

J. STEINBACH & J. READY.
Sewing-Machines.

No. 151,320.

Patented May 26, 1874.

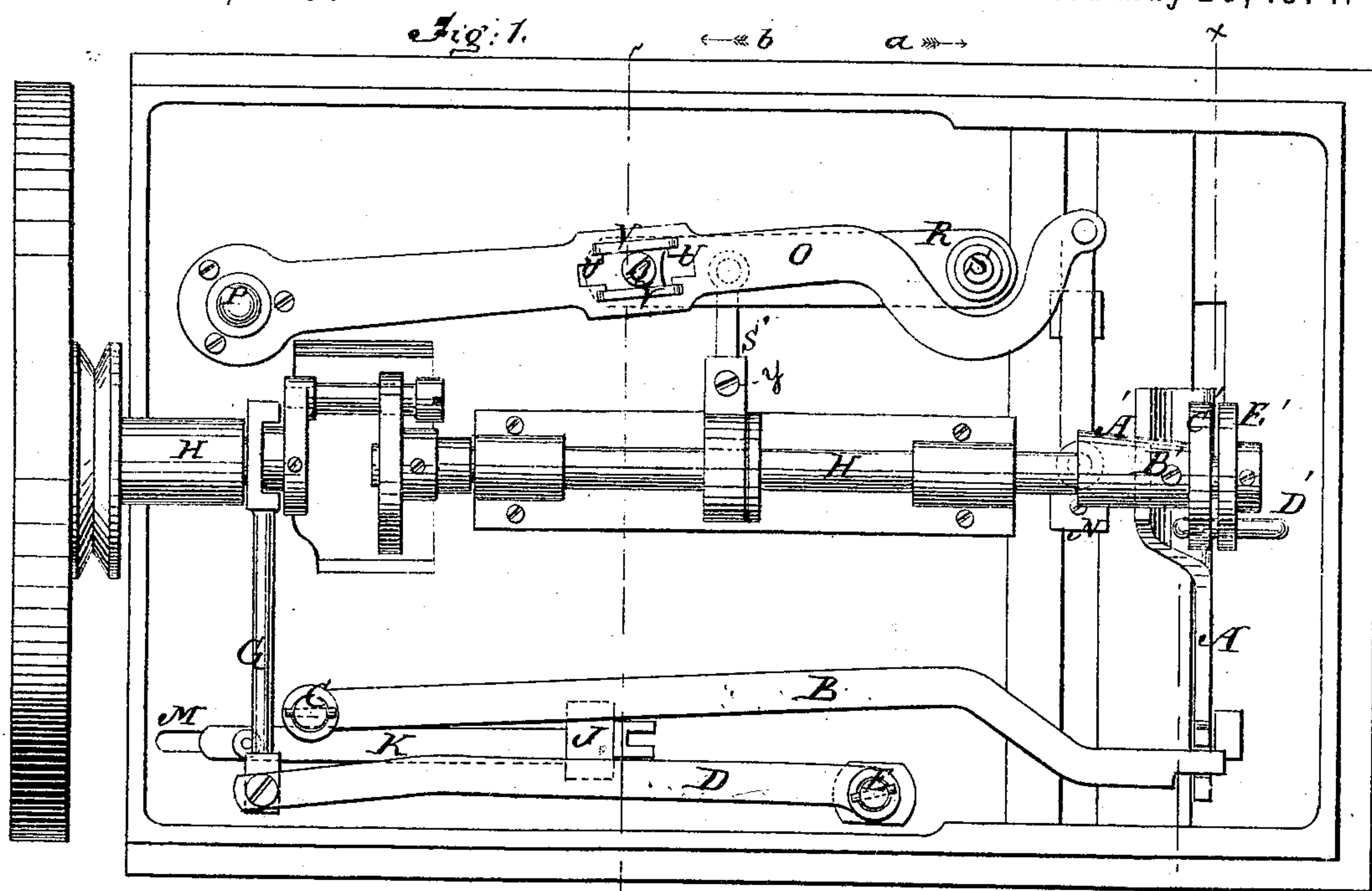


Fig: 2.

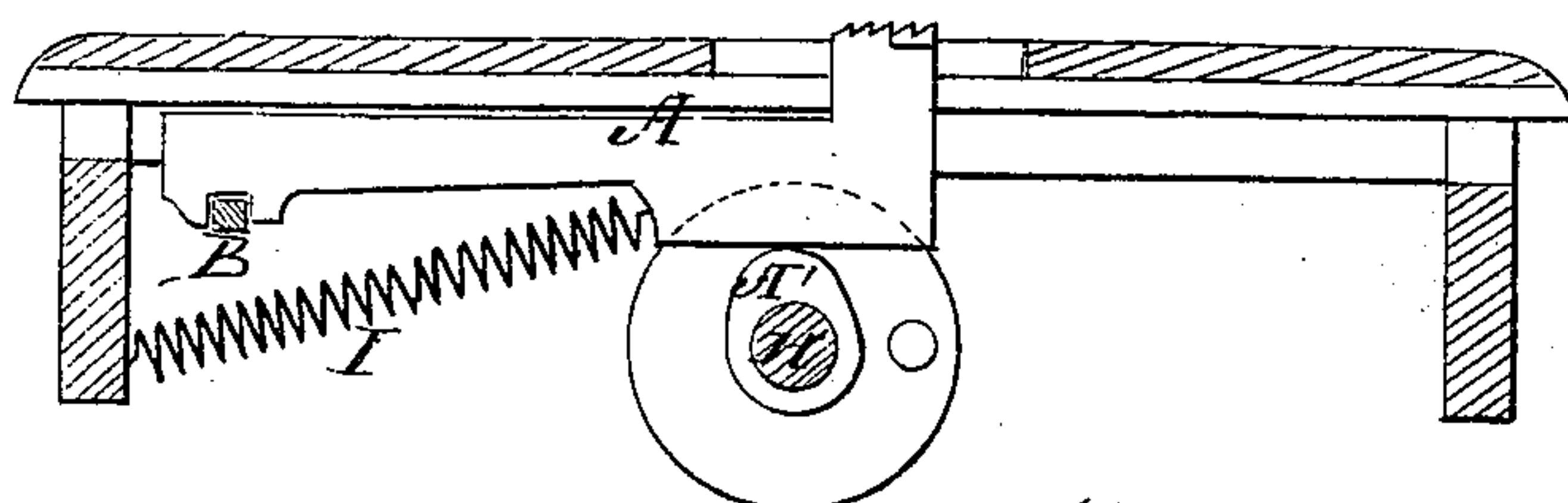


Fig: 4.

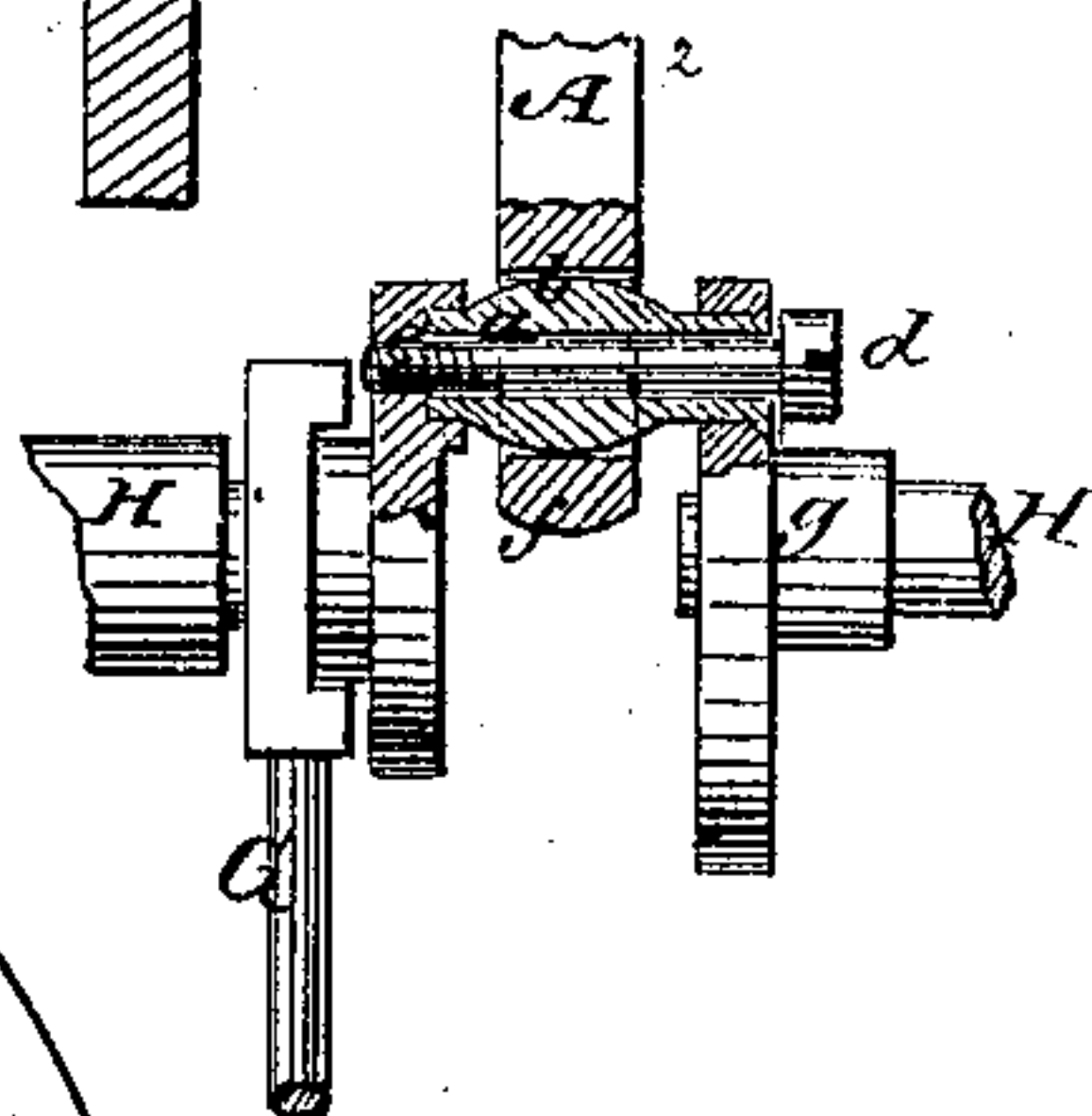
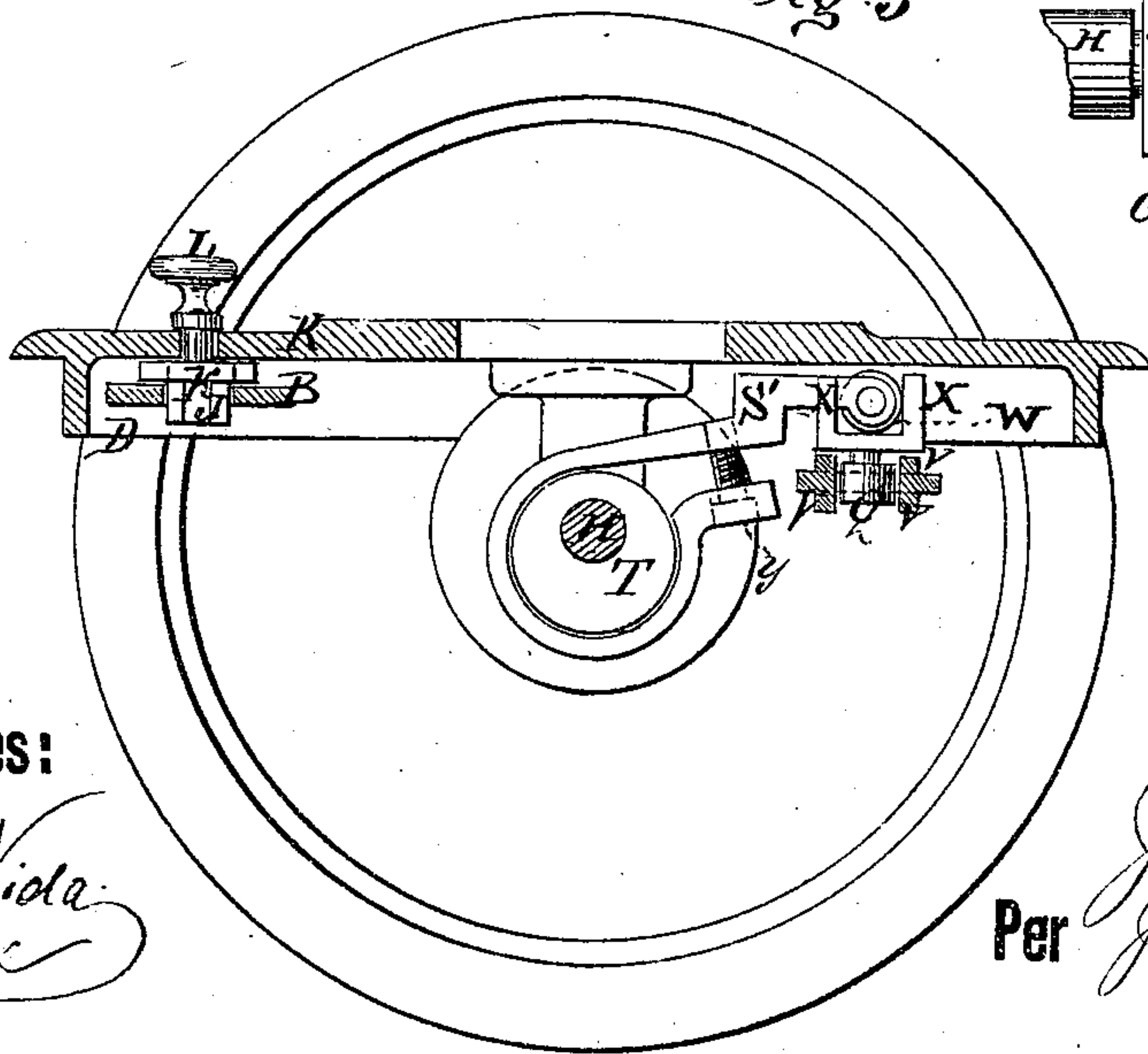


Fig: 3.



Witnesses:

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UNITED STATES PATENT OFFICE.

JOHN STEINBACH AND JAMES READY, OF BROOKLYN, E. D., NEW YORK.

IMPROVEMENT IN SEWING-MACHINES.

Specification forming part of Letters Patent No. **151,320**, dated May 26, 1874; application filed September 6, 1873.

To all whom it may concern:

Be it known that we, JOHN STEINBACH and JAMES READY, of Brooklyn, in the county of Kings and State of New York, have invented a new and Improved Sewing-Machine, of which the following is a specification:

This invention relates to improvements in feed actuating and regulating devices, as hereinafter described.

Figure 1 is a plan of the bottom of a sewing-machine constructed according to this invention. Fig. 2 is a cross-section on the line *xx* of Fig. 1, looking in the direction of the arrow *a*; and Fig. 3 is a cross-section looking in the direction of arrow *b*. Fig. 4 is a detail, showing the arrangement of the connecting-rods which work the needle-arm with the crank.

Similar letters of reference indicate corresponding parts.

The feed-plate *A* is connected to the free end of the long lever *B*, which is pivoted to a stud, *C*, projecting downward from the cloth-plate. Motion is communicated to said lever and feed-plate, for throwing it forward, by lever *D*, which is pivoted to a stud, *E*, projecting downward from the cloth-plate, and connected, at the other end, to the eccentric rod *G*, worked by the main shaft *H*. The return motion of the feed-plate is effected by a spring, *I*. The lever *D* acts on the lever *B* through the block *J*, which is arranged between them, and connected to a bar, *K*, which has a binding-screw, *L*, which extends up through the slot *M* of the plate of the machine, near the back end, for shifting said block along between the levers, to vary the stitch; and it may be fastened at any point.

The shuttle-carrier *N* is connected to the free end of a long lever, *O*, pivoted on a stud, *P*, and this lever is connected, by the stud-screw *Q*, with the lever *R*, pivoted to the plate at *S*, and connected, at its free end, with the eccentric rod *S'*, which is worked by the eccentric *T* on the main shaft. The stud-pin *Q* has a long head fitted in the slot *U* of the lever *O*, the walls of which are elongated above and below by flanges *V*, to provide sufficient bearing-surface for wear in a simple

and inexpensive way. The eccentric rod *S'* is connected to lever *R* by a roller, *W*, arranged between flanges *X*; also for providing ample bearing-surface cheaply.

The eccentric strap is composed of one bar, bent nearly around the eccentric, and connected by a screw, *Y*, which can be screwed up from time to time as the bar wears.

The feed-plate is raised up to the cloth by a cam, *A'*, on the main shaft, which is tapered on the high side, but parallel with the axis on the low side, so that it has the quality of always allowing the feed-plate to fall exactly to the same point, no matter how much it may vary it in the upward throw.

The cam is shifted along the shaft, to vary the height of the throw, by the binding-screw *B'* being loosened to allow it to shift, and then tightened up to fasten it again.

In order to prevent the cam from turning around out of place on the shaft while the screw is loose, it is provided with a disk, *C'*, with a pin, *D*, going through a disk, *E'*, permanently fixed on the shaft.

In order to allow the connecting-rod *A''*, by which the needle-arm is worked, to have lateral motion, to prevent binding by the lateral vibration of the needle-arm, we have a crank-pin, *a*, with a bulb, to which the connecting-rod is fitted by a cylindrical hole, so that the amplest lateral vibration is allowed. This crank-pin is made tubular, for the connecting-screw *d* to pass through, and bind the two parts of the crank together, by screwing into one, as shown at *e*. The pin *a* is fitted into a socket, *e*, in one part of the crank, and passes through the other part *g*, and is riveted and fastened in it.

Having thus described our invention, we claim as new and desire to secure by Letters Patent—

The combination, with feed and cloth plates, of the lever *B*, pivoted to stud *C*, lever *D*, pivoted to stud *E*, the main-shaft eccentric rod *G*, the block *J*, and the adjustable bar *K*, as and for the purpose specified.

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Witnesses:

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