

W. Breitenstein. Filling Spools.

N^o 43,474.

Patented Jul. 12, 1864.

Fig. 1;

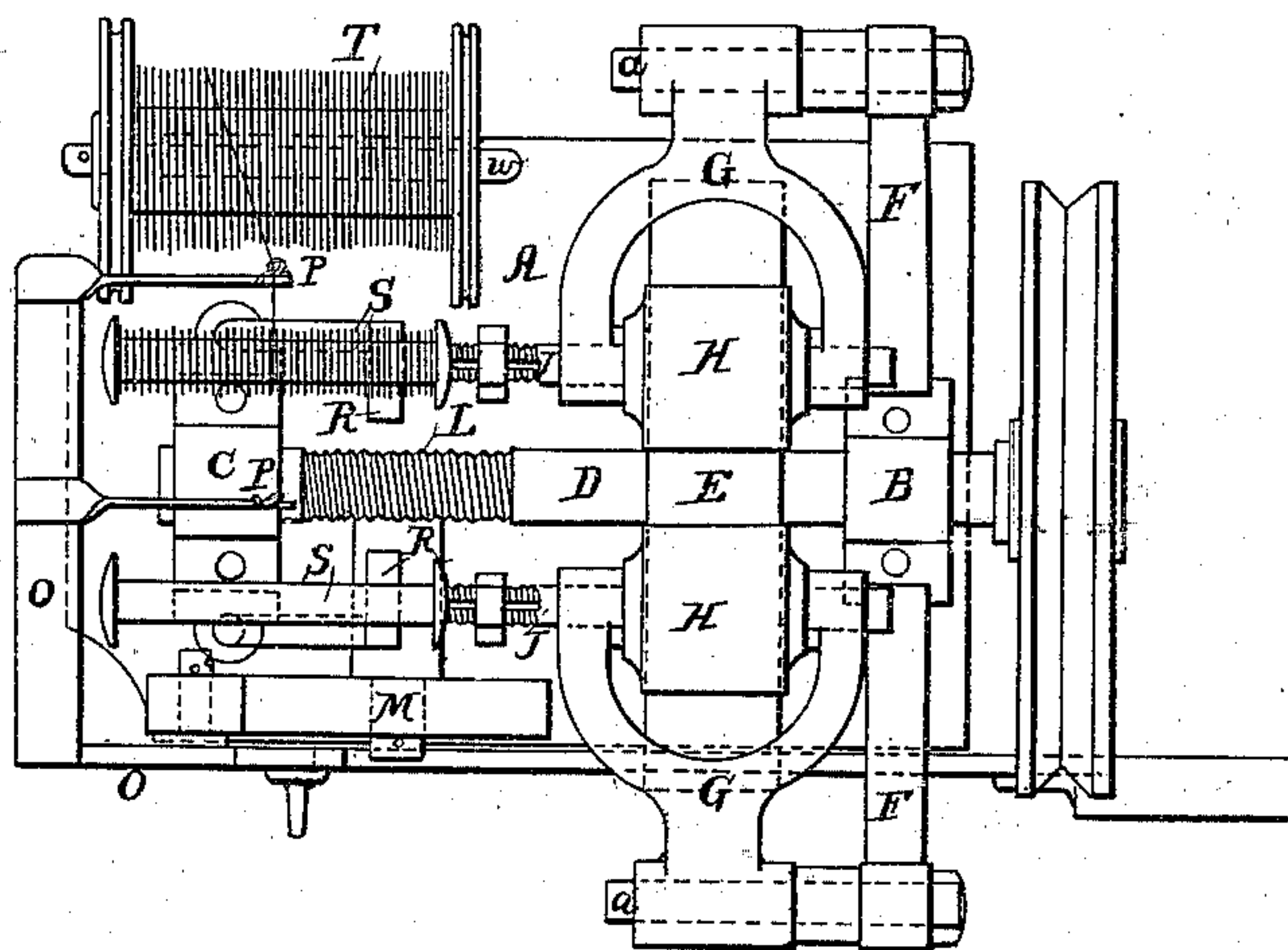


Fig. 3;

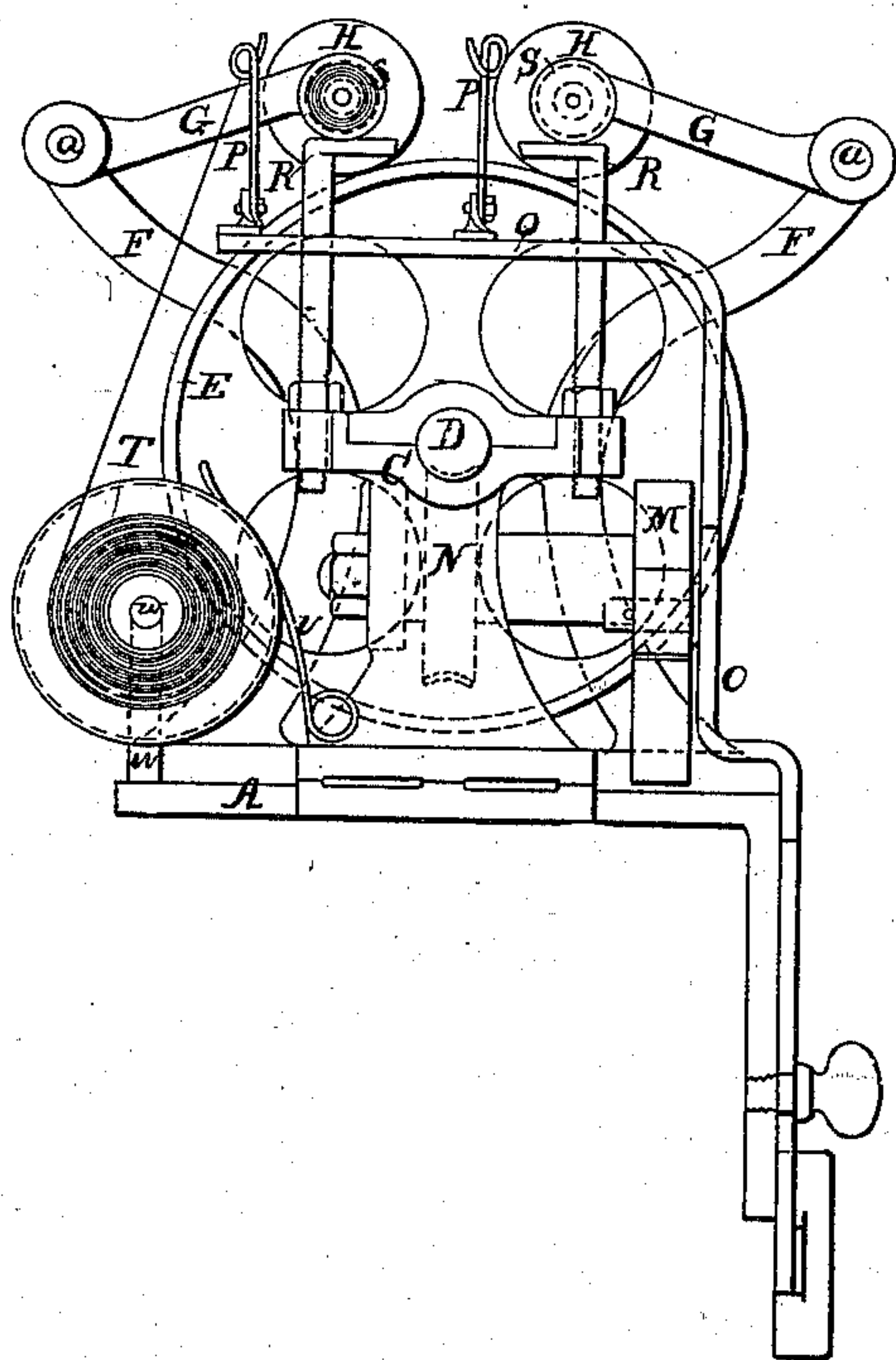
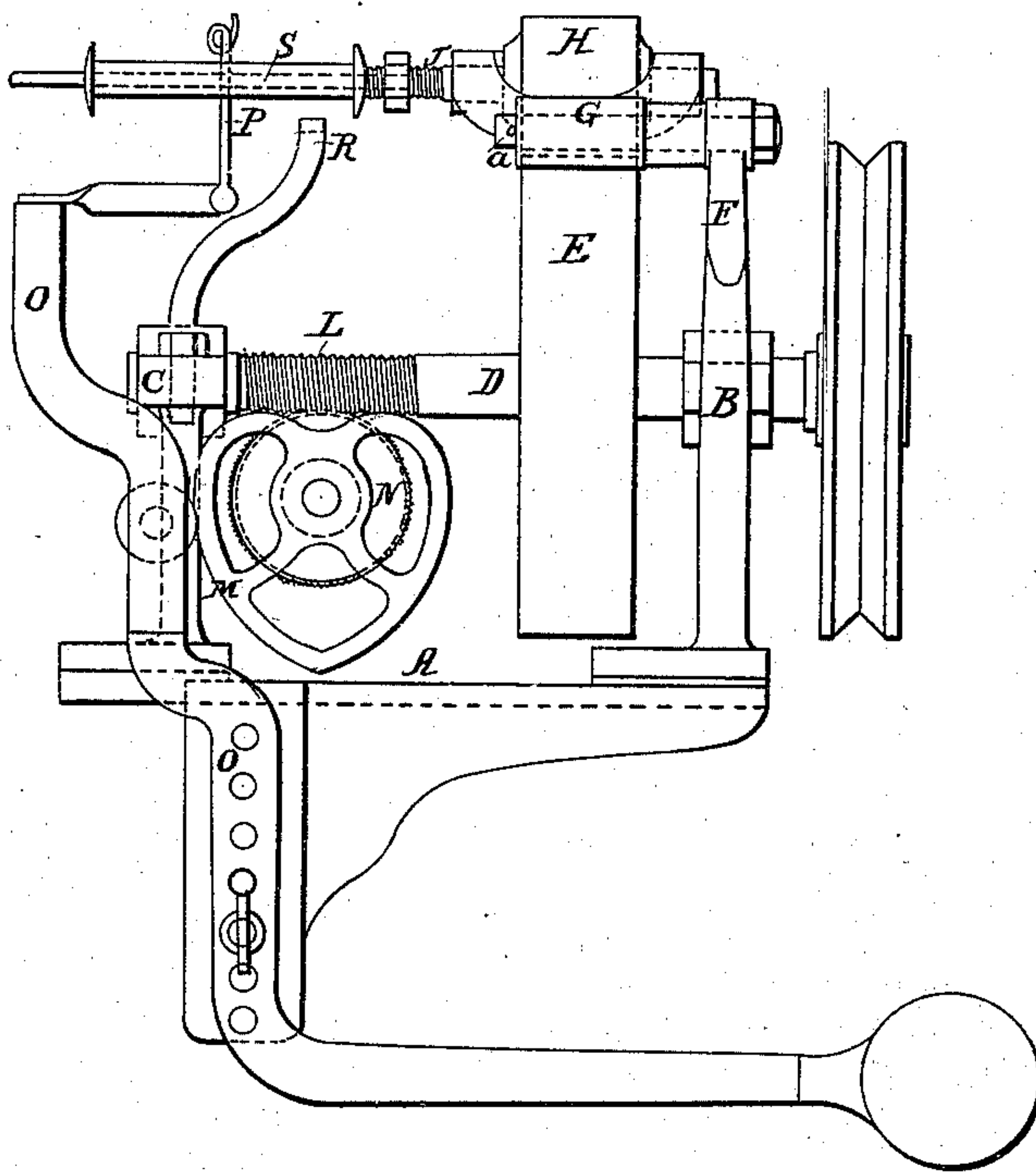


Fig. 2;



Witnesses;
Henry E. Pardon
John Stock.

Inventor;
Wm. Breitenstein.

UNITED STATES PATENT OFFICE.

WILLIAM BREITENSTEIN, OF NEW YORK, N. Y.

IMPROVEMENT IN MACHINES FOR FILLING SPOOLS.

Specification forming part of Letters Patent No. 43,474, dated July 12, 1864.

To all whom it may concern:

Be it known that I, WILLIAM BREITENSTEIN, of New York, in the county and State of New York, have invented a new and useful Improvement in Machines for Filling Spools; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

The nature of my invention consists in attaching the pulley, together with the spindle, upon which the spool to be filled is fixed, in such a manner as to allow the friction-pulley, through which the spindle receives its motion, to be moved upward, so as to bring said pulley clear of the driving-wheel; and, secondly, in the application of a regulating guide or stand under the spool to be filled, with which the thread on the spool comes in contact when filled to its required size, and is thereby forced upward, so as to lift the pulley off the driving-wheel.

In the accompanying drawings, Figure I represents a top view of my machine. Fig. II shows a front elevation, and Fig. III an end view of the same.

Similar letters represent similar parts.

A is the frame of the machine, upon which the supports B and C are raised, which carry the driving-shaft D, provided with a driving friction-wheel, E. The support B has two projecting arms, F F, to which studs or pins *a a* are fastened, acting as centers for the forked arms or levers G G, and upon which said pins *a* and *a* these arms can turn. The other end of these forked arms G carries the spindle J, into which the spool S is fastened, with its friction-pulley H resting upon the driving-wheel E. The shaft D is provided with a thread or screw, L, operating the screw-wheel N, and through the same the cam-wheel M, which latter acts upon the lever O. On the end of this lever O the thread-guides P P are fixed, which guide the thread from the main or large spool T to the spools S to be filled, and cause the thread to be evenly distributed upon the spool S, in the usual manner. The main or large spool T is fixed upon a pin, *w*, fast to the frame A, capable of turning freely upon said pin *w*, and is acted upon by a spring, *v*, to prevent its turning faster than required.

R R are guides or arms attached to the sup-

port C, or to any other part of the frame situated under the spools S, and arranged so as to be brought nearer toward said spools S, or farther away, as may be desired, for the purpose hereinafter to be explained. The large spool T, from which the spools S are to be filled, being fixed upon its pin *w*, and the empty spools S, which are to be filled, being attached to the spindle J, the thread is taken from the large supply-spool T, passed through the thread-guide P, and fastened to the spool S, as shown in red lines. Motion is then given to the shaft D, and consequently to the driving-wheel E, which latter will operate the spindles J through its friction-pulleys H, resting upon said wheel E, as above described. By this operation the thread is taken from the supply-spool T and wound upon the spool S, and is distributed in even layers upon said spool S through the action of the thread-guide P at the end of the arm or lever O operated through the cam-wheel M in the usual manner. When the spool S is filled to its desired size, the outer circumference of the thread wound upon said spool will come in contact with the stand or arm R, which latter, being firmly attached to some fixed part of the machine, as shown in the drawings to the support C, will cause the spool to raise, so as to bring thereby the friction-pulley H clear of the driving wheel E, and consequently stop thereby its rotary motion and prevent any more thread being wound upon said spool. As before described, the arm R can be regulated so as to be brought nearer to the spool S, or farther away from the same, whereby the amount of thread to be wound upon this spool can easily be regulated, and the rotary motion of the spool be stopped, and consequently the further winding up of thread upon this spool will cease as soon as the required size of the spool is obtained without any further attendance. In case any spool should get irregularly wound and require unwinding, the arm or lever G is turned quite over, together with the spindle J, and the irregular-wound spool attached, so as to hang downward when the thread from this spool can be passed through the thread-guide P and fastened upon another spool, and then wound upon the latter in the manner above described.

Instead of supporting the spool-spindle J and its driving-pulley H in the end of an arm

or lever, G, turning on a fixed center, this spindle J, with its pulley H, may be arranged to turn in suitable bearings working in perpendicular guides, so as to allow the spindle and pulley to be lifted up perpendicularly to bring the pulley clear of the driving-wheel, when the spool is filled to its required size and comes in contact with the stand or arm R.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The guide or arm R, arranged as described, and operating in the manner and for the purpose substantially as set forth.

2. I do not claim, broadly, carrying the

spindle on which the spool is fixed, together with its driving-pulley, on a lever swinging on a fixed pin occupying a position parallel with the shaft of the machine, but what I claim is supporting the spindle J, with its pulley H, so as to be capable of being lifted upward, when arranged in combination with the guide or arm R, and acting together substantially in the manner and for the purpose specified.

WILLIAM BREITENSTEIN.

Witnesses:

HENRY E. RAEDER,
JOHN STOCK.