B. W. BEAN.

Sewing Machine.

No. 2,982. Patented March 4, 1843.

Fig: 4.

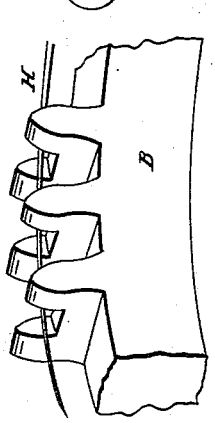


Fig: 3.

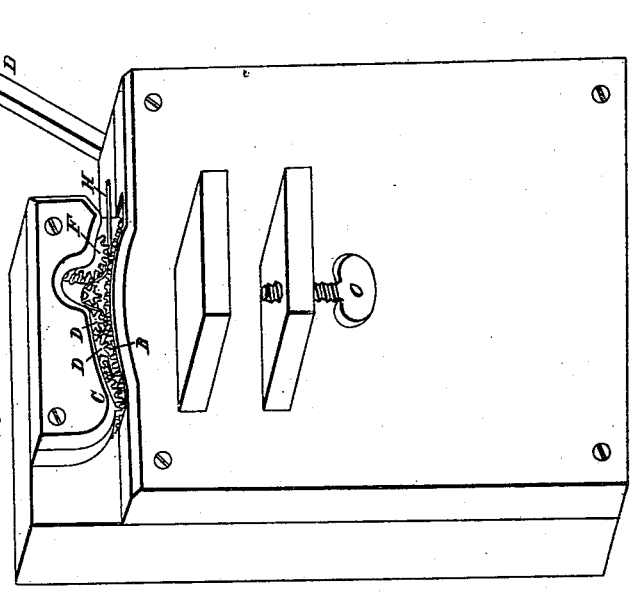


Fig: 2.

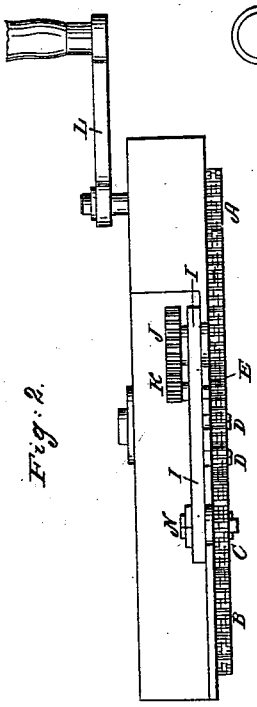
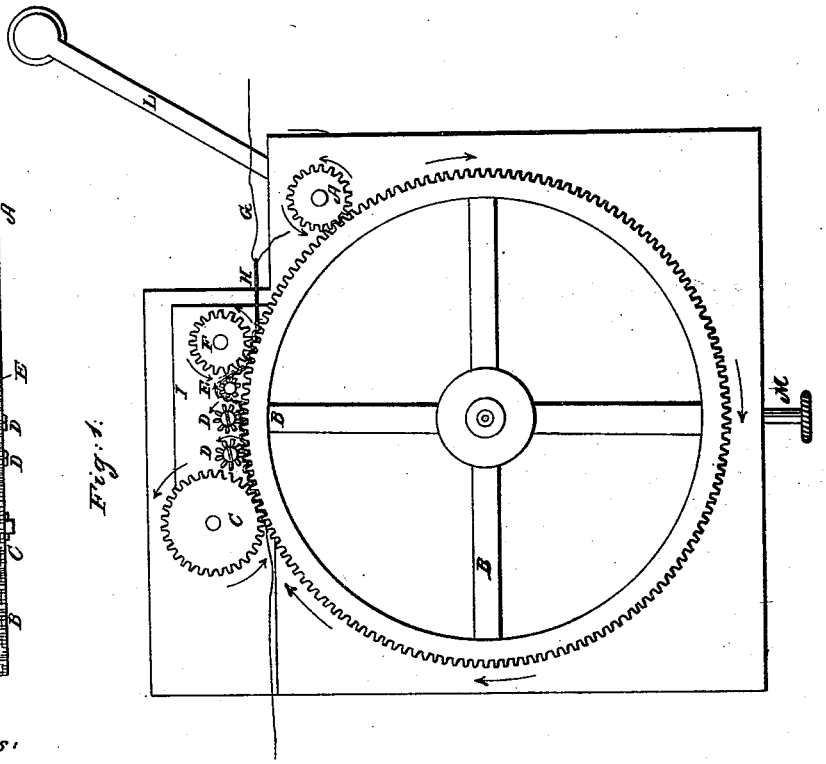


Fig: 1.



Witnesses:

Paul R. Hodge.

J. H. Bailey

Inventor:

Benjamin W. Bean.

UNITED STATES PATENT OFFICE.

BENJ. W. BEAN, OF NEW YORK, N. Y.

MACHINE FOR SEWING CLOTH OF ALL KINDS WITH A RUNNING STITCH.

Specification forming part of Letters Patent No. **2,982**, dated March 4, 1843.

To all whom it may concern:

Be it known that I, BENJAMIN W. BEAN, of the city, county, and State of New York, have invented a Machine for Sewing with a Needle, called a "Sewing-Machine;" and I do hereby declare that the following is a full and exact description.

The nature of my invention consists in sewing what is commonly called the "running stitch" by machinery, the stitch being produced by the combined actions of wheels and pinions in conjunction with a crooked needle.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

I construct my machine as per drawings, Figures 1, 2, 3, and 4, Figs. 1 and 2 being a geometrical elevation and ground plan; Fig. 3 being a perspective elevation with the wood coverings or facings attached, ready for operation.

The process of sewing is thus: By passing the fabric or cloth between the main wheel B and the pinion C, Fig. 1, the red line showing the direction of the cloth, which produces undulations or doubles by passing up and down the surfaces of the teeth of the wheel and pinion, having precisely the same effect as a crimping-machine. The motion given to the various wheels and pinions is by turning a crank-handle, (marked L in Figs. 1, 2, and 3,) which is turned from right to left, which gives motion to a pinion, A, which moves the wheel B from left to right. This gives motion to pinion C, turning from right to left. Between these last two the fabric enters to be sewed, passing on to the needle H between the wheel B and the two small pinions D D, passing thence over the curve in the needle, which bears on the small pinion E, from thence passes down over the needle H between the large pinion F and the wheel B, and passes on to the thread G. Thus the undulations or doubles are taken up on the needle by the effects of the gearing, the pitch of the gearing regulating the length of the stitch, so that when it is passed off on the thread it produces what is technically called the "running stitch." The needle H having a curve passing over the small pinion E, and the pinion having a reverse motion from left to right, is for the purpose of holding the needle stationary, the reverse motion of the pinion E being given by means of the pivot of the pinion F passing through the metal plate I I, bearing on it. A small wheel, J, which works into a pinion, K, so that K and E are on one pivot or shaft, which produces the reverse motion of E. There is a square groove turned in on the edges of all the wheels and pinions on the front side of the machine, with the exception of pinion A. These grooves are for the purpose of letting the needle in midway between each tooth of the wheel and pinions and allowing each wheel and pinion to play clear of the needle. The groove is readily seen by reference to Fig. 4, showing three of the teeth much enlarged, with the needle lying in the groove; also, may be seen in ground plan, Fig. 2. There is a screw marked M, which passes from the under side of the machine up to the center of the journal of the main wheel B, the said screw being for the purpose of regulating the distance between the wheel and pinion, according to the thickness of the cloth or fabric. I also regulate my pinion C by means of the tightening-nut marked N, so that by the screw M and the nut N the wheel B and pinion C may be regulated to any thickness of cloth.

What I claim as my invention, and desire to secure by Letters Patent, is—

The herein-described method of sewing by the combined action of the wheels and pinions forming the undulations or doubles, in connection with the crooked stationary needle, as is fully set forth in the drawings and specification.

BENJAMIN W. BEAN.

Witnesses:

PAUL R. HODGE,

I. H. BAILEY.