May 29, 1951 K. W. WARNER 2,554,544

MAGNIFYING ATTACHMENT FOR SEWING MACHINES

Filed July 15, 1947

Fig. 3.

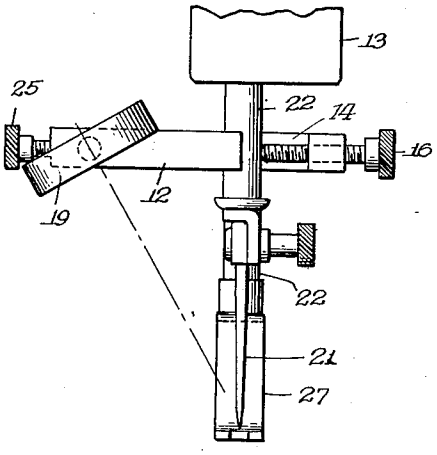


Fig. 2.

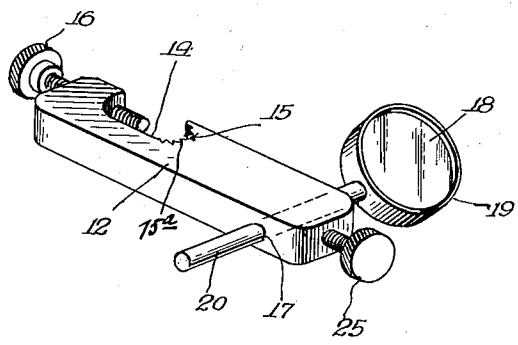


Fig. 1.

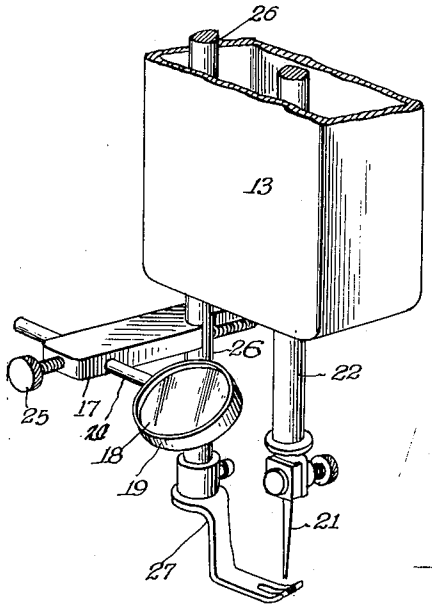


Fig. 4

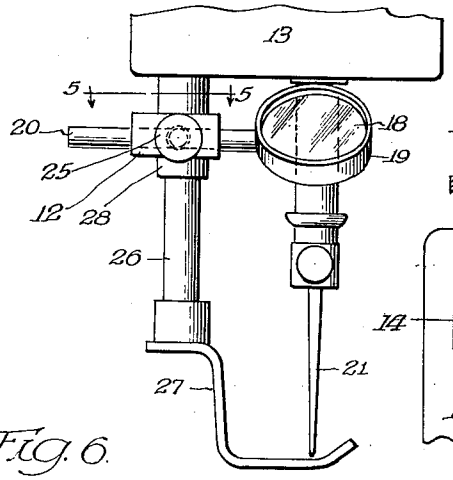


Fig. 5.

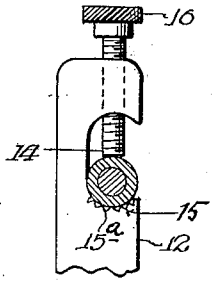
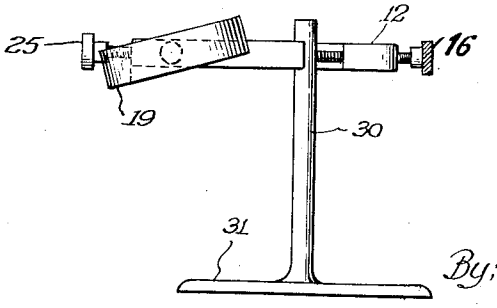


Fig. 6.



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MAGNIFYING ATTACHMENT FOR SEWING MACHINES

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Application July 15, 1947, Serial No. 761,040

2 Claims. (Cl. 88—39)

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The invention relates to attachments for sewing machines and particularly to devices for magnifying the needle to aid the operator in threading the needle and observing the sewing operation.

One object of the invention is to provide an optical attachment which it applicable to sewing machines of a wide diversity of constructions, and which may also be used when threading a needle for hand-sewing.

Other objects of the invention will appear from the detailed description.

The invention consists in the several novel features hereinafter set forth, and more particularly defined by claims at the conclusion hereof.

In the drawings:

Fig. 1 is a perspective of a portion of a sewing machine head with the optical attachment secured to the stem of the presser foot.

Fig. 2 is a perspective of the optical attachment.

Fig. 3 is a front elevation.

Fig. 4 is an outer side elevation of the head, with the attachment secured on a bushing which depends from the sewing machine head and through which the presser foot stem is slidable.

Fig. 5 is a section taken on line 5—5 of Fig. 4.

Fig. 6 is a view illustrating the attachment secured on a stand for use in magnifying the eye of the needle for hand-sewing.

The invention is exemplified in an attachment which comprises a supporting bar 12 which is adapted to be secured as hereinafter pointed out, to a cylindrical element such as the stem of a presser foot or a bushing for said stem, which depends from the sewing machine head 13. The bar is provided adjacent one of its ends and in one of its sides with an open-sided notch 14 which is provided at one of its ends with a concave seat 15 and a screw 16 in said end for jamming a cylindrical element against the curved seat 15 for detachably securing the bar in supported relation on the sewing machine head. Seat 15 is provided with ribs 15*a* for gripping a cylindrical element.

The seat 15 is concave to form a recess which partially surrounds the cylindrical element to hold the element transversely in the notch. At its other end, the bar is provided with a hole 17 which extends transversely therethrough. A magnifying device, usually consisting of a pair of lenses 18, is secured in a holder-ring 19. A stem 20 is rigidly secured and projects from one side of ring 19 and fits in the hole 17. Stem 20 is slidable in hole 17 for permitting the lens holder

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to be adjusted for aligning the lens axis with the needle 21 which is secured to the usual vertically slidable needle bar 22 and is also rotatably adjustable in hole 17, to permit the lens axis to be adjusted angularly to different vertical positions of the needle, or to the needle in its different vertical positions. A screw 25 in the end of the bar 12 adjacent the stem 20, is adapted to clamp said stem in the hole 17 in its assigned position against rotation and longitudinal movement.

In Figs. 1 and 3, the attachment is illustrated as applied to the stem 26 of the presser-foot 27. This stem 26, as well understood in the art, is vertically slidable in the head 13, for raising and lowering the presser foot to and from the work. In Figs. 4 and 5, the bar 12 is illustrated as applied to a bushing 28 which, in some machines, is secured to head 13, for slidably guiding the presser foot stem 26 vertically.

A desideratum in optical attachments for sewing machines, is to provide one which, without change in construction, is adapted to be quickly and easily attached to sewing machine heads of different constructions or makes. The concave seat 15 at one end of notch 14, forms a recess which receives and fits partially around either the stem 26 of the presser foot, or the bushing 28, and screw 16 has a sufficient range for securing the bar 12 on either the presser foot stem 26 or the bushing 28. Sewing machine heads of different makes, vary in construction, but substantially all are provided with a presser foot stem or bushings for said stem, and by providing a supporting bar for the magnifying glass, which can be secured on the presser foot stem or the bushing, the attachment is readily adapted for use on substantially all makes of sewing machines.

The concave seat 15 at the open-sided notch at one end, and a screw 16, also adapt the device to be secured on an upstanding cylindrical stem 30 on a base 31, for convenient use in magnifying the needle eye for aiding the user in threading a needle for hand-sewing.

The invention exemplifies an optical attachment for sewing machines which may be universally used on substantially all makes of sewing machines, can be readily attached to and detached from the machine, can be readily adjusted for magnifying the desired area around the needle and presser foot, and which is also adapted to be conveniently supported for hand-sewing.

The invention is not to be understood as limited to the details described, since these may be modi-

fied within the scope of the appended claims without departing from the spirit or scope of the invention.

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

1. A demountable optical attachment for sewing machines including a head, a presser-foot stem or a bushing for said stem, and a needle, comprising: a horizontally flat bar of substantially rectangular cross sections provided with an open-sided notch in one of its side edges adjacent one of its ends, having a recessed seat to fit around and engage one side of the presser-foot stem or bushing below the sewing machine head, the bar being adapted to extend below said head in approximate alignment with the presser-foot stem or bushing, the notch facing inwardly so the bar will be demountable sidewise from the presser-foot stem or bushing, a screw in the rear end of and having its axis extending longitudinally of the bar and its inner end engaging and clamping the presser-foot stem or bushing in said seat and demountably supporting the bar, a holder provided with a lens for viewing the needle and a stem extending from the center of one side of the holder across the front of the machine and horizontally through the front end of said bar and rotatably and slidably adjustable in said bar, and a screw having its axis extending longitudinally of the bar for clamping the stem of the lens holder in its adjusted position in the bar, the bar being horizontally rotatable on the presser-foot stem or bushing when the screw at the rear end of the bar is loosened, for shifting the lens and holder horizontally into and out of position for viewing the needle through the lens.

2. A demountable optical attachment for sewing machines including a head, a presser-foot stem or a bushing for said stem, and a needle, comprising: a horizontally flat bar of substantially rectangular cross sections provided with an open-sided notch in one of its side edges adjacent one of its ends, having a recessed ribbed seat to fit around and engage one side of the presser-foot stem or bushing below the sewing machine head, the bar being adapted to extend below said head in approximate alignment with the presser-foot stem or bushing, the notch facing inwardly so the bar will be demountable sidewise from the presser-foot stem or bushing, a screw in the rear end of and having its axis extending longitudinally of the bar and its inner end engaging and clamping the presser-foot stem or bushing in said seat and demountably supporting the bar, a holder provided with a lens for viewing the needle and a stem extending from the center of one side of the holder across the front of the machine and horizontally through the front end of said bar and rotatably and slidably adjustable in said bar, and a screw having its axis extending longitudinally of the bar for clamping the stem of the lens holder in its adjusted position in the bar, the bar being horizontally rotatable on the presser-foot stem or bushing when the screw at the rear end of the bar is loosened, for shifting the lens and holder horizontally into and out of position for viewing the needle through the lens.

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REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
294,171	Watts	Feb. 26, 1884
756,024	Jones	Mar. 29, 1904
996,039	Keuffel	June 20, 1911
1,059,868	Harrison	Apr. 22, 1913
1,258,107	Geist	Mar. 5, 1918
1,521,508	Denoux	Dec. 30, 1924
1,806,252	Hohein	May 19, 1931

FOREIGN PATENTS

Number	Country	Date
273,725	Germany	May 6, 1914
770,056	France	June 18, 1934