

G. C. WALTERS.
Sewing-Machines.

No. 137,640.

Patented April 8, 1873.

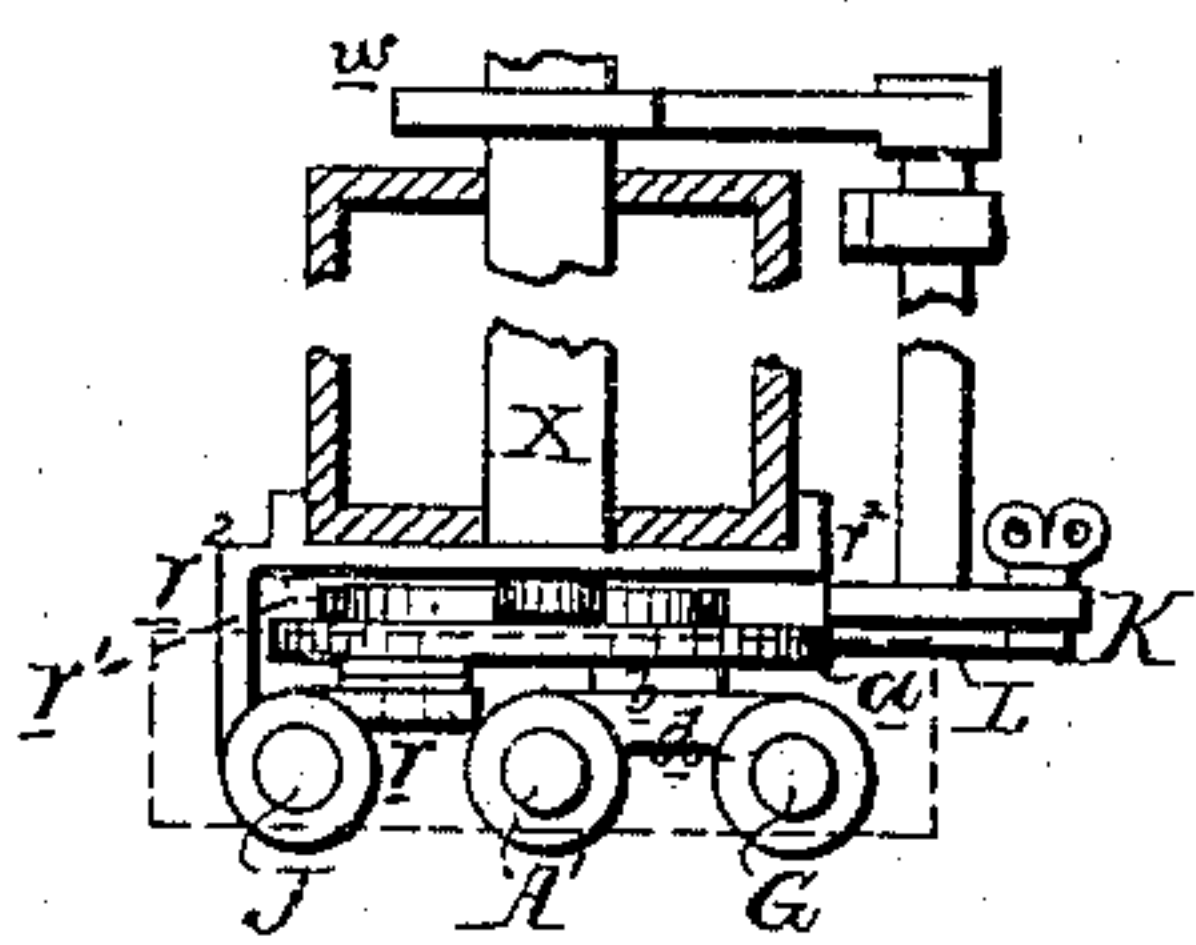


FIG. 3.

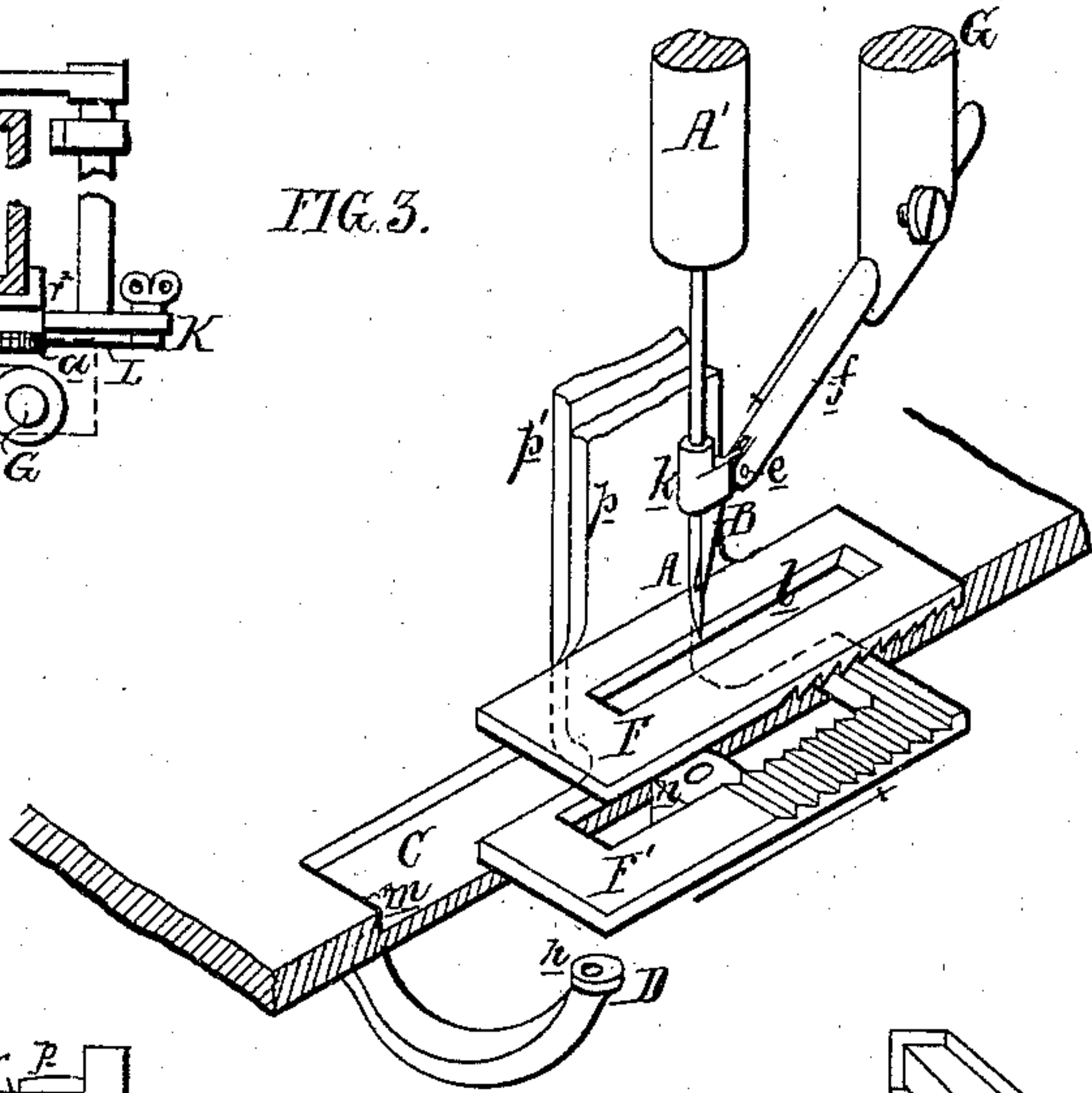


FIG. 1.

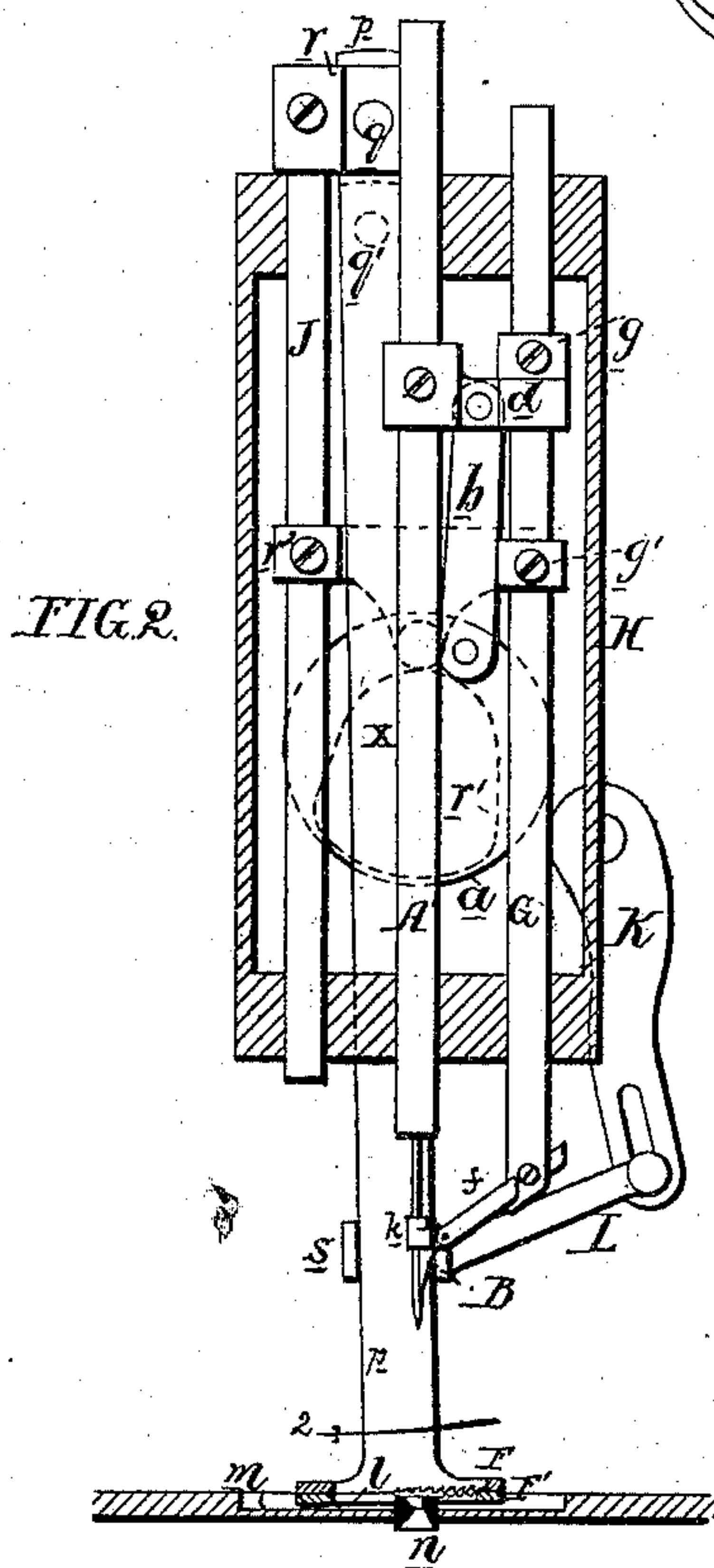


FIG. 2.

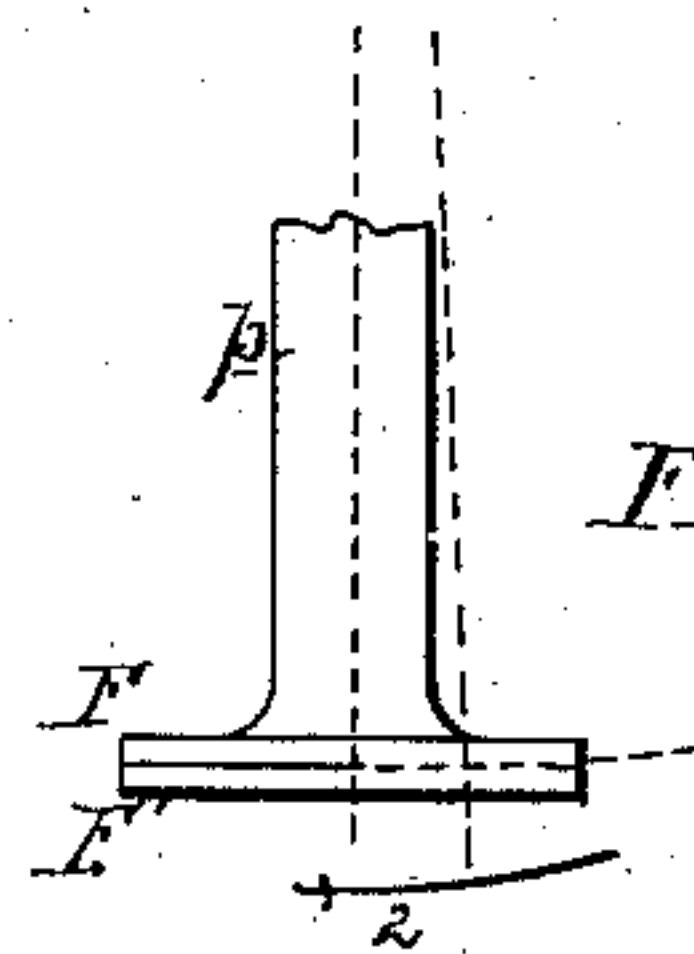


FIG. 5.

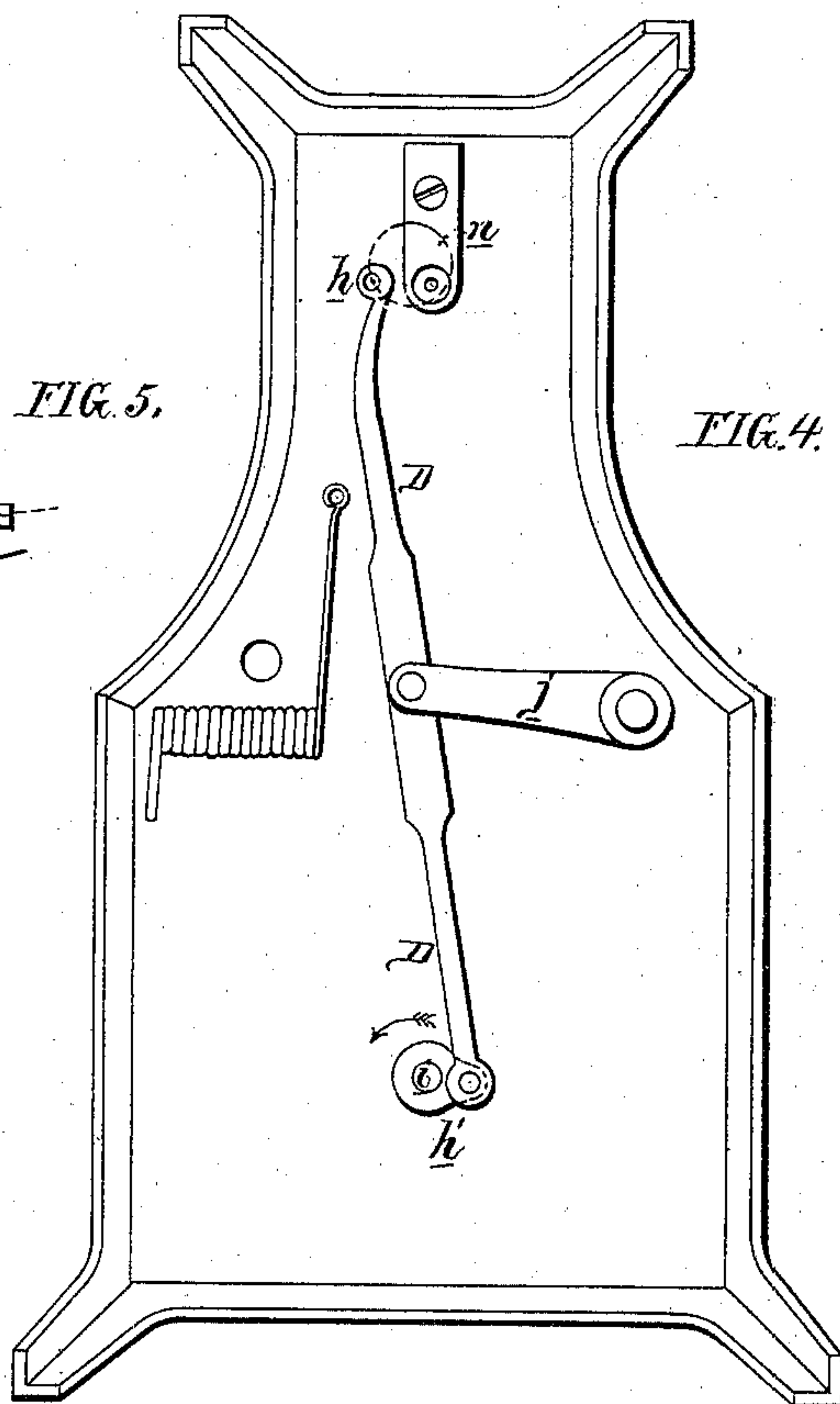


FIG. 4.

Witnesses } Thomas McGugin,
Harry Smith

George C. Walters
by his Attys.
Houson and Son

UNITED STATES PATENT OFFICE.

GEORGE C. WALTERS, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN SEWING-MACHINES.

Specification forming part of Letters Patent No. 137,640, dated April 8, 1873; application filed December 12, 1872.

To all whom it may concern:

Be it known that I, GEORGE C. WALTERS, of Philadelphia, Pennsylvania, have invented certain Improvements in Sewing-Machines, of which the following is a specification:

The object of my invention is to enable wet sheep, goat, and otherskins to be rapidly sewed up into the form of bags for the reception of tanning material; and this object I attain by the use of the sewing-machine illustrated in the accompanying drawing, the principal working parts of which are shown in the sectional perspective view, Figure 1, and consist of a hooked needle, A, and "cast-off" B above the work-plate C, a looping-arm, D, beneath the same, and a feeding device, consisting of two serrated plates, F and F', to which a swinging or oscillating movement is imparted, between which the wet and bulky skins are clamped. A vertical reciprocating movement is imparted to the needle-bar A' from a crank-wheel, *a*, on the driving-shaft X of the machine, through the medium of a connecting-rod, *b*, and projection *d* of the said needle-bar, (see sectional views, Figs. 2 and 3,) and the cast-off B which slides upon the needle is hinged at *e* to an adjustable inclined rod, *f*, connected to the lower end of a bar, G, to which an intermittent sliding movement in the frame H of the machine is imparted by the projection *d* of the needle-bar, which strikes alternately adjustable collars *g g'* on the said bar G. The end *h* of the looping-arm D is caused to traverse a circular path, in a horizontal or nearly horizontal plane, as shown in the inverted plan view, Fig. 4, and to thus wind the thread around the needle, by a crank, *h'*, at the lower end of a vertical spindle, *i*, receiving its movement from the driving-shaft through the medium of bevel-gear or otherwise, and by a vibrating arm, *j*, hung to the under side of the bed-plate and connected to the said looper.

The hooked needle cast-off and looper form the ordinary chain-stitch, in a manner which will be readily understood without explanation.

The tubular portion *k* of the cast-off is fitted somewhat loosely to the needle so that it may vibrate upon the latter to a very limited extent; sufficiently, however, to enable its low-

er pointed end to be pressed closely against the needle, and there maintained by a longitudinal adjustment in the direction of the arrow, Fig. 1, of the rod *f*, to which the said cast-off is hinged, as above described. This enables the cast-off to be held closely against the needle, and insures the throwing off of the loop of thread when the latter rises. The serrated plates F and F' which compose the feed have each a longitudinal slot, *l*, for the passage of the needle, and the lower plate E', which is contained within a recess, *m*, of the work-plate, receives also within its slot a stationary steel block, *n*, through a hole in which the needle passes, and which affords a permanent bearing for the skin as it is punctured by the needle. The lower serrated plate F' is suspended from a bar, *p'*, pivoted to the fixed arm H at *q'*, (see Figs. 1 and 2,) and the upper plate F is in like manner suspended from a bar, *p*, pivoted at *q* to a projection, *r*, of a sliding rod, J, to which an intermittent reciprocating movement is imparted by a cam, *r*¹, on the driving-shaft, through the medium of a cross-head, *r*², secured to the said rod J, and adapted to guides in the opposite sides of the frame H. (See Figs. 2 and 3.) A swinging or oscillating movement is imparted to the feed by means of an arm or lever, K, operated by an eccentric, *u*, on the driving-shaft, and connected to the bars *p* and *p'* by a rod, L, and jaws or collar *s*, through which the said bars can slide.

The operation of the feed is as follows: When the needle has descended and holds the skin the upper plate F is lifted by means of the cam *r*¹ and connecting devices, and the two plates, thus separated, are swung in the direction of the arrow, Fig. 1, by means of the lever K. The upper plate is then lowered and the skin is clamped firmly between the same and the lower plate, as indicated in Fig. 2, and the diagram, Fig. 5, when, after the raising of the needle, both plates are caused to swing in the direction of the arrow 2, and to thus feed the work sufficiently to form a stitch of the required length, the clamps holding the skin until the needle again descends, when they are separated as before, and swing to their original positions to again seize and feed the skin. The recessing of the work-plate at

m for the reception of the lower clamping-plate *F'* enables the latter to be sunk below the surface of the work-plate, and thus permits the same to be moved beneath the skin, preparatory to taking a fresh hold, without risk of dragging the said skin away from the needle, which would be the tendency, if the said clamping-plate were not thus depressed.

I claim as my invention—

1. The feed for sewing-machines consisting of two plates oscillating from a point or points above the work, and between which the work may be clamped and carried independently of the needle, as set forth.

2. The combination of the pivoted bar *p* carrying the clamping-plate *F* with a sliding rod, *J*, and guided cross-head *r*² operated by a cam on the driving-shaft.

3. The combination of the bars *p* and *p'* carrying the clamping-plates with the jaws or collar *s*, rod *L*, and operating arm or lever *K*.

4. The combination of a recessed work-plate and the clamping-plates *F F'*, oscillating from a point or points above the work-plates, as set forth.

5. The combination of the rotating crank *h'*, vibrating arm *j*, and looper *D*, operating as described.

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

GEORGE C. WALTERS.

Witnesses:

WM. A. STEEL,
HUBERT HOWSON.