(No Model.)

J. B. PRICE.

SEWING MACHINE.

No. 266,387. Patented Oct. 24, 1882.

Fig. 1.

Fig. 3.

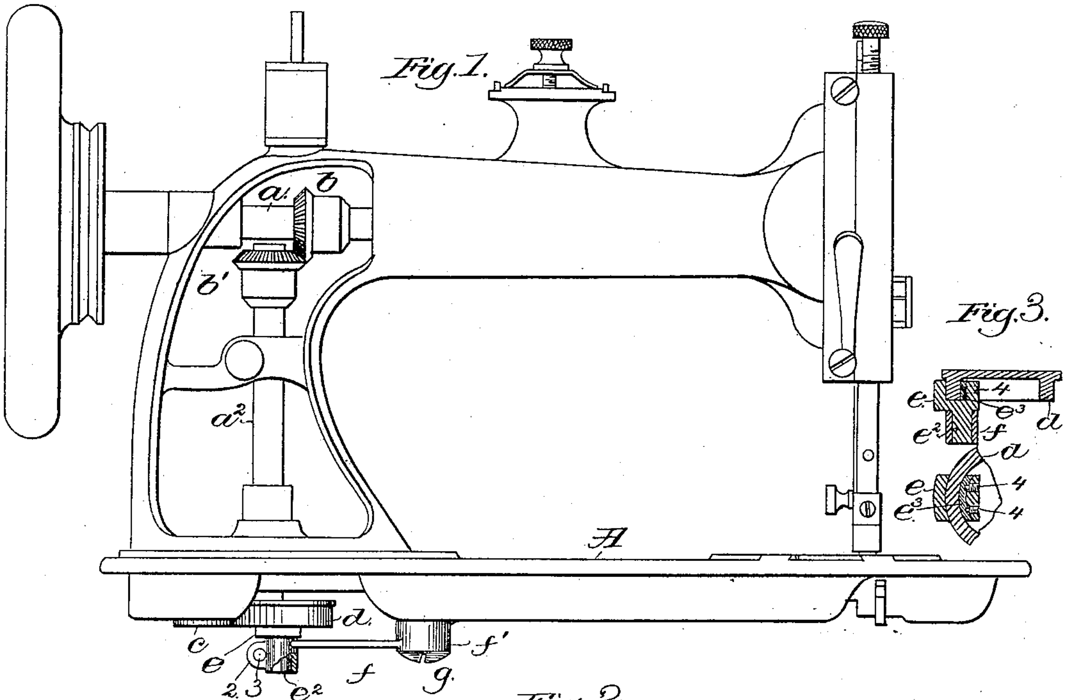


Fig. 2.

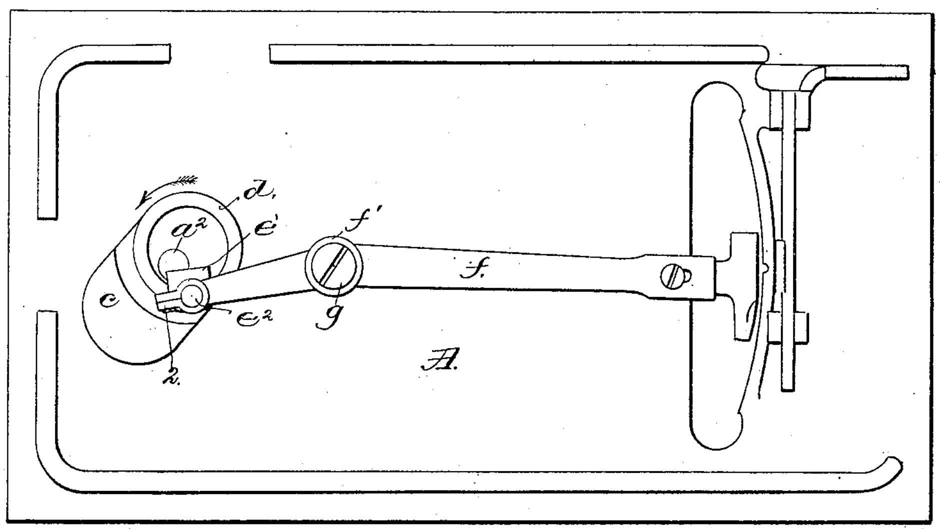


Fig. 4.

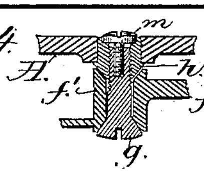
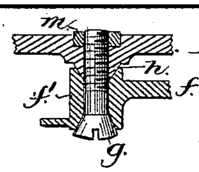


Fig. 5.



Witnesses.
John F. C. Prinkert
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UNITED STATES PATENT OFFICE.

JOHN B. PRICE, OF WOLLASTON, MASSACHUSETTS.

SEWING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 266,387, dated October 24, 1882.

Application filed August 28, 1882. (No model.)

To all whom it may concern:

Be it known that I, JOHN B. PRICE, of Wollaston, county of Norfolk, and State of Massachusetts, have invented an Improvement in Sewing-Machines, of which the following description, in connection with the accompanying drawings, is a specification.

My invention in sewing-machines relates to improvements in devices for imparting movement to the usual horizontally-vibrating shuttle-carrying lever, the said devices consisting essentially of an annulus or ring connected with an arm or plate carried by a rotating shaft, and an oscillating rider fitted to slide on the said ring and carried by a stud preferably held loosely in the rear end of the shuttle-carrying lever; but it is obvious that the rider might be loose on the stud; but such construction I do not prefer; also, in novel manner of supporting the vibrating shuttle-carrying lever to compensate for wear.

Figure 1 of the drawings represents in side elevation a sewing-machine provided with my improved mechanism for vibrating the shuttle-carrying lever; Fig. 2, an under side view of Fig. 1; Fig. 3, details of the rider and the end of the shuttle-carrying lever; Fig. 4, a sectional detail of the devices for supporting the shuttle-lever, and Fig. 5 a modification.

The sewing-machine selected by me to illustrate a practical embodiment of my invention has a horizontally-placed rotating-needle-bar-actuating shaft, *a*, provided with a gear, *b*, which engages a gear, *b'*, on a vertical shaft, a^2, all as usual. To the lower end of the rotating shaft a^2, I secure an arm or plate, *c*, provided at its under side with an annulus or ring, *d*. This rotating ring is placed eccentrically to the shaft a^2, and receives upon it the rider *e*, composed of a grooved block having a stud, e^2, which is extended into an opening at the rear end of the shuttle-carrying lever *f*, the opening in the said lever *f* to receive the said stud being preferably slotted, the said lever having ears 2 to receive an adjusting-screw, 3, to take up wear between the stud e^2 and lever *f*. The rider has in its groove a gib, e^3, (see Fig. 3,) which is made adjustable by means of suitable screws, 4, adjustment of the said gib compensating for wear at that point. The shuttle-carrying lever *f* has its fulcrum on an adjustable conical-headed stud or pin, *g*, which, extended through the hub *f'* of the lever *f*, is made to enter and extend through a conical hub, *h*, made fast to the bed-plate A, and the said pin or stud *g* has applied to its upper end a suitable setting device, *m*, (shown in Fig. 4,) as a screw accessible by a screw-driver from the upper side of the bed-plate.

In Fig. 4 the conical hub is made separate from the bed-plate, and one end of it is driven into a hole bored in the bed-plate; but in Fig. 5 the hub is shown as cast with the bed-plate, and in said figure the setting device *m* is shown as a nut fitted to the screw-threaded upper end of the stud or pin *g*.

It will be noticed in the drawings that the center of the stud e^2 is always nearer the fulcrum of the shuttle-carrying lever than is the center of the shaft a^2. With the ring *d* in the position Fig. 2 the shuttle-lever *f* has just commenced its slowest motion to permit the usual needle carried by the usual needle-bar to reach its highest point by the time the shuttle-lever has moved into its extreme position after passing through the loop of needle-thread.

By the eccentric position of the ring and the location of the stud e^2 as described with relation to shaft a^2, the lever *f* is moved most rapidly while the needle-bar and needle are being moved down. The lever *f* has a very slight dwell as it reaches its extreme backward position, the needle at such time forming its loop, and as soon as the loop is formed the ring starts the shuttle-lever and carries the shuttle rapidly through the loop, and as the needle rises, as before stated, the shuttle having been passed through the loop of needle-thread, the further movement of the shuttle-lever and its usual shuttle in that direction is made slower, as stated. The ring and saddle constitute a very simple and durable mechanism, which is liable to but little wear, and may be made to run very rapidly without jar or noise. The rider is partially oscillated at each rotation of the ring *d*.

I claim—

1. The rotating shaft a^2, its arm or plate and attached ring or annulus *d*, and the shuttle-carrying lever *f*, combined with the oscillating rider in which the said ring travels, substantially as described.

2. The shaft a^2, its arm or plate, and the eccentrically-placed ring d, and the lever f, combined with the oscillating rider and its adjusting-gib, as shown and described.

3. The bed-plate and its connected hub and the lever and conical-headed stud or screw g, combined with a setting device accessible from the top of the bed-plate, substantially as described.

4. The bed-plate and the conical hub driven therein, and the conical-headed screw g and lever f, combined with a screw-setting device, m, to hold the said screw g in adjusted position, substantially as described.

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

JOHN B. PRICE.

Witnesses:
G. W. GREGORY,
B. J. NOYES.