Sept. 20, 1932. G. HUBER 1,878,146

SEWING MACHINE

Original Filed April 6, 1928 3 Sheets-Sheet 1

Fig. 1

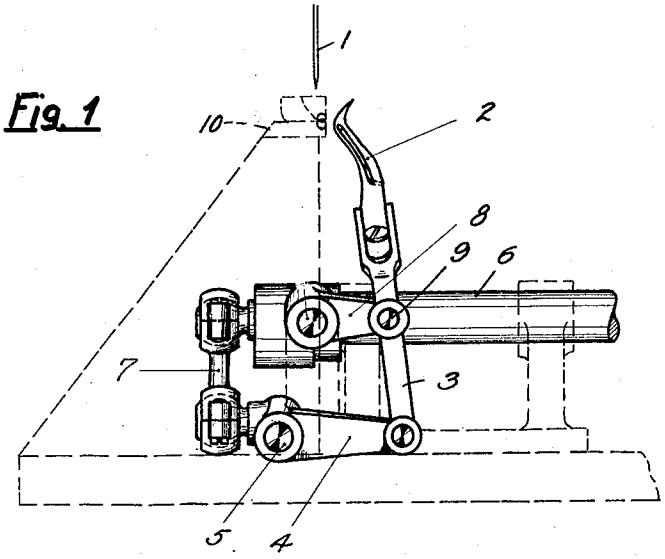
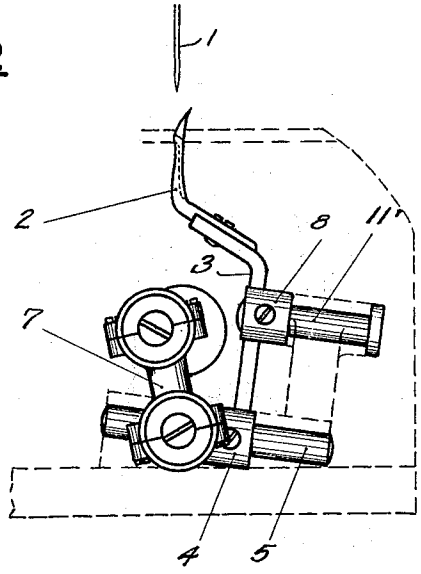


Fig. 2



Inventor:
Gustav Huber

Sept. 20, 1932. G. HUBER 1,878,146

SEWING MACHINE

Original Filed April 6, 1928 3 Sheets-Sheet 2

Fig. 3

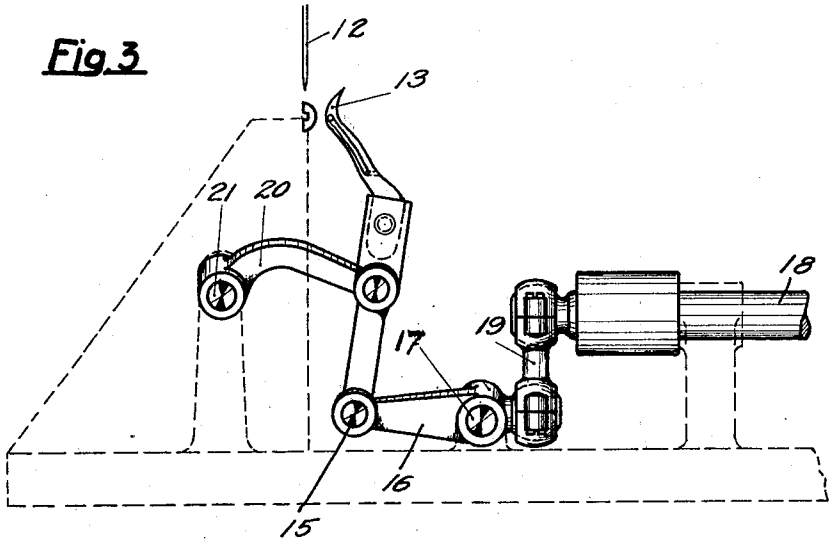
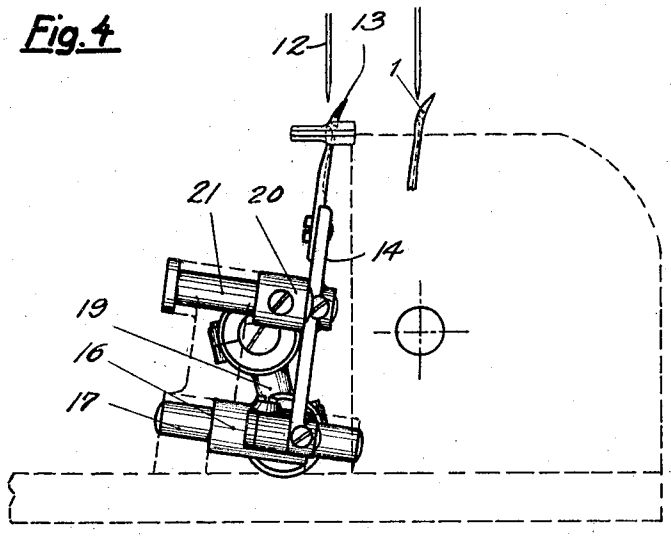


Fig. 4



Inventor:
Gustav Huber

Sept. 20, 1932. G. HUBER 1,878,146

SEWING MACHINE

Original Filed April 6, 1928 3 Sheets-Sheet 3

Fig. 5

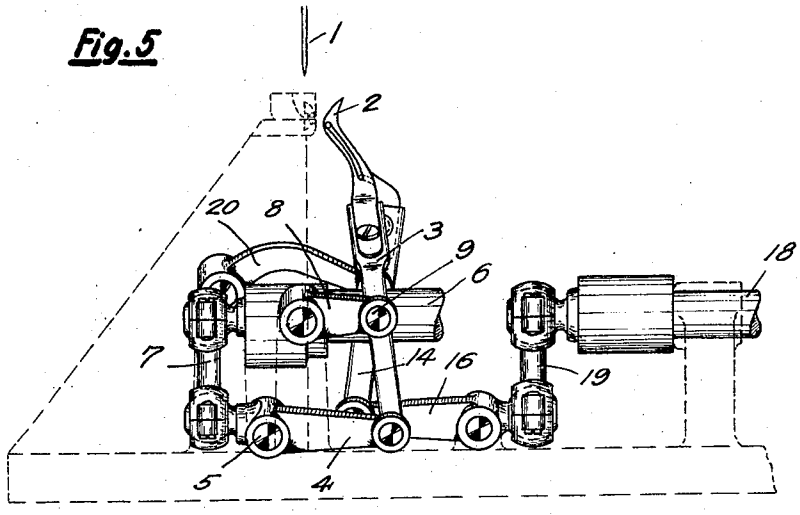
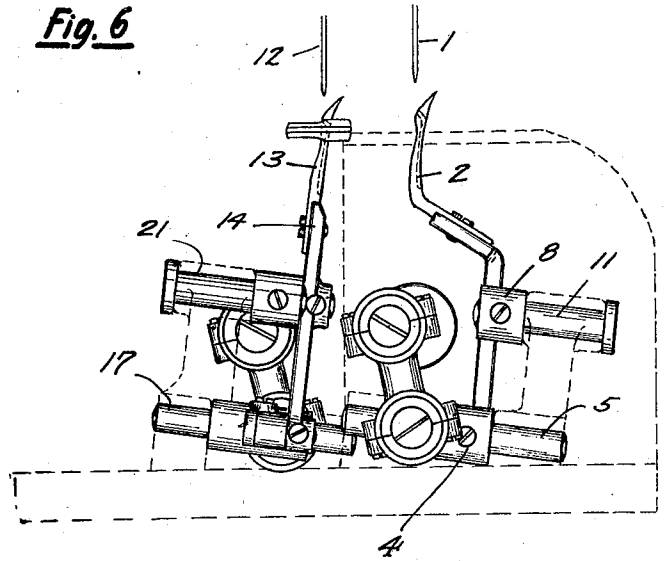


Fig. 6



Inventor:
Gustav Huber

Patented Sept. 20, 1932 1,878,146

UNITED STATES PATENT OFFICE

GUSTAV HUBER, OF STUTTGART, GERMANY

SEWING MACHINE

Application filed April 6, 1928, Serial No. 268,039, and in Germany April 14, 1927. Renewed May 27, 1932.

My invention relates to sewing machines and more especially sewing machines which are equipped with means for producing an overseam such as shown and described in my Patent 1,612,821. Now, the object of the present invention is to improve said overseaming mechanism to simplify the construction and operation and also to so construct the stitching mechanism that the seam uniting two, or more, pieces of fabric will itself be in the form of an overseam.

For a better understanding of my invention, I make reference to the annexed drawings, showing an embodiment of the invention by way of illustration, and in which drawings Fig. 1 is a front elevation of the stitching device for the production of the seam; Fig. 2 is a side view as seen from the left in Fig. 1; Fig. 3 is a view similar to Fig. 1 showing the overseaming device; Fig. 4 is a side view of Fig. 3 as seen from the left in said figure; Figs. 5 and 6 are respectively a front elevation and a side view of the combined stitching and overseaming devices.

In the drawings only so much is shown as is required to explain the particular improvement hereinafter described and claimed.

In Figs. 1 and 2 showing the stitching device for producing the seam uniting two or more pieces of fabric the straight sewing needle having the usual up and down movement is indicated at 1. At 2 is shown the looper, adjustably carried by an arm 3. To the lower end of the latter is pivotally connected a link 4 which is mounted on a suitably journalled axle 5. At 6 is shown a driving shaft which, by means of a connecting means shown at 7 and the said link 4 operates the looper 2 so as to impart thereto the required up and down movement. At 8 is shown a second link pivotally connected at 9 with the looper arm 3 for controlling and timing its motions so that the looper 2 will at the proper time intervals engage with its point the needle thread below the stitching plate indicated at 10 and above said plate will present to the needle 1 its loop adapted to overlie the seam produced by the needle thread as shown in the drawings of my copending application filed concurrently herewith. The link 8 is mounted on a suitably journalled axle 11 (Fig. 2).

At 12 in Figs. 3 and 4 is shown the straight needle provided to cooperate with a looper for producing the overseam proper. The looper is shown at 13 and is carried by an arm 14, to the lower end of which is pivotally connected at 15 a link 16, which is mounted on a suitably journalled axle 17. At 18 is shown a drive shaft which, in a similar manner as the drive shaft 6 shown in Figs. 1 and 2, by means of a connecting mechanism shown at 19 and the said link 16 imparts to the looper arm 14 the necessary movements for the looper 13 to cooperate with the straight needle 12 to produce the overseam. An arm 20 pivotally connected with lever arm 14 above the fulcrum 15 is provided to properly control the movements of said arm. The arm 20 is mounted on a suitably journalled axle 21 supported in a bearing as shown in Fig. 3.

As will be seen from Figs. 1 and 2 and Figs. 3 and 4, the axles of the links imparting movement to, and controlling, the lever arms 3 and 14 are disposed parallel to each other, but as shown in Figs. 2 and 4 are inclined at an angle to the reciprocating straight needles 1 and 12 respectively, so that the respective loopers below the stitching plate will be in a position back of the needle and above the stitching plate in a position in front of their needles. Or, in other words, the loopers are moved and controlled in such a manner that as they rise they will with their points engage the loop of the needle thread behind the needle holding it, until the looper at the extreme end of its uppermost position when in front of the straight needle presents a loop of its thread to the needle, withdrawing at the end of its downward movement from the loop of the needle thread.

The construction of my device is such that by means of the same it is possible to make in fabric a seam and an overseam of the type shown in my pending application Serial No. 268,040 filed April 6, 1928. The first seam is made by the needle 1 and the looper 2 cooperating together and then the second overstitch is made by the needle 12 with the looper 13 cooperating therewith. The entire device

is an improvement upon Patent 1,587,957 granted to the applicant.

The construction is such that either of the two stitching devices can at will be used alone.

Figs. 5 and 6 show the two devices together in their relative position.

I claim:

1. In a sewing machine, the combination of a stitching device comprising a needle and cooperating looper for producing a seam uniting two pieces of fabric, a second stitching device also comprising a needle and cooperating looper for producing an overseam covering said first seam and a separate operating mechanism for each looper inclusive of a drive shaft and a link connection between said shaft and looper, said needles being spaced from one another and being disposed in a vertical plane, and the link connections between the respective shafts and loopers being disposed to opposite sides of said plane, respectively.

2. The combination as specified in claim 1, including axles supporting said loopers, said axles being parallel to each other and inclined at an angle relative to said needles.

3. In a sewing machine, a pair of stitching devices each including a needle and a cooperating looper, a pair of axles associated with each device, the axles of each pair being disposed in spaced parallel relation and inclined with respect to a plane including the axes of the needles, both axles of one pair being disposed to the same side of said plane and the axles of the other pair being disposed, respectively, to opposite sides of said plane, a pair of links mounted on each pair of axles, respectively, the links of each pair being pivotally connected with their related looper, means operatively connected with one of the links of one pair for rocking same, and separate means operatively connected with one of the links of the other pair for rocking same.

In testimony whereof I affix my signature.

GUSTAV HUBER.