

(No Model.)

A. B. FOWLER & G. E. WARREN.
WELT GUIDING MECHANISM FOR SEWING MACHINES.

No. 560,705.

Patented May 26, 1896.

Fig. 1.

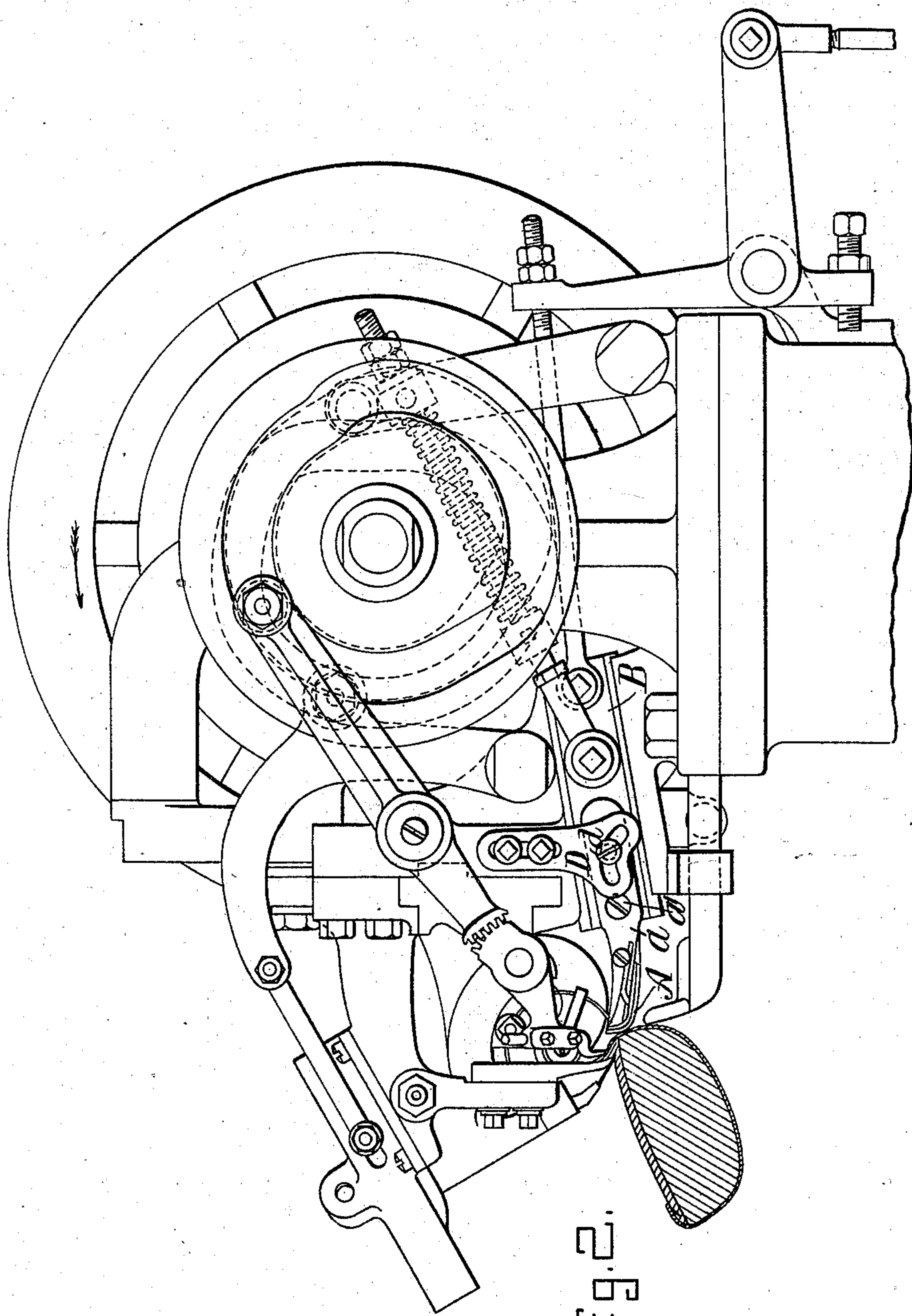
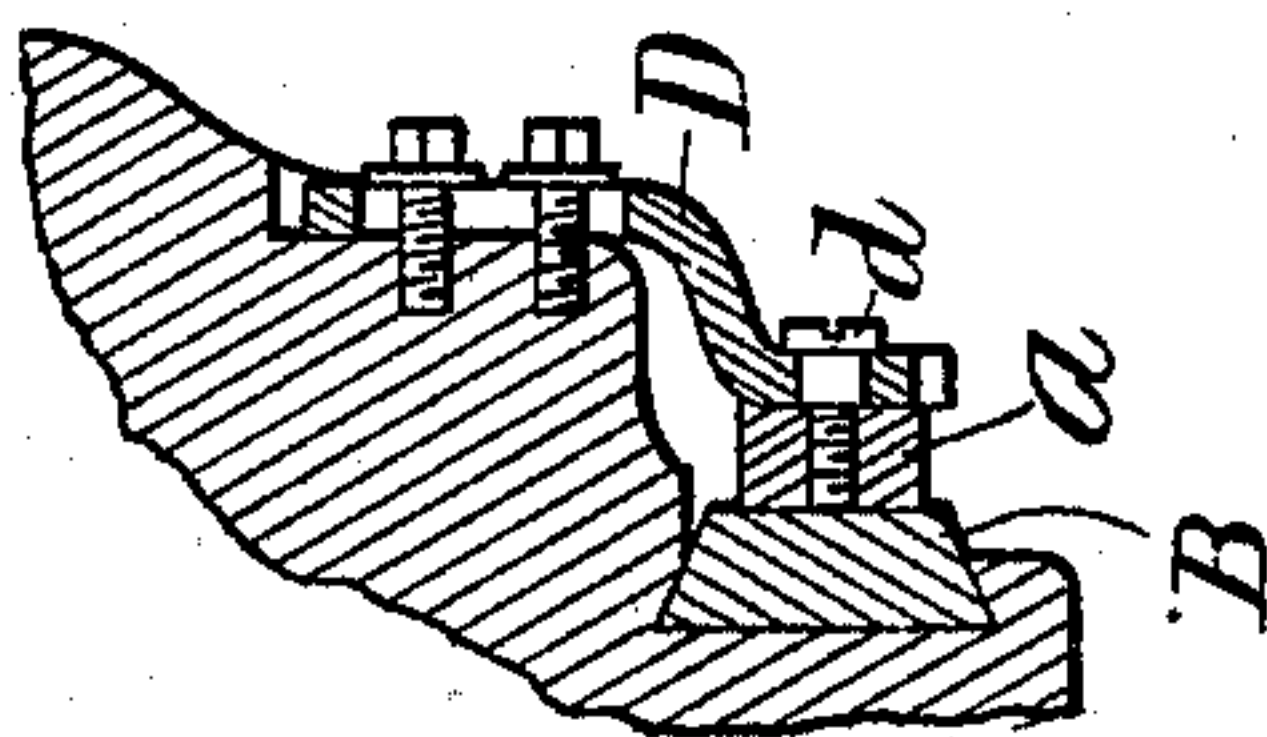


Fig. 2.



Witnesses
John R. Brown,
H. P. Guillo

Inventors
Alfred B. Fowler, and
George E. Warren
by their attorney,
J. E. Hammond

UNITED STATES PATENT OFFICE.

ALFRED B. FOWLER AND GEORGE E. WARREN, OF PAWTUCKET, RHODE ISLAND, ASSIGNORS TO THE LINCOLN SEWING MACHINE COMPANY, OF EXETER, NEW HAMPSHIRE.

WELT-GUIDING MECHANISM FOR SEWING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 560,705, dated May 26, 1896.

Application filed May 1, 1895. Serial No. 547,777. (No model.)

To all whom it may concern:

Be it known that we, ALFRED B. FOWLER and GEORGE E. WARREN, of Pawtucket, in the county of Providence and State of Rhode Island, have invented a new and useful Welt-Guide Mechanism for Sewing-Machines, of which the following is a specification, reference being had to the accompanying drawings, in which—
Figure 1 is an elevation of a sewing-machine with our welt-guide mechanism. Fig. 2 is a sectional detail illustrating that mechanism.

In machines of this class it has long been common to mount the welt-guide upon a slide, so that the welt-guide could be moved toward and from the work, as required; but heretofore the shank of the welt-guide has been incapable of motion relatively to that slide, and our invention is a welt-guide with a guiding mechanism by which the welt-guide when it is moved with relation to the needle has one point always held in the path of the needle. It is usual to groove welts near one edge and to so form welt-guides that the groove in the welt shall always maintain its proper relation with the guide-groove of the welt-guide, the object being to have the point of the needle, which moves in the arc of a circle, always penetrate the bottom of the small groove in the welt, and thereby make it certain that the stitch is at the proper distance from the edge of the welt; but when the welt-guide is movable in one line only, as heretofore, the edge of the welt is brought into exactly the right position when the welt-guide is in one position only, and a position of the welt-guide a little to either side of its correct position brings the edge of the welt a little out of place with relation to the point of the needle—that is, the needle moves in the arc of a circle and the welt-guide moves in a straight line which intersects that arc at one point only, so that when the welt-guide is a little too far in or a little too far out the point of intersection is not in the bottom of the groove in the welt held in the welt-guide, but a little to one side. We have discovered that this is often the cause of imperfect work and have so mounted

the welt-guide that it is automatically guided to keep the groove in the welt or the edge of the welt always in the proper position, so that the needle-point will pierce the welt always at the proper place, for as the welt-guide is moved toward and from the curved needle its holder is slightly swung on an axis, with the result that a point in the welt-guide, which is in contact with the bottom of the groove in the welt held by the welt-guide, is moved in the arc of the circle in which the needle-point moves.

In the drawings, A is the welt-guide, and *a* its tang, which is connected by a pin *a'* to slide B to enable the tang *a* to be moved on pin *a'* as a fulcrum, and thereby raise or depress the welt-guide A, as required, to keep it in its exact position with relation to the path of the needle. A stud *d*, fast to tang *a*, is controlled by a cam-slot in bracket D, and the result is that when slide B is moved tang *a* is tipped on its fulcrum-pin *a'*, thus giving welt-guide A the double motion desired. Bracket D is best made adjustable, as shown.

The mechanism for reciprocating slide B will be clear to all skilled in the art without description, and all the other parts (not lettered) are too well known to require description.

The details of construction of the support for the welt-guide and of the guiding-cam are not important; but we have shown the best form in which we have embodied our invention.

What we claim as our invention is—

In a curved-needle sewing-machine a welt-guide; its holder; a carrier for the welt-guide holder; and means for moving the holder with relation to its carrier and for moving the carrier toward and from the curved needle, to cause a point in the welt-guide to move in the arc in which the curved needle moves; all combined and operating substantially as described.

ALFRED B. FOWLER.
GEORGE E. WARREN.

Witnesses:

M. E. DOLLOFF,
A. L. GOODING.