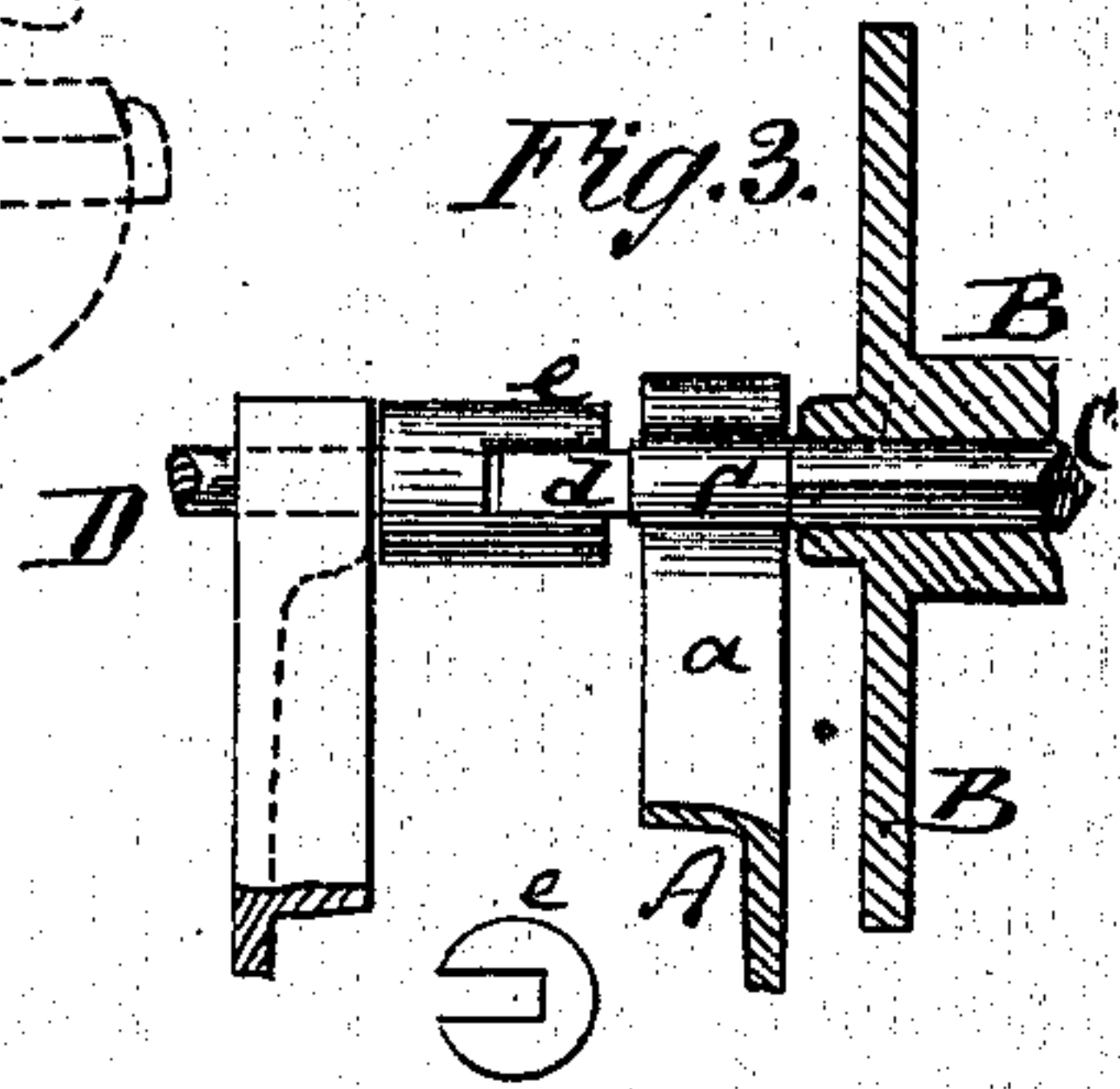
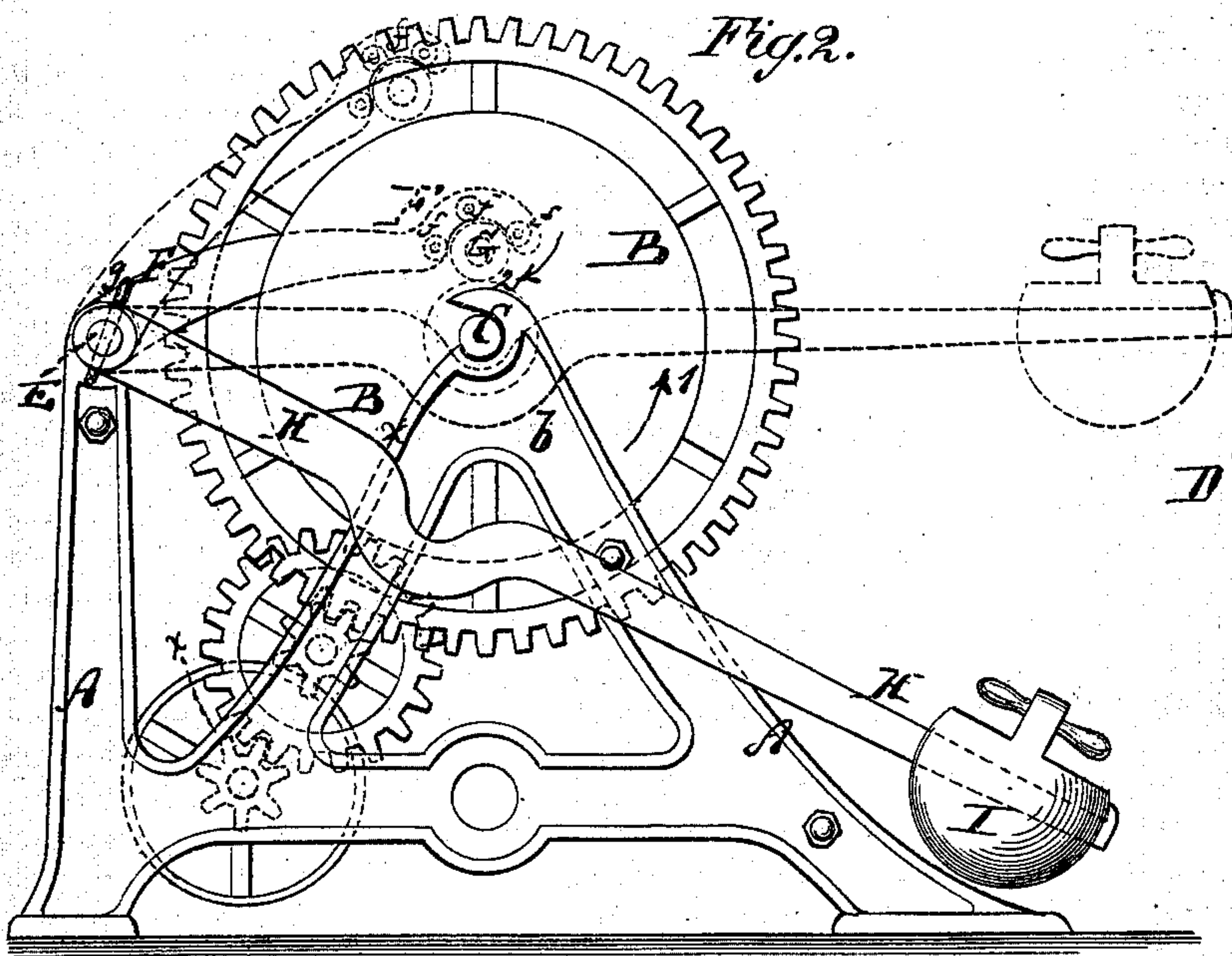
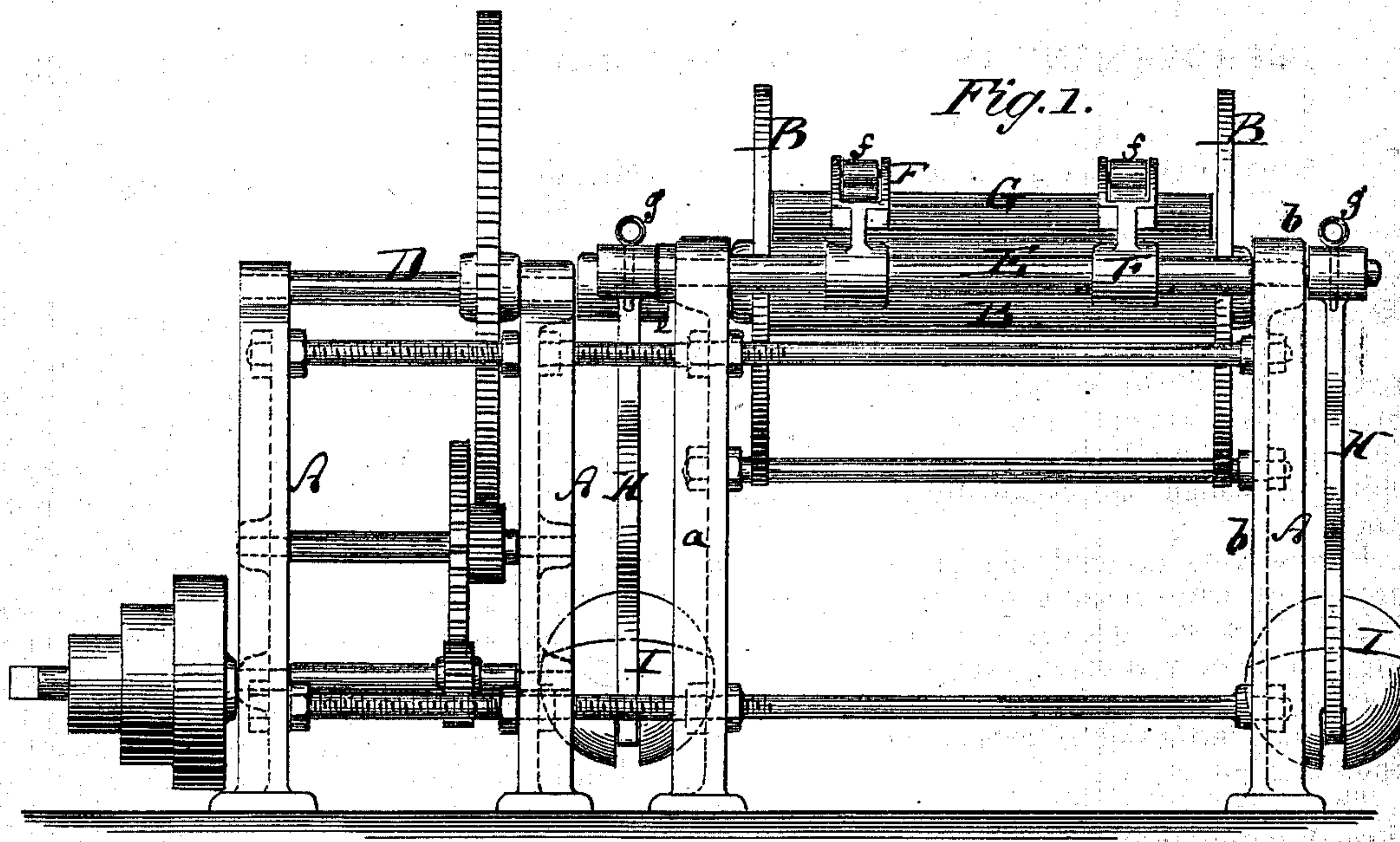


J. SHORT.

Thread-Dressing and Winding-Machines.

No. 139,521.

Patented June 3, 1873.



Witnesses:

John Becker
Saginaw

Inventor:

PER

J. Short
Munnell
Attorneys.

UNITED STATES PATENT OFFICE.

JAMES SHORT, OF NEW BRUNSWICK, NEW JERSEY, ASSIGNOR TO HIMSELF
AND R. N. WOODWORTH, OF NEW YORK, N. Y.

IMPROVEMENT IN THREAD DRESSING AND WINDING MACHINES.

Specification forming part of Letters Patent No. **139,521**, dated June 3, 1873; application filed
December 31, 1872.

To all whom it may concern:

Be it known that I, JAMES SHORT, of New Brunswick, in the county of Middlesex and State of New Jersey, have invented a new and Improved Thread Dressing or Winding Machine, of which the following is a specification:

Figure 1 is an end elevation of my improved thread dressing or winding machine. Fig. 2. is a side elevation of the same, and Fig. 3 a detail top view, partly in section, of a portion of the same.

Similar letters of reference indicate corresponding parts.

The object of my invention is to furnish to thread manufacturers an improved thread-winding machine; and it consists in a certain construction and arrangement for facilitating the connection of the axle of the spool or thread-beam with the driving-shaft and its removal from the machine; in the provision for ready connection and disconnection of the weighted arms from those carrying friction-rollers and co-acting with a loose thread-pressing roller, as hereinafter fully described.

In the accompanying drawing, the letter A represents the frame of my improved winding-machine or winding attachment to a thread-dressing machine. This frame is made of metal, wood, or both, of proper size and strength to support the parts of the machine pertaining to this invention. B is the beam or spool around which the thread is to be wound. This beam is made hollow to receive a prismatic shaft, C, which hangs with its rounded portions that are formed near its ends, in the notched upper parts of standards *a b* of the frame A. One extreme end, *d*, of this shaft C is squared and fits into a square mortise, *e*, formed in the end of the shaft D, by which motion is conveyed to said shaft C, and thereby also to the beam B that surrounds it. The mortise in the end of the shaft D is open at one side, and whenever the open portion is brought in line with the notches in the standards *a b*, the shaft C with its beams, can be drawn forward and down the inclined surface *x* of the standards until the beam or roll rests on the floor, (or other support provided for it,) when the shaft can be withdrawn

from the beam, so that the latter may finally and conveniently be removed from the winding apparatus and conveyed to the loom or other designated place. Rotary motion is imparted to the shaft D by crank or otherwise. At one side of the frame A is hung a pin or spindle, E, parallel to the shafts C D, and provided with projecting arms F F, whose rounded ends carry friction-rollers *ff*. G is a roller of suitable size, weight, and material, and about as long as the beam B between its flanges, and is placed upon the beam and beneath the friction-rollers *f*, of the arms F, as is fully indicated in Fig. 2. H H are other arms projecting from the spindle E, and provided with weights I I, which weights serve to draw the arms F upon the roller G, and press the latter upon the beam B.

When thread is being wound upon the beam, the beam is revolved in the direction of the arrow 1, Fig. 2, and at the same time the roller G will be revolved in the direction of the arrow 2 of the same figure, and will thereby tend to retard the application of the thread—that is to say, prevent the loose winding of the same. The weights I at the same time serve to press the roller G down upon the thread, allowing it, however, to be crowded upward gradually by the thread that accumulates on the beam; and thus to be moved from the lower position, in which it is shown by dotted lines in Fig. 2, into the upper position dotted into the same figure.

In practice, I provide an automatic apparatus for stopping the machine when the thread-beam or spool is filled, and simultaneously supporting the arms H so that the pins *g* may be removed. The friction-rollers *ff* facilitate the rotation of the roller G, and make the use of lubricating material unnecessary. I secure the arms H H upon the spindle E by means of removable pins or bolts *g*, to enable the arms F to be swung quite back clear of the beam, when it is necessary to remove the same, or else the arms F may be secured to the spindle E by such removable pins. The weights I may be made adjustable on the arms H, so that, by setting them, their effect on the roller G may be regulated. The machine may be made with but one arm F, and

one arm H, and operate substantially to the same effect.

I am aware that friction-rollers have been previously employed, in combination with a drawing-roll, and do not therefore claim such application; but

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

1. The axle C of the thread-beam B, made with rounded bearing parts, and with squared end *d*, in combination with notched bearings in standards *a b*, and the driving-shaft D provided with mortise *e*, substantially as and for the purpose specified.

2. The arms F, carrying friction-rollers *f*, and fixed on the shaft E, in combination with the weighted arms H mounted loosely on the

projecting ends of the shaft, and removable pins *g* for locking said parts together, in combination with the roller G and beam B, arranged as shown and described, for the purpose specified.

3. The combination with the spool B mounted on a removable spindle, the roller G placed above and resting on the spool and prevented from longitudinal movement by the flanges or disks of the spool, of the hinged arms F, provided with friction-rollers that bear on the body of the roller, and are retained against said rollers at all times by the weighted arms, as and for the purpose described.

JAMES SHORT.

Witnesses:

T. B. MOSHER,
C. SEDGWICK.