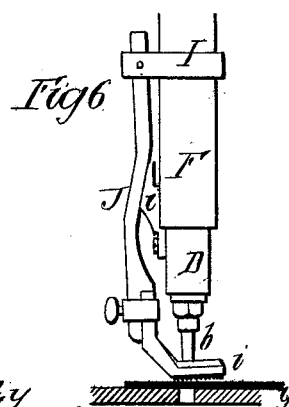
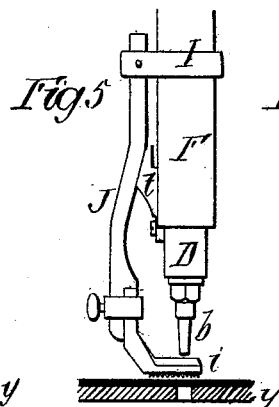
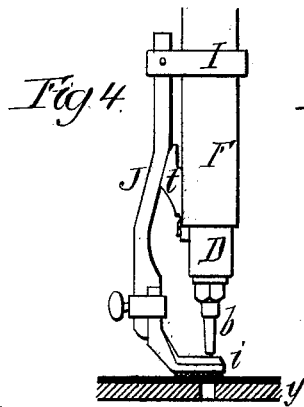
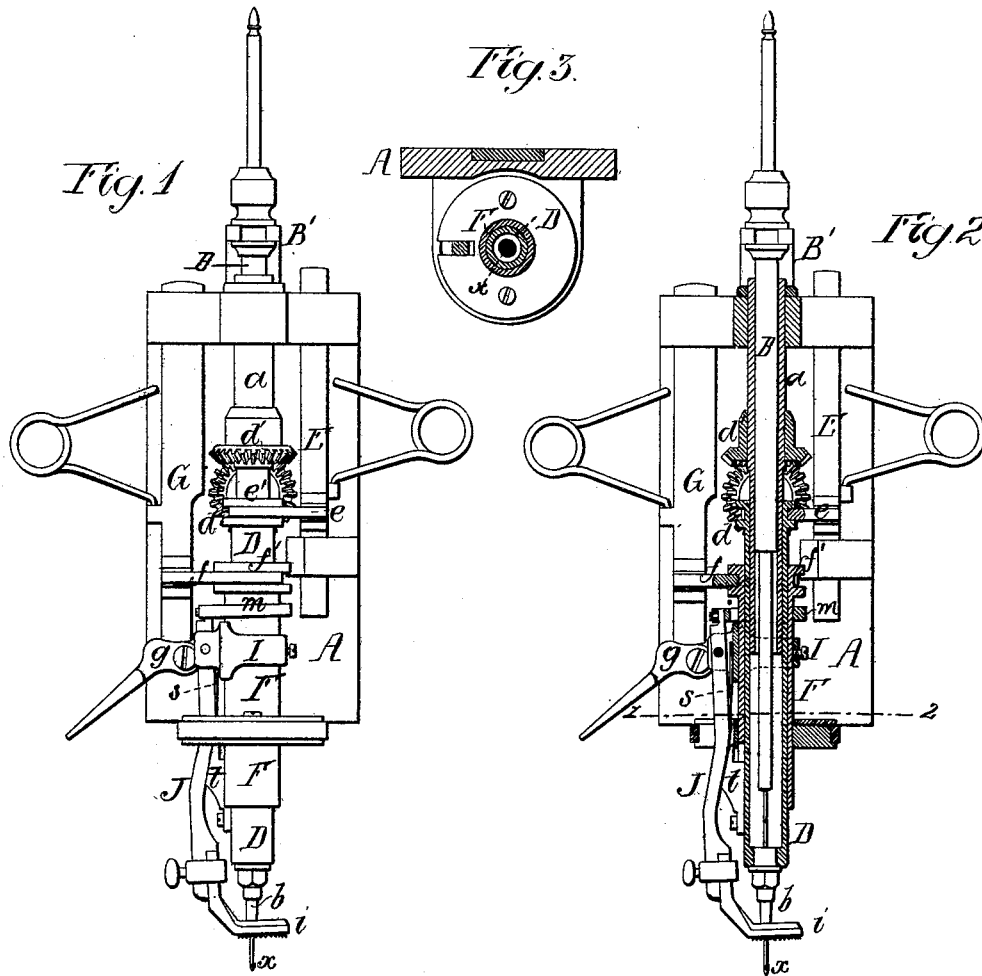


2 Sheets—Sheet 1,

J. C. WELLENS.  
Embroidering-Machine.  
No. 221,639.      Patented Nov. 11, 1879.



Witnesses,  
John W. Dummer,  
Thomas M. Sloan

Jules C. Wellens  
by his Attorney Howard

J. C. WELLENS.  
Embroidering-Machine.  
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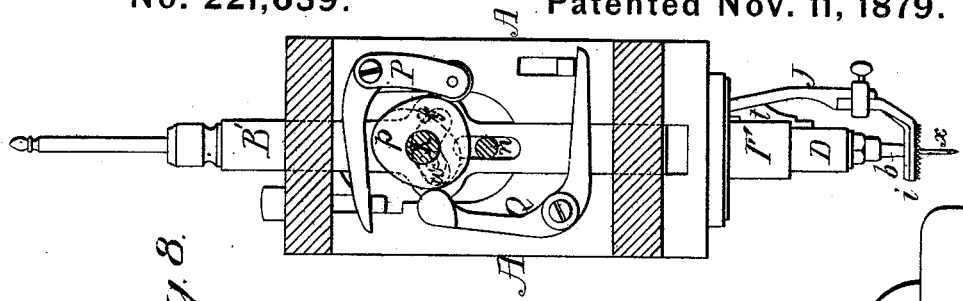


Fig. 8.

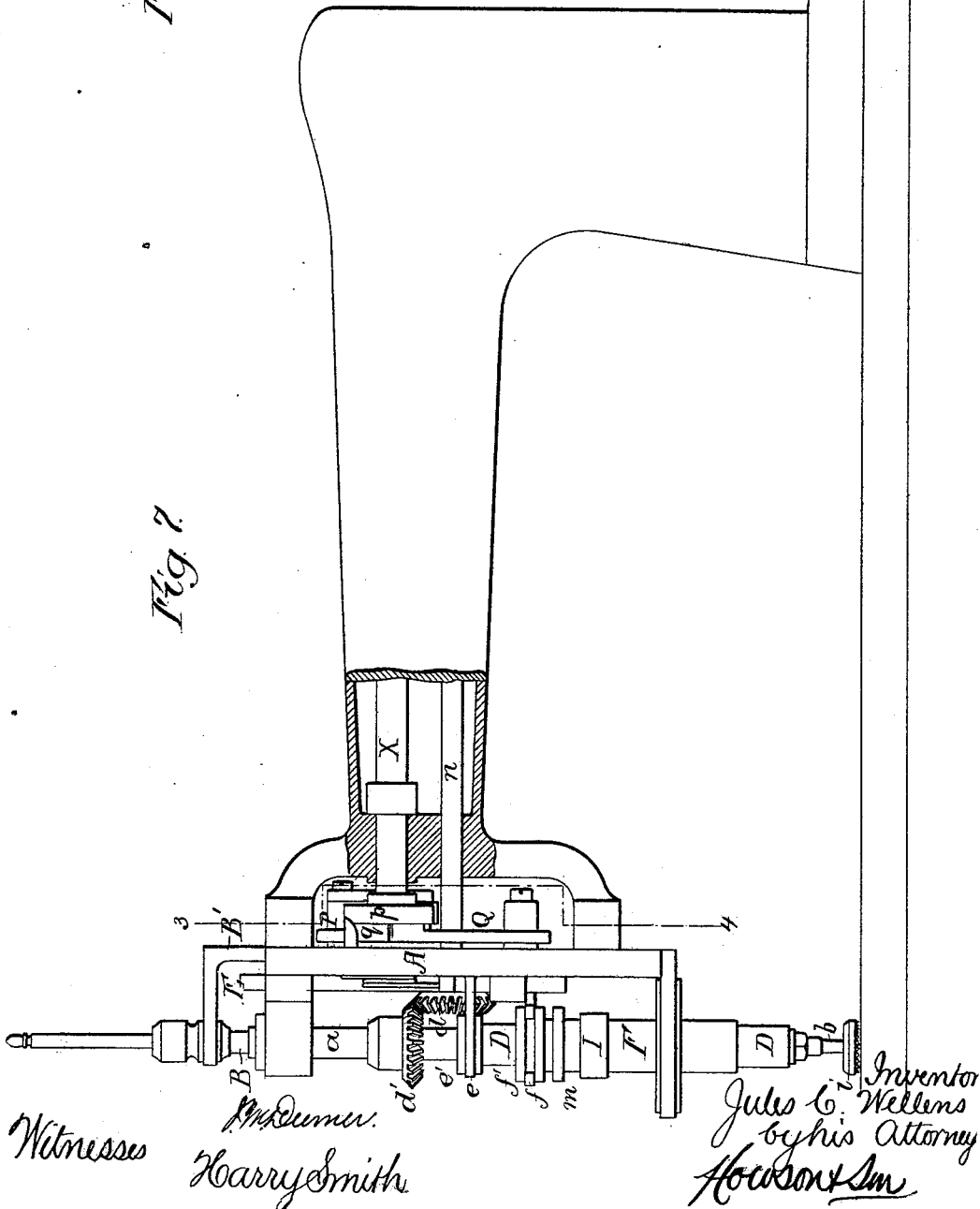


Fig. 7.

Witnesses

Wm. Dummer.  
Harry Smith

Inventor  
Jules C. Wellens  
by his Attorney  
H. C. Brown & Son

# UNITED STATES PATENT OFFICE.

JULES C. WELLENS, OF PHILADELPHIA, PENNSYLVANIA.

## IMPROVEMENT IN EMBROIDERING-MACHINES.

Specification forming part of Letters Patent No. **221,639**, dated November 11, 1879; application filed March 29, 1878.

*To all whom it may concern:*

Be it known that I, JULES C. WELLENS, of Philadelphia, Pennsylvania, have invented a new and useful Improvement in Embroidering-Machines, of which the following is a specification.

The object of my invention is to construct simple and effective feeding devices for an embroidering-machine, an object which I attain in the following manner, reference being had to the accompanying drawings, in which—

Figure 1, Sheet 1, is a front view of my improvement in feeding devices for embroidering-machines; Fig. 2, the same, partly in section; Fig. 3, a sectional plan on the line 1 2, Fig. 2; Figs. 4, 5, and 6, diagrams illustrating the operation of the device; Fig. 7, Sheet 2, a side view, partly in section, of the machine; and Fig. 8, a transverse section on the line 3 4, Fig. 7.

A is the front plate of the machine, at the top of which is formed a bearing for a sleeve, *a*, which surrounds the arm B, carrying the needle or hook *x*, the said arm being reciprocated vertically by a crank-pin, *w*, on the driving-shaft X of the machine through the medium of a bar, B'. (See Fig. 8.)

Surrounding the lower end of the sleeve *a*, and so secured thereto that it can slide vertically, but cannot rotate independently thereof, is a sleeve, D, into the lower end of which is screwed the tube *b*, which acts as a guard for the hook *x*, in the usual manner.

The sleeves *a* and D are rotated from a suitable shaft, *n*, under control of the operator, through the medium of bevel-wheels *d d'*, and the vertical reciprocation of the sleeve D is effected by a cam, *p*, on the driving-shaft through the medium of the bell-crank lever P and spring-bar E, a forked arm, *e*, on the latter being adapted to a grooved collar, *e'*, on the said sleeve D.

Surrounding the sleeve D is another sleeve, F, to which a vertical reciprocating movement is imparted by a cam, *q*, on the driving-shaft through the medium of a bell-crank lever, Q, and a spring-bar, G, the latter having a forked arm, *f*, adapted to a grooved col-

lar, *f'*, on the sleeve. The said sleeve can also be raised and lowered, when desired, in the same manner as an ordinary presser-foot, by means of a cam-lever, *g*, hung to the plate A, and acting on the lower end of the bar G.

The sleeve F is hung to the sleeve D, so as to rotate with, but reciprocate independently of, the same; and to a ring, I, which embraces the said sleeve F, is hung a lever, J, the lower or long arm of which carries the serrated feeding *i*, while its upper or short arm is provided with a ring, *m*, which embraces the sleeve F, but is somewhat greater in diameter than the same, so as to permit a limited vibrating movement of the lever J, the latter being effected by means of a cam, *t*, on the sleeve D, a spring, *s*, on the ring I tending to keep the inner edge of the lever J pressed against this cam.

The operation of the device is as follows: As soon as the hook *x* has drawn its loop of thread up into the guard *b*, the sleeve D and guard *b* are elevated, as shown in Fig. 4, so that the cam *t* acts on the lever J and vibrates the same, causing the ring *i* to carry forward the cloth or other material over the bed-plate *y* of the machine. The sleeve F, and consequently the lever J and ring *i*, are now raised slightly, so that the under face of the ring is clear of the material, as shown in Fig. 5, and the sleeve D and guard *b* then descend, so that the cam *t* permits a forward vibration of the lever J and forward movement of the ring *i*, as shown in Fig. 6. The sleeve F then descends, so as to permit the ring *i* to rest on the cloth, and the hook *x* descends, catches a fresh loop of thread, and rises, as before, prior to a repetition of the above-described movements.

The ring *m* serves as a stop to prevent excessive vibration of the lever J and ring *i*.

As the sleeve F, which carries the lever J, rotates with the sleeve D, it will be evident that the direction of the feed is governed by simply turning the said sleeve D.

I claim as my invention—

1. The combination of the hook *x*, the sleeve D, having a cam, *t*, the sleeve F, having a

lever, J, carrying the feed-ring *i*, the spring *s*, for acting on said lever, and devices, substantially as set forth, for imparting the within-described movements to said hook *x* and sleeves D and F.

2. The combination of the sleeve F, the spring *s*, and the lever J, hung to said sleeve, and carrying at its lower end the feed-ring *i* and at its upper end a ring, *m*, which embraces the sleeve, all as set forth.

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

JULES C. WELLENS.

Witnesses:

HARRY A. CRAWFORD,

HARRY SMITH.