

No. 776,370.

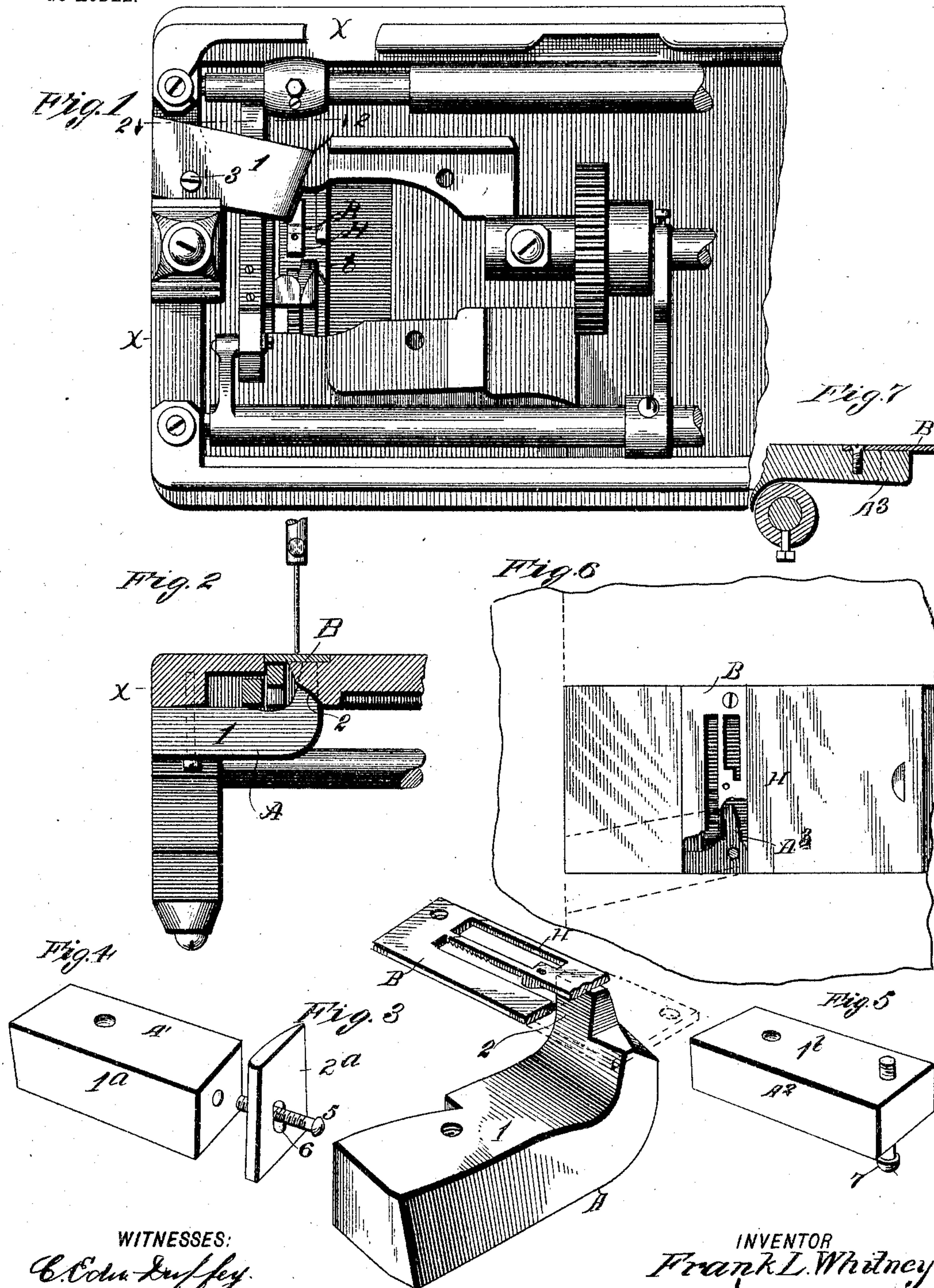
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F. L. WHITNEY.

SUPPORT FOR THROAT PLATES OF SEWING MACHINES.

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NO MODEL.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

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## SUPPORT FOR THROAT-PLATES OF SEWING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 776,370, dated November 29, 1904.

Application filed March 1, 1904. Serial No. 195,996. (No model.)

*To all whom it may concern:*

Be it known that I, FRANK L. WHITNEY, a citizen of the United States, and a resident of Lincoln, in the county of Lancaster and State  
5 of Nebraska, have invented certain new and useful Improvements in Supports for Throat-Plates of Sewing-Machines, of which the following is a specification.

The throat or needle plates of sewing-ma-  
10 chines are made quite thin in order to accommodate working parts located immediately beneath them. They are hence elastic to a considerable degree and correspondingly fail to afford a firm or rigid support for the work  
15 being sewed, so that the needle encounters more friction in piercing the work. Further, in case the needle is broken or becomes bent in use it will strike the throat-plate, which is liable to be broken, as well as the shuttle also.  
20 This is especially likely to happen in machines used for manufacturing purposes.

I have devised a support for the throat-plate which renders it perfectly rigid, and thus avoids the results above indicated.

25 The details of construction, arrangement, and operation of parts are as hereinafter described, reference being had to the accompanying drawings, in which—

Figure 1 is a bottom plan view of a well-  
30 known form of sewing-machine with my improvement applied thereto. Fig. 2 is a vertical cross-section on the line 2 2 of Fig. 1. Fig. 3 is a perspective view of a portion of the throat-plate and my improved support  
35 therefor arranged in the relation required for use. Fig. 4 is a perspective view of another form of my improved throat-plate support. Fig. 5 is a perspective view of another form of the support. Fig. 6 is a plan view of the  
40 bed-plate and throat-plate of a sewing-machine, a portion of the throat-plate being broken away to show the arrangement of a support which is integral with the bed-plate. Fig. 7 is a sectional view of the parts shown  
45 in Fig. 6.

I will first describe the invention as exhibited in Figs. 1 to 3, inclusive. A indicates my improved support for a throat-plate B of a sewing-machine. The same is constructed

and arranged and provided with a needle-hole 50  
H in a well-known manner. (See especially Fig. 3.) My support A is constructed of metal and has a horizontal member 1 and a vertical member 2. The horizontal member 1 is constructed quite thick, so as to have due 55  
strength and rigidity, while the vertical portion 2 is beveled or reduced in thickness, as shown. As shown in Figs. 1, 2, the horizontal member 1 is rigidly secured by a screw 3 to the body-frame of the sewing-machine, 60  
while its nose or beak 2 projects upwardly, the support as a whole being arranged at a slight angle to the side of the frame X in order that the nose 2 may be arranged in due proximity to the needle-hole H in the throat- 65  
plate, or, in other words, so that the plate may be duly supported at a middle point where its elasticity and weakness are greatest. It will be observed in Figs. 1 and 4 that one side of the horizontal member 1 is notched or cut away in 70  
order to accommodate one of the sewing-machine attachments; further, that the nose 2 is cut away on one side, so that its width in one direction is only one-half that of the horizontal member. Thus the body or horizontal mem- 75  
ber of the support has the requisite strength and rigidity, and the vertical member 2 supports the throat-plate at its weakest point, whereby the plate is rendered practically rigid. The support A is preferably made ad- 80  
justable vertically relative to the frame X of the machine, so that its nose 2 may be adjusted higher or lower, and thus pressed upward into firm contact with the throat-plate B. For this purpose the upper side of the 85  
horizontal member 1 may be slightly inclined or beveled and a washer may be inserted between it and the bed-frame, as in Fig. 1.

In the forms of my invention illustrated in Figs. 4 and 5 it is constructed in two parts, 90  
as will now be described. In Fig. 4 the support A' has a horizontal member or body portion 1<sup>a</sup>, provided with a screw-hole in its inner end, and the vertical member or nose 2<sup>a</sup> is adapted to be secured thereto by a screw 5, 95  
the latter passing through a vertical slot 6, formed in the nose, as shown. The horizontal member 1<sup>a</sup> is attached to the machine in



the same manner as illustrated in Figs. 1 to 3; but the nose 2<sup>a</sup> is adjustable vertically, whereby it may be more perfectly adapted or accommodated to the throat-plate of a machine than in the case of the integral support.

In the form of the invention illustrated in Fig. 5 and indicated by A<sup>2</sup> a screw 7 passes vertically through the right-hand or inner end of the horizontal member 1<sup>b</sup>, its upper end being in practice adjusted into firm contact with the throat-plate B. It will be understood that the support may be attached to the bed-plate instead of the frame X. In Figs. 6 and 7 I show a throat-plate support A<sup>3</sup>, formed integral with the bed-plate of a sewing-machine. In other words, it is cast solid with the bed-plate and projects horizontally beneath the throat-plate B and is in firm contact with the under side of the latter.

By means of my improvement the throat-plate or needle-plate is supported in such manner that it is rendered practically rigid and the needle works with less friction, especially in heavy sewing, while in case the needle is bent or broken, and thus strikes heavily upon the throat-plate the latter will not be broken, as in machines of ordinary character. The attachment is simple, cheap, may be easily applied, and may be adjusted as required to better accommodate it to its place.

What I claim is—

1. The combination, with the bed and the

throat-plate of a sewing-machine, of an independent and detachable support for said throat-plate, the same forming a rigid attachment to the bed and consisting of a horizontal body having its free end upturned and bearing against the throat-plate at a point adjacent to the needle-hole and removed from the side edges of the throat-plate, as shown and described.

2. The combination, with a throat-plate and a bed whereon its edges rest, of a support therefor which consists of two members, one being secured to the rigid frame and the other adjustably connected with the first-named member and its free end bearing upward against the throat-plate at a point adjacent to the needle-hole, and means for securing the two members rigidly together in any required adjustment, substantially as described.

3. As an improved article of manufacture, a support for throat-plates of sewing-machines, comprising a horizontal member or body portion adapted to be rigidly secured to the frame, and a vertically-adjustable member having a vertical slot, and a clamp passing through said slot and securing the vertical member adjustably in the manner described.

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Witnesses:

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