

No. 637,853.

Patented Nov. 28, 1899.

H. L. COWLES.
SPOOL FOR WEBS OF PAPER.

(Application filed Feb. 9, 1899.)

(No Model.)

Fig. 1

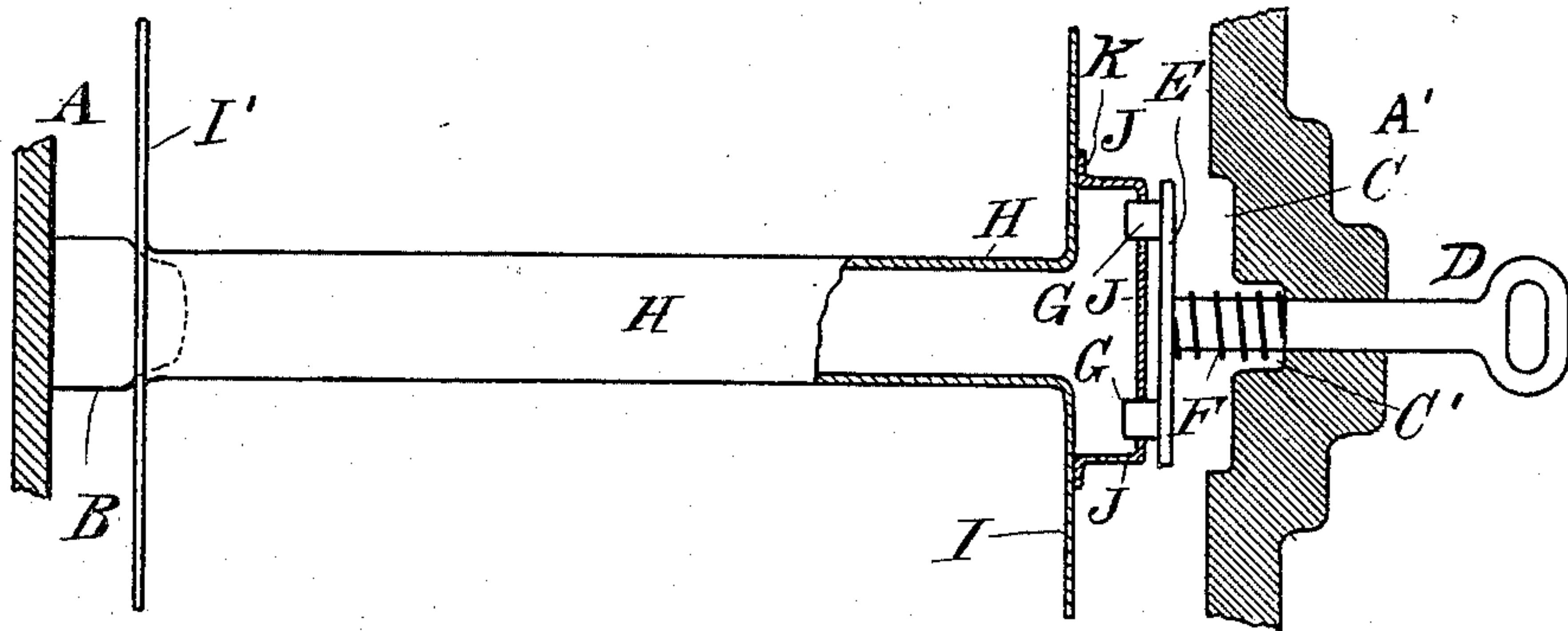


Fig. 4

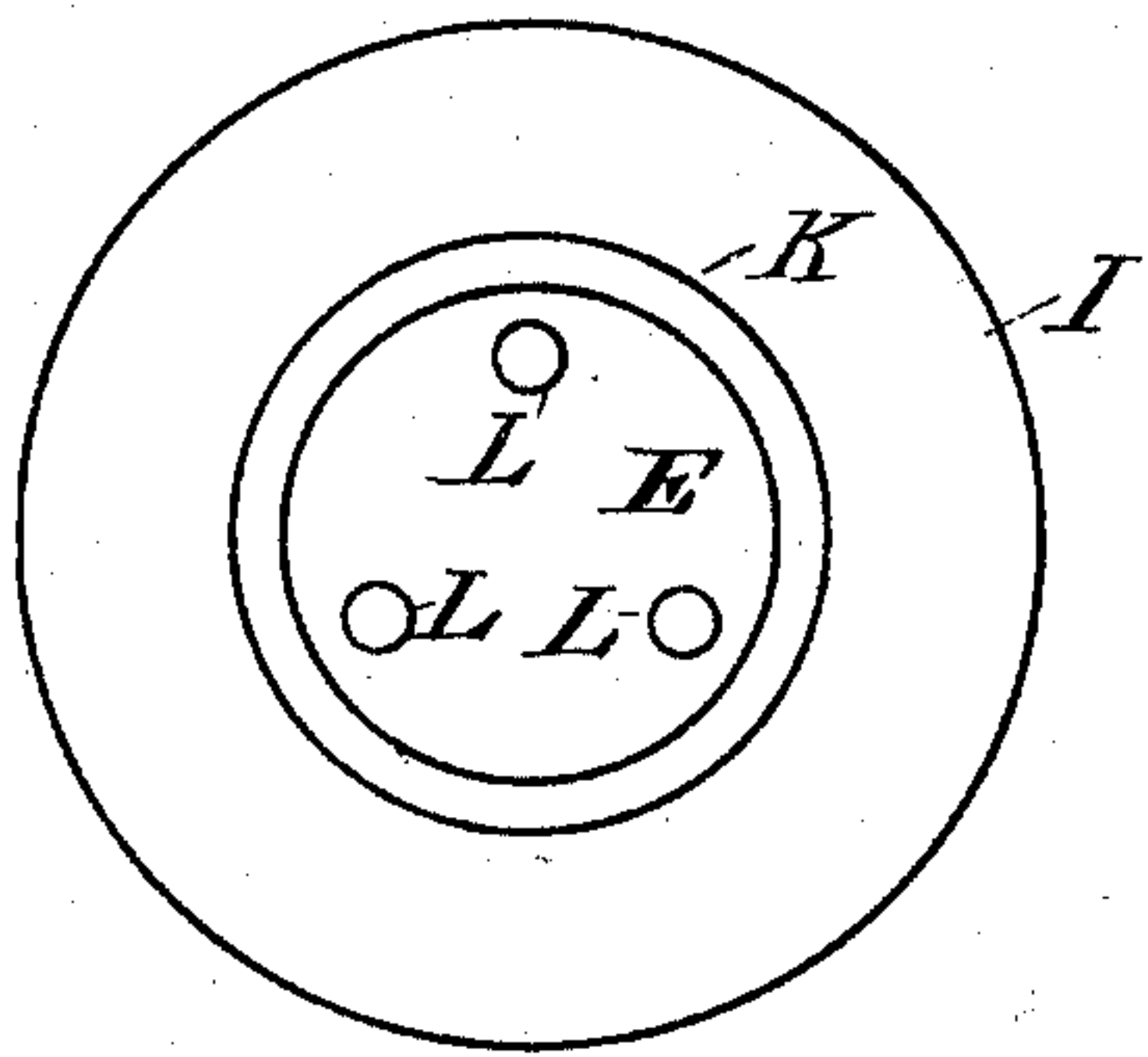


Fig. 3

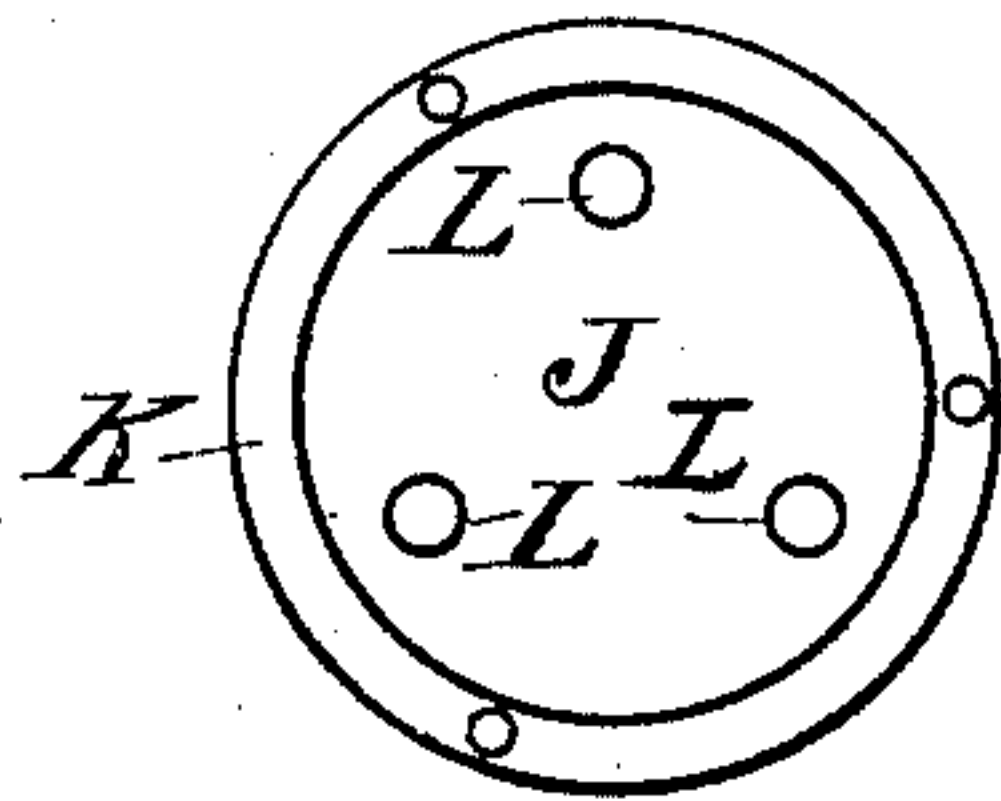
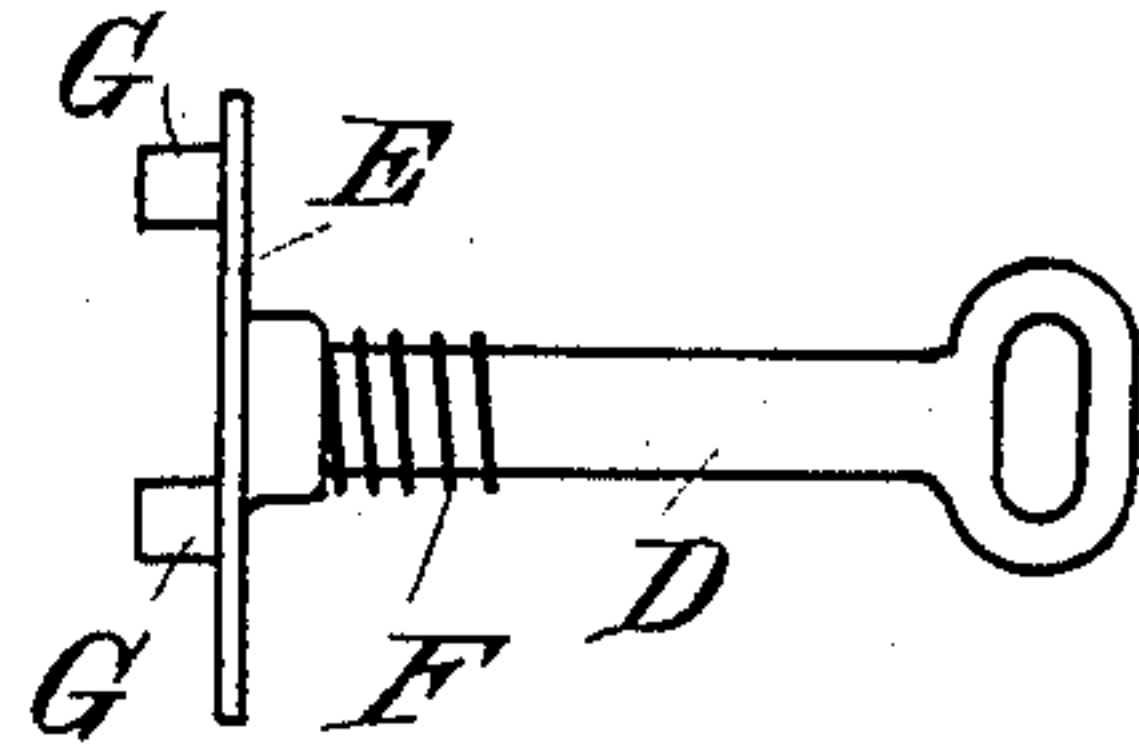


Fig. 2



WITNESSES:

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UNITED STATES PATENT OFFICE.

HARRY L. COWLES, OF NEW YORK, N. Y., ASSIGNOR TO THE NEW ERA COMPANY, OF SAME PLACE.

SPOOL FOR WEBS OF PAPER.

SPECIFICATION forming part of Letters Patent No. 637,853, dated November 28, 1899.

Application filed February 9, 1899. Serial No. 705,136. (No model.)

To all whom it may concern:

Be it known that I, HARRY L. COWLES, a citizen of the United States, residing in the borough of Manhattan, city of New York, county and State of New York, have invented a new and useful Device or Spool for Holding Webs of Paper and Like Material, of which the following is a specification.

My invention has for its object the construction of a device or spool for holding webs of paper or similar fabric adapted to be used upon a machine heretofore invented by John A. Jones, application for a patent whereon is now pending, it being Serial No. 692,661, filed October 4, 1898, called an "Automatic copying-press."

Referring to the drawings hereof, Figure 1 illustrates an elevation, partly in section, of the spool, showing portions of the frame of the machine. Fig. 2 illustrates a detail in elevation of that which I term the "spring-spindle." Fig. 3 is a face view of the perforated plate with which the spring-spindle engages. Fig. 4 is a face view of the end or disk of the spool to which the perforated plate shown in Fig. 3 is attached.

A and A' show two of the side pieces or frame of the machine. To the part marked A there is attached a projecting stud B, which has a shoulder, as shown. The part A' is recessed at C and also at C'.

D is a spindle adapted to slide loosely through a hole made in the side of the frame, as shown, and on its inner end is attached a circular plate E, (see Figs. 1 and 2,) between which plate and the shoulder made by the bottom of the recess C' there is arranged a spiral or other suitable spring F, so that the spindle D, carrying the plate E, is normally thrust inwardly toward the center of the machine. Upon the face of the plate E there are set as many studs G as may be desired. Three are shown in the drawings.

H illustrates the shaft of the spool, upon which a continuous web of paper or other suitable material is wound.

I I' are the flanges or disks at the ends of the spool. The hub or shaft of the spool is preferably hollow or at least recessed at its left-hand end.

J (see Figs. 1 and 3) is a cup-shaped plate,

the flange K of which is attached in any suitable manner to the side of the disk I, which forms part of the spool, and is preferably offset therefrom, as shown. This cup-shaped plate J has openings L, (see Fig. 3,) which coincide in location and size substantially with the pins or projections G on the plate E, so that the latter are adapted to enter into and interlock with the former.

The operation of the apparatus is as follows: The paper or other web is wound upon the spool in the usual manner. When the paper has been exhausted and it is desired to substitute a new spool in place of the empty one, the spindle D is caught hold of and pulled outwardly, during which operation the spring F will be compressed and the pins or studs G G removed from the openings in the cup-shaped plate J, whereby the spool will be rendered detachable from the machine, because the reduced point or apex of the stud B upon the other part of the frame A rests loosely within the hollow shaft of the spool, from which it can be easily removed. In fact, the spool will usually fall when the spindle is withdrawn, as stated.

The insertion of a new spool is a mere reversal of the operation above stated. The stud B is entered into the hollow shaft H of the spool. The spindle is then withdrawn and the spool adjusted so that the studs G will register with the holes L. The spindle is then released and the spring holds all the parts in their desired position during use. The plate E can either be loosely attached to the end of the spindle D, so that it will revolve thereupon, or the spindle D may revolve in the side frame A', through which it passes, as preferred.

It is obvious that changes may be made in the details of construction of the apparatus without departing from the essentials of the invention. I therefore do not limit myself to the details illustrated and described.

Having described my invention, I claim—

The combination, with a spool having disks or heads at each end and a hollow axis, of a shouldered rigid stud, the part beyond the shoulder being adapted to enter the hollow axis of the spool; a plate having a plurality of perforations therein attached to and offset

from the disk at the other end of the spool; a spindle mounted in a rigid support in such manner as to have longitudinal movement through said support, the outer end of said
5 spindle projecting beyond the support, whereby it may be manipulated; a plate attached to the inner end of the spindle, studs projecting from the face of said plate equal in number and location to the perforations in
10 the first-named plate on the spool; and a

spring encircling the spindle, adapted to actuate the same, for the purposes set forth.

Signed at New York, in the county of New York and State of New York, this 6th day of February, 1899.

HARRY L. COWLES.

Witnesses:

PHILLIPS ABBOTT,
EDGAR R. MEAD.