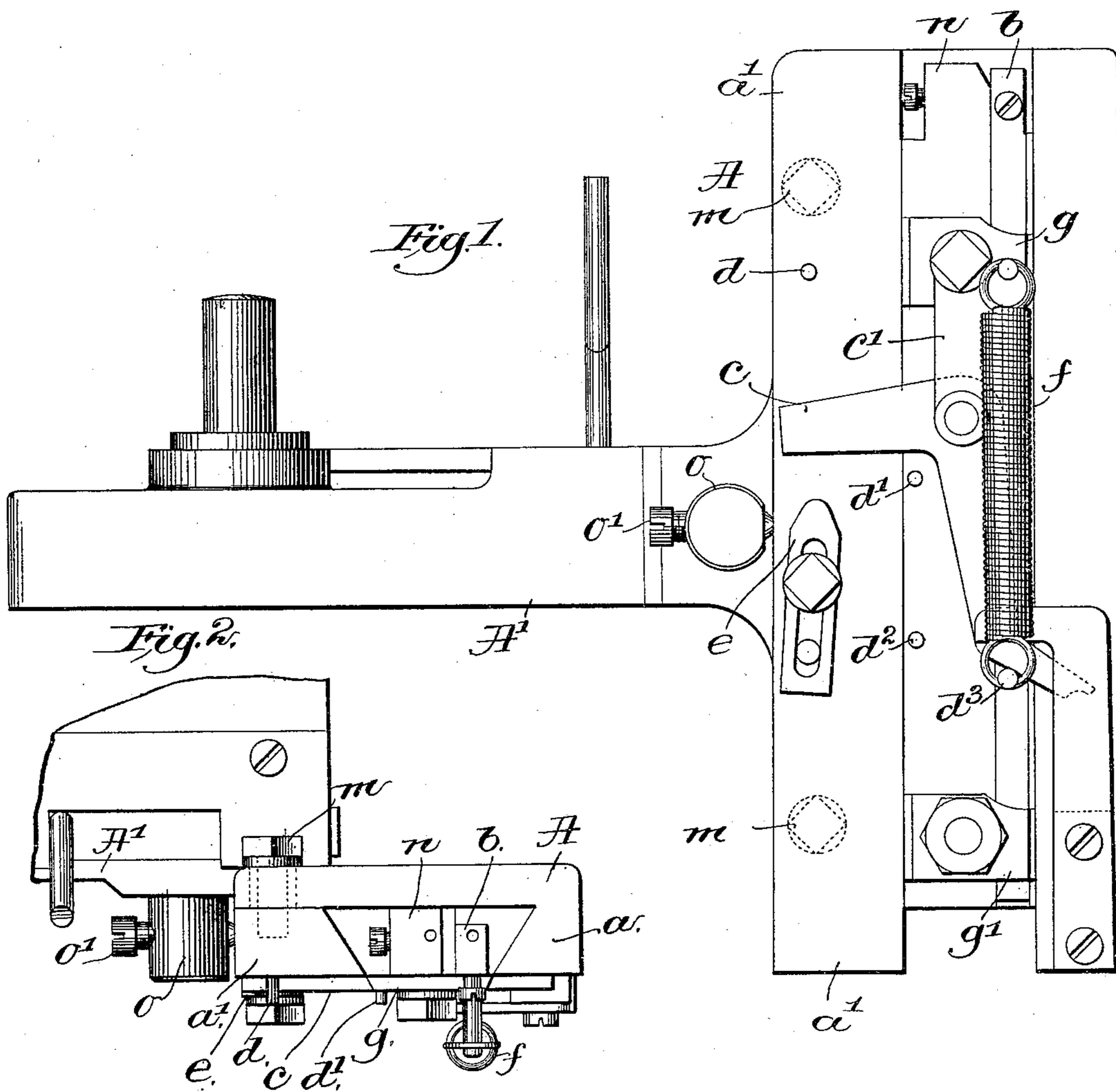


(No Model.)

A. W. BIGELOW.
SEWING MACHINE.

No. 480,229.

Patented Aug. 2, 1892.



Witnesses.
Edward F. Allen.
Fred S. Greenleaf.

Inventor:
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UNITED STATES PATENT OFFICE.

AUSTIN W. BIGELOW, OF EVERETT, MASSACHUSETTS, ASSIGNOR TO THE
GOODYEAR SHOE MACHINERY COMPANY, OF HARTFORD, CONNECTICUT.

SEWING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 480,229, dated August 2, 1892.

Application filed March 14, 1892. Serial No. 424,824. (No model.)

To all whom it may concern:

Be it known that I, AUSTIN W. BIGELOW, of Everett, county of Middlesex, State of Massachusetts, have invented an Improvement in Wax-Thread Sewing-Machines, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

In wax-thread sewing-machines using a hooked needle and cast-off it is customary to bevel what is to constitute the outer sides of both the needle-bar and cast-off bar, their contiguous sides being plane surfaces contacting one with the other, the cross-section of the contiguous bars forming a figure of dovetailed shape. These two bars edge to edge are commonly fitted into a dovetailed guideway, a gib being interposed between the beveled edges of one of the said bars and the guideway, which gib is made to take the wear of the needle-bar. In this class of work very considerable strain is put on the needle-bar in sewing with waxed thread, and as a result thereof the bar and gib soon wear, so that the bar is not guided accurately and poor stitching is the result.

In my experiments to provide against the deterioration of the stitching due to looseness and lack of proper fit in the guideway of the needle and awl bars I have made one of the main guide-walls of the framework in which the said bars reciprocate as a detached bar capable of being quickly changed in position and locked in said position. This construction enables the guideway in which the needle-bar slides to be adjusted in suitable manner.

Figure 1 in front elevation shows a sufficient portion of a wax-thread sewing-machine of well-known construction with my improvement attached, and Fig. 2 a partial top view thereof.

The metal frame or stand A, having an extension A', the needle-bar *n* and the cast-off bar *b*, of the shape best shown in Fig. 2, the lever *c*, spring *c'*, on which it has its pivot, the pin *d* and stop *e* to turn the lever *c* at the up-and-down strokes of the needle-bar to thus afford the necessary lost motion between the cast-off and needle, the pins *d'* *d*² to limit the movement of the lever *c* in one direction, the

pin *d*³ on the cast-off bar to be engaged by the lever *c*, the spring *f*, and the friction-plates *g* *g'* are and may be all as usual. The abutment *a*, tapered to fit the beveled outer side of the cast-off bar *b*, is made as a part of the frame or casting A. The side piece *a'*, having its edge beveled to fit the bevel of the needle-bar, is a separate piece into which enters two like set-screws *m*, whose shanks pass through elongated holes (shown by dotted lines, Fig. 2) in the casting A. The frame or casting A' has a post *o*, through which is screwed an adjusting device *o'*, (shown as a screw,) the end of the screw acting against the side piece *a'*. In this way when by use the needle-bar and cast-off bar become worn, so as to fail to properly draw the loop or so that the cast-off fails to coact properly with relation to the needle, the set-screws *m* may be loosened and the adjusting-screw *o'* be turned in against the side piece *a'* until the latter fits the needle-bar as snugly as desired, when the set-screws will be turned in.

The provision described for confining the needle-bar and cast-off bars in their guideway enables the running fit between them to be regulated quickly as desired, and the expense of caring for and repairing the machine is materially lessened and the machine is made to work more satisfactorily, because the means for taking up the wear may be moved so readily that the operator will promptly correct faults of fit, whereas in the old plan wherein to provide for wear a gib of a certain thickness had to be provided the operator was apt to neglect the repairs until the last moment.

I am aware that a dovetailed bar has been adapted to reciprocate in a dovetailed guideway, one side of the guideway having placed in it loosely a thin plate of steel, acted upon near each end by a pointed adjusting-screw, the said screws being turned and adjusted independently in order to keep the gib pressed against the beveled side of the bar. When a gib of this class is used, the operator seldom succeeds in securing uniform pressure of the gib from end to end on the bar, and the gib supported on the points of the screws is free to adapt itself to inequalities and fails to form a rigid and firm guide.

In my invention one side of the guideway

for the needle-bar is made adjustable bodily toward and from the other side of the guide, and a gib-plate is not used. The movable side piece of the guide is made adjustable by
5 a single screw, it serving to set the wall up to the needle-bar firmly and equally, and then to obviate strain on the adjusting device or screw used I clamp the side piece in its adjusted position by the screws *m*.

10 I disclaim anything shown in United States Patent of July 27, 1880, No. 230,580.

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

15 In a sewing-machine, the frame or casting A, having a side piece *a*, forming one half of a guideway, and a detachable side piece *a'*,

forming the other half of the guideway, a dovetailed needle-bar acted upon directly by the edge of the detachable side piece, and set- 20 screws extended through the said side piece and into the casting A, combined with an adjusting-screw, as *o'*, adapted to act upon the edge of the detachable side piece and move the same toward the needle-bar when the set- 25 screws are loosened, as and for the purpose described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

AUSTIN W. BIGELOW.

Witnesses:

GEO. W. GREGORY,
EMMA J. BENNETT.