

No. 695,981.

Patented Mar. 25, 1902.

F. B. WILKINS.
WARP STOP MOTION FOR NARROW WARE LOOMS.

(Application filed Nov. 22, 1901.)

(No Model.)

2 Sheets—Sheet 1.

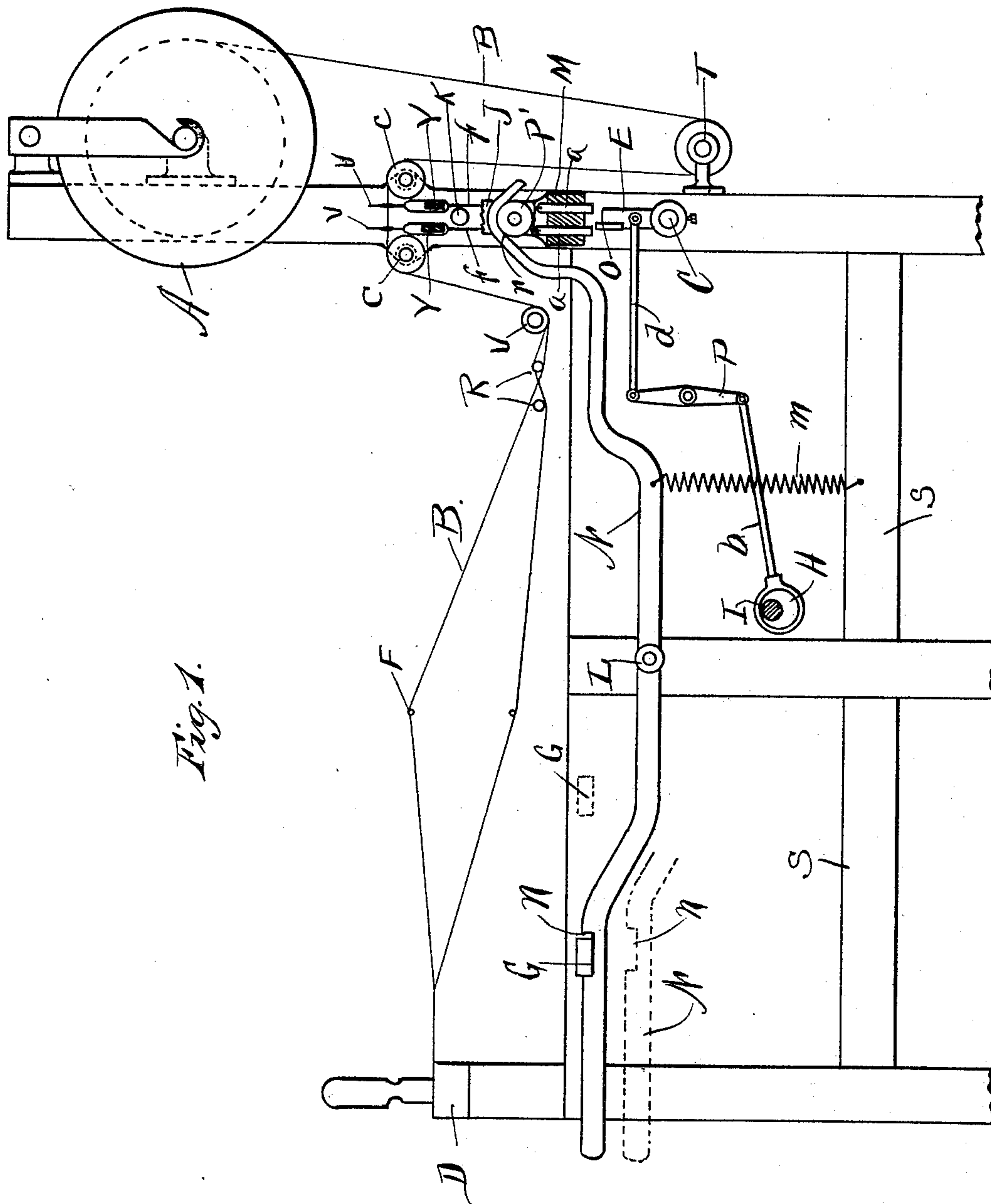


Fig. 1.

Witnesses.

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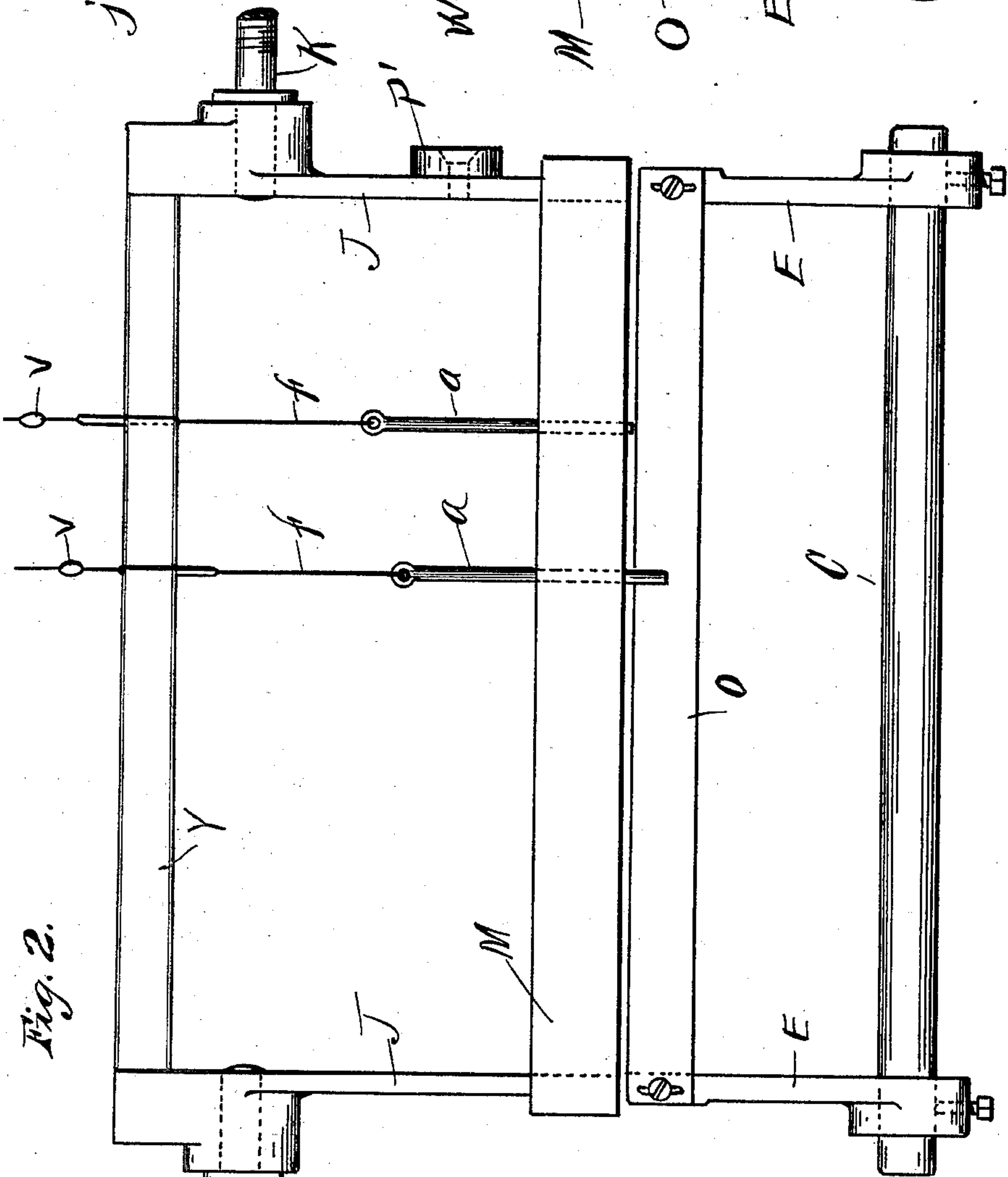
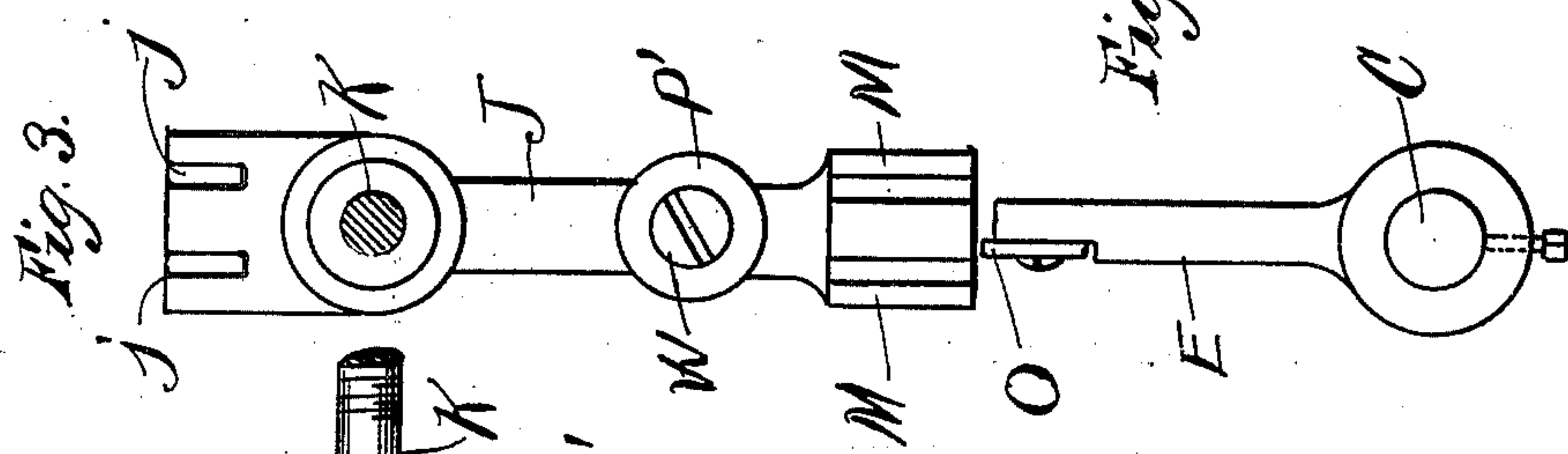
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UNITED STATES PATENT OFFICE.

FRED B. WILKINS, OF WOONSOCKET, RHODE ISLAND.

WARP STOP-MOTION FOR NARROW-WARE LOOMS.

SPECIFICATION forming part of Letters Patent No. 695,981, dated March 25, 1902.

Application filed November 22, 1901. Serial No. 83,263. (No model.)

To all whom it may concern:

Be it known that I, FRED B. WILKINS, a resident of the city of Woonsocket, in the county of Providence and State of Rhode Island, have
5 invented certain new and useful Improvements in Warp Stop-Motions for Narrow-Ware Looms; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the
10 accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to the warp stop-motion for narrow-ware fabric or common wide
15 single-web looms. Its object is to provide a stop-motion to be operated by the warp at the back of the loom with an improved method of connecting the same with the belt-shipper at the front of the loom. It is fully described
20 and illustrated in this specification and the annexed drawings.

Figure 1 represents the end view of a loom with the near end frame removed. Fig. 2 shows a back view of the two swinging frames
25 of the stop-motion. Fig. 3 is an outside view of two of the arms that hold the swinging frames. Fig. 4 shows one of the drop-wires.

The construction and operation of the improvement are as follows:

30 S represents the farther frame, A the warp-beam, B the warp-threads, which run from the warp-beam A down under the lower roll T, then up over the two rolls *c c* and down under the roll V, and from thence through
35 the lease-rods R, harnesses F, to the breast-beam D.

N is a lever held to rock on a pivot L, fast in the end frame of the loom, and extends across from front to back of the loom and
40 connects the drop-motion on the back with the belt-shipper G near the front of the loom. A shaft C, that extends across the back of the loom, has bearings at each end in the end frames of the loom. This shaft C has a rock-
45 ing motion imparted to it by an eccentric-cam H, fast on the cam-shaft I, through the lever P, also pivoted to the end frame and connected at its lower end by the rod *b* to the cam H and at its upper end by a rod *d* to the arm
50 E, fast on the shaft C. A flat bar O is adjustably secured to the two arms E. (See Fig. 2.)

J J are swinging arms which are placed one at each end of the loom and held on studs K, fast in the end frames. (See Figs. 2 and
55 3.) Slots *j j* are made in the upper ends of the arms J to hold the bars Y, on which the healds that hold the drop-wires *a a* are strung, (see Fig. 1,) and at the lower ends three bars M M are held that extend from one arm J to
60 the other, leaving space between the bars for the drop-wires to hang. A roll P' is held on a stud W in one of the arms J (see Figs. 2 and 3) to operate the lever N when the bar swings. The end of the lever N is held over the roll
65 P' and is bent down both sides of the roll, forming a double incline *r*, with the roll in the center, so that if it moves either way it will raise the end of lever N by one incline
70 *r* or the other.

The front end of the lever N has a notch *n* made in it to retain the end of the belt-shipper G and prevent it from being drawn over by its spring (not shown) and casting off the
75 belt. A spiral spring *m* has one end attached to the lever N and the other end to the end frame to keep the lever from being moved by the jar of the loom.

The operation is as follows: In Fig. 1 there are two sets of drop-wires *a a* shown. These
80 are placed alternately to find room for them, and in weaving some fine goods it is necessary to have three or more sets of the drop-wires. The warp-threads B in passing from one of the rolls *c* to the other roll pass through the
85 eyes *v v* in the healds *f*, to which the drop-wires *a a* are attached, and so long as the threads are intact they will hold the drop-wires *a a* up, so that their lower ends will not be struck by the bar O as it vibrates back
90 and forth below them; but if one of the warp-threads breaks it will let down its drop-wire, as shown in the one representing the front set in Fig. 2, and the bar O, striking the
95 dropped wire, will cause the arm J to swing and the roll P' to raise the end of the bar N by one of the inclines *r*, and the front end of the lever will be thrown down, as shown by the dotted lines, and release the shipper G,
100 so it will cast off the belt and stop the loom.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. The combination of a warp stop-motion

for looms of a rocker-shaft, means for rock-
ing said shaft, vertical arms held on said
shaft, a bar connecting the outer end of said
arms, swinging arms held on pivots over said
5 shaft, two rolls held above said swinging
arms to support the warp-threads, sets of
drop-wires held between bars on the swing-
ing arms, healds attached to said drop-wires
and having eyes to receive the warp-threads
10 and loops to receive the bars on the swinging
arms, a roll held on one of said swinging
arms, a lever held on a pivot in the frame
and extending from the front to the back of
the loom, a double incline on the back end of
15 said lever, a notch in the front arm to hold
the belt-shipper, substantially as described.

2. In a warp stop-motion for looms, the
combination of a series of drop-wires held on
bars on swinging arms, a roll held on one of

said swinging arms, a lever pivoted on the 20
end frame and having a double incline at one
end to receive said roll and connected with
the belt-shipper, a rocker-shaft held in bear-
ings in the end frames, arms fast in said
rocker-shaft and connected together by a bar, 25
a lever pivoted on said frame connected at
its upper end with the arm on the rocker-
shaft and its lower end with an eccentric-cam
on the cam-shaft, and said eccentric, sub-
stantially as described. 30

In testimony whereof I have hereunto set
my hand this 15th day of November, A. D.
1901.

FRED B. WILKINS.

In presence of—

BENJ. ARNOLD,
HOWARD E. BARLOW.