(No Model.)

G. W. LORD.

SHUTTLE DRIVER FOR SEWING MACHINES.

No. 252,045. Patented Jan. 10, 1882.

Fig. 1.

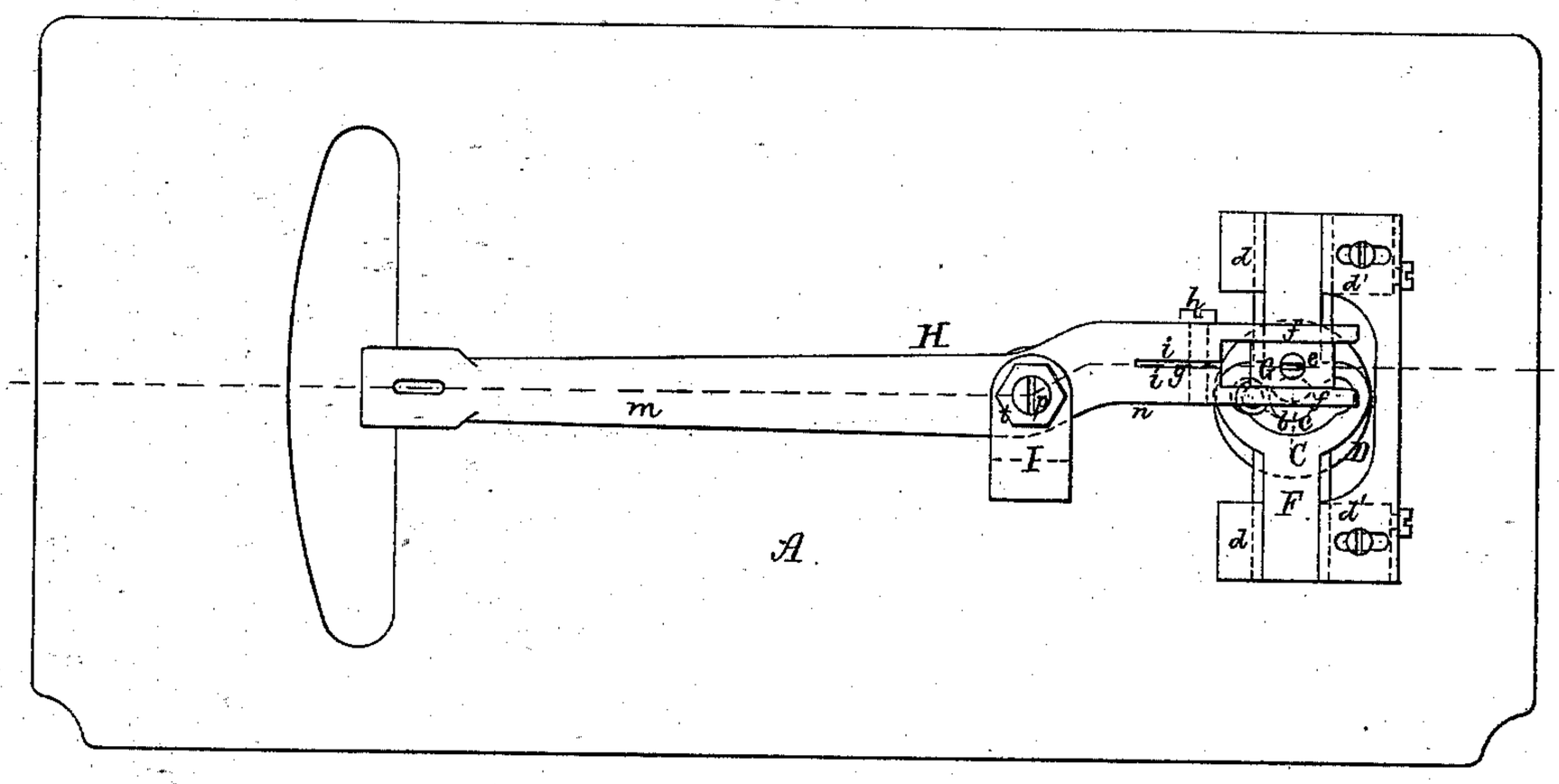


Fig. 2.

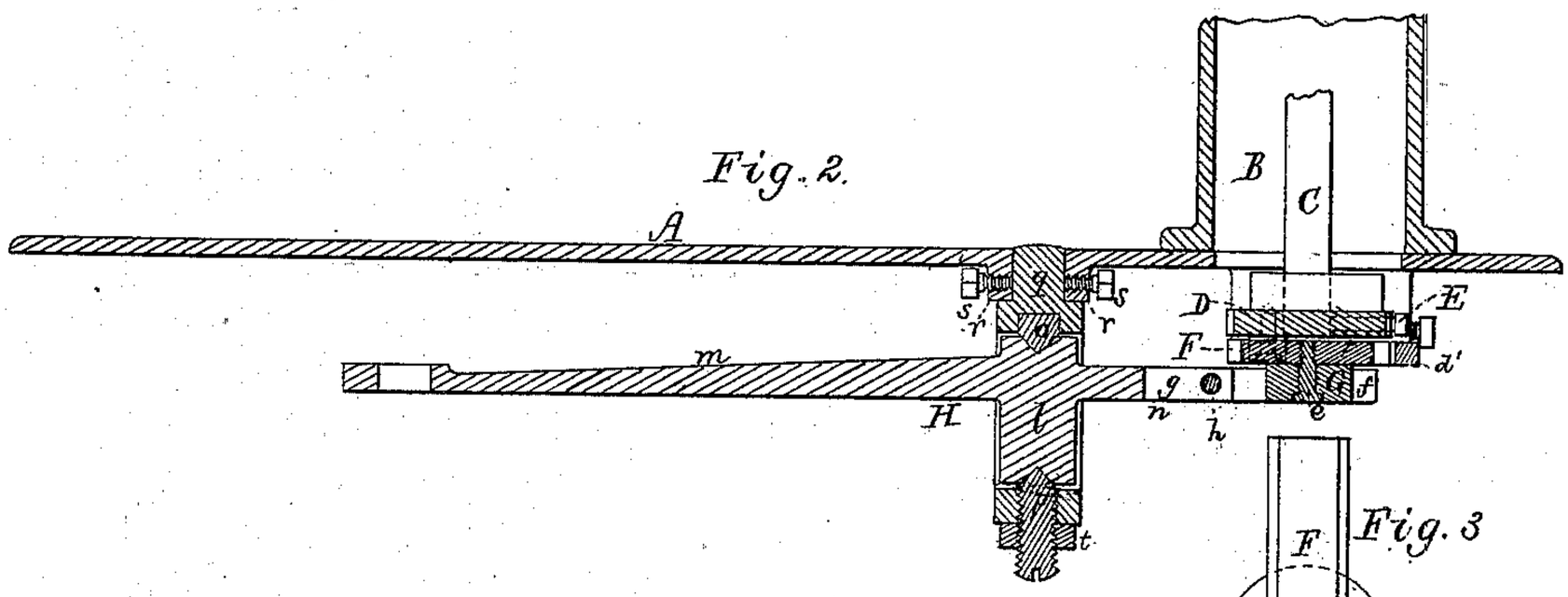
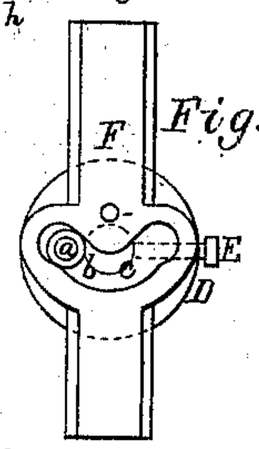


Fig. 3



Witnesses.
S. N. Piper.
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UNITED STATES PATENT OFFICE.

GEORGE W. LORD, OF BOSTON, MASSACHUSETTS.

SHUTTLE-DRIVER FOR SEWING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 252,045, dated January 10, 1882.

Application filed October 21, 1881. (No model.)

To all whom it may concern:

Be it known that I, GEORGE W. LORD, of Boston, of the county of Suffolk and State of Massachusetts, have invented a new and useful Improvement in Mechanism for Operating the Shuttle-Driver of a Sewing-Machine; and I do hereby declare the same to be described in the following specification and represented in the accompanying drawings, of which—

Figure 1 is an under side view, and Fig. 2 a longitudinal section, of my improved mechanism as applied to the base-plate and an upright shaft of a sewing-machine. Fig. 3 is a view of the curve slotted slide constituting part of my invention.

The nature of my improvement is duly set forth in the claim hereinafter presented.

In such drawings, A denotes the base-plate, and B the lower part of the goose-neck or hollow arm of a sewing-machine. Within the said goose-neck, and extending down through the said base-plate, is a vertical shaft, C, having fixed on it concentrically at its lower end a disk, D, such disk being fastened to the shaft by means of set-screw E, screwed radially into the disk and against the shaft, the disk being free to turn around on the shaft, when the screw may not bear against the shaft. From this disk a stud, *a*, carrying a friction-roller, *b*, projects into a curved slot, *c*, made, as represented, in a plate, F, supported by and adapted to slide longitudinally and rectilinearly between guides *d d d' d'*, arranged as shown. Near the curved center of the curved slot *c* a screw, *e*, is screwed into the slide-plate F, such screw going through and constituting a pivot for another and rectilinear slide-plate, G, arranged between and against the two parallel prongs *f f* of a forked lever, H. In said lever, and extending back from the space between its prongs, is a slot, *g*, as shown in Fig. 1. A screw, *h*, arranged as represented, and going laterally into one of the parts *i i* on opposite sides of the slot and screwed into the other, serves to compress the prongs upon the slide G as it or they may become worn.

The lever H is composed of a short pivotal cylinder or hub, *l*, and two arms, *m n*, projecting from it in manner as represented. At its opposite ends the hub or cylinder *l* is countersunk to receive two pivots, *o p*, extending from and arranged in a carrier, I, in manner as shown in Fig. 2. The carrier has at its upper end a tenon, *q*, which enters the base-plate, and a projection, *r*, extending therefrom, and is held in place by set-screws *s s*, screwed into such projection and against the tenon. The lower pivot is screwed into the carrier and provided with a clamp-nut, *t*. The longer arm of the lever H is to be fixed to the shuttle-driver to be moved by it.

While the shaft C may be in revolution an intermittent vibratory motion will be imparted to the lever H, whereby the shuttle-driver at one extremity of its path of motion will be at rest awhile—that is, after the shuttle may have drawn its thread taut—and the needle-bar being in motion in the meantime, is drawing the needle-thread tightly into the work.

By having the cranked disk D to turn as described on the shaft C its crank or roller may be adjusted so as to cause the shuttle to enter the loop of the needle at the proper time.

What I claim as my invention is as follows, viz:

The combination of the cranked disk D, applied to the shaft C, as described, with the slide-plate F, having the curved slot *c*, and with the slide G and the forked lever H, all being arranged and to operate substantially as and for the purpose set forth.

GEORGE W. LORD.

Witnesses:
R. H. EDDY,
E. B. PRATT.