

(No Model.)

J. KNOUS.

SHUTTLE ACTUATING MECHANISM FOR SEWING MACHINES.

No. 246,680.

Patented Sept. 6, 1881.

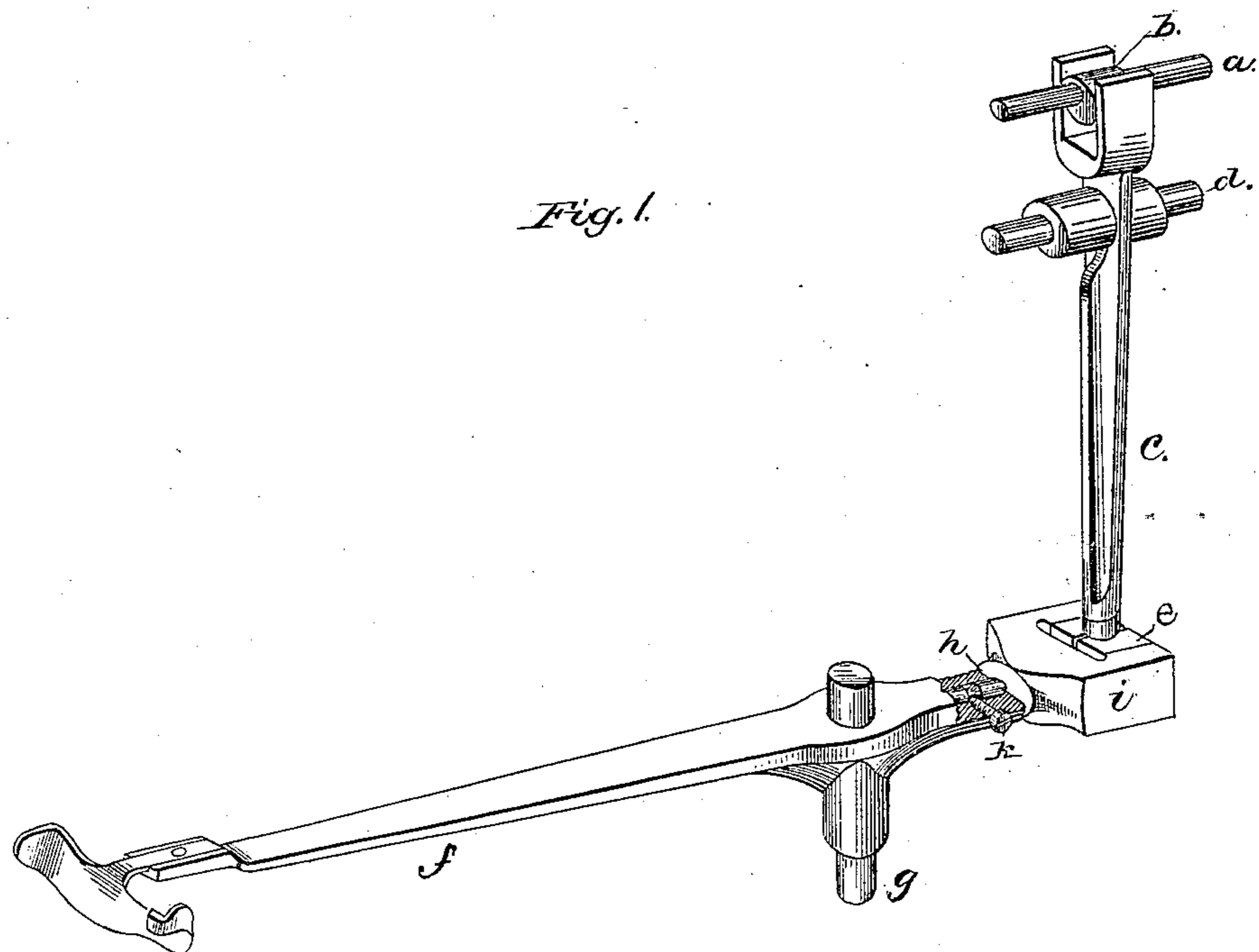


Fig. 2.

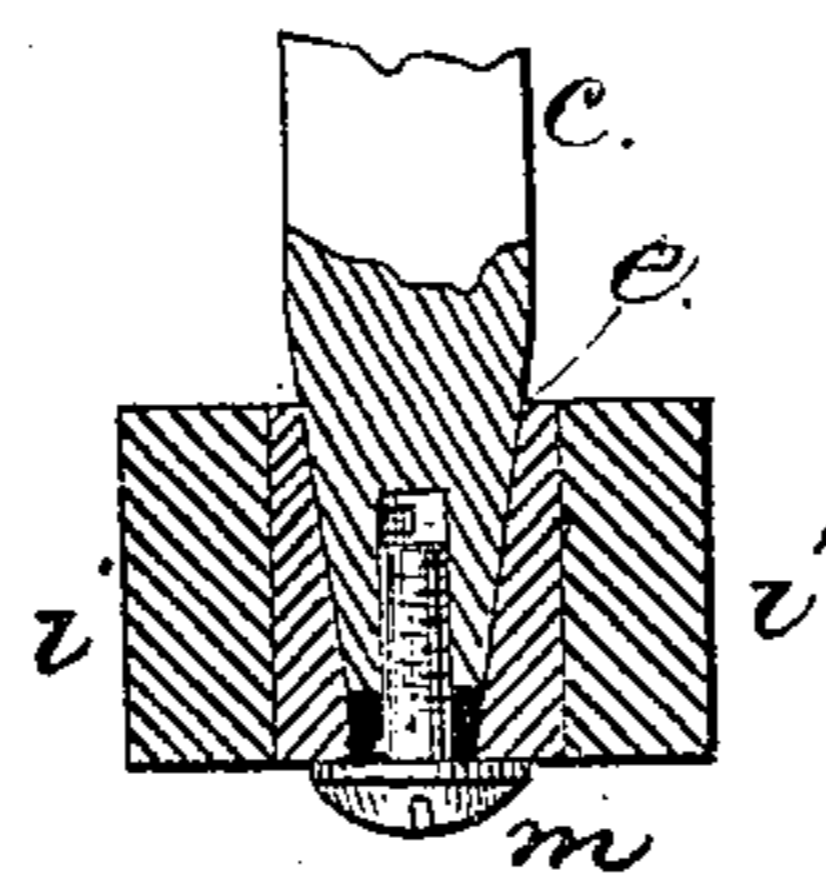


Fig. 5.

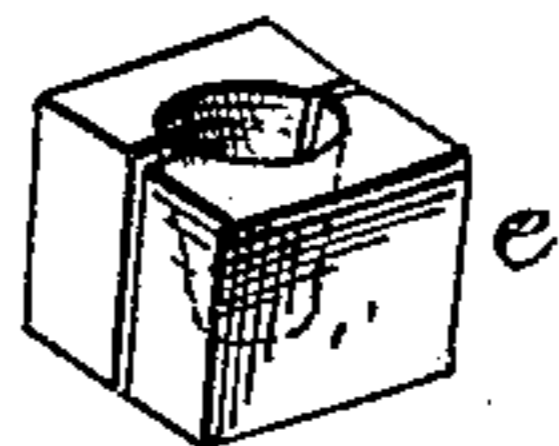


Fig. 4.

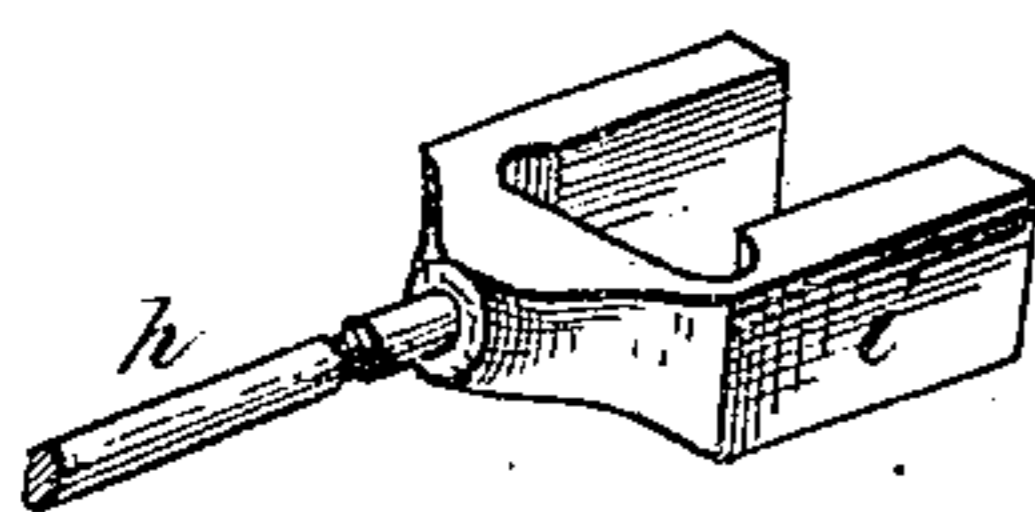
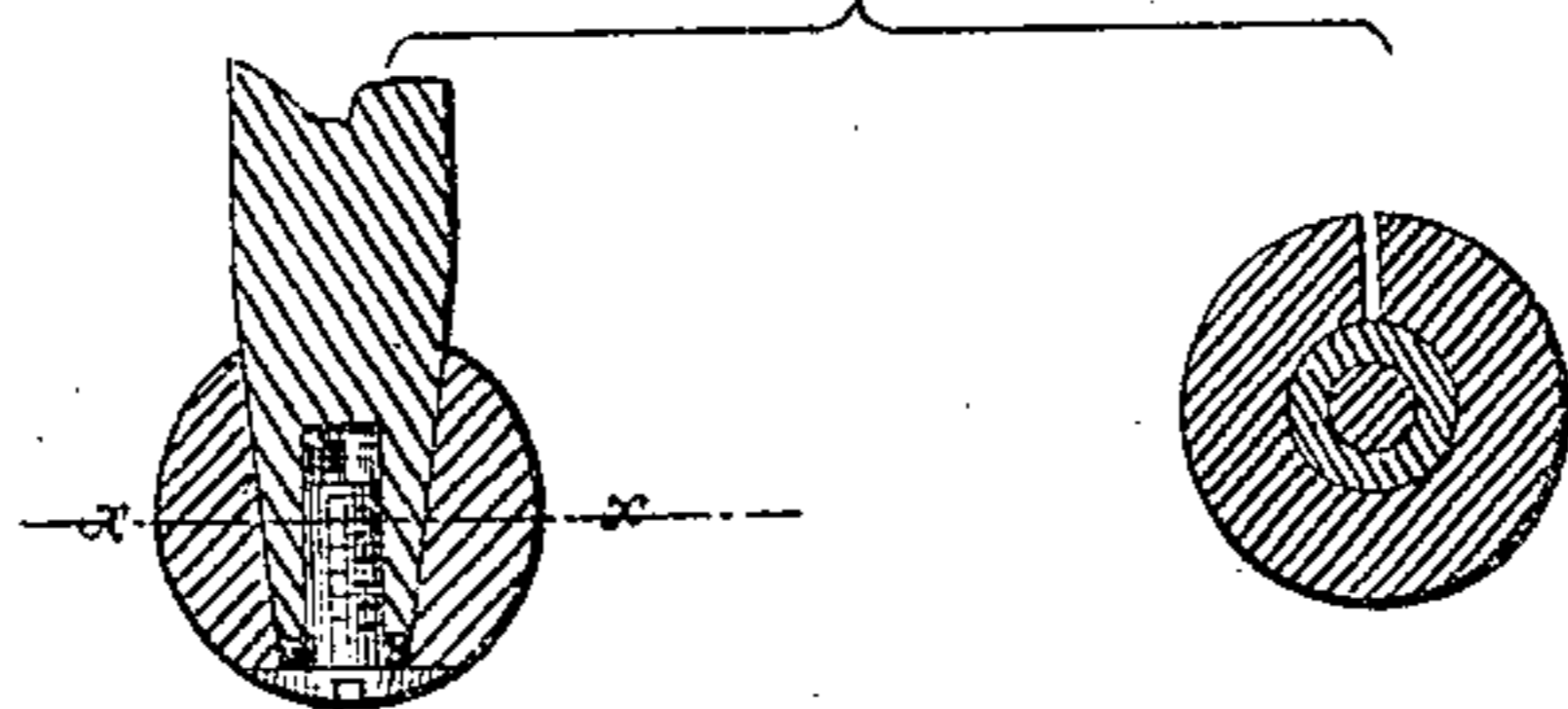


Fig. 3.



Witnesses.

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UNITED STATES PATENT OFFICE.

JOHN KNOUS, OF HARTFORD, CONNECTICUT, ASSIGNOR TO THE WEED SEWING MACHINE COMPANY, OF SAME PLACE.

SHUTTLE-ACTUATING MECHANISM FOR SEWING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 246,680, dated September 6, 1881.

Application filed June 2, 1881. (No model.)

To all whom it may concern:

Be it known that I, JOHN KNOUS, of Hartford, county of Hartford, State of Connecticut, have invented a new and useful Improvement in Shuttle-Actuating Mechanisms for Sewing-Machines, of which the following description, in connection with the accompanying drawings, is a specification.

This invention in sewing-machines is embodied in a lock-stitch machine of the so-called "Domestic" class, wherein a horizontally-vibrating shuttle-carrying lever is actuated from a vertical lever, in turn vibrated by a cam placed upon the rotating shaft of the machine, which gives motion to the needle-bar.

My invention consists in the combination, with such a horizontal lever, of a vertical lever made conical or tapering at its lower end and provided with an adjustable block to fit the fork of the shuttle-carrying lever, whereby the two levers may be made to work properly together without lost motion.

Figure 1 of the drawings represents, in perspective, a detail, showing a portion of the main or needle-bar-actuating shaft of a sewing-machine, its cam, and the vertical and horizontal levers and their connections. Fig. 2 is a vertical cross-section of Fig. 1, taken through the forked block at the end of the horizontal shuttle-lever and through the block therein and the lower end of the vertical lever. Fig. 3 is a modification to be referred to. Fig. 4 is a detail, in perspective, of the forked part of the shuttle-lever, and Fig. 5 a like view of the block, Figs. 1 and 2, which fits the said fork.

In the drawings I have considered it necessary to show only the parts which it is the object of my invention to improve, as the parts not shown are well known.

The shaft *a* and its cam *b* are supposed to be the same as employed in the Domestic class of sewing-machine referred to, the forward end of the said shaft being provided with a suitable crank-pin to actuate the needle-bar and needle.

The vertical lever *c*, forked at its upper end to embrace the cam *b*, has its fulcrum at *d*, and the lower end of the said lever is tapered or made conical to receive the swiveling or loose block *e*, which, as shown in Figs. 1, 2, and 5, is composed of separate pieces or halves.

The horizontal shuttle-carrying lever *f*, pivoted at *g*, is bored at its rear end to receive the pin *h* of the fork *i*, the said pin being fitted loosely to the said lever to turn thereon, but being so held by the screw *k* that the pin of the fork cannot be withdrawn longitudinally from the horizontal lever during the operation of the machine.

The block *e*, at the lower end of the vertical lever, is placed between the forks of the swiveled rear end of the shuttle-carrying lever, and contact between the faces of the blocks and the fork may be always properly preserved by turning the screw *m* and forcing the block longitudinally over the conical or tapering end of the vertical lever. Instead of this square block shown in Figs. 1 and 2, I may employ a ball-like block fitted to the tapering lower end of the vertical lever, as in Fig. 3, the said Fig. 3 showing the ball in vertical and horizontal section, in order the better to illustrate the construction of the parts. The interior of the block *e* is made conical to receive the conical lower end of the lever *c*.

I claim—

1. The horizontal shuttle-carrying lever forked at its rear end, and the vertical lever tapered or made conical at its lower end, and means to vibrate it, combined with the block having the conical recess and fitted between the forks of the shuttle-carrying lever, and with means to adjust the said block upon the conical part of the vertical lever to compensate for wear, substantially as described.

2. The horizontal shuttle-carrying lever having its forked end pivoted to swivel or oscillate thereon, combined with the block fitted to the tapered or conical end of the vertical lever, and with a screw to adjust the said block to insure contact of its sides with the said forks, and with means to vibrate the said vertical lever, substantially as described.

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

JNO. KNOUS.

Witnesses:

F. E. BELDEN,
GEO. H. DAY.