

No. 695,983.

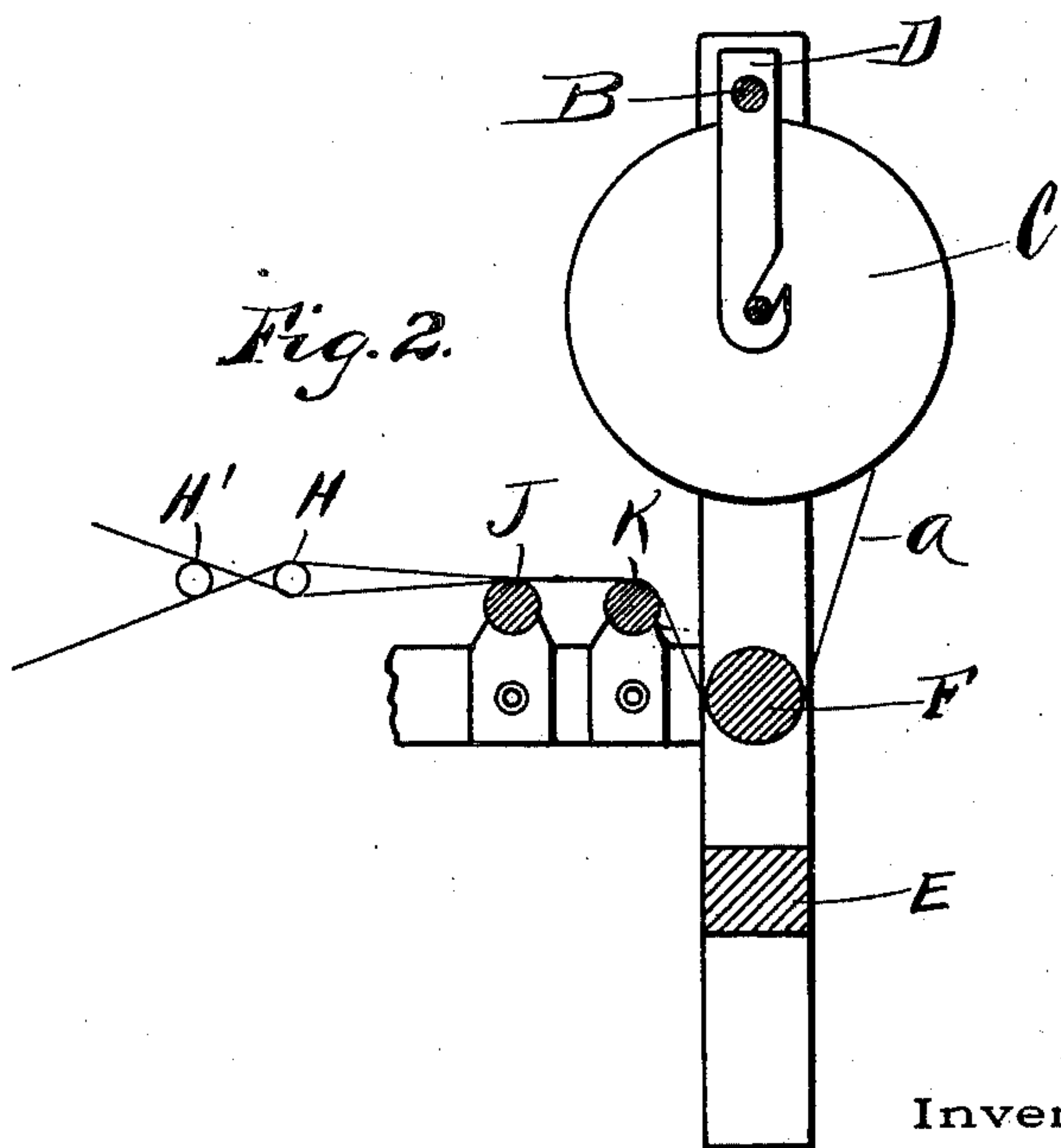
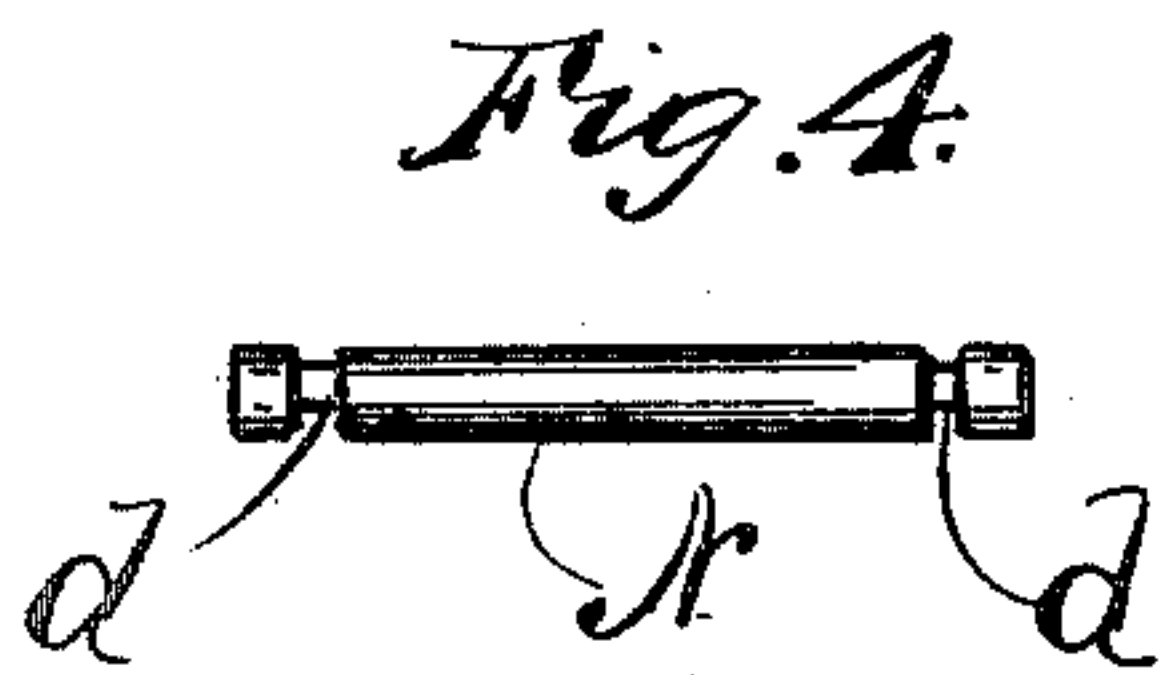
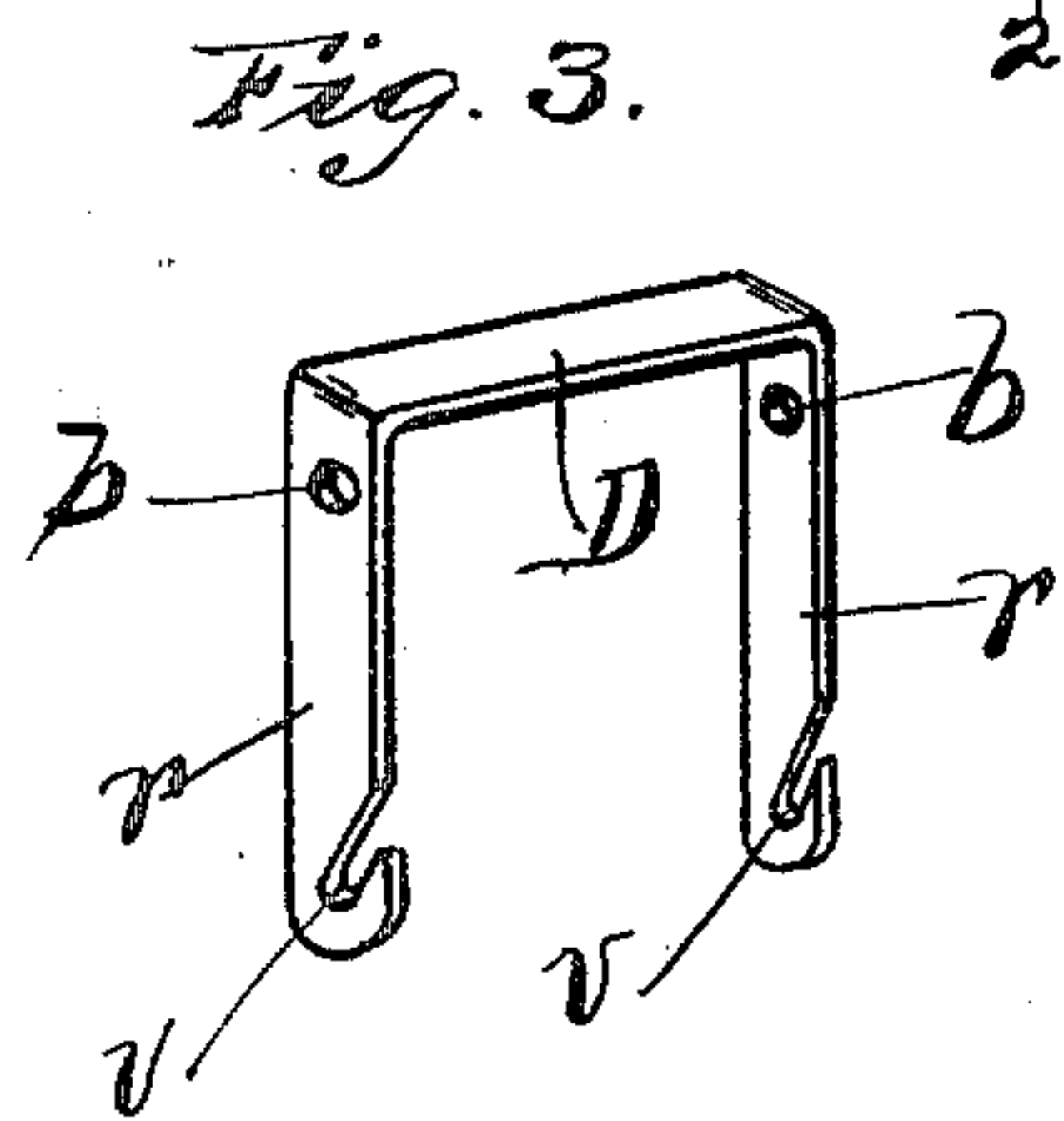
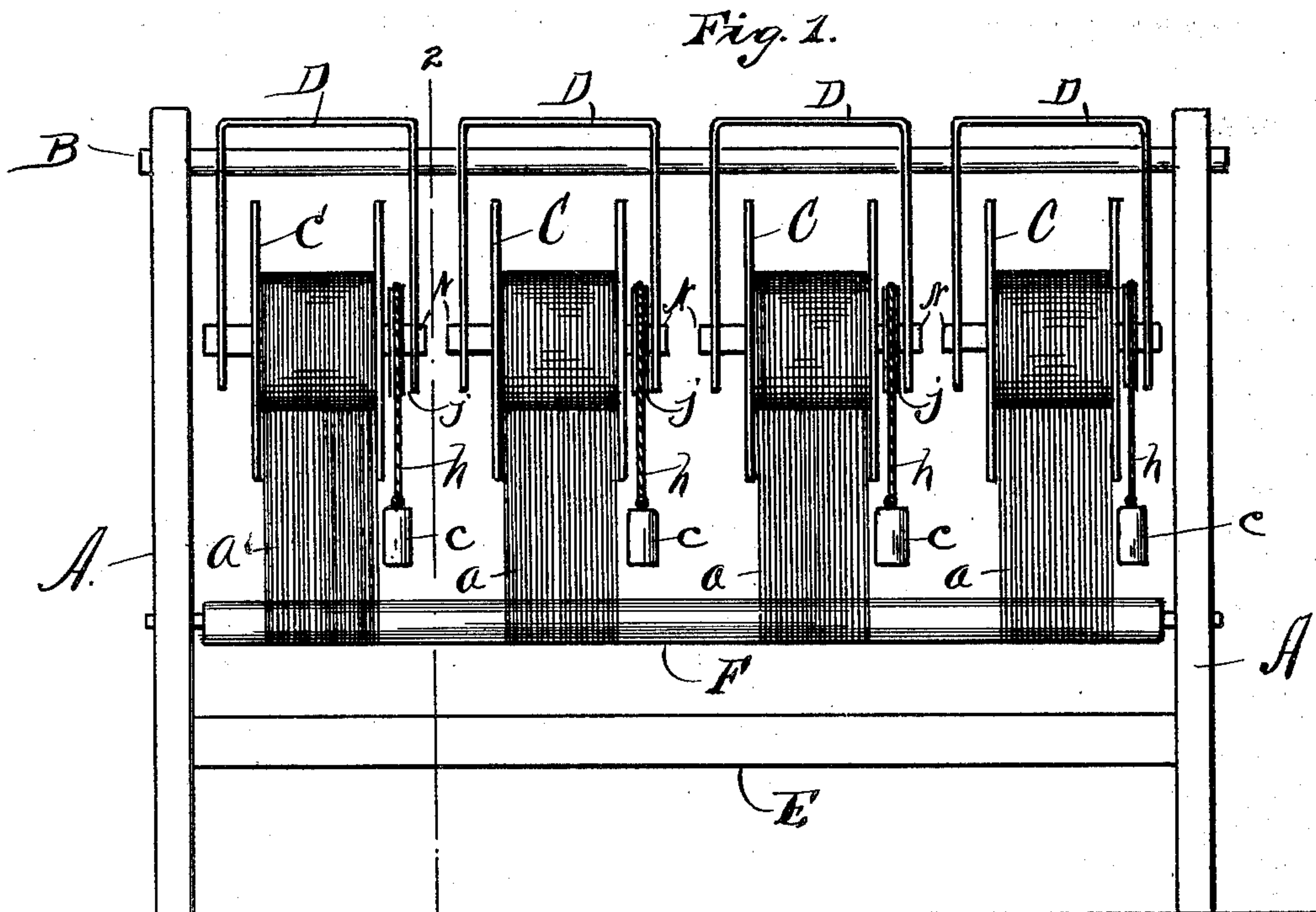
Patented Mar. 25, 1902.

F. B. WILKINS.

WARP BEAM SUPPORT FOR NARROW WARE LOOMS.

(Application filed Nov. 22, 1901.)

(No Model.)



Witnesses.

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UNITED STATES PATENT OFFICE.

FRED B. WILKINS, OF WOONSOCKET, RHODE ISLAND.

WARP-BEAM SUPPORT FOR NARROW-WARE LOOMS.

SPECIFICATION forming part of Letters Patent No. 695,983, dated March 25, 1902.

Application filed November 22, 1901. Serial No. 83,265. (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-Beam Supports 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 accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to what are known as
15 "narrow - ware" looms used for weaving tapes, ribbons, and other like fabric. It refers especially to the manner of supporting the warp beams or spools that contain the warp-threads. Its object is to so construct the parts of the loom that holds the spools or
20 warp-beams that where there are several in a loom, as is the case in narrow-ware looms, any one of them can be taken out for renewal or otherwise manipulated without disturbing the other spools, and also to so hold them
25 that they can have a slight swinging motion, so as to respond in a measure to the motion of the harness and of the lathe in beating up the filling and so prevent the breaking of the warp-threads. It is fully described and illustrated in this specification and the annexed drawings.

Figure 1 represents an elevation of the back of the loom with my invention applied. Fig.
30 2 is a vertical section taken on line 2 2 in Fig. 1, showing the position of the warp-spools and the rolls. Fig. 3 is a perspective view of one of the swinging frames that hold the warp-spools. Fig. 4 represents one of the short shafts on which the warp-spools are held in
40 the swinging frame.

The construction and operation of the improvement are as follows:

A A are the end frames of the loom, which are carried up high enough to hold the spools
45 C C, that contain the warp, above the level of the web in the loom. A bar B is held at each end in the upper ends of the frames A A to support the spool-frames D.

The construction of the spool-frames can be
50 seen in Fig. 3. It consists of a flat top bar D with a vertical bar *r* at each end, and bearings *v v* are made near the lower ends of the

vertical bars to receive the spool-shafts N, and notches are cut in from one side in each bearing *v* to allow the shaft to be put in and
55 taken out when changing the spool.

The spool-shaft N, which is seen in Fig. 4, is a plain round bar of a proper length to a little more than reach through the two sides
60 *r r* of the frames D, and journals *d d* are turned in the shaft near each end to fit in the bearings *v v* in the frame D.

The warp-spools C consist each of two circular plates, attached one to each end of a
65 barrel with a hole through its center to receive the shaft N, and the spool also has a pulley *j* on one side to receive a strap or cord *h*, on one end of which a weight *c* is hung in the usual way with warp-beams to make friction to keep the warp taut while weaving. A
70 series of these spool-frames D are held on the bar B, which passes through a hole *b* in each side of the frame D, near the top, and on this bar B the frames are free to swing. There is one of the frames D with its spools C held on
75 the bar B for each strip of tape that the loom is intended to weave. In operation the threads *a* from each spool C pass from the spools down under the roll F and then up over the rolls J and K (see Fig. 2) and over and under the
80 lease-rods H H' to the harnesses, (not shown,) the threads from each spool forming the warp for a strip of tape or other narrow fabric.

The main advantages of my improvement are that as these spools are now held on a bar
85 rigidly held in the loom-frame the threads are liable to break from the sudden motion of the lathe and harnesses when the loom is running rapidly—often as many as three hundred
90 picks per minute—because the spools are too rigidly held to respond in the least to these motions; but by allowing the spools to swing a little this breaking of the warp-threads is mainly prevented. Another advantage is, as
95 the spools are usually held in these looms, all on one bar, if any one runs out and has to be replaced it is necessary to disturb all of the other spools to get it off and put on the full one, but being held separately one can be removed at any time without disturbing the
100 others.

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

1. In a loom the combination of a bar held at each end in the end frames of the loom, a series of pendent warp-spool frames held to swing independently of each other on said
5 bar, spools held to turn on shafts in said frames, and the said shafts, substantially as described.

2. In a loom the combination of a bar held at each end in the end frames of the loom, a
10 series of pendent warp-spool frames held to swing independently of each other on shafts

held in said frames, the said shafts, and a strap and weight for each pulley, substantially as described.

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.