

(No Model.)

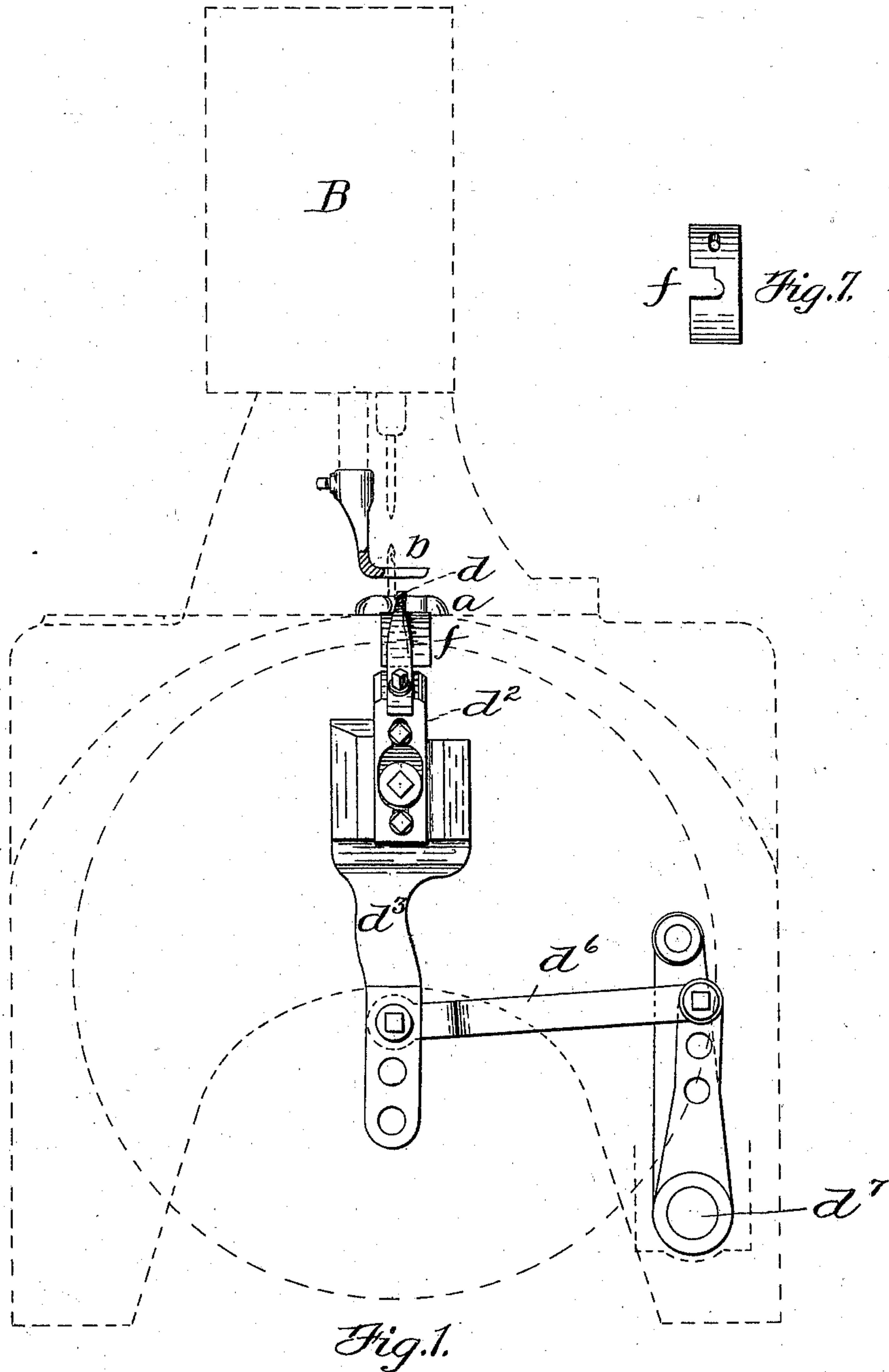
3 Sheets—Sheet 1.

A. E. JOHNSON.

WORK CLAMPING AND CHANNEL CUTTING DEVICE FOR SEWING MACHINES.

No. 547,169.

Patented Oct. 1, 1895.



Witnesses;  
Matthew Allen,  
John R. Snow.

Inventor,  
Albert E. Johnson  
By J. E. Herndon  
His Attorney.

(No Model.)

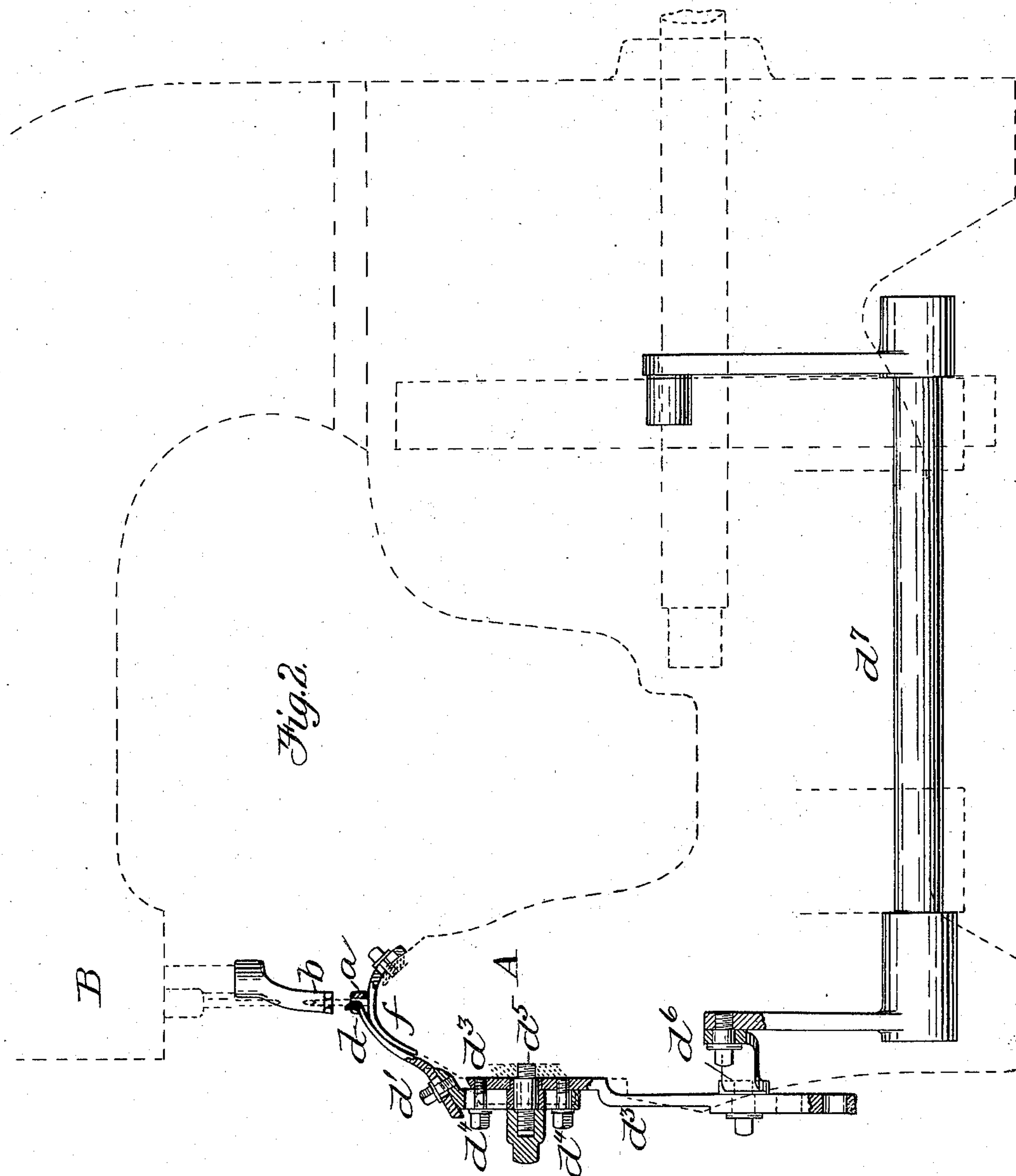
3 Sheets—Sheet 2.

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WORK CLAMPING AND CHANNEL CUTTING DEVICE FOR SEWING MACHINES.

No. 547,169.

Patented Oct. 1, 1895.



Witnesses  
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(No Model.)

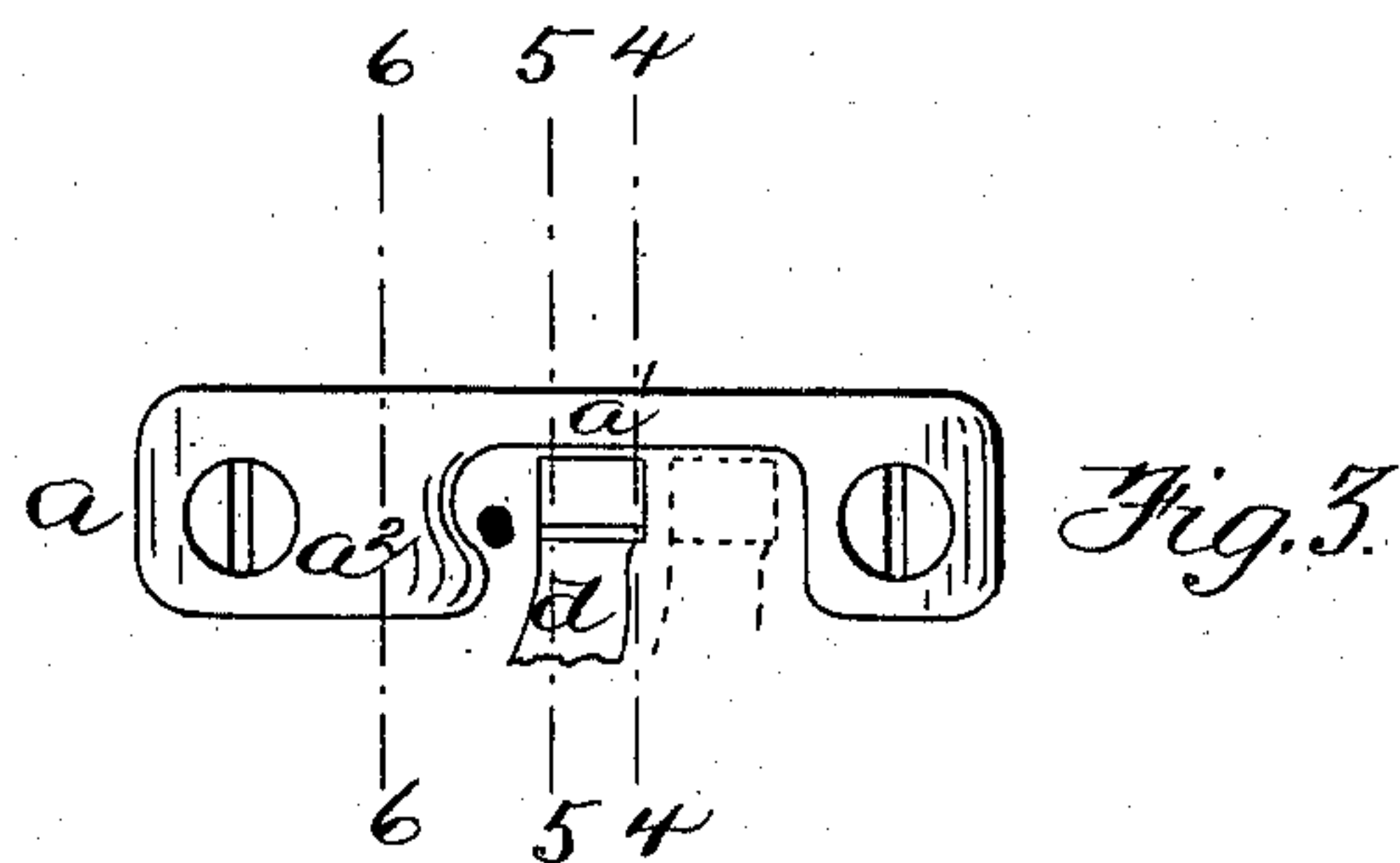
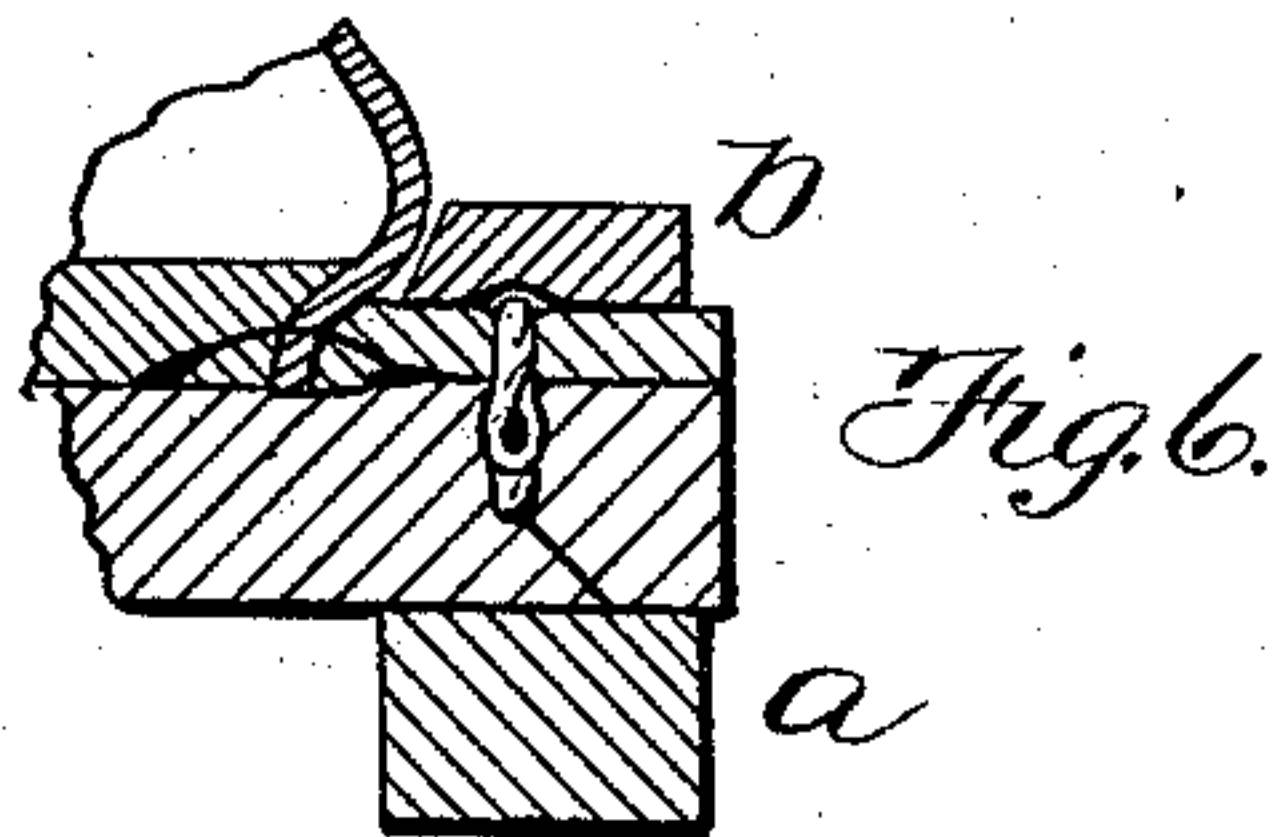
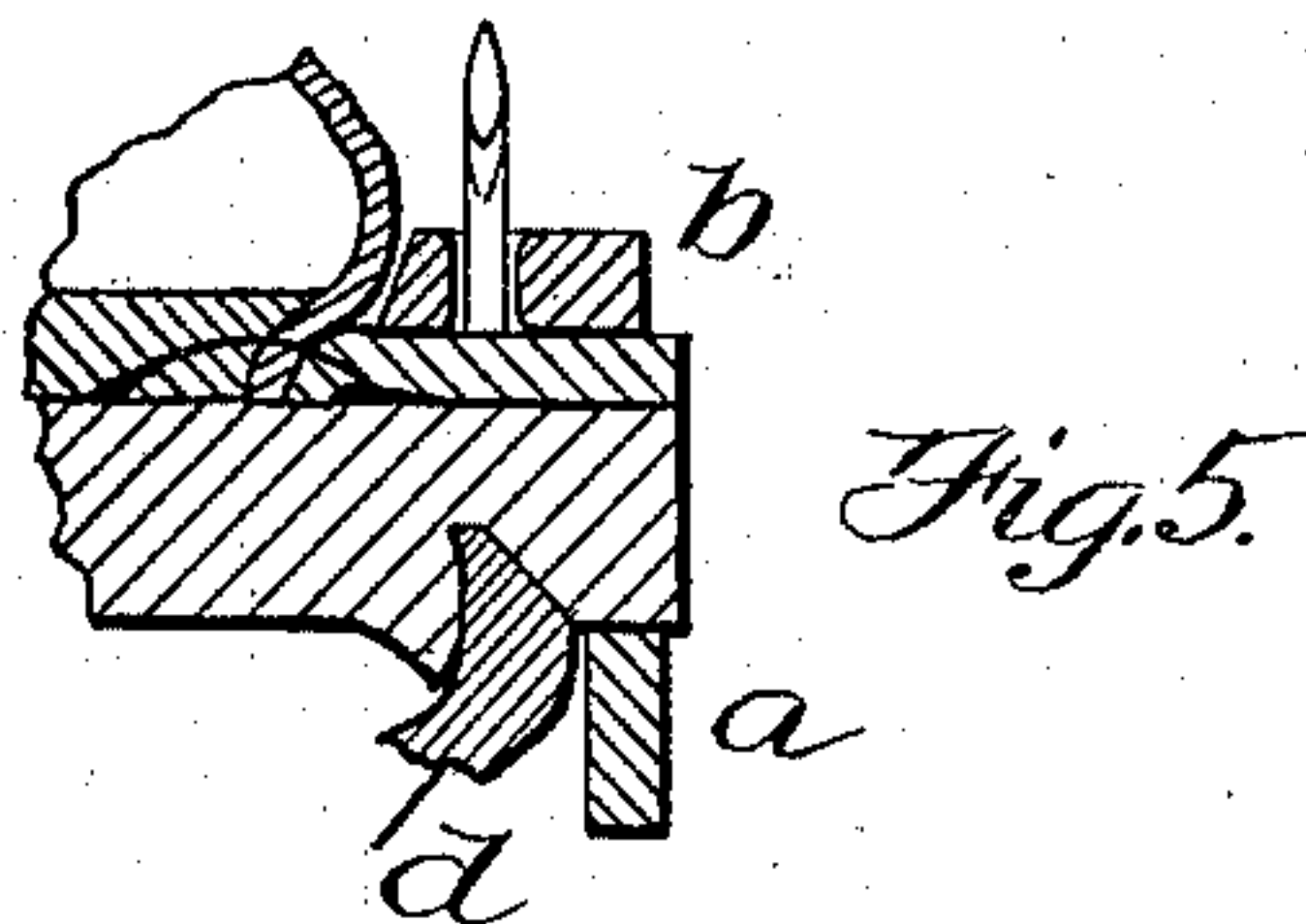
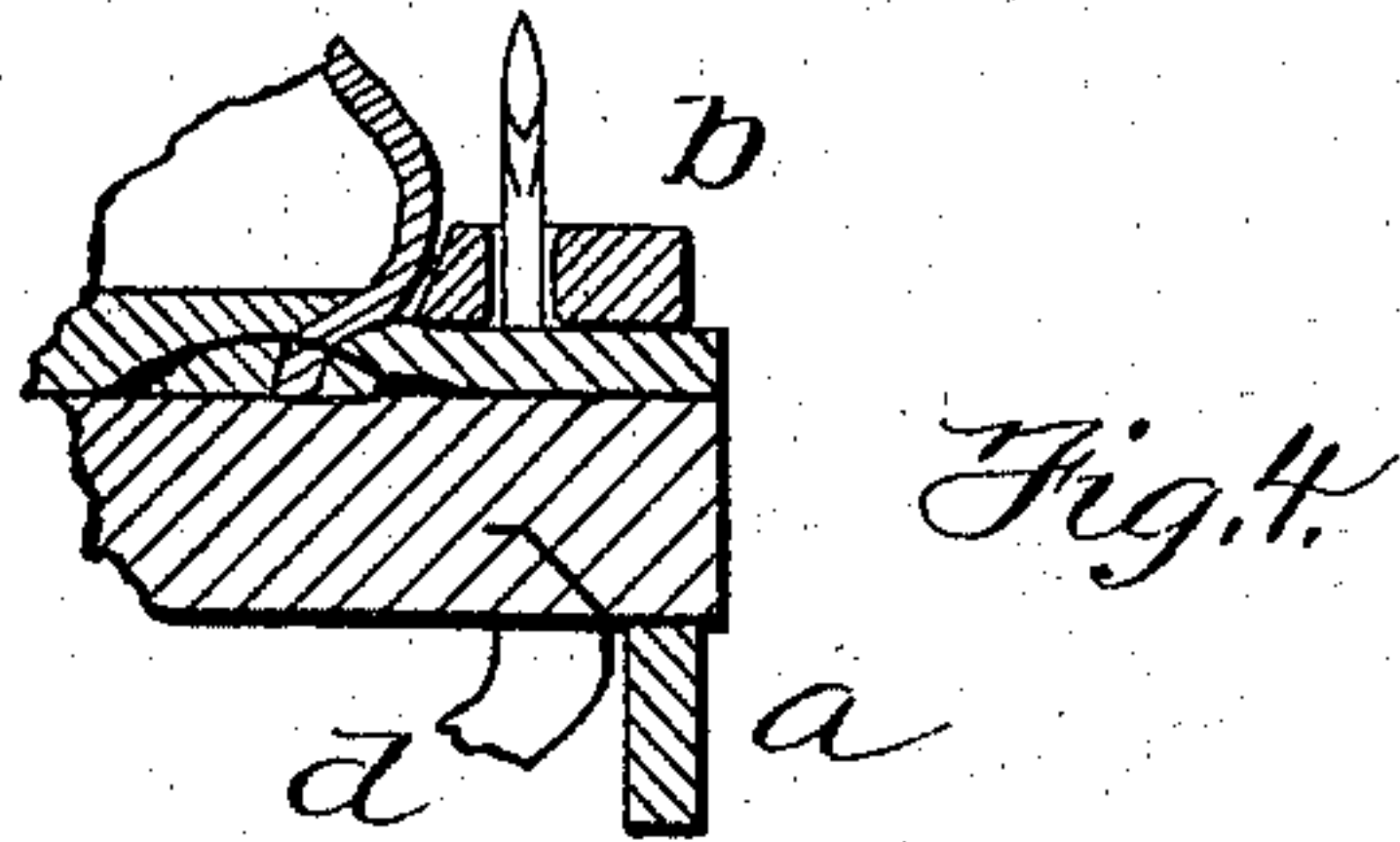
3 Sheets—Sheet 3.

A. E. JOHNSON.

WORK CLAMPING AND CHANNEL CUTTING DEVICE FOR SEWING MACHINES.

No. 547,169.

Patented Oct. 1, 1895.



Witnesses:  
*Matthew Kelley*  
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# UNITED STATES PATENT OFFICE.

ALBERT E. JOHNSON, OF BROCKTON, MASSACHUSETTS, ASSIGNOR TO THE CAMPBELL MACHINE COMPANY, OF PAWTUCKET, RHODE ISLAND.

## WORK-CLAMPING AND CHANNEL-CUTTING DEVICE FOR SEWING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 547,169, dated October 1, 1895.

Application filed December 9, 1892. Serial No. 454,569. (No model.)

*To all whom it may concern:*

Be it known that I, ALBERT E. JOHNSON, of Brockton, in the county of Plymouth and State of Massachusetts, have invented a new and useful Work-Clamp and Channel-Cutter for Sewing-Machines, of which the following is a specification, reference being had to the accompanying drawings, in which—

Figure 1 is a front elevation, and Fig. 2 a side elevation, partly in section, illustrating my invention as applied to the well-known Campbell lock-stitch wax-thread sewing-machine; Fig. 3, a diagram in plan, showing the throat-plate and channel-knife and their relations to the needle. Figs. 4, 5, and 6 are sectional diagrams on the corresponding lines on Fig. 3. Fig. 7 is a plan of the adjustable support for the cutter.

The work-clamp in ordinary sewing-machines is composed commonly of a presser-foot and a work-plate or throat-plate, and the moving member is usually called the "presser-foot;" but in some cases both members move—as, for example, in Patent No. 444,895, dated January 20, 1891, granted to Cyrus H. Porter and myself—and in that case either member may be called the "presser-foot" or the "throat-plate."

My invention is a work-clamp, one member of which—namely, that member which acts on that surface of the sole or other material to be stitched, commonly called the "work," in which the channel is cut—is formed with a bearing-surface at one side of the channel in advance of the needle and also with a bearing-surface across the channel in rear of the needle.

In the drawings I have shown my work-clamp and channel-cutter applied to the Campbell lock-stitch wax-thread sewing-machine.

A indicates the arch, which contains the shuttle, and B the head.

The work-clamp is composed of the throat-plate *a* and presser-foot *b*. The throat-plate *a* is fast to the upper surface of the arch A, and the presser-foot is connected to its bar, all as usual. As that surface of the work in which the channel is cut is pressed against the upper surface of the throat-plate, the throat-plate in front of the needle has no bear-

ing-surface which lies across the channel, but in rear of the needle has a bearing-surface which extends across the channel, the absence of the bearing surface in front of the needle allowing the channel-flap to project, as in Fig. 5, while the bearing surface in rear of the needle closes the channel by turning the channel-flap into place as the work is fed along and crowding the channel-flap into place as the work is clamped between the presser-foot and throat-plate—that is, by the two members of the work-clamp, as shown in Fig. 6. It will now be clear that this feature of my invention is applicable to all sewing-machines for sewing in a channel, whether the channel be cut and the flap turned aside before the work is put into the sewing-machine or whether cutting the channel and turning aside the flap be done in the sewing-machine, as in Patent No. 444,895, for the channel-cutter and flap-turner *d* is in substance the same as the knife and shear of that patent. This feature of my invention consists in the new work-clamp, one member of which is especially adapted to bear on the channeled surface and with a bearing-surface extending parallel with the line of feed at one side of and in front of the needle and across the line of feed at the rear of the needle, as will be plain from Fig. 3, in which *a'* is that part of the bearing-surface which supports the work against the thrust of the awl, but is so shaped as to allow the channel-flap to project, while *a''* is that part of the bearing-surface which turns the flap into place and forces it into place when the work is clamped. When the channel is cut and its flap turned aside in the sewing-machine, the throat-plate *a* must also be recessed to allow the tool *d* to make its stroke, and this combination of my work-clamp and such a tool is also a feature of my invention. In Fig. 3 the tool *d* is shown in full lines at one extreme position and in dotted lines at the other.

A third feature of my invention is the adjustable support *f* (shown in plan in Fig. 7) for the tool *d*. The tendency is for the tool *d* to spring away from the work, so that the channel will not be cut quite so deep in hard leather as in softer leather, and this support *f*, when properly adjusted, prevents the spring-



ing away of the tool  $d$ , thereby making channels of uniform depth in all kinds of work. In that example of my invention shown in the drawings the tool  $d$  is held by screw  $d'$  to tool-holder  $d^2$  and is adjustable on tool-holder  $d^2$  5 in the usual way by a slot in the shank of tool  $d$ . Tool-holder  $d^2$  is adjustable on carrier  $d^3$  in the same way, being held to carrier  $d^3$  by the screws  $d^4$ . Carrier  $d^3$  is fulcrumed 10 on stud  $d^5$ , which is fast to the front of the arch A. The tang of carrier  $d^3$  is connected by link  $d^6$  with one arm of rock-shaft  $d^7$ , which is actuated by its other arm engaging a cam in the usual way. The stroke of carrier  $d^3$  is 15 adjusted by varying the connections at one or both ends of link  $d^6$ , as will be clear.

What I claim as my invention is—

1. In a sewing machine for stitching in a

channel, in combination the needle; a work clamp one member of which is provided with 20 a wide bearing surface  $a^2$ , in rear of the needle, and a narrow bearing surface  $a'$ , at the side and in front of the needle; and a tool to cut the channel and turn the flap aside; all arranged and operating substantially as and 25 for the purposes set forth.

2. In a sewing machine, in combination with the work clamp  $a b$ , and the vibrating channel cutting tool  $d$ , the support  $f$ , adjustably 30 mounted in the machine as an adjustable bearing surface for the shank of tool  $d$ ; substantially as set forth.

ALBERT E. JOHNSON.

Witnesses:

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JOHN R. SNOW.