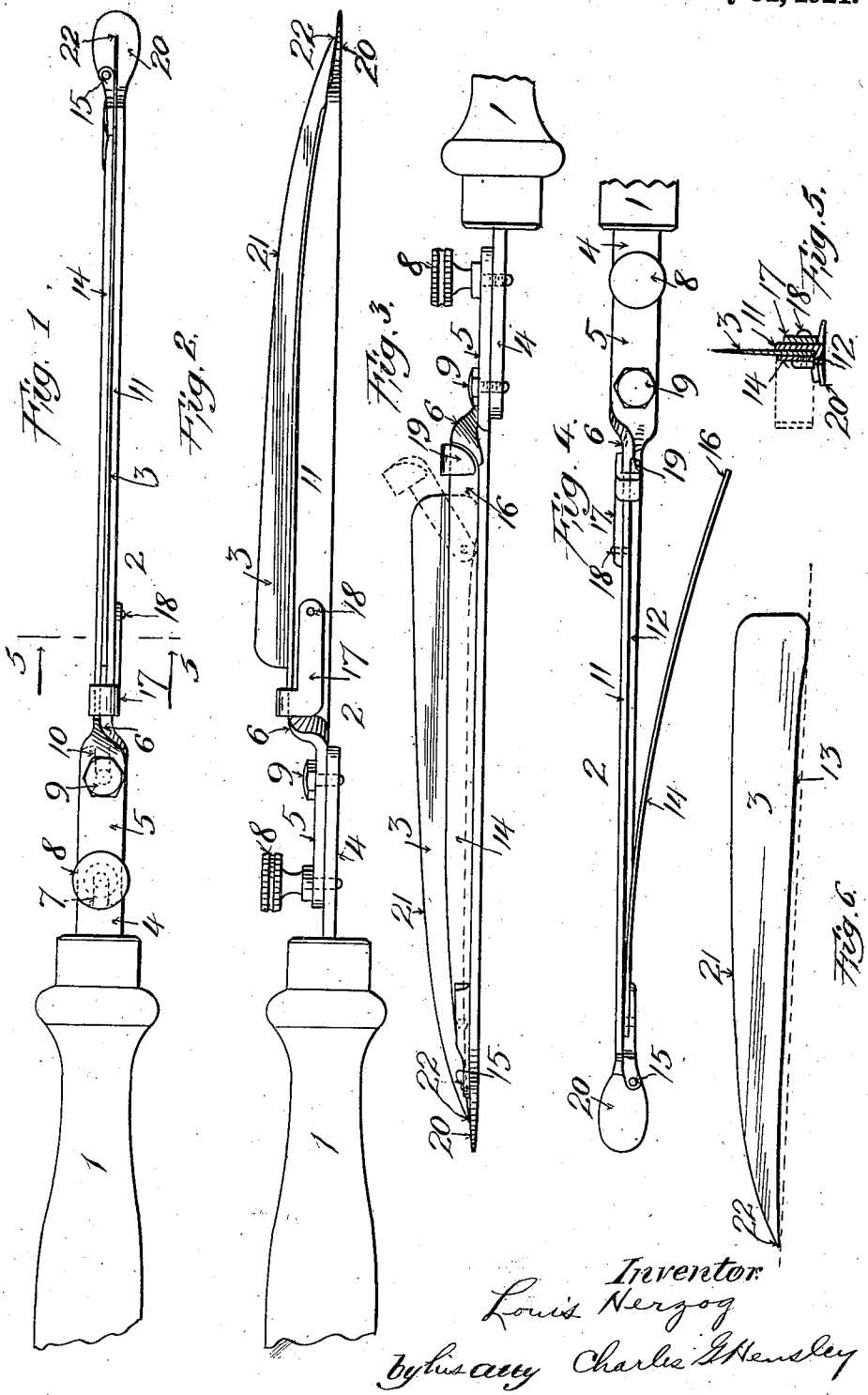
L. HERZOG.

EMBROIDERY KNIFE.

APPLICATION FILED SEPT. 9, 1918.

1,379,920.

Patented May 31, 1921.



Inventor:
Louis Herzog
by his atty Charles G. Hensley

UNITED STATES PATENT OFFICE.

LOUIS HERZOG, OF BEACON, NEW YORK.

EMBROIDERY-KNIFE.

1,379,920. Specification of Letters Patent. Patented May 31, 1921.

Application filed September 9, 1918. Serial No. 253,211.

To all whom it may concern:

Be it known that I, LOUIS HERZOG, a citizen of United States, and a resident of Beacon, in the county of Dutchess and State of New York, have invented certain new and useful Improvements in Embroidery-Knives, of which the following is a specification.

My invention relates to knives and it is especially useful in connection with the manufacture of embroidery although it is not necessarily limited to that application. In making embroideries on the large or Swiss machines there are usually formed what are called "jump" threads; that is, where the rows of needles leave off in the making of one rapport row of embroidery and where they start on a new rapport row there is a thread passing between the rows for each needle which forms no part of the embroidered design and these are cut, generally by passing a knife, having one or more blades, between the fabric and the jump threads to cut the latter, while the fabric is spanned upon the machine. Various knives have been made for the purpose, most of which are expensive and have to be totally discarded when the blade is worn out. The object of my invention is to provide a knife adapted for the purpose mentioned, wherein the blade may be removed. The blade may be readily removed for resharpening and renewal so that the whole device need not be discarded when a blade is worn out. Furthermore, the blades may be very economically made and of very thin steel so that they may be more readily sharpened and so that they will take a finer edge. All these advantages are obtained in a knife which is in every way adapted for the cutting of the threads as above described.

In the drawings forming part of this application,

Figure 1 is a plan view of a knife embodying my invention, ready for use,

Fig. 2 is a side elevation thereof,

Fig. 3 is a similar view from the opposite side,

Fig. 4 is a plan view showing the blade removed and the clamp open,

Fig. 5 is a sectional view taken on the line 5—5 of Fig. 1 and,

Fig. 6 is an elevation of the blade detached.

The device consists, primarily, of a handle 1, the blade holder 2 and the blade 3. The handle 1 may be of any shape or design and generally it is in line with the blade holder. The handle has a shank 4 extending therefrom and the blade holder is preferably detachably secured thereto. I have shown the blade holder provided with an extension 5 formed by bending the holder plate at right angle at 6 and the extension has a slot 7 to receive a set screw 8 which is threaded in the shank 4, whereby the holder may be slipped endwise under the head of the screw 8 and then secured by tightening the set screw. There is a screw 9 in the extension 5 which enters a slot 10 in the shank 4 and this prevents the holder from twisting on the screw 8. The screws 8, 9, are also adapted for securing the holder to the combination or multiple handles in the manner well known in the art. The forward part of the blade holder has a wall 11 against which one side of the blade is adapted to be pressed and there is a seat 12 at right angle thereto, against which the back edge 13 of the blade is adapted to rest, so that the rigid portion of the holder forms a seat for the back and one face of the blade.

The blade is detachably held in position by the member 14 which presses against the other face of the blade. This member 14 is fulcrumed to the rigid holder at 15 so that it may be swung in a plane at right angle to the wall 11 and preferably its bottom edge just clears the member 12. This member 14 is resilient and it is normally bowed as shown in Fig. 4 so that pressure is required to bring its free end 16 in against the blade. When the end 16 is forced over against the blade it is adapted to be held there by a clip which is here shown as a U shaped plate 17 fulcrumed at 18 and reaching over the edge of the wall 11 and extending down the opposite side at 19. The clip is swung upwardly as shown in dotted lines in Fig. 3, while the free end 16 of the clamp 14 is being forced over and then the clip is turned down so that it loops over the wall 11 and the clamp 14 and holds the latter in position. When the parts are thus engaged, the blade 3 is held in its seat by the frictional engagement of the clamp 14 which latter is under tension. To release the blade it is only necessary to raise the clip 17 to release the clamp 14 whereupon the blade may be removed.

The forward end of the holder has a heel 20 lying at right angle to the plane of the blade and parallel with the back edge

of the holder. The blade 3 has a curved cutting edge 21 starting from the point 22 and rising upwardly, and the back edge 13 of the blade is arched as shown in Fig. 6. When the blade is clamped in position the back of the point rests against the heel 20 so that when the knife is moved along under the threads the latter can not pass between the back of the knife and heel, but will be compelled to engage the cutting edge of the knife. As the knife is sharpened from time to time more or less of the pointed end will be ground away but owing to the arched shape of the back edge the pointed end will always rest snugly against the heel 20.

The knife is used in the same manner as other embroidery knives. The operator places the heel 20 against the embroidered fabric with the blade 3 extending out at right angle to the fabric and she then moves the knife endwise along the line of the jump threads. As each jump thread is reached the heel 20 first passes under it and the thread passes up on the cutting edge 21 until there is a slight pull on the thread, whereupon it is cut by the blade. This action occurs repeatedly as the knife is moved along the fabric.

It is a very simple matter to remove a blade for resharpening or for replacement. It is only necessary to raise the clip 17 to release the clamp 14 and the blade is then free to be removed. With the present arrangement the blades may be made thinner than in former knives of this character and if desired, they may be made of metal of uniform thickness.

Having described my invention, what I claim is:

1. A device of the class described consisting of a knife having a blade holder provided with a seat for a detachable blade, a heel at the forward end of said holder and disposed at right angles to a blade held in said seat, a blade having a pointed end and an arched back and means for detachably securing said blade in said seat whereby the forward end of the blade will rest against said heel.

2. A device of the class described consisting of a blade holder provided with a seat for a detachable blade, a heel at the forward end of said holder and disposed at right angles to a blade held in said seat, a blade and means for detachably holding said blade in said seat whereby the forward end of the blade will rest against said heel and comprising an arched, resilient member adapted to press against said blade and means for holding said resilient member pressed against the blade.

3. A device of the class described comprising a blade holder provided with a seat for a detachable blade and including a wall for one face of the blade, a wall for the back edge of the blade, a heel at the forward end of the holder, disposed at right angles to a blade held in said seat, a blade having an arched back and means for detachably securing said blade in said seat so that the arched back rests against said heel and said wall.

4. A device of the class described including a blade holder provided with a seat for a detachable blade and consisting of a wall for one face of the blade, a wall for the back edge of the blade, a heel for the forward end of the blade, a blade having an arched back, said blade being adapted to seat against said walls with its forward end resting against said heel and a pivoted, arched and resilient member adapted to press said blade against said first wall, a U shaped clip hinged to said holder and adapted to straddle said first wall and said resilient member to hold the blade in position.

Signed at Glenham in the county of Dutchess and State of New York, this 4th day of September 1918.

LOUIS HERZOG.