

# O. P. Hussey, Drawing Frame.

No. 94,752.

Patented Sep. 14, 1862.

Fig 1.

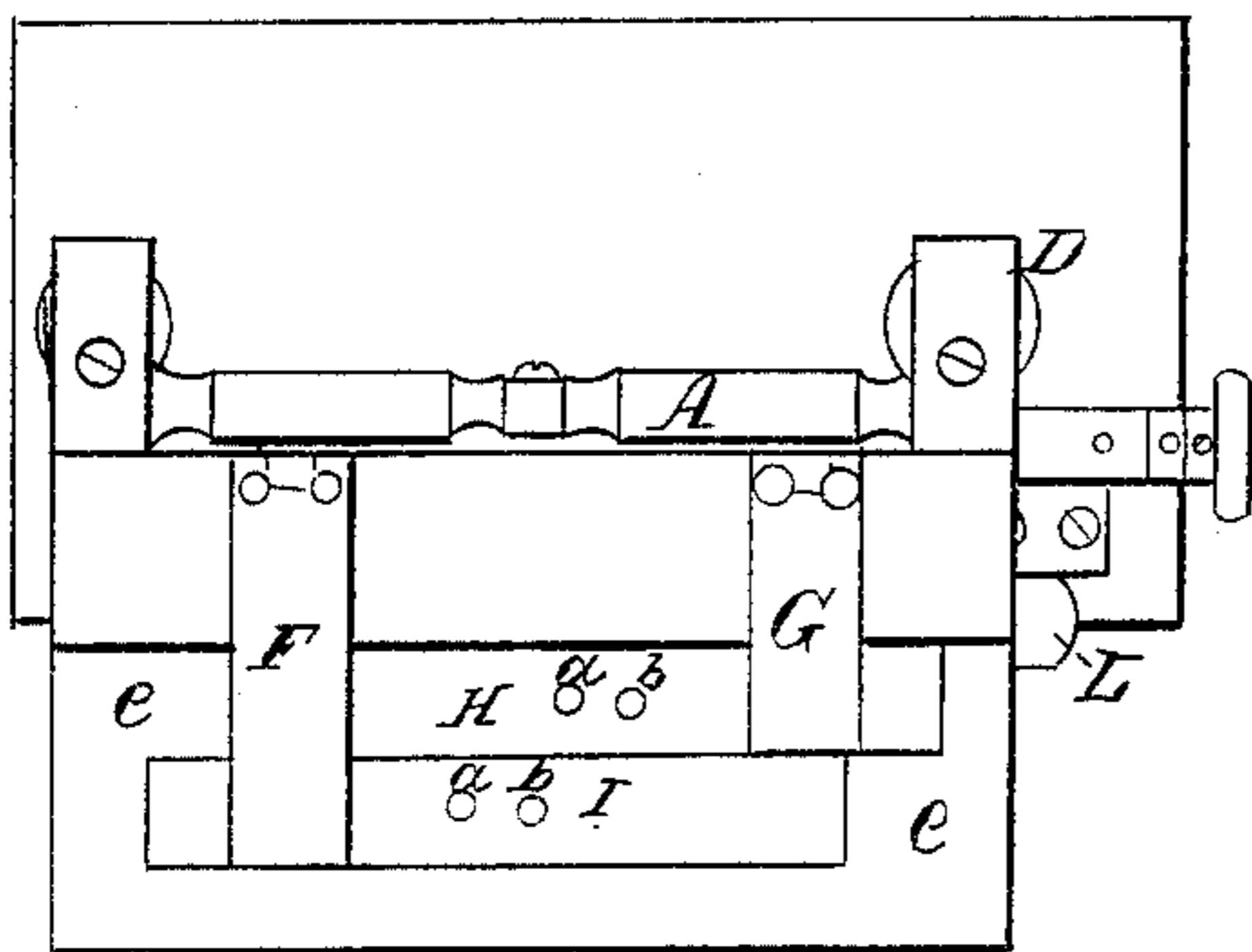


Fig 2.

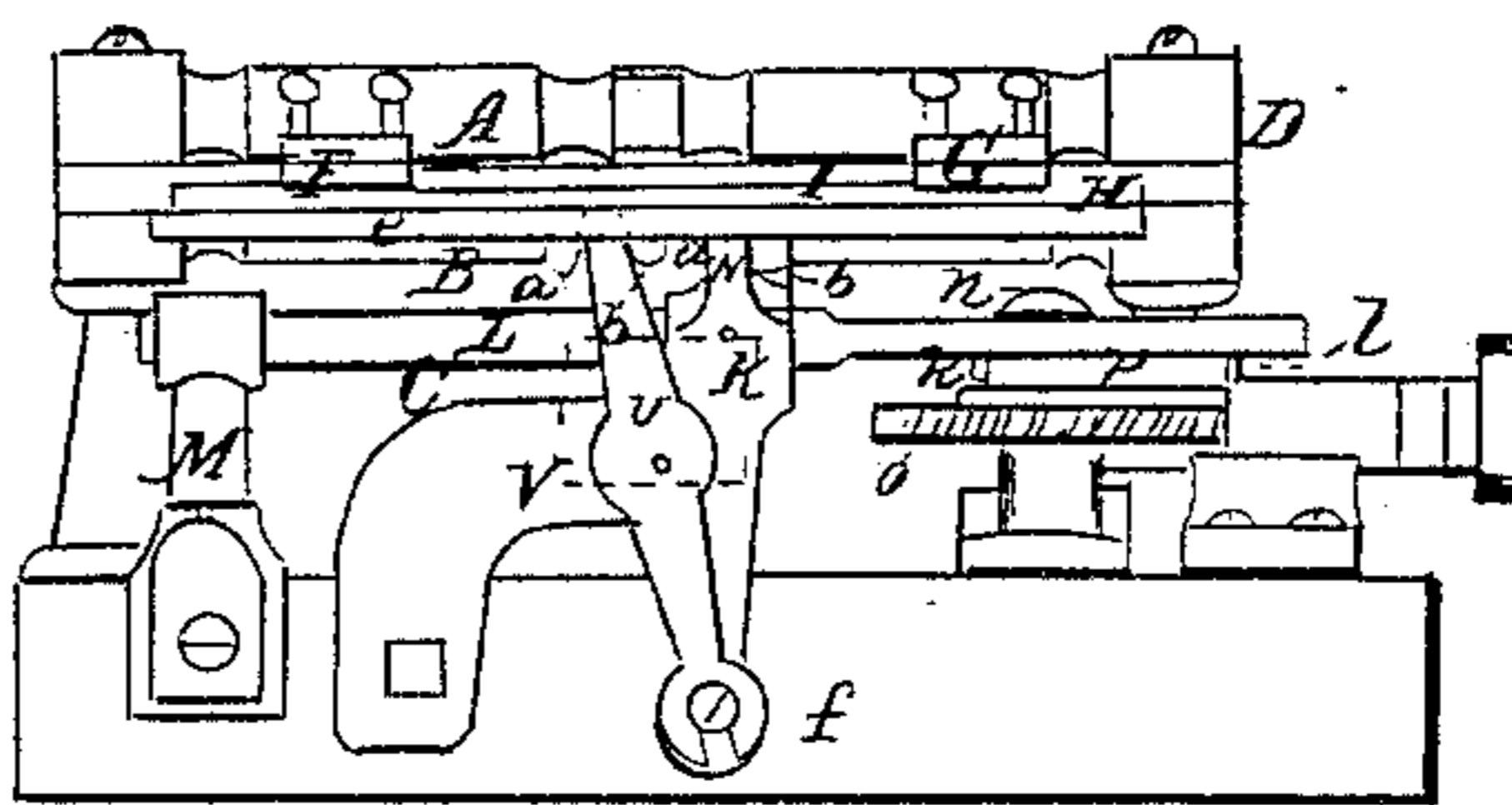


Fig 3

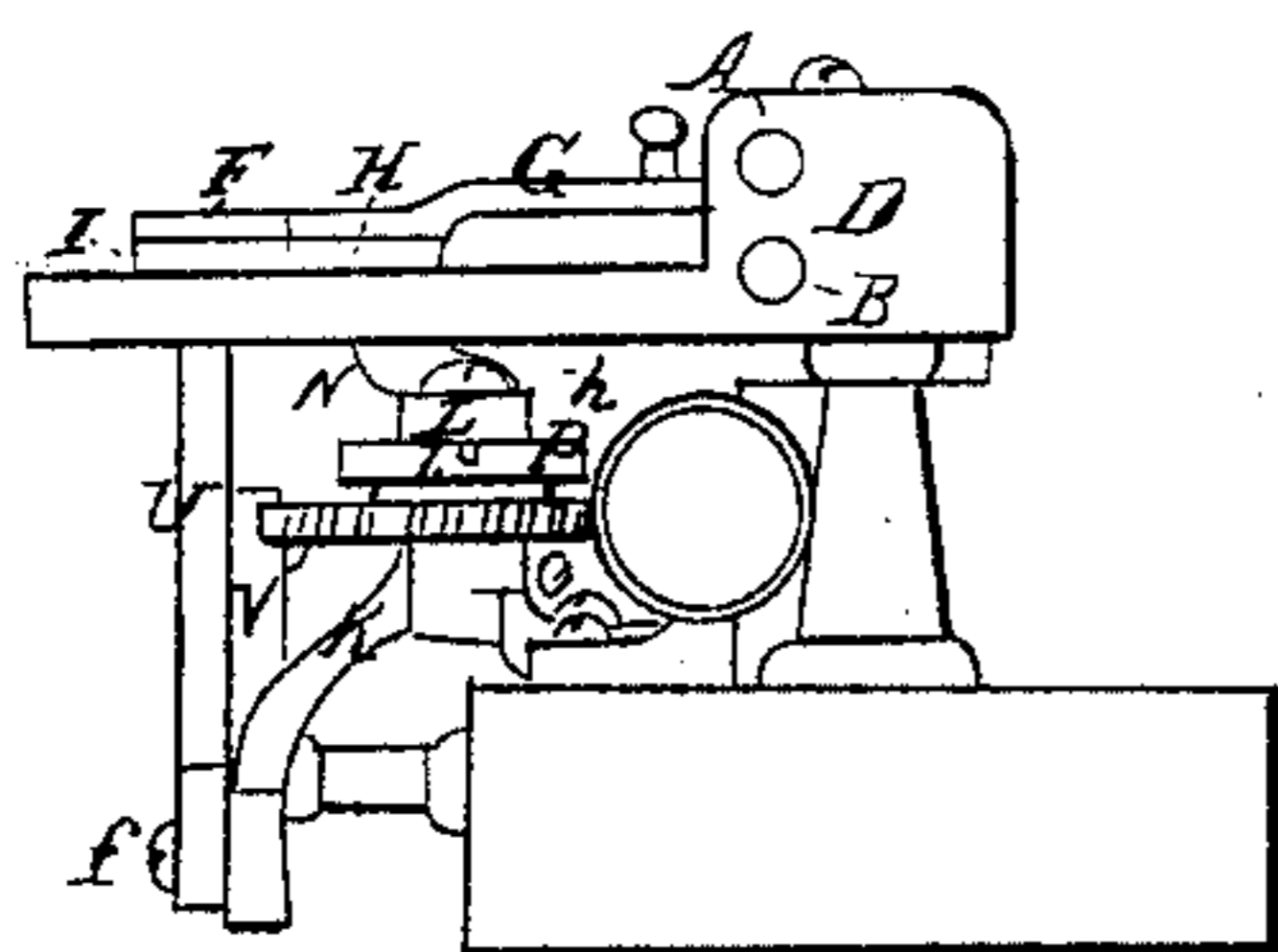


Fig 4.

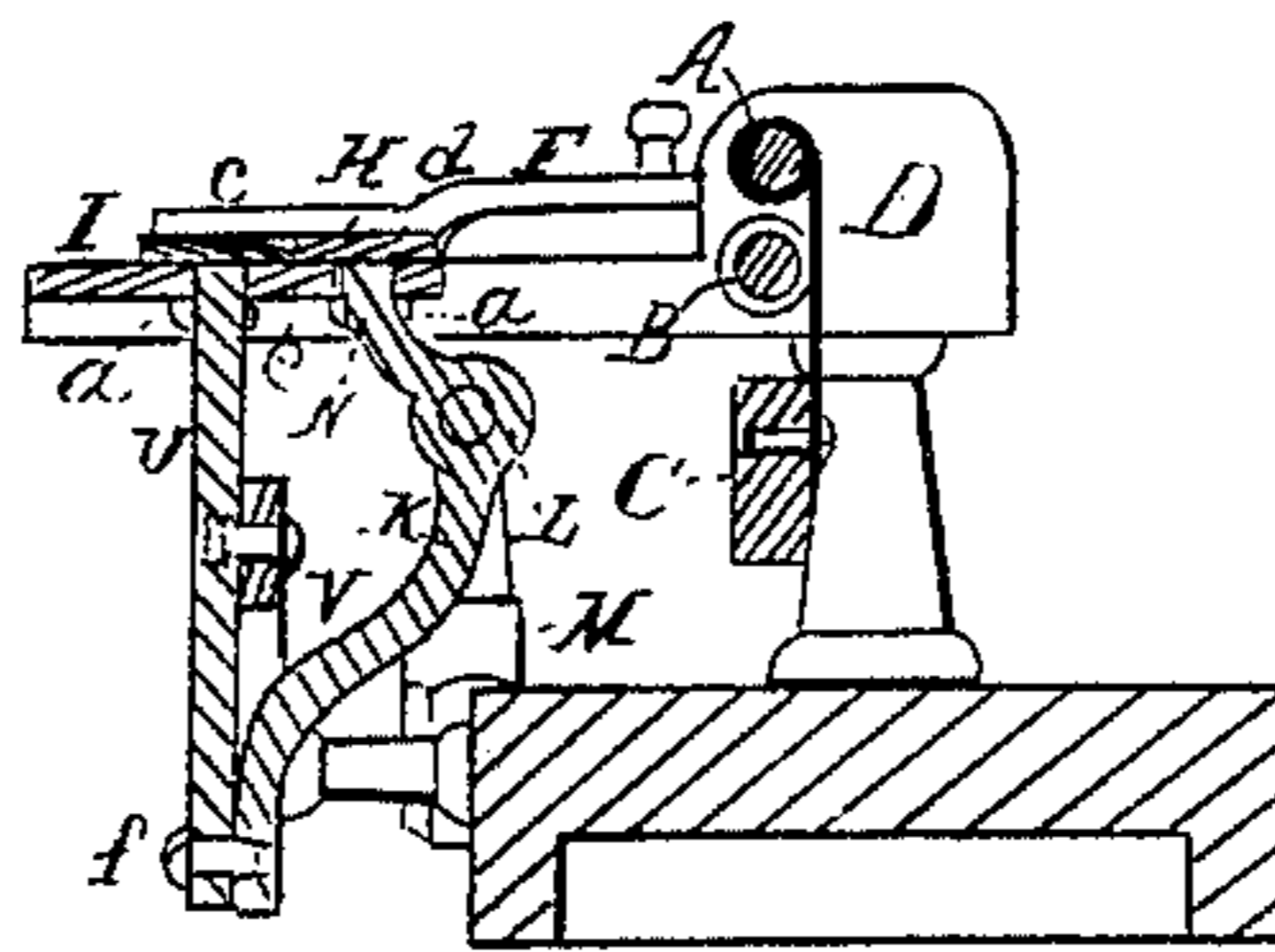
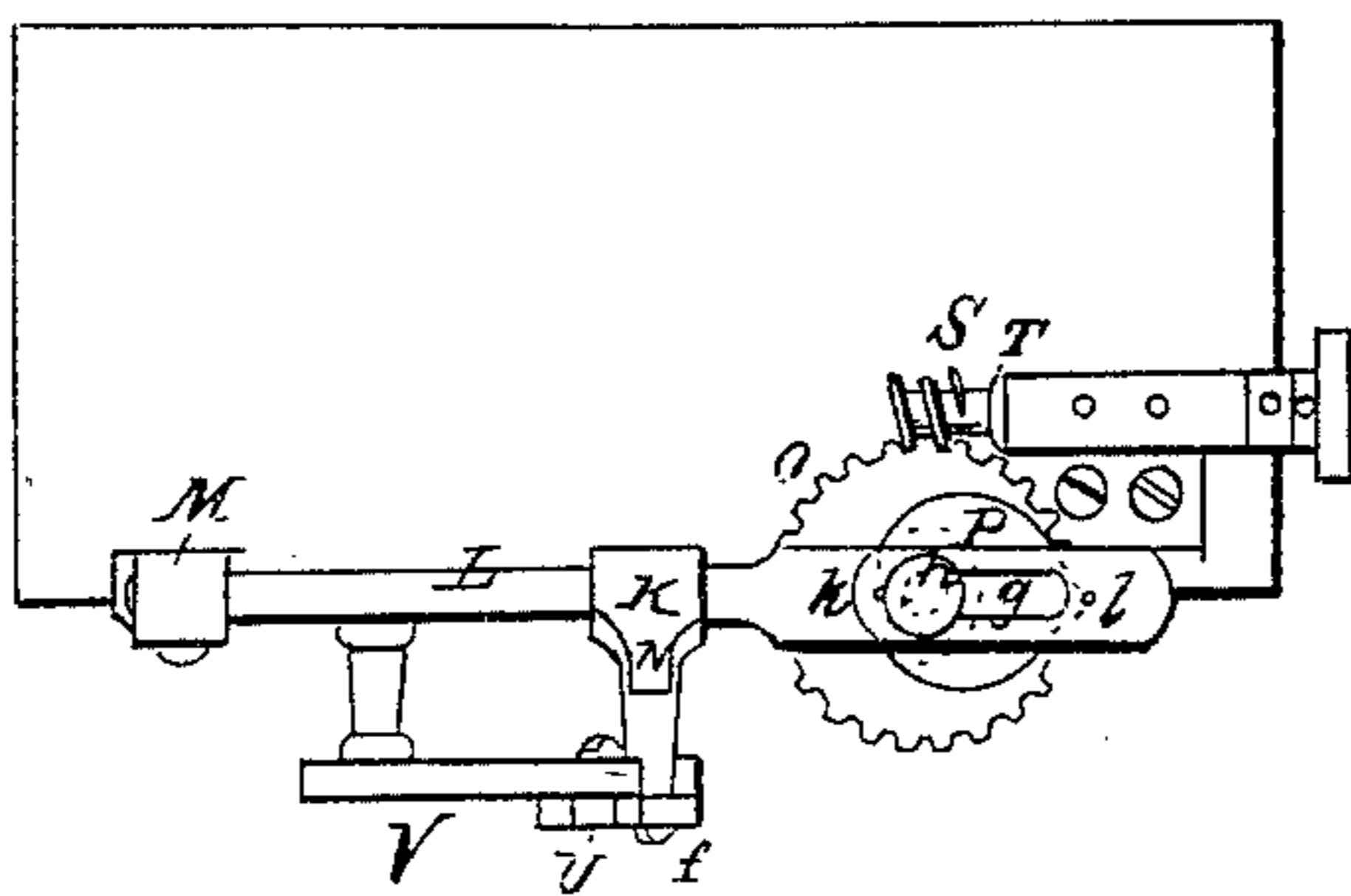


Fig 5.



Witnesses

L. N. P. P.  
J. R. P.

O. P. Hussey

by his attorney.

R. W. Eady

# United States Patent Office.

OLIVER P. HUSSEY, OF NASHUA, NEW HAMPSHIRE.

Letters Patent No. 94,752, dated September 14, 1869.

## IMPROVEMENT IN DRAWING-FRAME.

The Schedule referred to in these Letters Patent and making part of the same.

To all persons to whom these presents may come:

Be it known that I, OLIVER P. HUSSEY, of Nashua, of the county of Hillsborough, and State of New Hampshire, have made a new and useful invention, having reference to the draught-rollers and the traverse yarn-guides of drawing-frames, or various other machines for spinning roving or yarn; and I do hereby declare the same to be fully described in the following specification, and represented in the accompanying drawings, of which—

Figure 1 is a top view;

Figure 2, a front elevation;

Figure 3, an end view; and

Figure 4, a transverse section of a set of draught-rollers and traverse-guides, with my invention applied thereto.

Figure 5 is a top view of the slide-bar and its operative cam, to be hereinafter described.

The purpose of my invention is to maintain each of the guides throughout its motions at the same distance as the other from the middle of the top roller, in order that the amount of pressure exerted by such roller on both of the yarns, going through the guides and between the rollers, may be alike.

By the common method of traversing the guides, they move simultaneously in one direction, so that while one may be approaching the middle of the top roller, the other will be departing therefrom; but, with my invention, both guides approach the middle of the top roller at one and the same time, and they next simultaneously depart from it, each in the mean time preserving the same distance as the other from the middle of the top roller.

As the weight or power which depresses the top roller on the two strands, yarns or rovings, going through the guides and between the draught-rollers, is applied at the middle of such top roller, it will be seen that, with my improvement, the pressure on each yarn or roving will be alike, whereas such will not be the case when the guides are moved simultaneously in the same direction, for, under such circumstances, the leverage will be increasing on one yarn, and diminishing on the other, thus producing irregularities of draught of the yarn or roving, and being productive of other injurious results, all of which are prevented by my improvement.

In the drawings—

A and B are a pair of draught-rollers, C being the weight suspended from the middle of the upper of them.

D is the frame, in which the rollers are supported.

F G are the yarn or roving-guides, which, in this

machine, are projected from separate slide-bars H I, arranged in the frame and applied to it, so as to be capable of being moved endwise thereon.

Two studs, *a b*, project downward from each of the slide-bars, and through one of two slots, *c d*, made in the top board or part *e* of the frame.

One arm of a lever, U, goes between the two rear-most studs, such lever being pivoted to a bracket, V.

The lower arm of the said lever is forked, and spans a stud, L, projecting from an arm, K.

This arm is extended down from a slide-rod, L, supported on a standard, M.

From this slide-rod another arm, N, projects upward, and goes between the other two studs *a b*.

The slide-rod L has a slot, *g*, in it, which receives the upper part of a vertical and stationary journal, *h*.

A worm-gear, *o*, having a cam, P, fixed to it, turns on the said journal and engages with a worm or screw, S, fixed upon a driving-shaft, T. The cam is arranged eccentrically with respect to the gear, and plays between and against two studs, *k l*, which are projected down from the rod L, the whole being as represented in the drawings.

While the worm-gear is in revolution, it will revolve the cam, and thereby cause a reciprocating rectilinear motion to be imparted to the slide-rod L. This rod, by means of the two arms K N, and the lever U, will produce reciprocating rectilinear movements of the two yarn-guides, such as will cause them at one time to approach one another, at equal speeds, and next depart from each other at equal speeds, thereby producing the desirable results, as hereinbefore explained.

I claim, in combination with the yarn-guides, the draught-rollers, and the weight or device for pressing down the upper of such rollers at its middle, mechanism, substantially such as described, for moving the yarn-guides with equal velocities and simultaneously, first towards, and next away from each other, and the centre of the upper or top roller of the draught-rollers, the whole being substantially in manner and for the purpose as set forth.

I also claim, for effecting the movements of the yarn-guides, the combination of the slides H I, the two sets of studs *a b*, the lever U, the arms K N, the slide-rod L, the studs *k l*, and the eccentric or cam P, the whole being arranged and applied to the guides F G and the frame of the rollers, substantially in manner, and so as to operate as explained.

OLIVER P. HUSSEY.

Witnesses:

E. P. EMERSON,  
IVORY HARMON.