

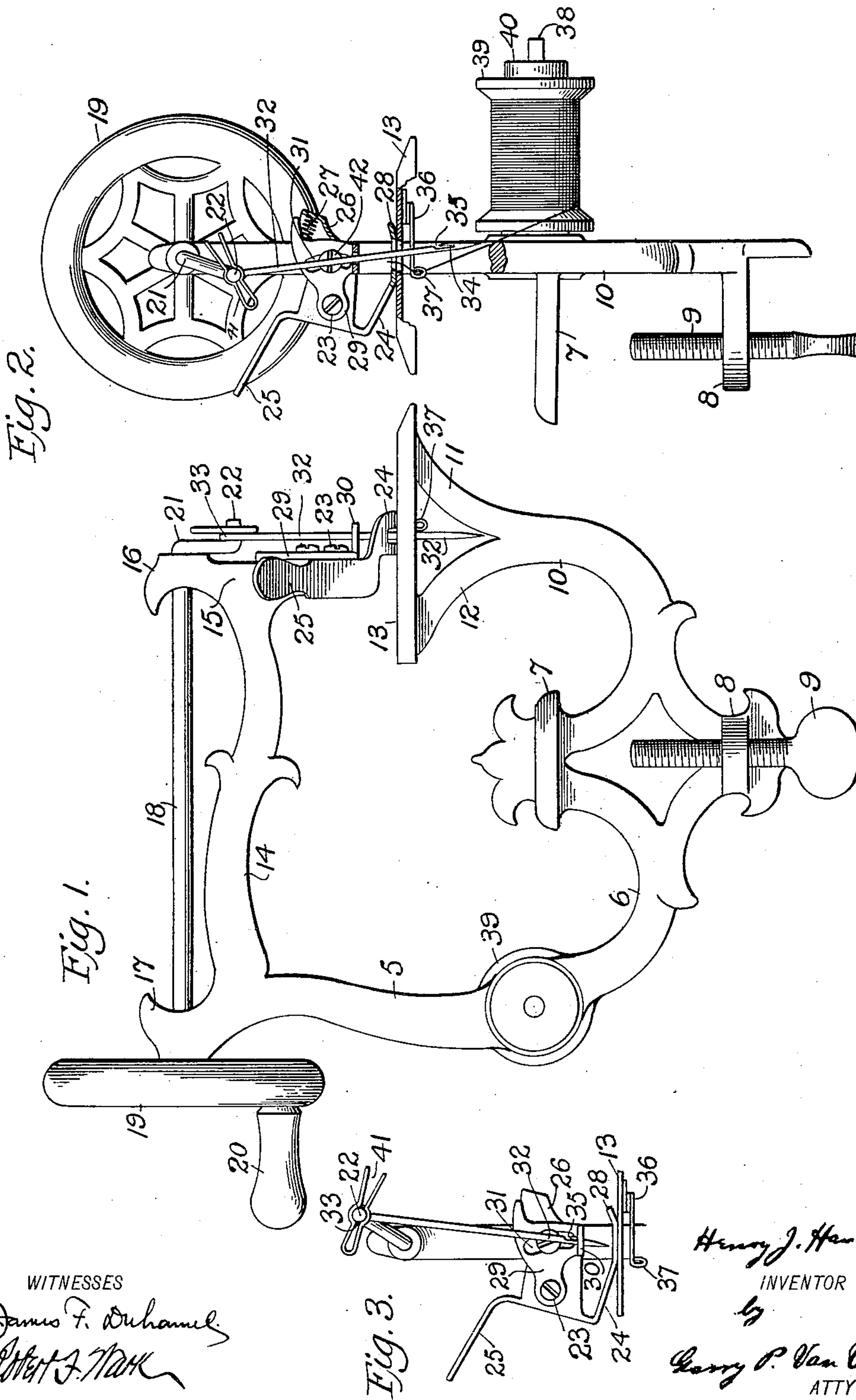
No. 677,740.

Patented July 2, 1901.

H. J. HANCOCK.
NEEDLE FEED CHAIN STITCH SEWING MACHINE.

(Application filed Oct. 27, 1900.)

(No Model.)



UNITED STATES PATENT OFFICE.

HENRY J. HANCOCK, OF NEW YORK, N. Y., ASSIGNOR TO GEORGE T. BATCHELOR, OF SOUTH ORANGE, NEW JERSEY, AND SAMUEL STENSON, OF SEACLIFF, NEW YORK.

NEEDLE-FEED CHAIN-STITCH SEWING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 677,740, dated July 2, 1901.

Application filed October 27, 1900. Serial No. 34,558. (No model.)

To all whom it may concern:

Be it known that I, HENRY J. HANCOCK, a citizen of the United States, residing at New York, county and State of New York, have invented a new and useful Chain-Stitch Sewing-Machine, of which the following is a specification.

My invention relates to sewing-machines, and has for its object to produce a machine of this kind which will be especially adapted for children's use. With this object in view my aim has been to produce a machine which will be cheap to manufacture, easy to use, and with the fewest possible parts. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of a sewing-machine constructed according to my invention. Fig. 2 is a front end view thereof, a part being broken away; and Fig. 3 is a view of the needle in a different position.

In the accompanying drawings similar numerals of reference refer to like parts in each of the views, and in the practice of my invention I provide a sewing-machine frame consisting of the standard 5, having the bottom arm 6, which is provided with two outwardly-projecting plates 7 and 8, in the lower one of which I mount a clamping-screw 9, by means of which the frame may be secured to a table, as will be readily understood. The arm 6 is also provided with the upwardly-directed extension 10, ending with the arms 11 and 12, which are of equal length and on the ends of which is mounted the plate 13. I also provide a top arm 14, carrying the cross-head 15, which is provided with an upwardly-projecting bearing 16, and a similar bearing 17 is formed at the upper end of the standard 5, and in the bearings 16 and 17 I mount a shaft 18, on the rear end of which is mounted a balance-wheel 19, provided at one side with a handle 20, by means of which the shaft 18 may be rotated. The opposite end of the shaft 18 is bent and formed into a crank 21, having an outwardly-projecting arm 22.

The lower end of the cross-head 15 is provided with a lateral arm to which at 23 is pivoted the presser-foot 24, provided with a handle 25, and an arm 26 projects to the op-

posite side of the head 15, and a spring 27 is mounted between the angular end of the arm and the head 15 and normally holds the foot 28 firmly against the plate 13.

On the pivot 23 I mount a guide-plate 29, having an outwardly-projecting perforated arm 30 and a segmental opening 31, through which a set-screw 42 is passed into the arm 26 and by means of which the plate 29 may be adjusted upward or down, as will be readily understood.

On the arm 22 of the crank 21 I mount a needle 32, which is provided at the end with a ring or loop 33, adapted to fit snugly upon the arm 22, so that the said arm may freely rotate within the same, and the needle is passed downward through the perforated arm 30 and through a perforation in the plate 13, between the arms 11 and 12, as clearly shown in Fig. 1. The needle 32 is provided adjacent to the lower end with a hook formed by slitting the needle, as shown at 34, and connecting the slit at one side, at the upper end, with the outer surface of the needle by a transverse slit 35.

On the bottom of the plate 13 I mount a spring 36, in the free end of which I form a loop 37, and on the standard 5, by means of a shaft 38, I mount a spool 39, which may be held in place by a tight-fitting washer 40, and the washer 40 may be pressed against the spool to obtain the required tension on the thread, or a nut may be used for this purpose, if desired, as will be readily understood.

The operation is as follows: The cloth is mounted between the foot 28 and the plate 13, and the wheel 19, with the shaft 18, is rotated by the handle 20. As the end of the shaft 18 is formed into a crank, on the arm 22 of which one end of the needle is mounted, and as the needle passes down through the perforated arm 30 of the guide-plate, the lower end of the needle will not only have an up-and-down movement, but will substantially describe an ellipse, and as the motion is always in the one direction the lateral movement of the needle will feed the cloth between the foot 28 and the plate 13. The thread is passed from the spool 39 through the loop 37, and as the needle descends it will

by reason of the relation of the perforation in arm 30 to the spring 36 first take a position on the outside of said spring, as shown in Fig. 2; but as the shaft continues to rotate the end of the needle will move toward, 5 press upon, and pass beyond and over the end of the spring, the spring yielding as the needle advances until the needle passes over the end, when the spring will return to its 10 normal position, as shown in Fig. 1, and at the same time place tension upon the thread and hold the same against the needle, so that it will be caught by the hook in the needle and will be drawn up through the cloth in 15 the shape of a loop surrounding the needle, and when the needle descends the next time it will draw the next loop of thread up through this loop and form what is known as a "chain-stitch." The length of the stitch can be regulated by raising or lowering the guide-plate 20 29, so that the perforated arm 30 will be nearer to or farther away from the point of the needle, as will be readily understood. The needle 32 may be held upon the arm 22 25 of the crank in any desired manner; but I prefer to use for this purpose an ordinary spring-clamp, as 41.

The entire construction is very simple, easy to operate, has few parts to get out of order, 30 and can be used not only for the amusement and instruction of children, but also by adults in actual work. The main use of the arm 11 is to protect the point of the needle and may be dispensed with, if desired. Many other 35 changes may be made without departing from the spirit of my invention, and I reserve the right to make all such changes.

Having thus described my invention, what

I claim as new, and desire to secure by Letters Patent, is—

1. A sewing-machine comprising a shaft, means to rotate the same, a crank formed on one end thereof, a needle mounted on said crank and provided with a hook adjacent to the lower end thereof, a plate, a spring-controlled presser-foot pivotally mounted on the 45 frame, a guide-plate pivotally mounted on the pivot on which the presser-foot is mounted and provided with a segmental slot, a screw passing through said slot into a part of 50 said presser-foot, and means to feed the thread to said needle, as and for the purpose set forth.

2. A sewing-machine comprising a shaft, means to rotate the same, a crank formed on 55 one end thereof, a needle mounted on said crank and provided with a hook adjacent to the lower end thereof, a plate, a spring-controlled presser-foot pivotally mounted on the 60 frame, a guide-plate pivotally mounted on the pivot on which the presser-foot is mounted and provided with a segmental slot, a screw passing through said slot into said presser-foot, a spring secured at one end thereof to the under side of said plate and having the 65 free end thereof extending obliquely in the transverse path of said needle, and means to protect the point of the needle, as and for the purpose set forth.

In testimony whereof I have signed my 70 name to this specification in the presence of two subscribing witnesses.

HENRY J. HANCOCK.

Witnesses:

G. P. VAN WYE,
ROBERT F. WARK.