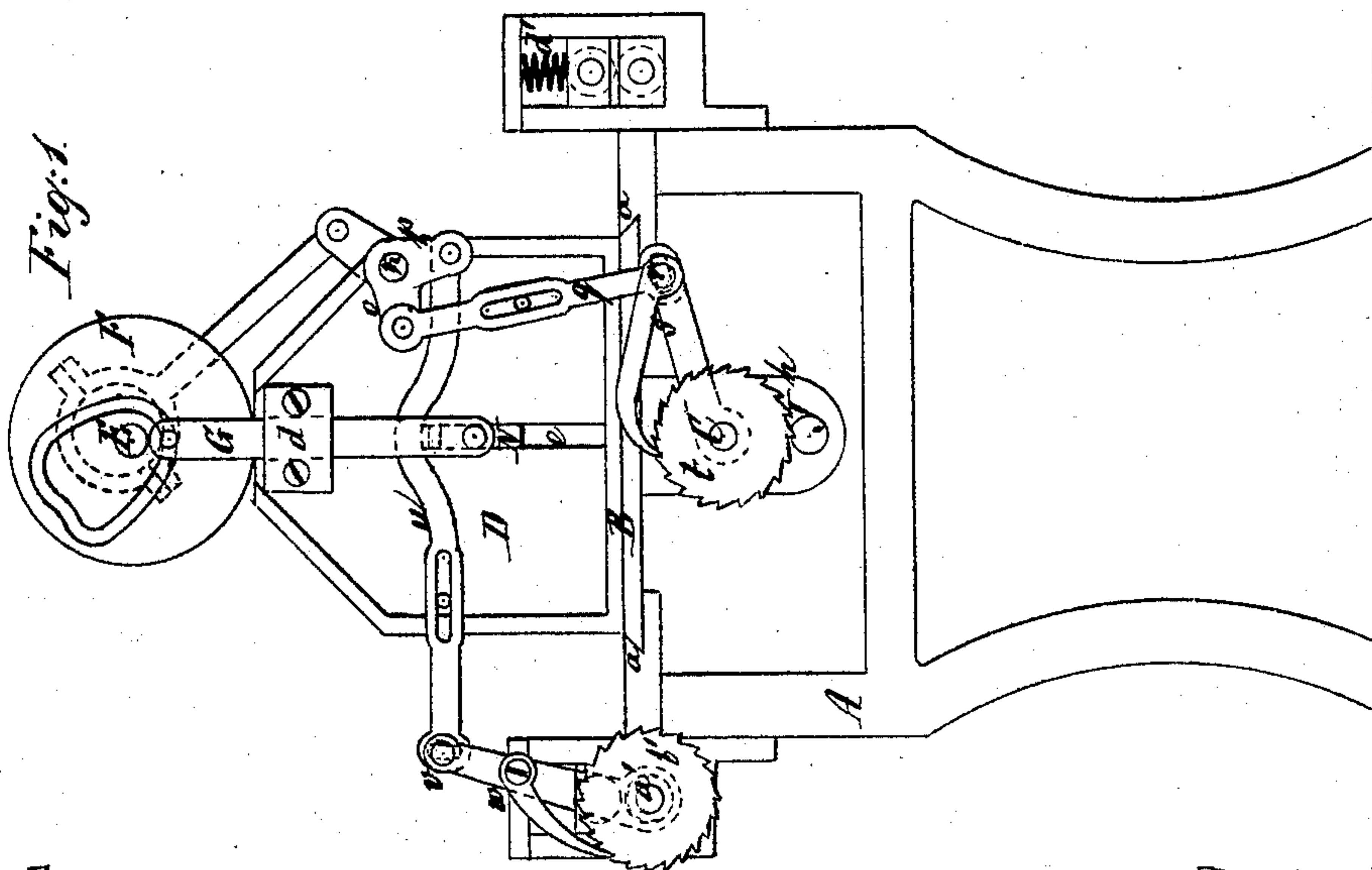
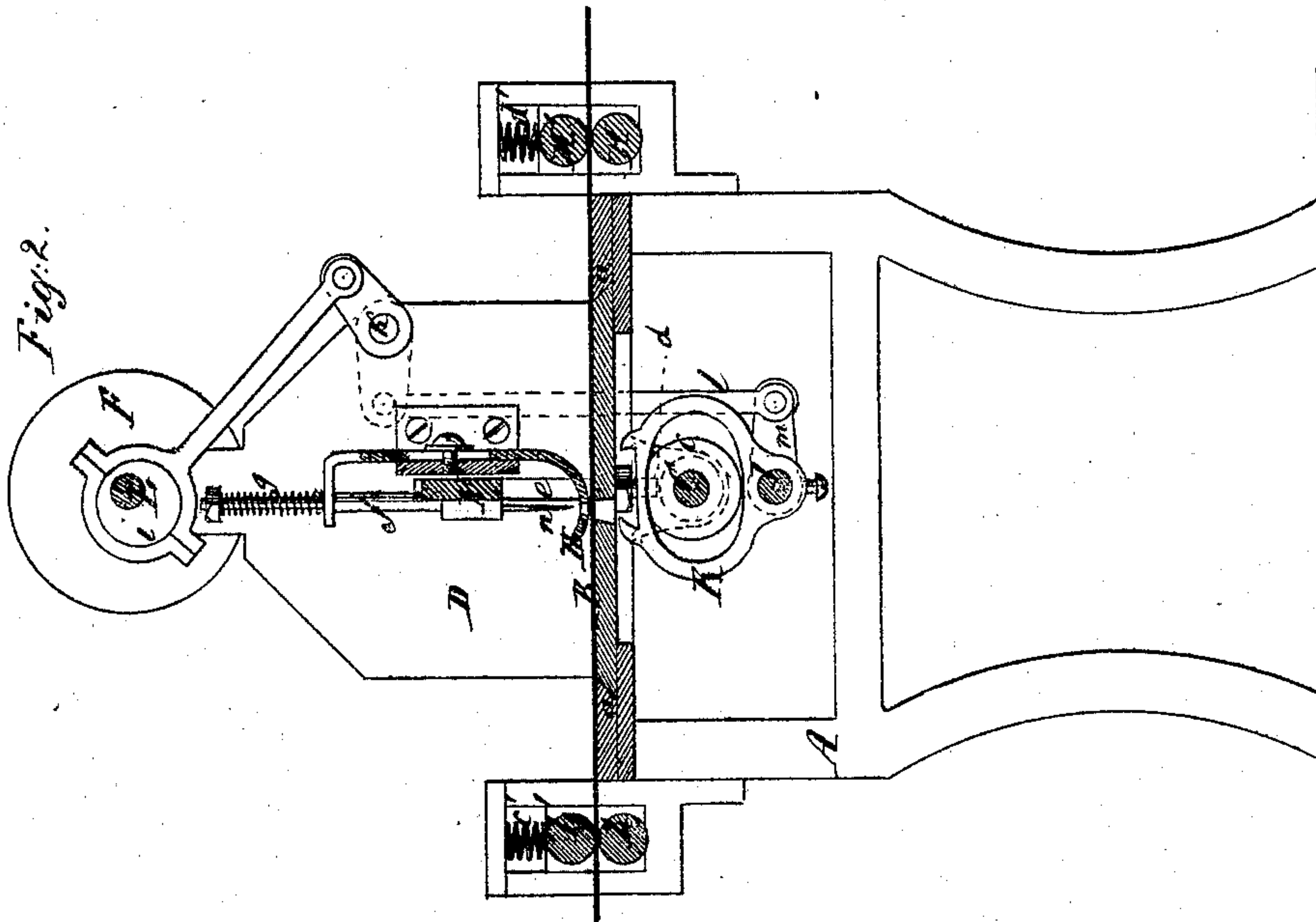


J. HAPPE & W. NEWMAN.
Quilting-Machines.

No. 130,715.

Patented Aug. 20, 1872.



Witnesses
Ernst Rilkuber.
C. Wahlers.

Inventors.
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By *Vandewater Hauff*
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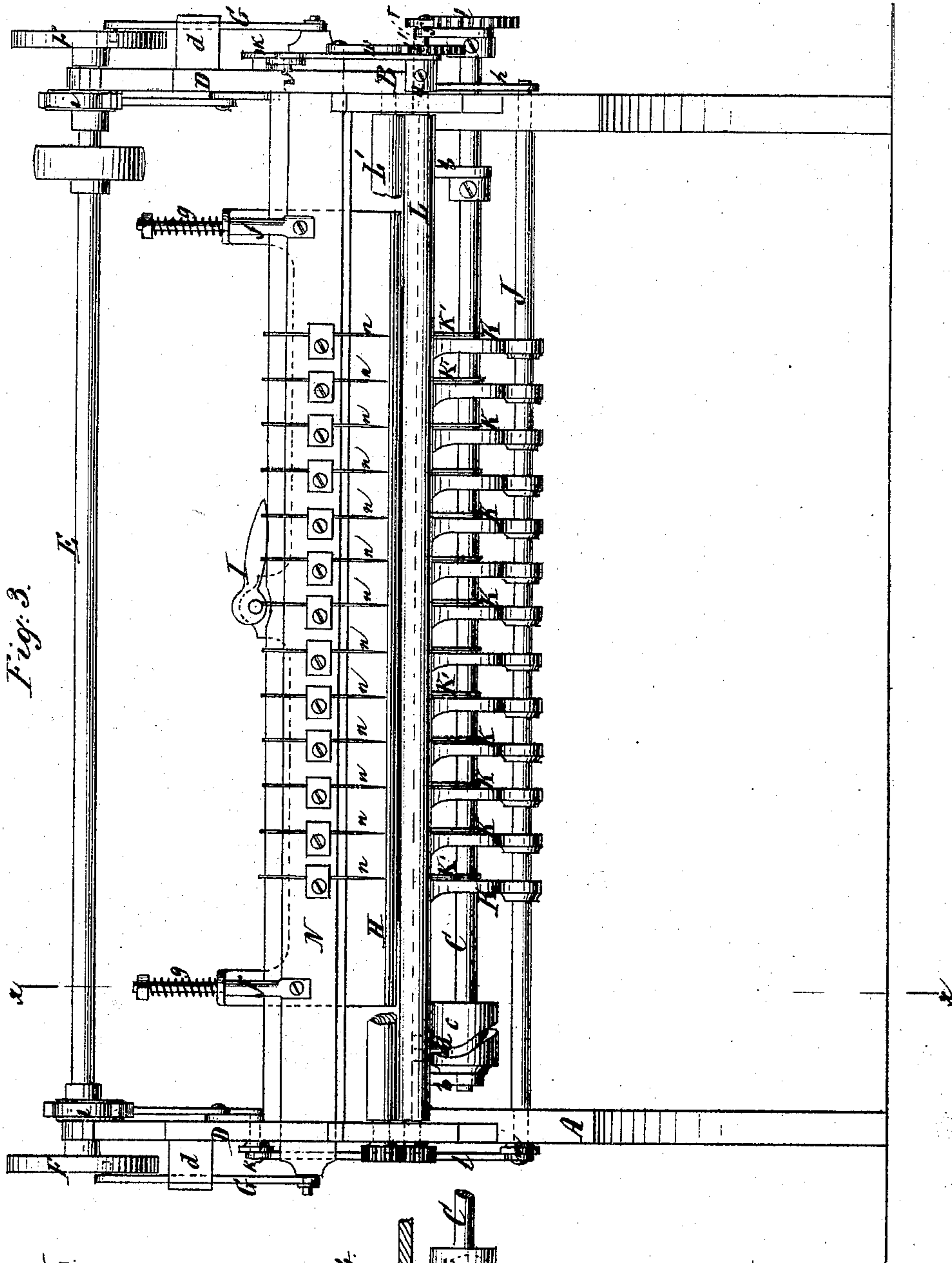
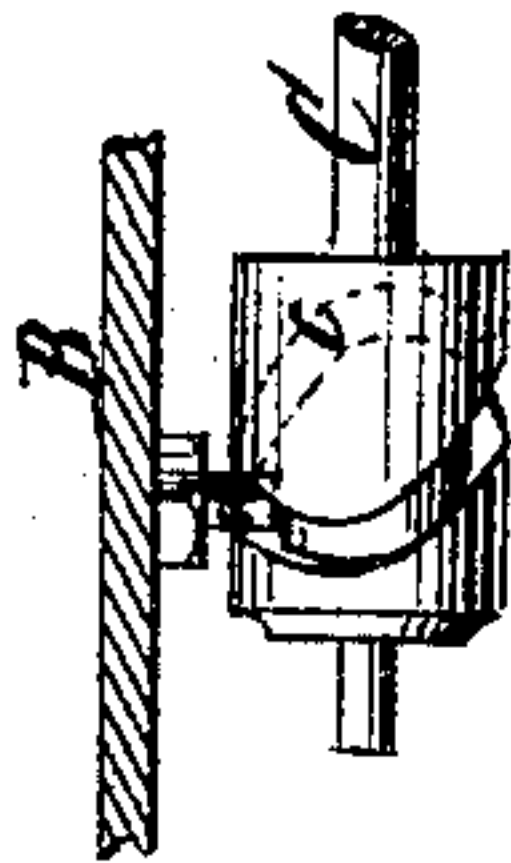


Fig. 3.

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Fig. 4.



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UNITED STATES PATENT OFFICE.

JOHN HAPPE AND WENZESLAUS NEWMAN, OF NEW YORK, N. Y.

IMPROVEMENT IN QUILTING-MACHINES.

Specification forming part of Letters Patent No. 130,715, dated August 20, 1872.

To all whom it may concern:

Be it known that we, JOHN HAPPE and WENZESLAUS NEWMAN, of the city, county, and State of New York, have invented a new and Improved Quilting-Machine; and we do hereby declare the following to be a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification, in which drawing—

Figure 1 represents an end view of this invention. Fig. 2 is a transverse vertical section of the same in the plane $x x$, Fig. 3. Fig. 3 is a front view of the same. Fig. 4 is a detached view of the mechanism for imparting to the needle-carriage a reciprocating motion.

Similar letters indicate corresponding parts.

This invention relates to a machine in which a carriage is used which contains a needle-bar carrying a series of needles, a presser-foot, and a rock-shaft on which are mounted a series of shuttle-carriers, in combination with a pair of feed-rollers in front and a pair of drawing-rollers in the rear of the needle-bar. The needle-carriage receives a reciprocating traversing motion, while the material to be sewed passes through under the needles in a direct line, so that the stitches are made in zigzag lines. The driving-gear is attached to the needle-carriage, while the shaft which imparts motion to the needle-carriage has its bearings in hangers attached to the main frame, and is actuated by a slotted lever, which is secured to the needle-carriage and slides on a pin projecting from a lever-pawl which swings on said shaft.

In the drawing, the letter A designates the main frame of our machine, which is provided with guide-ways $a a$, between which is fitted the needle-carriage B. From the main frame extend two hangers, $b b$, which form the bearings for a shaft, C, on which is mounted a cam, c , that engages with a pin, d , projecting from the needle-carriage, so that, by revolving the shaft C, a reciprocating motion is imparted to the needle-carriage in the guide-ways a . From the ends of the needle-carriage rise two standards, D D, the upper ends of which form the bearings for the driving-shaft E. On the ends of this shaft are mounted cams F F, which en-

gage with studs projecting from slides G, which move up and down in suitable guides d secured to the standards D. The lower ends of said slides are connected to the needle-bar N, which extends through guide-slots e in the standards D, so that, by revolving the driving-shaft E, a rising-and-falling motion is imparted to the needle-bar. In this needle-bar are secured a series of needles, n , and from its top extend two rods, f , which form the guides for the presser-foot H. This presser-foot is depressed by springs g wound round the rods f , and it can be raised against the action of these springs by a cam-lever, I. Said presser-foot is perforated with a series of holes corresponding in number and position to the needles n . From the bottom surface of the needle-carriage extend two hangers, h , Fig. 1, which form the bearings for a shaft, J, on which are mounted the shuttle-carriers K. These shuttle-carriers move close to the shuttle-races K', and they straddle the cam-shaft C, and the shaft J receives an oscillating motion by means of eccentrics i , which are mounted on the oscillating shaft, and one of which connects by an intermediate rock-shaft, k , rod l , and crank m , with the shuttle-carrying shaft. (See Figs. 2 and 3.) On the outer end of the rock-shaft k is mounted a bell-crank lever, $o p$, (see Fig. 1,) one arm, o , of which connects by a sliding lever, q , with a pin, r , which projects from a lever-pawl, s , said lever being provided with a slot, so that it can slide on the pin r as the needle-carriage receives a reciprocating motion. The lever-pawl s swings on the cam-shaft C, and the pawl engages with a ratchet-wheel, t , mounted on said shaft, so that when the driving-shaft revolves a step-by-step motion is imparted to the cam-shaft C. From the arm p of the bell-crank lever $o p$ extends a sliding lever, u , which engages with a pin, v , projecting from a lever-pawl, w , which swings on a shaft, a' , on which is mounted the lower drawing-roller L. This pawl engages with a ratchet-wheel, b' , mounted on the end of the shaft a' , so as to impart to the drawing-roller a step-by-step motion. Said drawing-roller extends the entire length of the frame A, and it co-operates with the upper drawing-roller L', which is depressed by the action of springs c' , and which is geared together with the lower

drawing-roller, so that both their rollers receive a positive motion by the action of the lever-pawl *w*.

The material to be sewed is fed to the sewing mechanism through between rollers *M M'*, which are geared together and compressed by means of springs *d'*. These rollers receive no positive motion, and they simply serve to keep the material flat down upon the table or cloth-plate. In sewing quilts two sheets of muslin or other textile fabric are used with a layer of wadding interposed. The two sheets are fed to the rollers *M M'*, as indicated in Fig. 2, and just before they reach said rollers the wadding is spread on the lower sheet.

What we claim as new, and desire to secure by Letters Patent, is—

The cam *c* upon the shaft *C*, operating the needle-carriage through the pin *d* in combination with the shuttle-carriers *K*, needles *a*, presser-foot *H*, rock-shaft *J*, and the gear mechanism for actuating the feed, all arranged substantially as described.

This specification signed by us this 22d day of July, 1872.

JOHN HAPPE.

WENZESLAUS NEWMAN.

Witnesses:

CHAS. WAHLERS,

E. F. KASTENHUBER.