

No. 822,818.

PATENTED JUNE 5, 1906.

F. BENZ, SR.
TAKE-UP MECHANISM FOR LOOMS.
APPLICATION FILED MAR. 27, 1903.

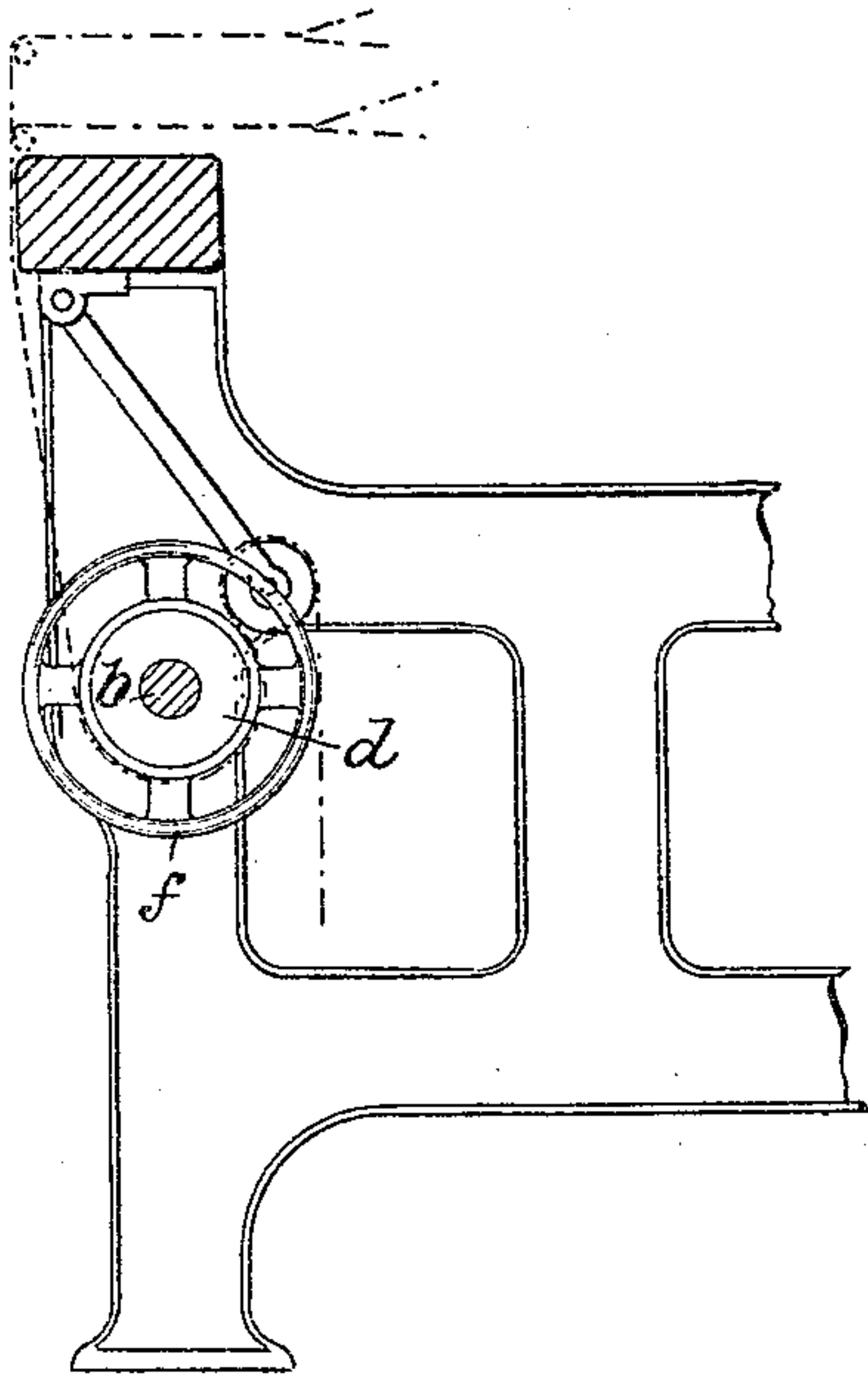


Fig. 1.

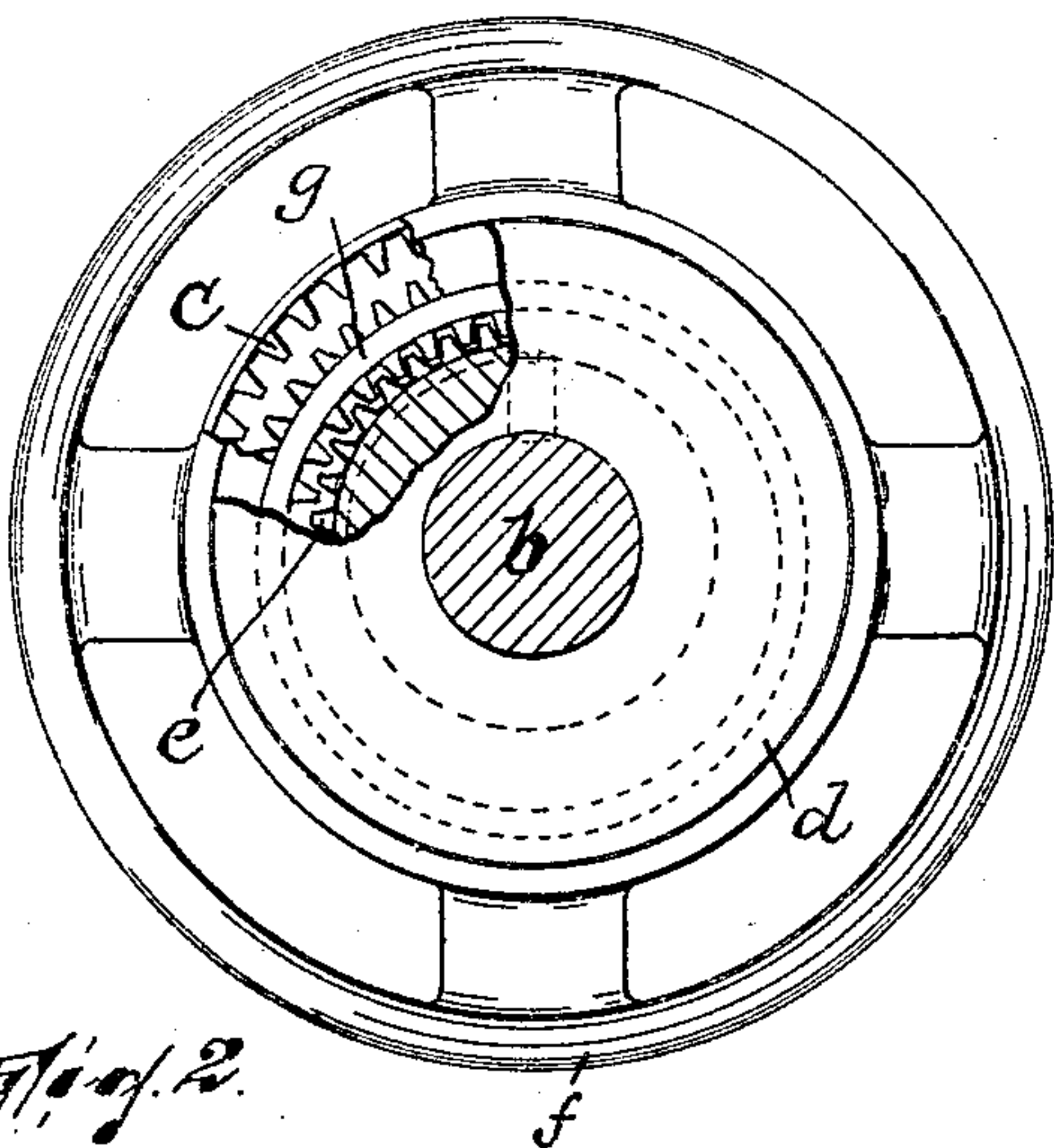


Fig. 2.

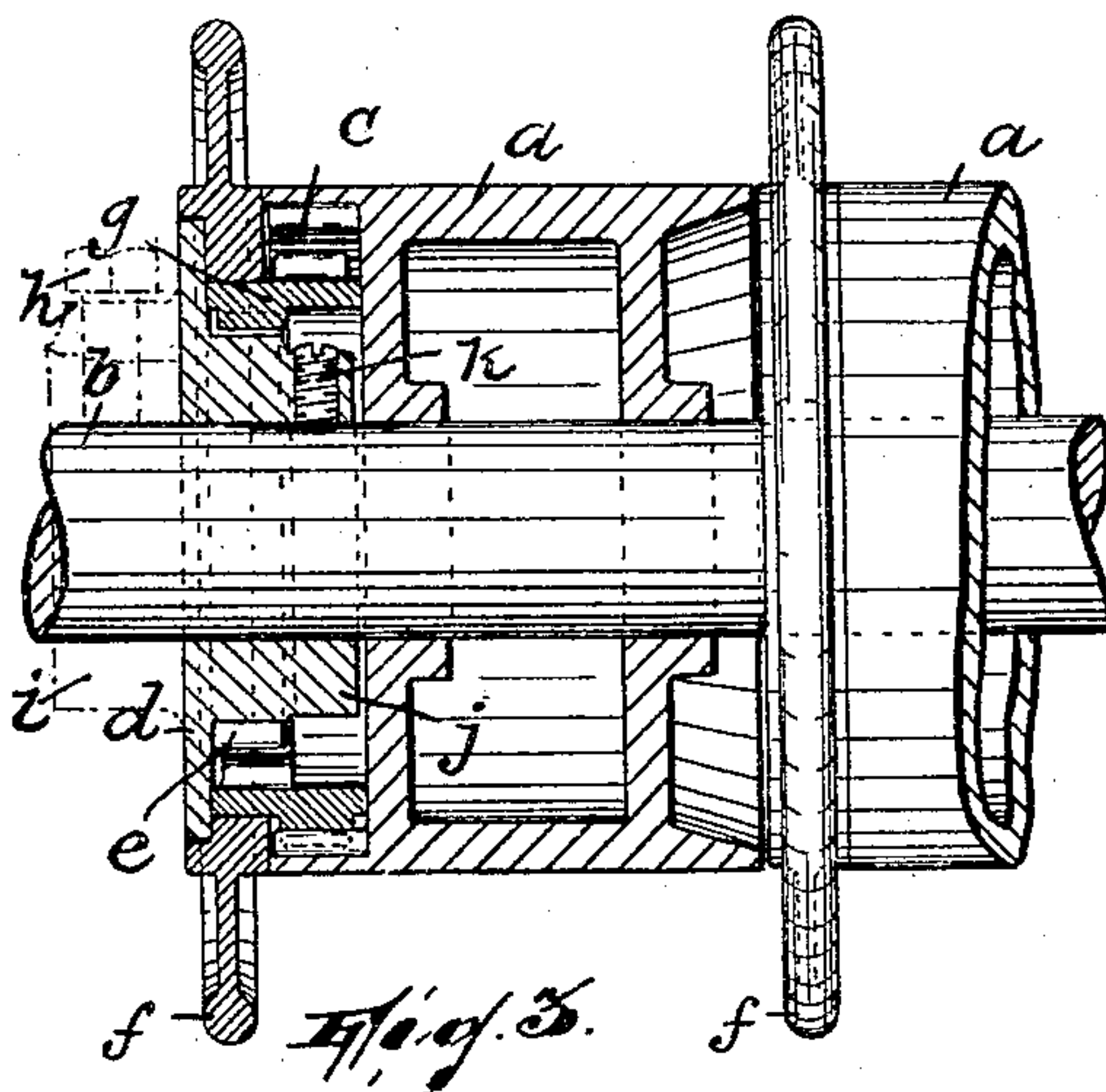


Fig. 3.

WITNESSES:

Wm. D. Bell.
Robert J. Pollitt.

INVENTOR,

Frederick Benz, Sr.,
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UNITED STATES PATENT OFFICE.

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TAKE-UP MECHANISM FOR LOOMS.

No. 822,818.

Specification of Letters Patent.

Patented June 5, 1906.

Application filed March 27, 1903. Serial No. 149,785.

To all whom it may concern:

Be it known that I, FREDERICK BENZ, Sr., a citizen of the United States, residing at Haledon, county of Passaic, and State of New Jersey, have invented a certain new and useful Improvement in Take-Up Mechanisms for Looms; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

This invention relates to looms, and it has reference particularly to the take-up mechanism of narrow-ware looms.

The invention is applied especially to a narrow-ware-loom take-up mechanism now in common use and comprising, as shown, the accompanying drawings, wherein—

Figure 1 shows the improved take-up mechanism applied to a loom. Fig. 2 is a view partly in side elevation and partly in section, and Fig. 3 is a view partly in front elevation and partly in section.

The take-up or sand-roller *a*, the shaft *b* on which said roller is free to turn, an internal gear *c*, forming a part of the sand-roller and arranged concentric with the shaft, a disk *d*, formed with an external gear *e*, also concentric with the shaft, said disk being fast on and also concentric with the shaft, a hand-wheel *f*, having an eccentric opening and arranged to turn on the disk, and integrally-formed internal and external gears *g* engaging and each made a little smaller than the aforesaid gears *c*, said integral gears being fitted to the eccentric opening in the hand-wheel and adapted upon the turning of the same manually and because of their relatively reduced size to cause the sand-roller while being driven by the shaft to either recede or advance slightly, according as desired and as the web is taut or slack.

The construction and operation of this mechanism are set forth in United States Patent No. 595,104.

As indicated in dotted outline in Fig. 3 of the drawings hereof, the disk *d* and gear *e*, formed therewith, are secured to the shaft by a set-screw *h* set in a hub *i*, projecting out-

wardly from the disk. This hub occupies considerable room and, as has been demonstrated by the development of the present invention, involves a waste of space which, especially where there are a considerable number of take-up mechanisms on the same shaft *b*, might be utilized to accommodate more of said mechanisms or wider ones and hence to that extent make possible an increase in the product of each loom either as to the width of each ribbon or even as to the number of ribbons.

The present invention contemplates eliminating this hub entirely and instead providing a boss *j* on the side of the gear *e* away from the disk. This boss carries a set-screw *k*, which takes against the shaft to secure the gear and disk fast thereon. This arrangement involves inclosing the boss in the otherwise unused inclosure formed in the sand-roller, so that thus in a group of take-up mechanisms considerable space is economized.

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

The combination of a rotary shaft, take-up rollers having internally-toothed gears journaled on said shaft, hand-wheels alternating with and abutting against the adjacent ends of said rollers and each having an eccentric opening, devices, each comprising an integral disk, gear and boss relatively arranged in the order named, secured by their bosses on the shaft with their boss sides toward the same end of the shaft, each disk forming a concentric journal for a hand-wheel and having its outer face flush with the corresponding face thereof, and internally and externally toothed gears each journaled in the opening of a hand-wheel and having its internal teeth in mesh with the teeth of the corresponding disk-gear and its exterior teeth meshing with the gear-teeth of the corresponding roller, substantially as described.

In testimony that I claim the foregoing I have hereunto set my hand this 24th day of March, 1903.

FREDERICK BENZ, SR.

Witnesses:

JOHN W. STEWARD,
JAMES B. NEWTON.