

(No Model.)

C. SCHNEIDER.
ATTACHMENT FOR SEWING MACHINES.

No. 604,161.

Patented May 17, 1898.

Fig: 1.

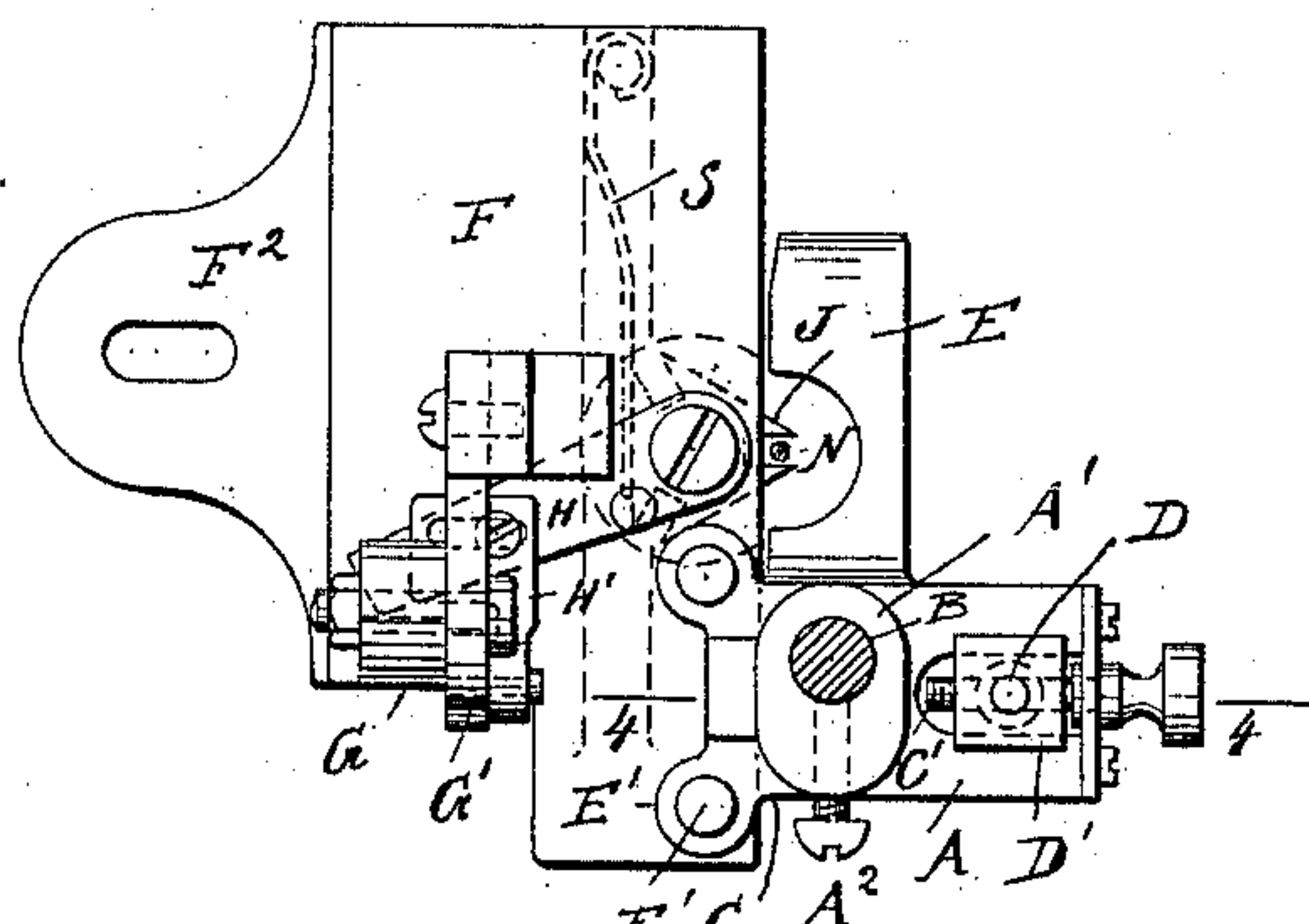


Fig: 3.

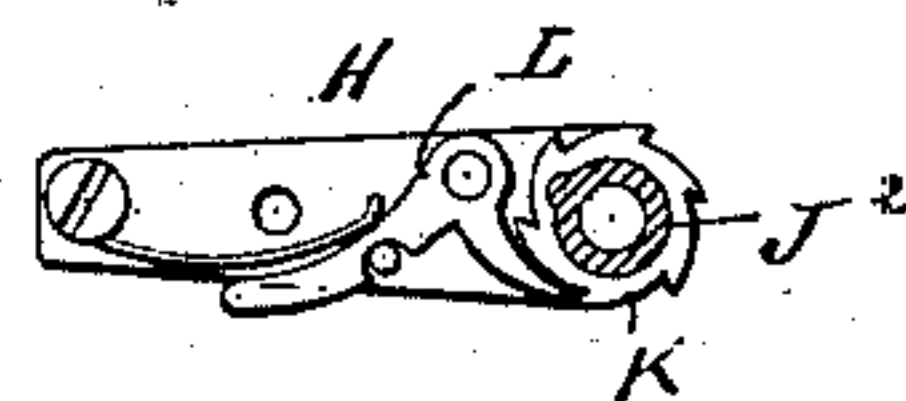


Fig: 2.

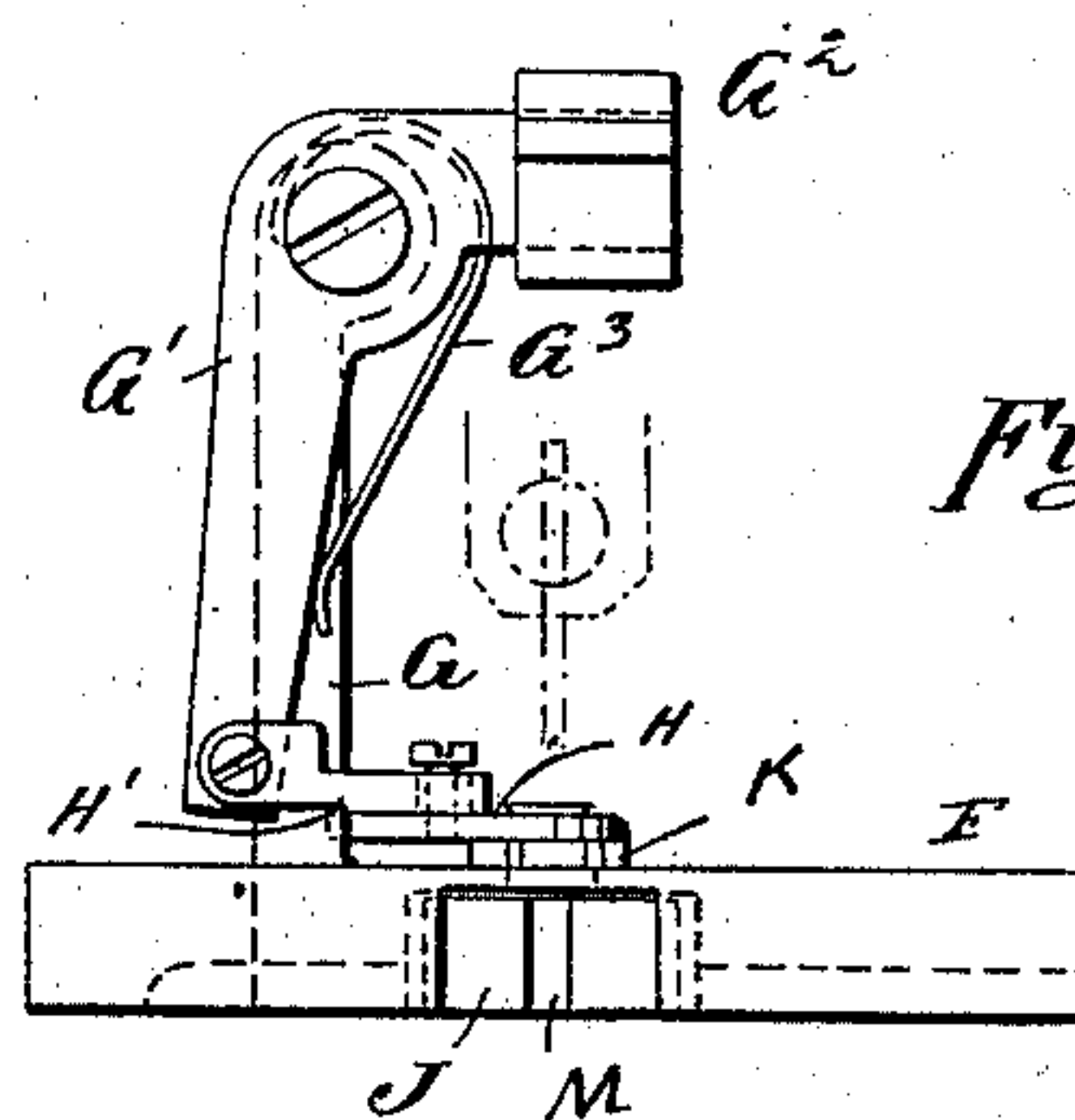


Fig:4.

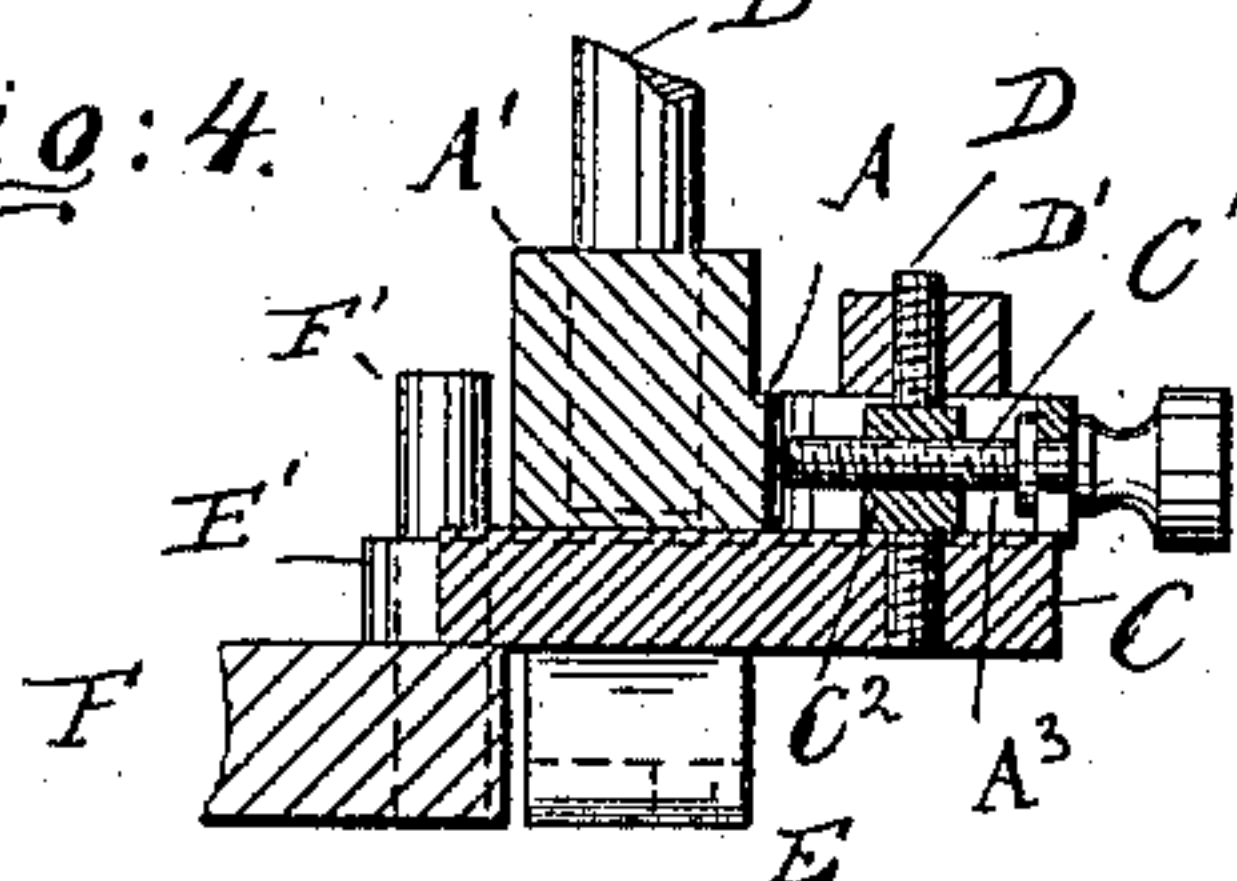


Fig: 5.

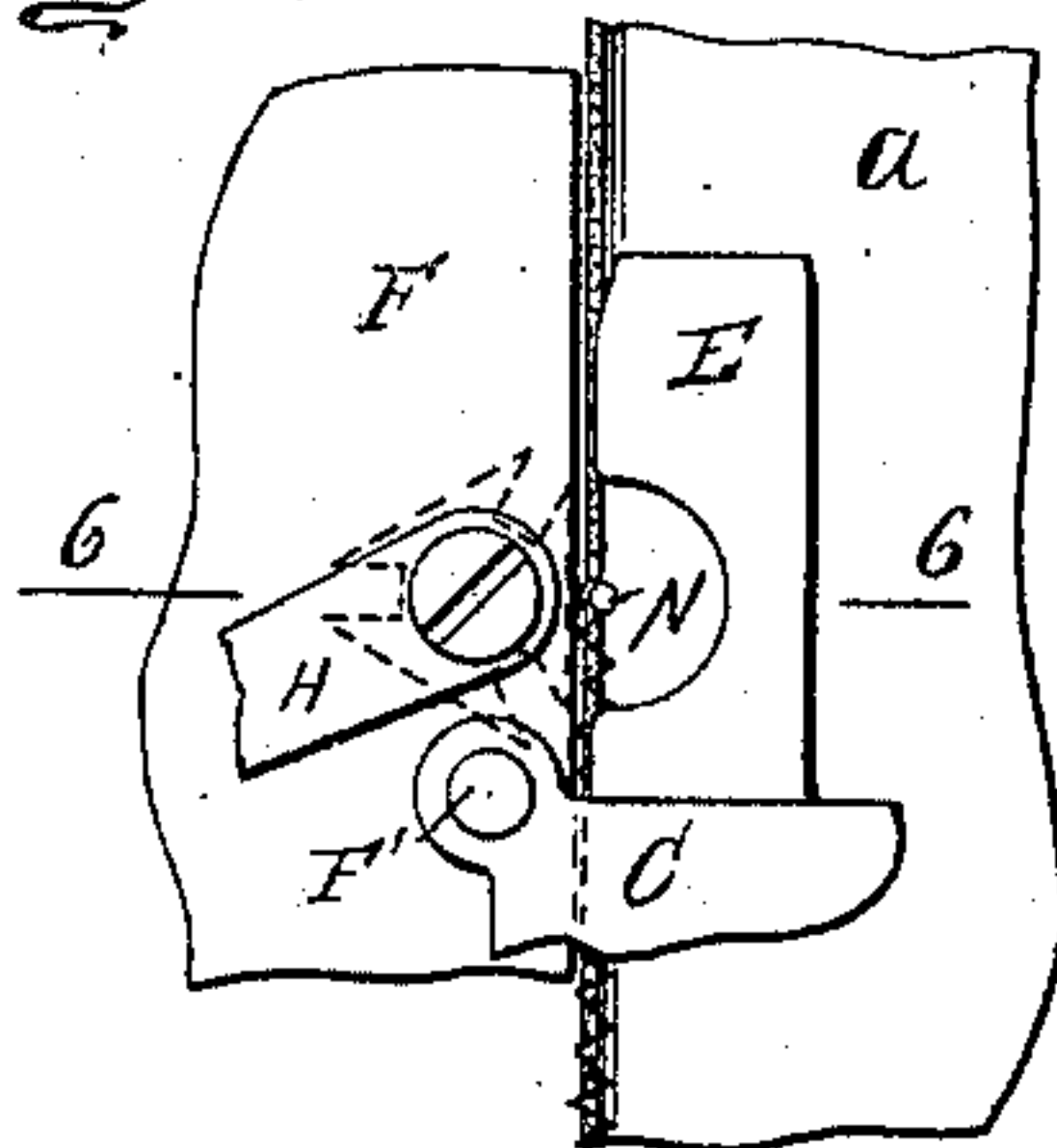


Fig: 7.

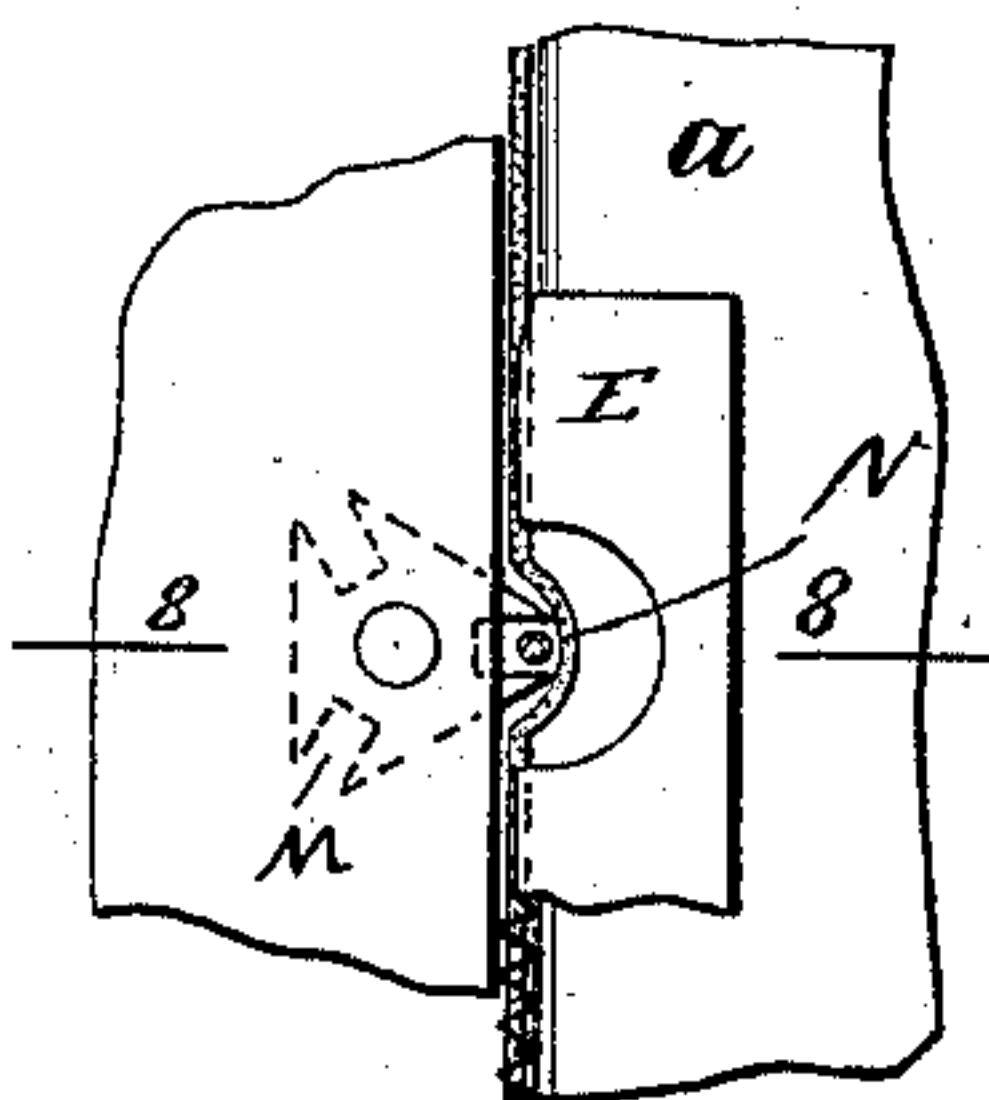


Fig: 9.

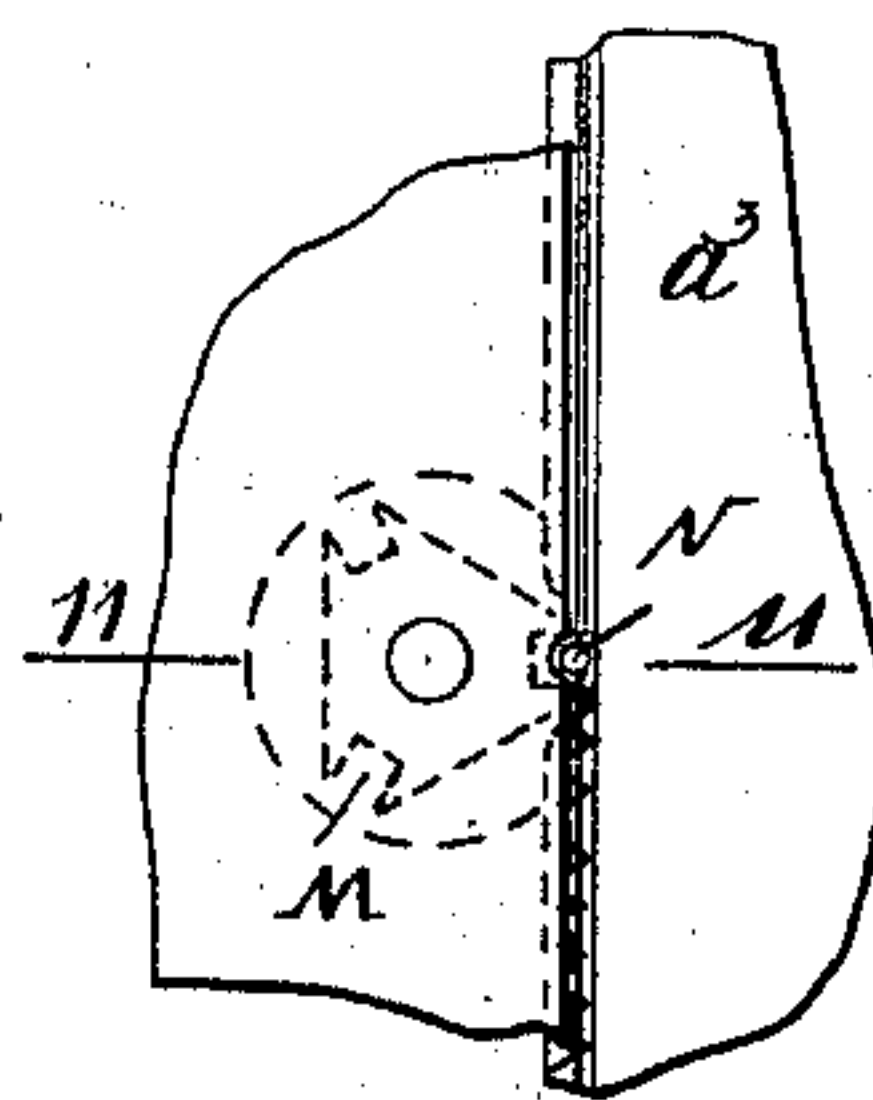


Fig: 6:

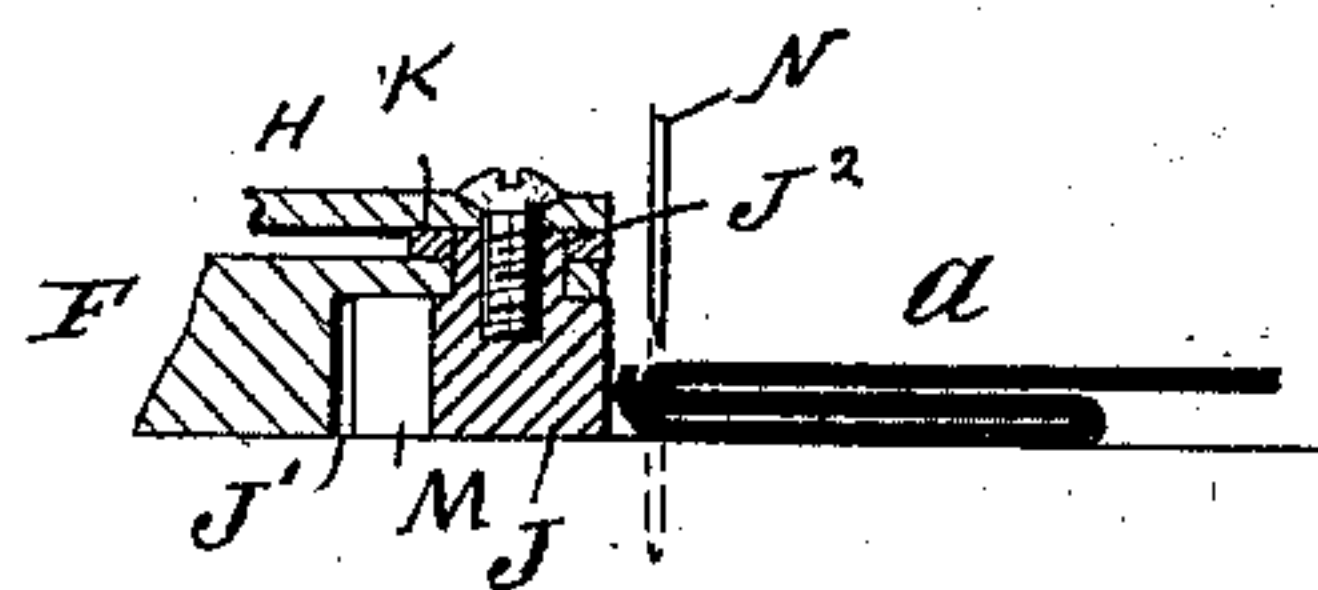


Fig: 8.

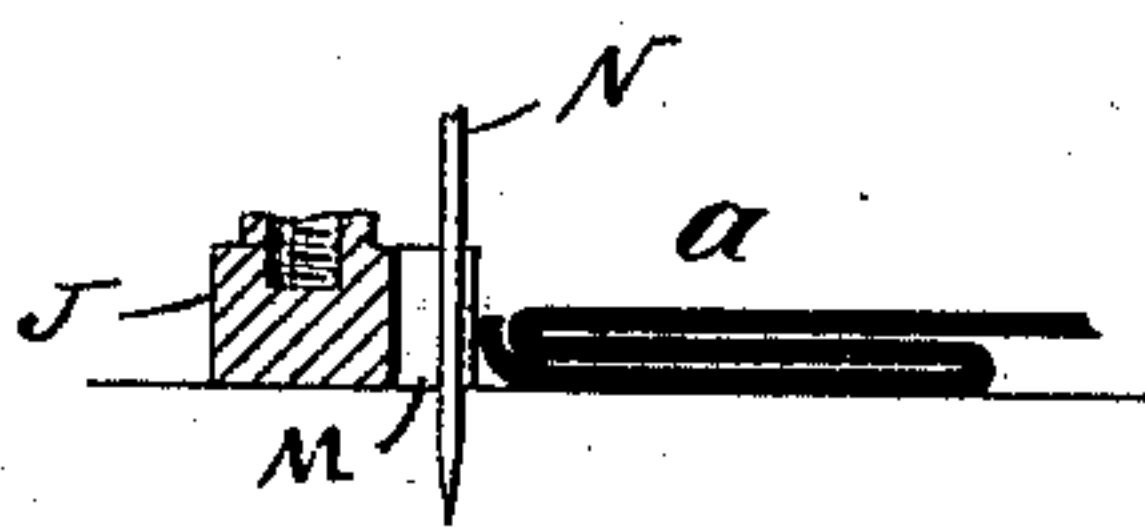


Fig: 10.

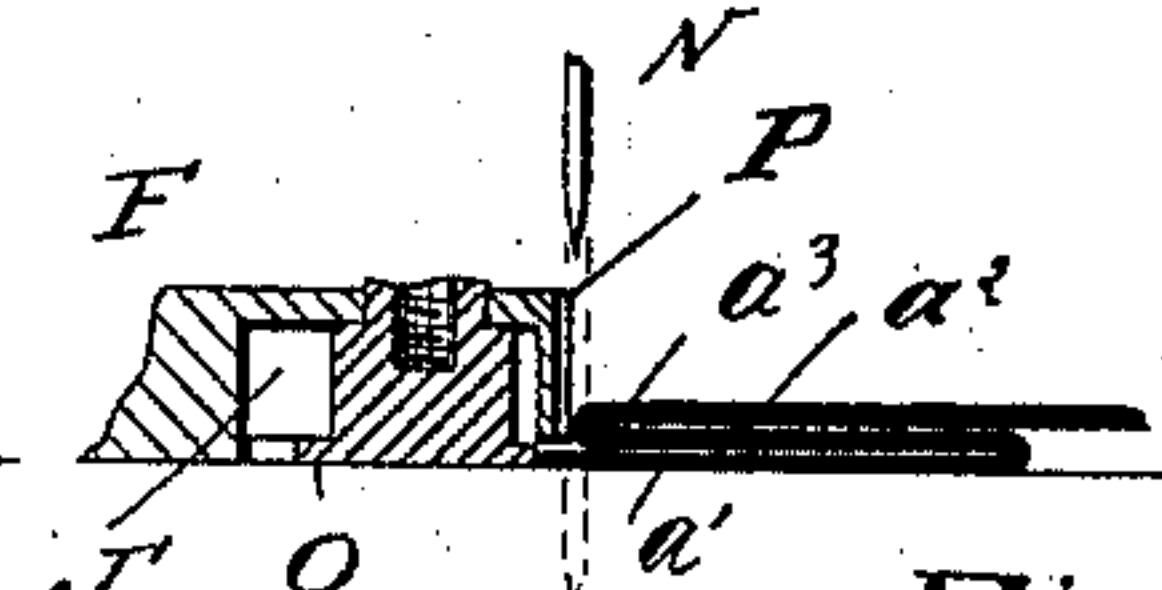
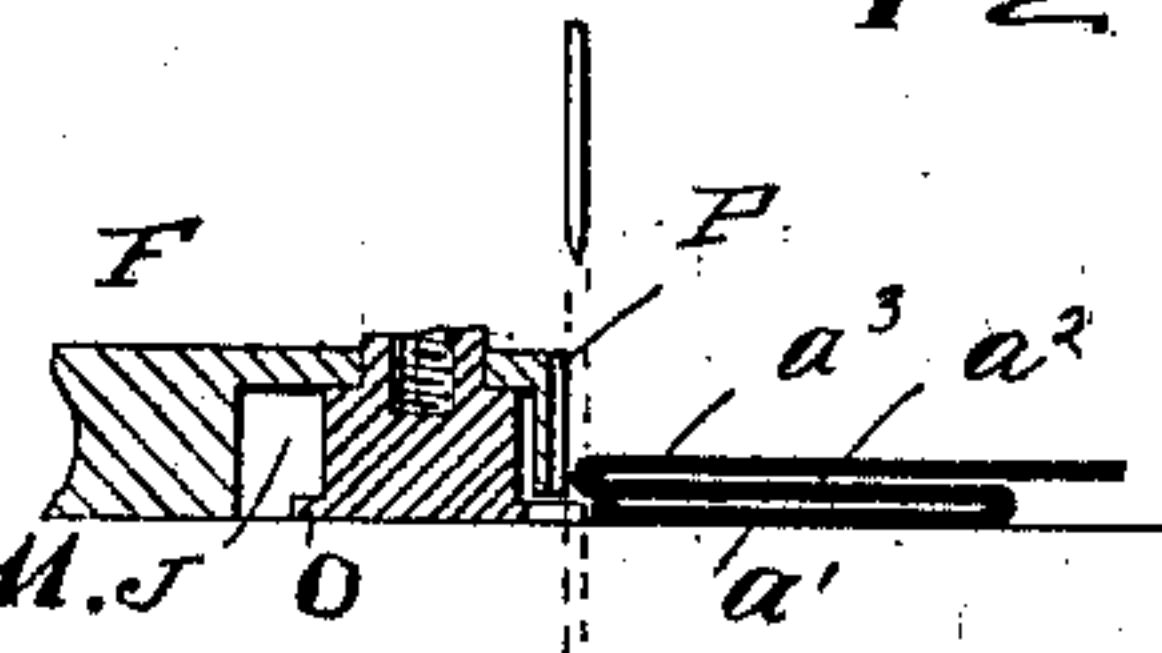


Fig: M.



Witnesses
Peter Albertine J.
A Reighlon Kounell

C. Schneider Inventor
By his Attorney Oscar F. Guenz.

UNITED STATES PATENT OFFICE.

CARL SCHNEIDER, OF BROOKLYN, NEW YORK.

ATTACHMENT FOR SEWING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 604,161, dated May 17, 1898.

Application filed October 28, 1897. Serial No. 656,626. (No model.)

To all whom it may concern:

Be it known that I, CARL SCHNEIDER, a citizen of the United States, and a resident of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Blind-Stitching and Serging Attachments for Sewing-Machines, of which the following is a specification.

This invention relates to an attachment for sewing-machines for making blind-stitching and serge or covering stitching over the raw edges of the fabric.

The object of my invention is to provide a new and improved attachment of this kind which is simple in construction, strong and durable, and which operates reliably and rapidly and can be applied on any sewing-machine and adjusted for making various kinds of stitches.

The invention consists in the combination, with a plate adapted to be attached to the sewing-machine presser-foot and having a recess opening toward the presser-foot, of a polygonal cam mounted to rotate on a vertical axis within said recess and so that its sides can successively be brought in line with the recessed edge of the plate and the angles of the cam, which angles have vertical needle-slots successively projected beyond the recessed edge and means for turning said cam from one position to the other for each stroke of the needle-bar.

The invention also consists in the construction and combination of parts and details, as will be fully set forth and described hereinafter.

In the accompanying drawings, forming a part of this specification, and in which like letters of reference indicate like parts in all the views, Figure 1 is a plan view of my improved attachment, the presser-bar being shown in section. Fig. 2 is a side elevation of the same. Fig. 3 is a plan view of the under side of the pawl-lever, parts being in section. Fig. 4 is a vertical sectional view on the line 4 4 of Fig. 1. Fig. 5 is a detail plan view showing one position of the cam. Fig. 6 is a vertical sectional view on the line 6 6 of Fig. 5 through the fabric. Figs. 7 and 8 are similar views showing different positions, Fig. 8 being a vertical section on the line 8 8 of Fig. 7. Fig. 9 is a plan view showing a

modified form of the cam. Figs. 10 and 11 are vertical sectional views on the line 11 11 of Fig. 9, showing different positions of parts. 55

The metal block A is provided at one end with an upwardly-extending socket A' for receiving the lower end of the sewing-machine presser-bar B, on which said socket is held by a screw A². A plate C is held against the under side of the block A and can be shifted longitudinally in relation to the same by means of a screw C', mounted to turn in an end cross-piece of the block A and passing through a threaded aperture in a lug C², projecting from the plate C up into a longitudinal slot or recess A³ in the block A. A screw D extends upward from the lug C², and on the same a nut D' is screwed, by means of which the block A and plate C can be locked in place in relation to each other after adjustment by means of the screw C', the nut D' being drawn up tight against the upper surface of the block A. 60 65 70

From the inner end of the plate C the presser-foot E, of conventional shape, extends laterally, and said plate C is provided at the inner end with two eyes E', which extend beyond the inner edge of the presser-foot. 75

The base-plate F is provided at its inner edge with two upwardly-projecting pins F', adapted to pass into the eyes E' of the plate C from below the base-plate, resting on the bed of the machine, and its straight inner edge forming an abutment and guide for the fabric that is being stitched. 80 85

If desired, the base-plate F may be fastened to the bed by means of a screw passing through the slot F² in the base-plate.

The base-plate F has a standard G, to which an angle-lever G' is pivoted, the upper arm of which has a lateral projection G² for engagement with the needle-bar (shown in dotted lines) during the upstroke of the latter, so that said angle-lever is rocked when the needle-bar is reciprocated. A spring G bears on said angle-lever to throw it back. 90 95

The lower end of the angle-lever G' is connected by a link H' with a horizontal rocking pawl-lever H, mounted above the upper surface of the base-plate to rock on the upper end of a triangular fabric-shifting cam J, mounted to rotate on its vertical axis in a recess J' in the under side of the plate F at the 100

straight edge of the same, which recess is open toward the presser-foot E.

The cam J is provided at its top with a neck J², extending above the upper surface of the base-plate, and on said neck a ratchet-wheel K is fixed, which is engaged by a spring-pressed pawl I, pivoted to the under side of the pawl-lever H, as shown in Fig. 3.

The cam J, as stated, is triangular in plan, but may have other polygonal shape, the triangle being preferred, and has its under side flush with the under side of the plate F. At each angle it has a slot M, extending from the top to bottom and through which the needle N can pass.

The cam J is so mounted to turn that its sides will successively be flush with the straight edge of the plate F, as shown in dotted lines in Fig. 5, and so that its slotted angles can project beyond the straight edge of the plate F, as shown in Fig. 7.

As the ratchet-wheel K has twice as many teeth as there are sides to the cam J, it follows that for each stroke of the needle the cam J will be rotated one-sixth of a turn and alternately a side of the cam will be flush with the edge of the plate F, and a slotted corner of the cam will extend beyond the said edge, and so on, and the fabric *a*, the edge of which rests against the straight edge of the plate F, is pushed by the rotating cam J away from said edge for each alternate stroke of the needle-bar.

A spring-wire S in a recess in the under side of the plate F rests against the cam and serves to hold the cam in place after each partial turn.

In Figs. 5 and 6 the fabric is shown as resting against the edge of the plate F and on the side of the cam J flush with said edge, the fabric being folded for a serging-stitch. The needle N now passes through the several layers of fabric, as shown in dotted lines in Fig. 6. By the succeeding upstroke of the needle-bar the cam is turned one-sixth of a turn and a slotted angle of the cam has been projected beyond the edge of the plate F and shifted or forced the edge of the fabric *a* away from the edge of the plate F by the sweeping rotary motion of said cam, these positions being shown in Figs. 7 and 8. The descending needle now passes through the vertical slot M in the projecting angle of the cam J and cannot pass through the fabric. By the next succeeding upstroke of the needle-bar the cam J is again rotated one-sixth of a turn and another side of the cam is brought in position flush with the edge of the plate F, and the edge of the fabric under its own elasticity rests against the edge of the plate F and the flush edge of the cam J again, and so on. The cam J does not push the fabric from the edge of the plate F, but by a sweeping motion gradually forces back part of the edge of the fabric and likewise permits said fabric to move back against the plate F again.

It will be observed that in the construction

shown in Figs. 5 to 8 the needle does not pass through any part of the fabric at every second stitch; but for certain kind of work it is desirable to have the needle pass through part of the fabric at every alternate stitch. To accomplish this, the cam is so shaped as to have a body which at all times remains within the limits of the plate F, and said body is provided at its lower end with a polygonal flange O, of about the thickness of a layer of cloth and shaped like the cam J previously described—namely, triangular in shape—and of such dimensions that the three sides can be successively brought into position in lines with the edge of the plate, but slightly inward from the same, the three angles of the flange being provided with slots O' and successively projecting beyond the edge of the plate F, so as to insure the passage of the needle through the fabric at each stroke. The edge of the plate F is provided with a vertical needle-groove P, and the edge of the plate is brought slightly nearer the needle. This construction is shown in Figs. 9, 10, and 11.

As shown in Figs. 10 and 11, the needle N passes through the folded layers *a*² and *a*³ of the fabric *a* at each stroke; but the bottom layer *a*' is forced back when a slotted angle of the flange O projects, and when said angles do not project the edge *y* the layer *a* rests against the edge of the cam, which, as stated, sets back a short distance from the edge of the plate F, as shown in Fig. 10, and the needle passes through the fold of the layers *a*² and *a*³ and through the layer *a*'. Blind-stitching can be made in the same manner.

By means of the screw C' the edge of the plate F can be adjusted a greater or less distance from the needle.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination with a plate adapted to be attached to the presser-foot of a sewing-machine, and having a recess opening toward the presser-foot, of a polygonal cam mounted to turn on a vertical axis in said recess, and also mounted so that its angles can be projected beyond the recessed edge of the plate, said cam having a vertical needle-slot in each angle and means for turning said cam a partial rotation for each stroke of the needle-bar, substantially as herein shown and described.

2. The combination with a plate adapted to be attached to the presser-foot of a sewing-machine, and having a recess opening toward the presser-foot of a polygonal cam mounted to turn on a vertical axis in said recess, and also mounted so that its sides can be brought in position successively in line with the recessed edge of the plate and its angles successively projected beyond said edge, said cam having a vertical needle-slot in each angle and means for rotating the cam for each stroke of the needle-bar to bring the cam from one position to the other, substantially as herein shown and described.

3. The combination with a plate adapted to
to be attached to the presser-foot of a sewing-
machine and having a recess opening toward
the presser-foot, of a polygonal cam mounted
5 to rotate on a vertical axis within said recess,
said cam having a vertical needle-slot in each
angle, a ratchet-wheel fixed on said cam and
having as many teeth as the cam has sides
and angles, a pawl-lever engaging said ratchet-
10 wheel, and means for operating said pawl-
lever from the needle-bar of the sewing-ma-

chine, substantially as herein shown and de-
scribed.

In testimony that I claim the foregoing as
my invention I have signed my name, in pres- 15
ence of two witnesses, this 30th day of Sep-
tember, 1897.

CARL SCHNEIDER.

Witnesses:

OSCAR F. GUNZ,
P. ALBERTINE, Jr.