J. S. McCURDY.

Guide for Sewing Machines.

No. 52,870. Patented Feb. 27, 1866.

Fig. 1.

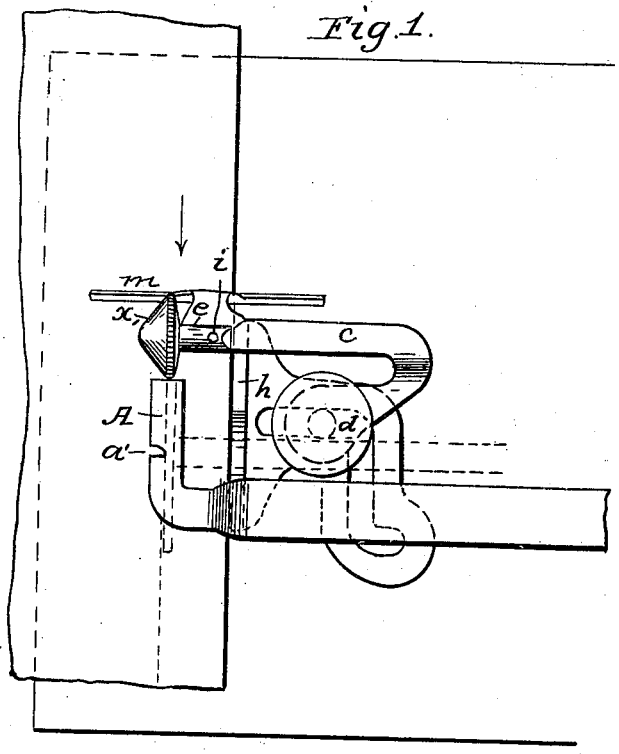
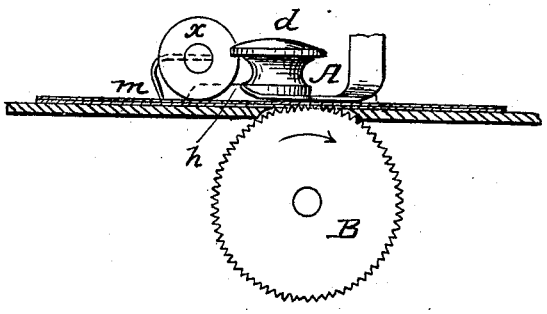


Fig. 2.



Witnesses:
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UNITED STATES PATENT OFFICE.

JAMES S. McCURDY, OF BRIDGEPORT, CONNECTICUT.

IMPROVEMENT IN GUIDES FOR SEWING-MACHINES.

Specification forming part of Letters Patent No. **52,870**, dated February 27, 1866.

To all whom it may concern:

Be it known that I, JAMES S. McCURDY, of Bridgeport, in the county of Fairfield and State of Connecticut, have invented a new and Improved Guide 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 annexed drawings, making a part of this specification, in which—

Figure 1 is a plan or top view. Fig. 2 is a front view.

In sewing-machines the material to be sewed is liable to be drawn from its course in consequence of the improper adjustment of the needle, particularly so in those machines using a curved needle. This action more frequently arises from the needle being so set in the machine that the point of the needle does not move in the same line that the shank does—as, for instance, if the needle is so set in the machine that the point moves nearer to the guide employed to guide the edge of the cloth than the shank does, the material will be drawn from the guide, and if the needle is set so that the shank moves nearer the guide than the point does, the material will be crowded up against the guide and the seam varied in distance from the edge of the material. The same operation of the needle upon the material results sometimes from other causes. For instance, the needle may not be curved to the same arc in which the needle-holder moves. In curved-needle machines the needle is almost always set improperly in one of the ways above mentioned. It will be shown that, in order to sew straight or curved seams with any regularity, the work must be guided properly, and the object of my invention is to do this by making the guide counteract the effect of the imperfect set of the needle, and to this end my invention consists in a guide-wheel arranged to operate upon the top of the material in front of the needle, as hereinafter described.

A represents the ordinary presser, situated above the feed-wheel B, and provided with a notch or hole, *a*, for the passage of the needle.

h is the ordinary adjustable guide for the edge of the cloth, secured to the work-plate or cloth-bed of the sewing-machine by the screw *d* in the usual manner.

x is the guide-wheel, fitted to rotate freely on a longitudinal pivot, *e*, attached to the end of an elastic arm or spring, *c*, which is secured to the sewing-machine by the screw *d*, and which by its elasticity presses the said wheel upon the surface of the cloth. The said wheel is so arranged that its narrow edge, which presents little more than a mere point to the surface of the cloth, bears upon the part of the cloth which is moving toward the needle at a point opposite, or nearly opposite, the needle, and that its plane of rotation is parallel with the face of the guide *h* and with the planes of the feed-movement, or very slightly oblique thereto, in such a direction that the part of the wheel nearest the needle is the nearest to the plane of the face of the guide *h*. The arm or spring *c* has attached to or formed in the same piece with it a straight-edged smoothing-piece, *m*, the straight edge of which is turned downward and set parallel with the work-plate or cloth-bed of the machine at such distance therefrom and behind the wheel *x* that it will allow the cloth to pass freely under it without exerting any considerable pressure thereon, but will smooth the cloth as it passes under it in case of its being drawn or puckered.

The cloth to be sewed, passing under the straight edge *m*, wheel *x*, and presser A to the needle, produces the rotation of the wheel by friction, and is thereby so guided that its edge as it passes along may come in proper contact with the face of the guide *h*. If, owing to the set of the needle being faulty, the material runs away from the guide *h*, by turning the arm *c* on the pin *d* in a direction to bring the edge of the wheel *x* nearest the needle toward the guide *h* the material will be directed up against the guide, and if the material hugs the guide too hard and tends to turn up against it, by turning the arm *c* and wheel *x* in the opposite direction this tendency will be corrected. Hence it will be understood that by setting the wheel *x* the cloth or material may be guided as desired without regard to the set of the needle.

The horizontal pivot *e* may be attached to the end of the elastic bar or spring *c* by means of a vertical pivot, *i*, as shown in Fig. 1, upon which it may be adjusted horizontally to alter the set of the wheel *x* without disturbing the

screw *d*, which may require to be slackened in order to allow the bar or spring *c* to turn upon it, as hereinbefore described.

This guide is much simpler in construction, has fewer parts, and is more easily adjusted than the roller and other guides heretofore employed as aids to the guide *h* for directing the cloth.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The guide-wheel *x*, turning upon a pivot, *e*, at the end of an elastic arm or spring, *c*, and applied to the sewing-machine substantially as herein specified.

2. The straight-edged smoothing-piece *m*, applied in connection with the elastic arm or spring *c* and in relation to the wheel *x*, substantially as herein described.

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Witnesses:
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