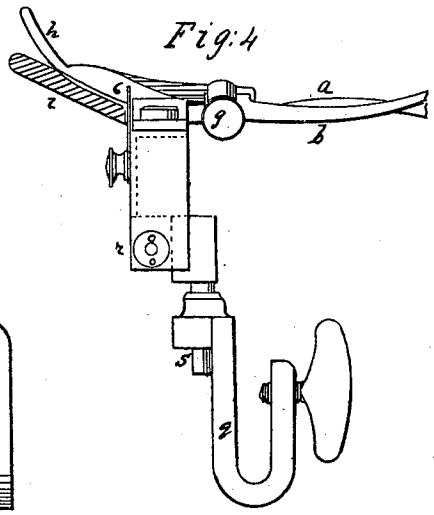


Fig: 11

Fig: 9

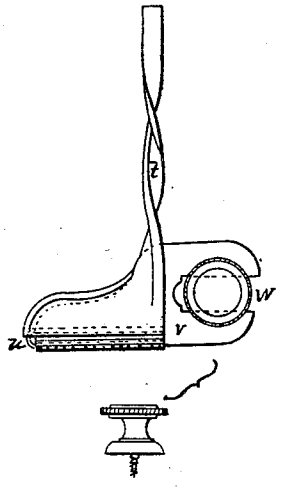
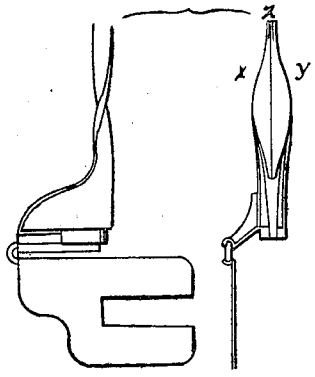


Fig: 10.



Witnesses

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UNITED STATES PATENT OFFICE.

JOHN MORRISON OF BIRMINGHAM, ENGLAND.

IMPROVEMENT IN FOLDING-GUIDES FOR SEWING-MACHINES.

Specification forming part of Letters Patent No. **39,160**, dated July 7, 1863.

To all whom it may concern:

Be it known that I, JOHN MORRISON, of Birmingham, in the county of Warwick and Kingdom of England, machinist, a subject of Her Britannic Majesty, have invented an Improvement in or Addition to Sewing-Machines; and I do hereby declare that the following is a full and exact description of my said invention—that is to say:

My invention consists of an improved instrument or apparatus constructed in the manner hereinafter particularly described, and represented in the accompanying drawings, the said instrument or apparatus being added to or used in connection with sewing-machines for the purpose of folding or doubling the edges of the fabric or material to be sewed, where such folding or doubling is required prior to sewing.

Figure 1 of the drawings represents in elevation a sewing-machine having an instrument or apparatus for folding or doubling the fabric constructed according to my invention, and Fig. 2 represents a plan of the same. Figs. 3 and 4 are elevations of the instrument or apparatus of the full size.

A plan of the instrument or apparatus is represented in Fig. 2 on the bed of the sewing-machine. The said instrument or apparatus consists essentially of two plates or strips of sheet metal, situated parallel to one another and at a distance apart sufficient to allow the fabric or material to be sewed to pass readily between them. The said plates I make by preference of one piece of metal folded in the direction of its length.

Fig. 5 represents a piece of sheet metal, the arms *a* and *b* of which, when the plate is doubled at *c*, are parallel to one another, and may be used in carrying my invention into effect in place of two separate strips. The said plates or strips *a b*, after having been folded on one another, are twisted into a screw-like form, as represented in Fig. 3. The said plates *a b* may be preserved steadily in their relative positions by the arched strap or band *d*. The opposed surfaces of the plates *a b* may either be plain or grooved, as represented in Fig. 5, so that a fabric drawn between the plates when they are folded upon one another, as shown in Fig. 6, is made to preserve its parallelism with the edges of the said plates.

Instead of joining the strips or plates *a b* by a piece, *c*, as shown in Fig 5, the said strips *a b* may be made separately and secured together by two or more junctions of the kind shown at *d* in Fig. 6.

The twisted plate, Fig. 6, which I will hereinafter call the "guide" is inserted in that portion of the apparatus represented in Figs 3 and 4, the part *e* of the guide being inserted in the slot (best seen at *f* in Fig. 3) and fixed therein by a clamp-screw, *g*. Before the edge of the fabric to be sewed enters the guide it passes between plates *h* and *i*, the opposed faces of which are grooved with grooves situated obliquely, as will be understood by an inspection of Fig. 2. The fabric passing between the plates *h* and *i* is guided in the direction necessary to bring its edge into the guide. When the edge of the fabric is drawn between the guide *a b* in the direction of its length the edge of the said fabric, following the twist of the plates of the guide *a b*, becomes folded over or doubled, the amount or number of foldings or doublings being determined by the number of turns made by the plates *a b*.

In Fig. 2 the folded edge of the fabric is marked *k*, the said edge leaving the guide *a b* at the point marked *l*. At *m* the needle of the sewing-machine is shown in transverse section.

Figs. 7 and 8 represent another method of constructing the guide, Fig. 7 representing the plate of metal of which the said guide is made before it is folded, and Fig. 8 representing the same after it has been folded and twisted.

In order to determine a greater or less width in the fold produced by the guide, a tongue, *n*, Figs. 7 and 8, turning stiffly on a joint, *o*, may be fixed to the said guide in the manner represented. By turning out the tongue more or less the fold produced will be wider or narrower. In order still more effectually to guide the fabric in its motion while being folded, I sometimes employ a spring, *p*, Fig. 8, fixed on the outside of the guide, the point of which spring, passing through a slot in one of the plates of the guide, presses the fabric into the grooves in the other plate of the guide. Several of the said springs *p* may be employed where from the rigidity of the fabric or otherwise it may be deemed desirable.

The instrument or apparatus may be attached to the sewing-machine or to the table supporting the machine by means of a clamp, *q*, or otherwise, and the said instrument or apparatus, by turning upon joints *r* and *s*, may be turned aside or turned down, so as to be out the way when the fabric being sewed does not require to be folded.

I sometimes modify my invention in the manner represented in Fig. 9 of the drawings, by which said modification the parts are very much simplified. The guide *t* is made of a plate of metal, folded and twisted, and is joined by a joint, *u*, to a plate, *r*, which said plate *r* may be connected with the sewing-machine or table by means of a clamp-screw engaging in the slot *w*.

When two edges have to be folded and sewed together I modify my invention in the manner represented in Fig. 10—that is to say, I employ two guides, *x y*, through which the edges of the fabrics are passed, respectively. The folded and superposed edges emerge at *z* nearly under the needle of the sewing-machine. The general arrangements of the apparatus Fig. 10 resemble those of the apparatus Fig. 9.

Instead of the tongue *n*, Figs. 7 and 8, I sometimes employ the arrangement represented in Fig. 11 for increasing or diminishing the width of the fold—that is to say, I employ a lever, 1, turning stiffly upon a joint, 2, by moving the end 3 of the lever. The end 4 may be separate more or less from the guide 5, and the width of the fold thereby increased or diminished. When I employ the tongue *n*, Figs. 7 and 8, or the lever 1, Fig. 11, I attach a tongue or slip, (marked 6 in Figs. 1, 3, and 4,) which tongue or slip, by being turned more or less toward the plate *i*, allows for the increased or diminished width of fold.

Having now described the nature of my invention and the manner of carrying the same into effect, I claim as my invention—

The improvement in or addition to sewing-machines hereinbefore described, and illustrated in the accompanying drawings—that is to say, an instrument or apparatus constructed and operating, as herein described, so as to regulate the width of the fold, and to be attached to or used in connection with sewing-machines for the purpose of folding or doubling the edge or edges of the fabric or material to be sewed, substantially as herein described, the said instrument or apparatus consisting essentially of the two guiding-plates *h i* and of two plates or strips, *a b*, of sheet metal, or one plate folded, as herein described, and the levers *n* or 1, the said plates or strips *h i* being situated parallel, or nearly so, to one another, and the said plates or strips *a b* being twisted into a screw-like form, and either or both grooved or plain on their inner or opposed surfaces.

JOHN MORRISON.

Witnesses:
I. M. G. UNDERHILL,
Consular Agent U. S. A., a Commissioner, &c.
WM. TADMAN FOULKES.