

D. NOBLE.
PRESSER FOOT MECHANISM FOR EYELET SEWING MACHINES.
APPLICATION FILED JUNE 17, 1909.

995,706.

Patented June 20, 1911.

2 SHEETS—SHEET 1.

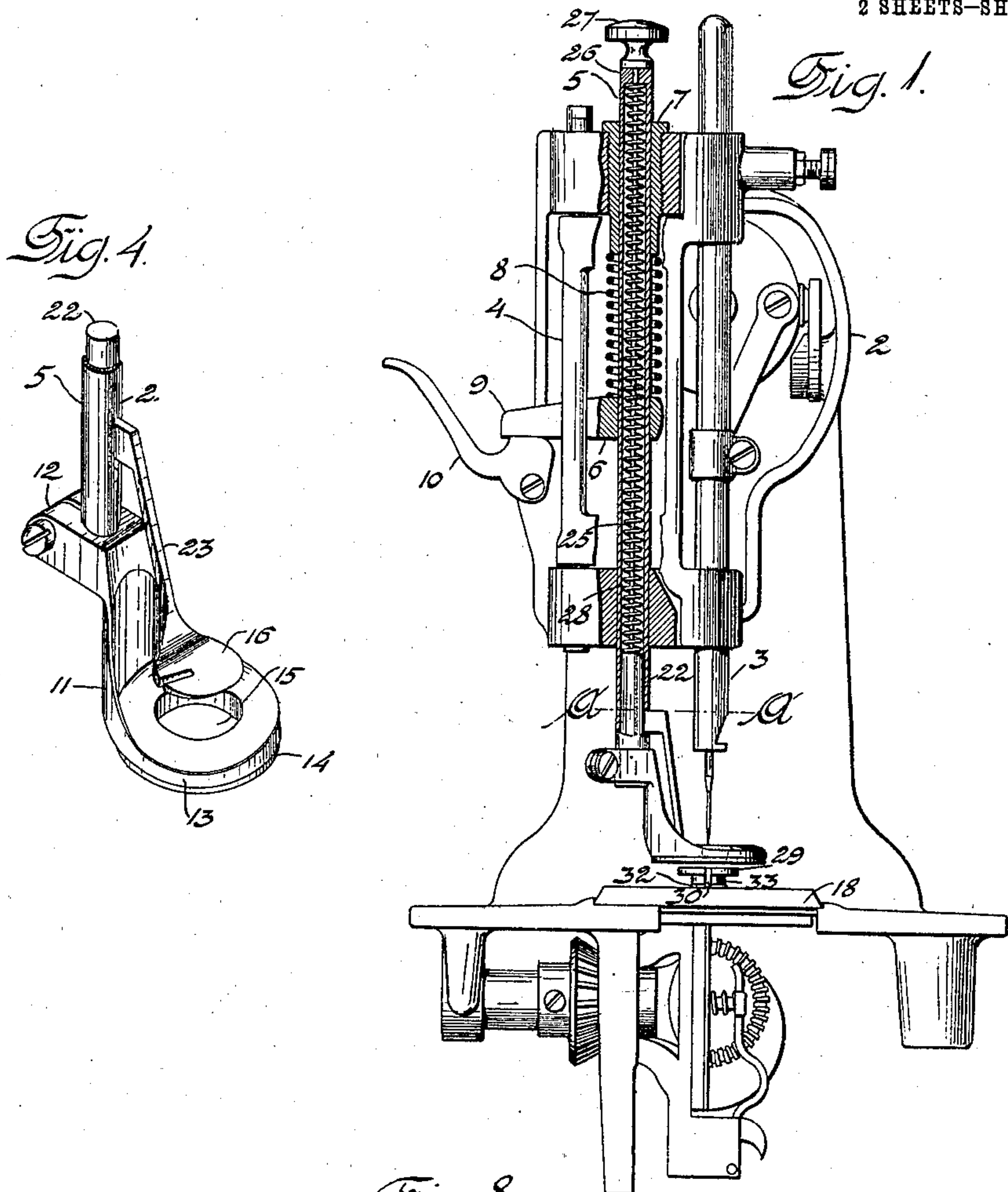
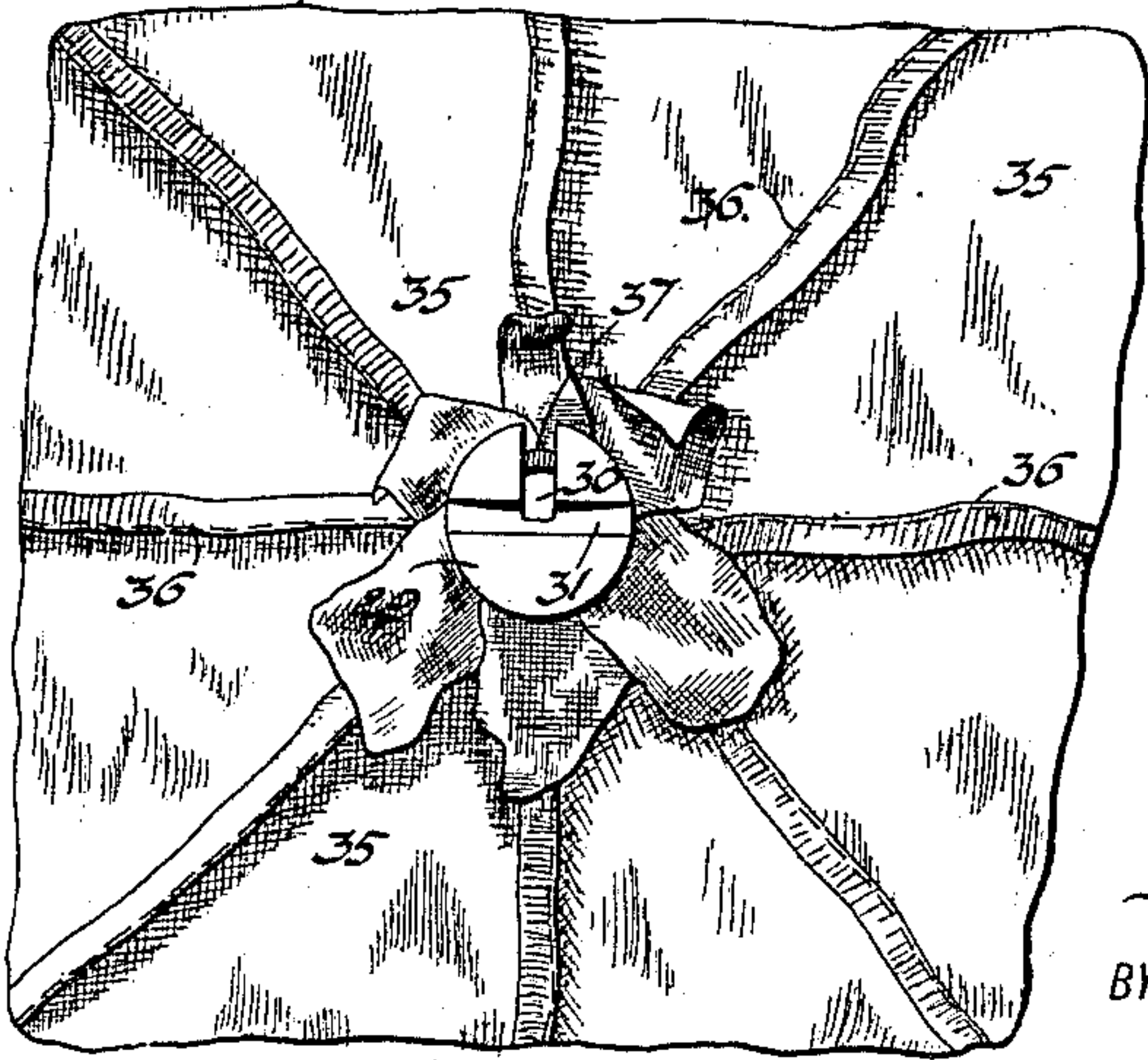


Fig. 8.



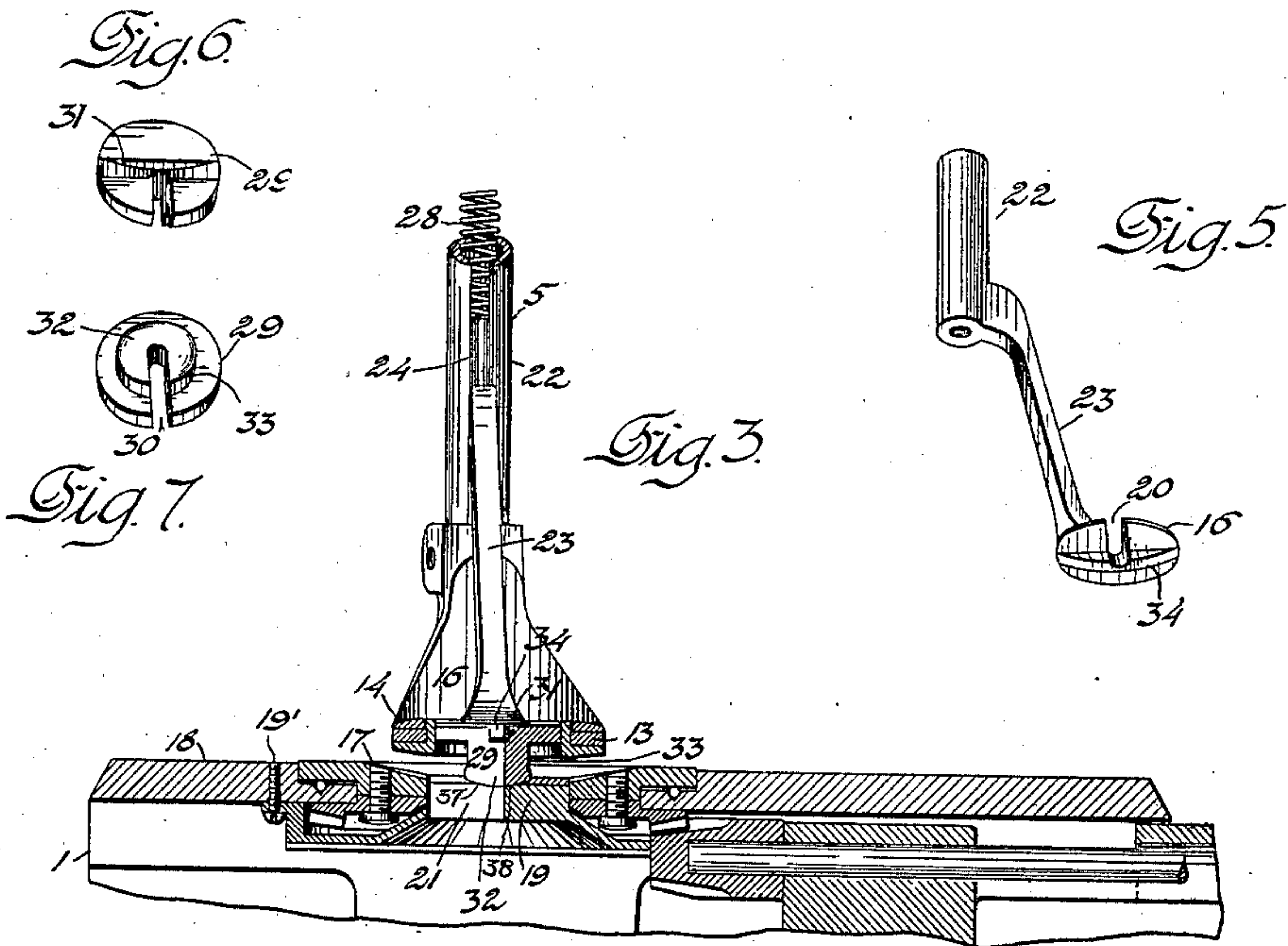
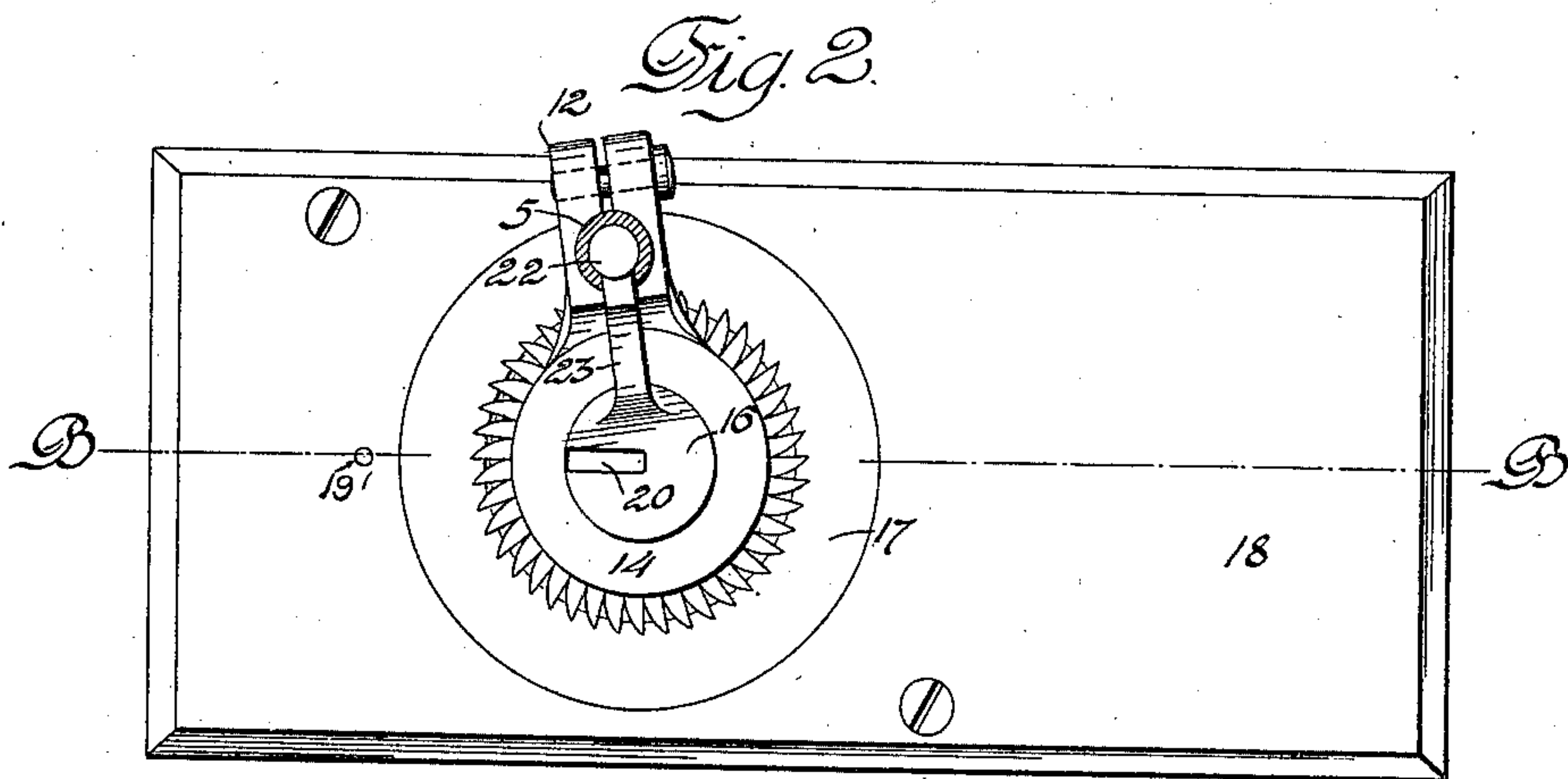
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Geeta Tennah

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UNITED STATES PATENT OFFICE.

DONALD NOBLE, OF BRIDGEPORT, CONNECTICUT, ASSIGNOR TO THE SINGER MANUFACTURING COMPANY, A CORPORATION OF NEW JERSEY.

PRESSER-FOOT MECHANISM FOR EYELET-SEWING MACHINES.

995,706.

Specification of Letters Patent. Patented June 20, 1911.

Application filed June 17, 1909. Serial No. 502,712.

To all whom it may concern:

Be it known that I, DONALD NOBLE, a subject of the King of Great Britain, residing at Bridgeport, in the county of Fairfield and State of Connecticut, have invented certain new and useful Improvements in Presser-Foot Mechanism for Eyelet-Sewing Machines, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to improvements in presser-foot mechanism for eyelet sewing machines, and has for its object to provide means whereby a substantially large eyelet may be made about the edge of a circular opening formed in comparatively uneven thicknesses of material; and to this end there is provided a transferable, non-rotatable eyelet stud which is inserted in the eyelet opening prior to placing the material in operative relationship with the stitch-forming and cloth-feeding mechanism.

In the accompanying drawings illustrating the invention, in the several figures of which like parts are similarly designated, Figure 1 is a front end elevation, partially in section, of an eyelet sewing machine equipped with the improved mechanism, the face-plate being removed and the horizontally-oscillated needle-bar gate partly broken away for convenience of illustration. Fig. 2 is a horizontal section, partly broken away, taken in the plane indicated by the line A—A, Fig. 1, the needle-bar being omitted. Fig. 3 is a vertical section, partly broken, taken in the plane indicated by the line B—B, Fig. 2. Fig. 4 is a perspective view of the presser, together with the auxiliary foot. Fig. 5 is a perspective view of the auxiliary presser-foot detached. Fig. 6 is a perspective view of the upper side of the transferable, non-rotatable eyelet stud. Fig. 7 is a perspective view of the underside of said eyelet stud. Fig. 8 is a view of one class of production for which the improved device is intended, showing the eyelet stud in the position which it occupies when the overseam stitches are being made.

1 represents the frame or bed-plate of the sewing machine, 2 the arm, and 3 the needle-bar which is mounted in the gate 4 so that it will descend in different vertical planes to form the overseam stitches in a manner common to this class of machines.

5 represents a spring-pressed hollow or

tubular presser-bar mounted in one end of the arm 2, 6 the usual presser-bar collar between which and the screw-threaded bushing 7 is interposed the usual coil spring 8, and 9 the usual presser-bar collar extension with which the presser-lifter 10 coöperates to raise the presser-bar in the usual manner, said extension also serving to restrain the presser-bar against turning.

11 represents the presser-foot which is secured by an integrally-formed pinch collar 12 to the lower end of the presser-bar 5, said foot being provided with an annular flange 13 upon which is mounted the rotatable presser 14.

15 represents an opening in the presser-foot 11 into which an auxiliary presser-foot, presently described, projects.

The presser 14 is of ordinary construction, its under surface preferably conforming to the adjacent surface of the feed disk 17, which latter may be of any approved form and may be actuated in the usual or any approved manner, the actuating mechanism employed in the present instance being the same as that shown and described in United State Patent No. 680,664, dated August 13, 1901. Said disk 17 is journaled within a cover plate 18 which latter also supports the stationary throat-plate 19 by means of screws 19', only one of which is shown.

The auxiliary presser-foot 16 is provided with a needle opening 20 which registers with the opening 21 in the throat-plate 19, and also with a stem or plunger 22 which is connected with said presser-foot by an integrally-formed leg or connection 23 passing through a vertical slot 24 in the hollow presser-bar 5 within which said plunger is fitted to slide vertically.

25 represents a rod, one end of which is secured to the plunger 22, as by a screw thread, while the opposite end passes through the shouldered end 26 of the presser-bar and has secured to it a thumb piece 27 by means of which said rod may be lifted to raise the auxiliary foot.

28 is a coiled spring interposed between the shoulder 26 of the presser-bar and the top of the plunger 22, the tendency of said spring being to thrust the auxiliary foot downward, while the vertical slot 24 acts to prevent said foot from turning.

The parts hereinbefore referred to are in construction and operation substantially the

same as those shown and described in United States Patent to Donald Noble, No. 724,322, dated March 31, 1903, to which reference may be had.

5 Referring now to the parts more directly connected with the invention, 29 represents a transferable, non-rotatable eyelet stud provided with a needle slot 30, registering groove 31, and a hub 32 about which latter
10 is formed an annular groove 33. On the underside of the auxiliary presser-foot 16 is formed a rib 34 which coacts with the groove 31 to register the needle slot 30 in line with the slot 21 in the throat-plate, and also with
15 the needle opening 20 formed in the auxiliary presser-foot 16.

In the operation of the device, supposing it is desired to form an eyelet in the joined sections 35 of a cover such as is commonly
20 used in the manufacture of umbrellas, the opening about which the eyelet is to be made is formed by discontinuing the seams 36 a short distance from their converging points. This having been done, the eyelet stud is
25 placed in the opening with the fold of the turned back portion of the material located in the groove 33; then the cover, with the stud positioned as shown in Fig. 3 with the convexed portion 37 of said stud seated in
30 the concaved portion 38 of the throat-plate 19, is transferred to the machine and the overseam stitches forming the eyelet are made in the regular way.

Claims:—

35 1. In a presser-foot mechanism for eyelet sewing machines, the combination of a spring-actuated presser, a throat-plate, a feeding disk, and a transferable, non-rotatable eyelet stud provided with a needle
40 slot and about which the material is rotated as it is fed to the action of the stitch-forming mechanism.

2. A presser-foot mechanism for eyelet sewing machines comprising a rotatable,
45 spring-actuated presser, a throat-plate, a feeding disk mounted concentrically with said throat-plate, and a transferable, non-

rotatable eyelet stud provided with a needle slot and an annular groove for the reception of the edge of the material about which the
50 eyelet is to be formed.

3. A presser-foot mechanism for eyelet sewing machines comprising a spring-actuated presser, a feeding disk, a transferable, non-rotatable eyelet stud having a down-
55 wardly extended hub, and a throat-plate provided with a seat for the reception of said hub when said stud is adjusted into operative relationship with said spring-actuated presser.

4. A presser-foot mechanism for eyelet sewing machines comprising a cover-plate, a feeding disk journaled in said plate, a throat-plate, a spring-pressed presser-bar, a
60 presser carried by said bar, and a transferable non-rotatable eyelet stud provided with a needle slot and about which the material is rotated as it is fed to the action of the stitch-forming mechanism.

5. A presser-foot mechanism for eyelet sewing machines comprising a feeding disk, a cover-plate into which said disk is mounted to rotate, a throat-plate, a presser-bar, a
70 presser carried by said bar, a transferable eyelet stud, and an auxiliary presser-foot for locking said eyelet stud against rotation.

6. In a presser-foot mechanism for eyelet sewing machines, the combination of a feeding disk, a cover-plate into which said disk is mounted to rotate, a throat-plate, a presser-
80 bar, a presser carried by said bar, a transferable eyelet stud provided at its upper side with an opening, and an auxiliary presser-foot provided at its under side with a rib, said rib coacting with said opening
85 to hold said eyelet stud against rotation.

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

DONALD NOBLE.

Witnesses:

ABBIE M. DONIHUE,
GEORGE H. CONGER.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."