

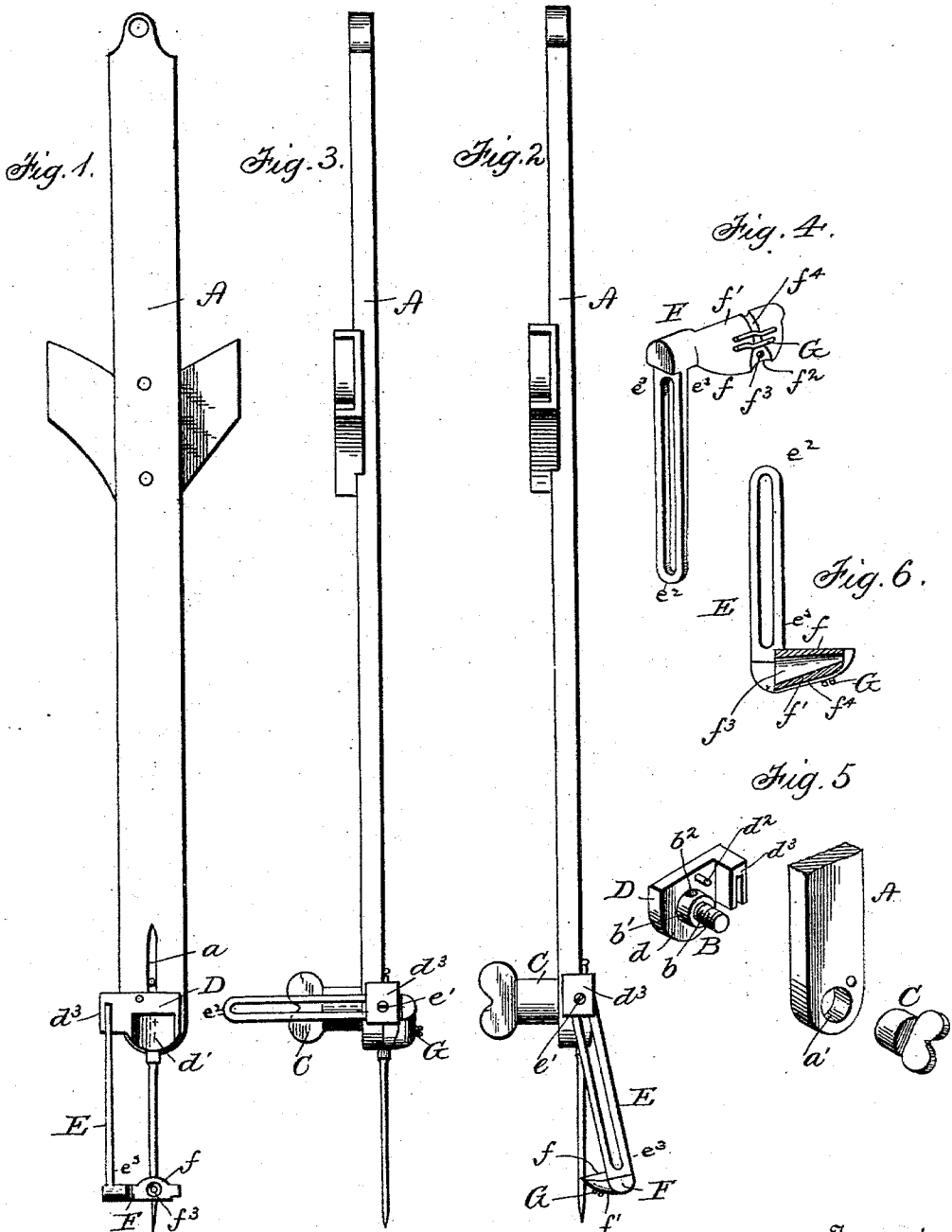
(No Model.)

C. W. KUTZ.

NEEDLE THREADER FOR SEWING MACHINES.

No. 551,325.

Patented Dec. 10, 1895.



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NEEDLE-THREADER FOR SEWING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 551,325, dated December 10, 1895.

Application filed July 15, 1895. Serial No. 556,070. (No model.)

To all whom it may concern:

Be it known that I, CHARLES W. KUTZ, a citizen of the United States, residing at Fleetwood, in the county of Berks, State of Pennsylvania, have invented certain new and useful Improvements in Needle-Threaders and Guide Attachments for Sewing-Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to an improvement in needle-threading attachments for sewing-machines.

The invention consists in the features, details of construction and combination of parts, which will first be described in connection with the accompanying drawings, and then particularly pointed out in the claims.

In the drawings, Figure 1 is a front elevation of a needle-bar provided with my invention in its position for threading the needle. Fig. 2 is a side elevation of the same. Fig. 3 is a side elevation showing the threading attachment raised. Fig. 4 is a detail perspective view of the attachment removed from the needle-bar. Fig. 5 is a detail view of the lower end of the needle-bar. Fig. 6 is a longitudinal section through the head F.

Referring to the drawings, A is a needle-bar having a longitudinal needle-groove *a* and a clamp-pin hole *a'*. Through this pin-hole passes a clamp-pin B, threaded at *b* for the reception of a wing-nut or clamp-nut C, and provided with an enlarged portion *b'* arranged to fit the pin-hole *a'*. The said enlarged portion *b'* is provided with a transverse needle-opening *b²*, which is arranged to receive the needle and clamp it in the needle-groove *a* in the usual manner.

To the enlarged portion *b'* of the pin B is attached or formed integral therewith a plate D, having a semicircular lower end *d*, which is provided with a concave recess on its outer side or face, as seen at *d'*, for a purpose hereinafter described. The inner face of said plate D is provided with an inward-projecting guide-pin *d²*, which enters a hole in the needle-bar to hold the plate D against rotation. The plate D is also provided on one side with a

slotted inward-projecting lug *d³*, the said slot forming a guideway and has its motion lengthwise limited by a small screw or stop-pin *e'* passing through the lug and through the slot in the link.

One end of the link E is rounded, as shown at *e²*, while the other end has a head F, flat on the front surface and provided with a convex portion *f* on its rear or inner surface, said portion *f* being arranged to fit into the concave recess *d* in the plate D. The lower end of the head F is semicircular, as shown at *f'*, to fit flush with the end *d* of the plate D. The lower edge or face of said semicircular end *f'* is notched, as shown at *f²*, to receive the needle, and extending from the center of said notch upward through the head F is a conical hole *f³*, the apex being downward. The front face of said head F is grooved, as shown at *f⁴*, and at or near the lower end of said head are attached small wires G, these wires being secured each at one end, on opposite sides of the groove *f⁴*, each wire having its free end projecting slightly outward from the head F, and may be used for a thread-guide in place of the conical hole *f³*.

The operation of my device is as follows: The needle is inserted in the needle-opening *b²* and clamped between the needle-bar and the plate D by screwing up the clamp-nut. The head F is drawn outward and then downward, swinging on the pin *e'*, which swinging is possible owing to the rounded end *e²* of the link. When thus swung down the conical hole *f³* has its apex opposite the eye of the needle, said needle resting in the groove or notch *f²*, which is V-shaped, so as to bring the apex of the conical hole into exact register with the eye of the needle, no matter whether the link E has a slight lateral play in the guideway or not. The conical hole *f³* being opposite the eye of the needle, the thread is pushed into said conical hole and through the eye of the needle in a well-known manner, the end of the thread being caught and held to prevent its withdrawal, while the head F and link E are swung upward to a horizontal position and then pushed inward until the convex portion *f* rests in the concave recess *d*, being held in this position by the friction of the link in the guideway, for which

purpose the link is thickened, as shown at e^3 , so as to fit tightly into the slot in the lug.

It will be seen that my device serves as a needle-clamp, a thread-guide, and a needle-threader, and that the threading of the thread-guide and of the needle is done at once.

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

10 1. In a sewing machine needle-threader, the combination, with a needle-clamping device provided with a lug having a slide-way, of a link movable in said slide-way and provided with a head at one end having a conical hole
15 adapted to come opposite the eye of the needle, substantially as described.

2. In a sewing machine needle threader, the combination, with a needle bar and a needle clamping device, of a link loosely attached to
20 the clamping device and arranged to move in a horizontal plane, and a head arranged to swing in the arc of a circle, said head having

a conical hole, and a groove and guide pins on its forward face, substantially as described.

3. In a sewing machine needle threader, the
25 combination, with a clamping device having a slotted lug at one side and a concave recess on its front face, of a slotted-bar horizontally movable in said slotted-lug, said bar being thickened on its forward end and having a
30 head and a conical aperture whereby when swung down said aperture registers with the eye of the needle, said head having a convex portion fitting the concave recess in said plate, and a groove and a pair of guide pins on its
35 forward face, substantially as and for the purpose described.

In testimony whereof I affix my signature in presence of two witnesses.

CHAS. W. KUTZ.

Witnesses:

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