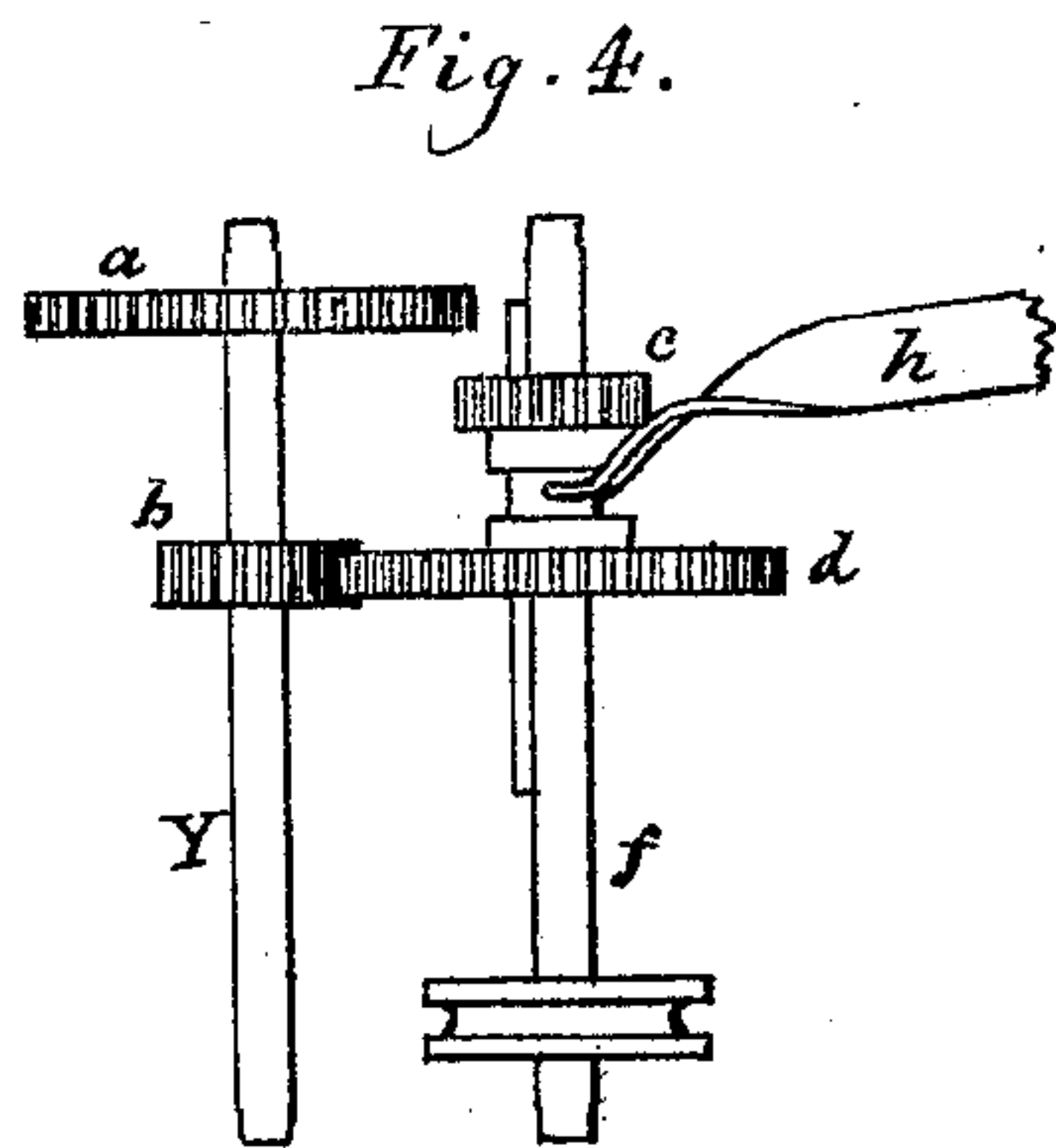
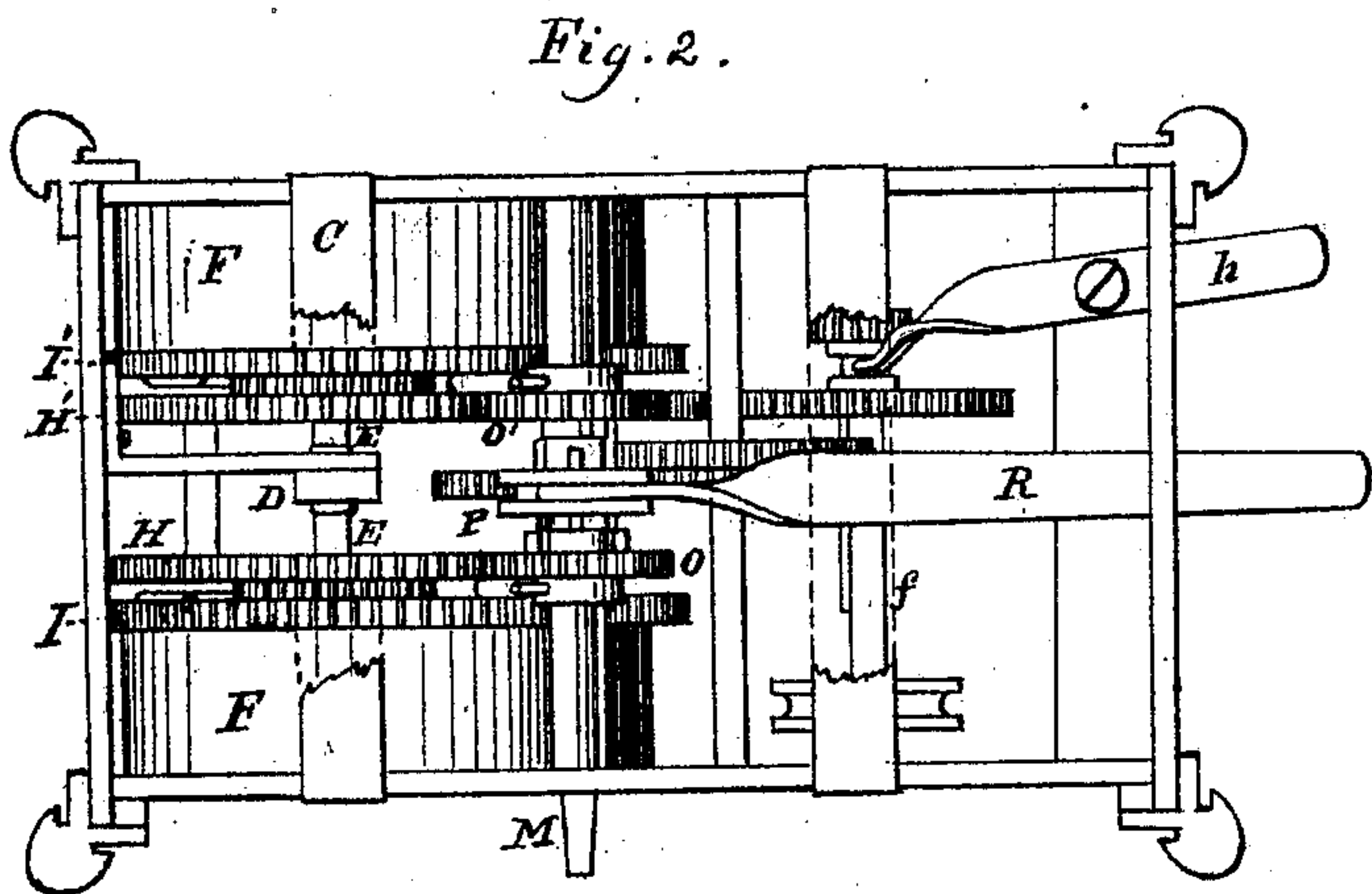
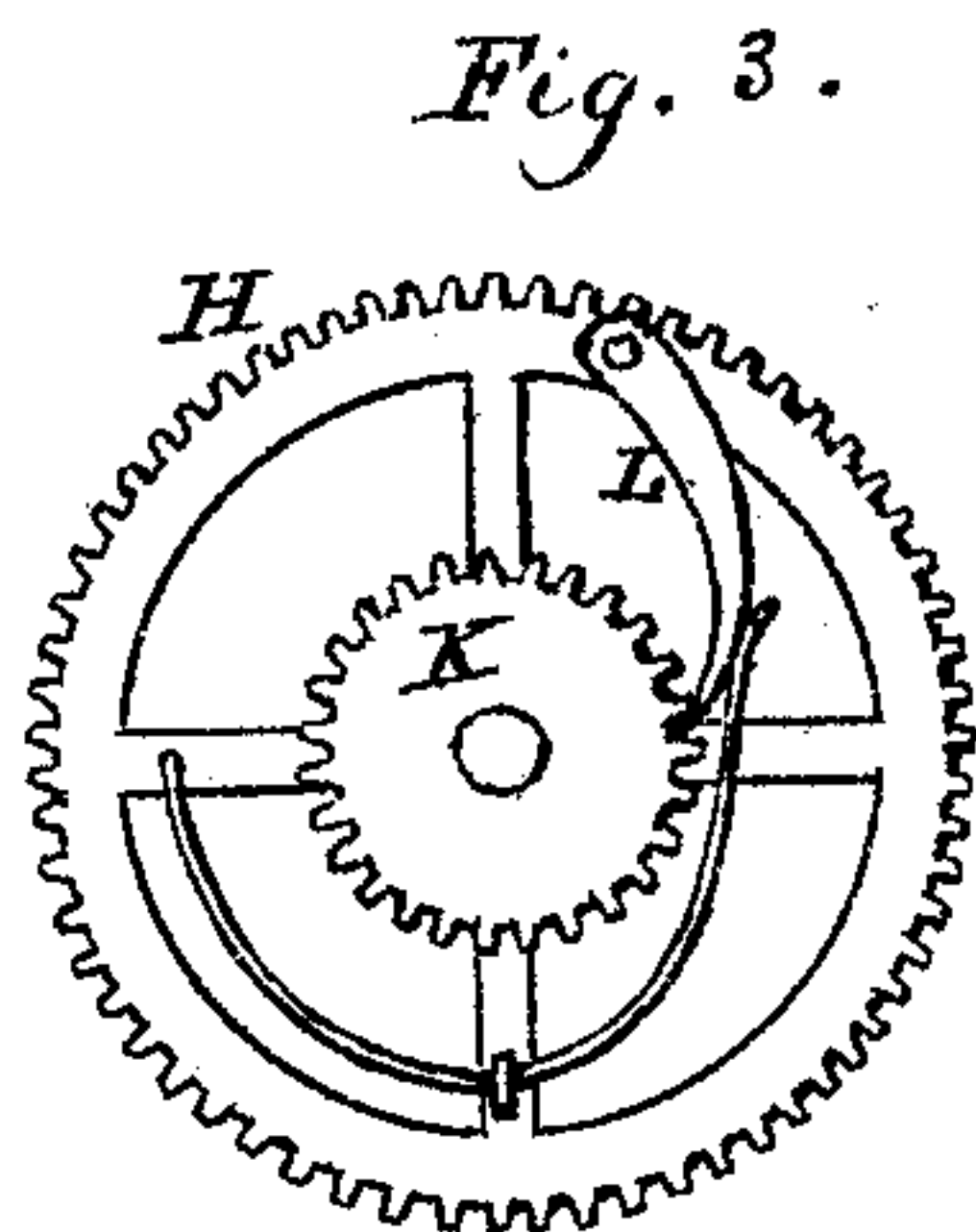
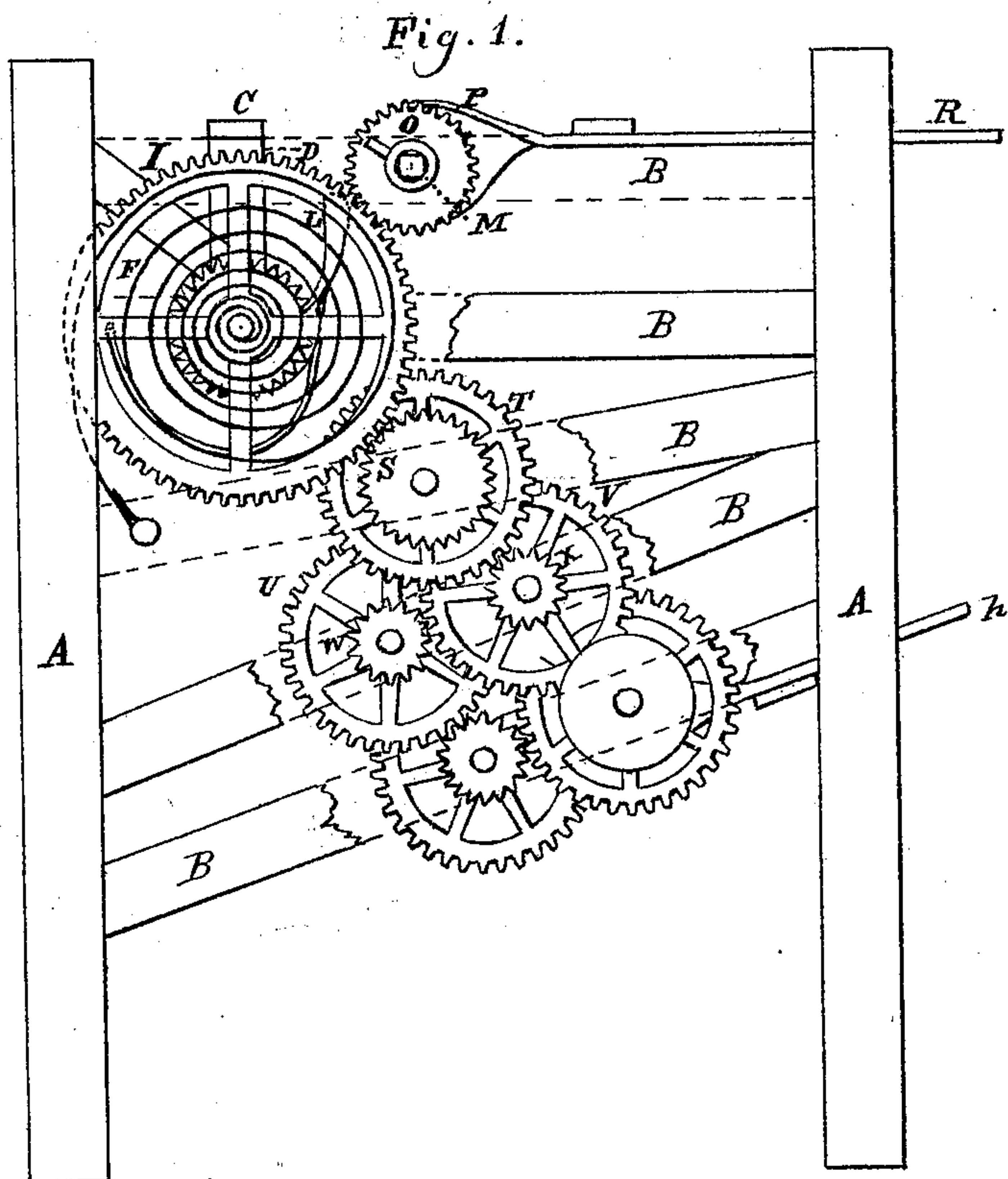


HARVEY S. BARNES.  
Improvement in Motive Power for Sewing Machines.  
No. 121,745. Patented Dec. 12, 1871.



Witnesses.

Geo. H. Howard.

H. A. Daniels

Harvey S. Barnes Inventor.  
C. S. Whitman Attorney



# UNITED STATES PATENT OFFICE.

HARVEY S. BARNES, OF AUGUSTA, WISCONSIN.

## IMPROVEMENT IN MOTIVE-POWERS FOR SEWING-MACHINES.

Specification forming part of Letters Patent No. 121,745, dated December 12, 1871.

*To all whom it may concern:*

Be it known that I, HARVEY S. BARNES, of Augusta, in the county of Eau Claire and in the State of Wisconsin, have invented an Improvement in Motive-Power for Sewing-Machines and other Mechanisms; and do hereby declare that the following description, taken in connection with the accompanying drawing, hereinafter referred to, forms a full and exact specification of the same, wherein I have set forth the nature and principles of my said improvement, by which my invention may be distinguished from others of a similar class, together with such parts as I claim and desire to secure by Letters Patent.

My invention has reference to that class of motors which may be made use of for driving sewing-machines and other light mechanisms; and the nature thereof consists in certain improvements in the details of the construction of the same, hereinafter shown and described.

In the accompanying drawing which illustrates my invention and forms a part of the specification thereof, Figure 1 is a side elevation of the machine. Fig. 2 is a top view. Fig. 3 illustrates in detail a portion of the mechanism, and Fig. 4 is a plan view of a detached portion.

The construction, operation, and relative arrangement of the component parts of my invention are as follows:

In the drawing referred to, A designates the upright posts of the frame, to which are secured the cross-bars B, in which are the bearings of the shafts of the gear-wheels. To the transverse piece C is attached the vertical strip D, in which, and side pieces of the frame, the shafts E E' have their bearings. Upon the said shafts are coiled the spiral springs F F', the outer ends of which are secured to a transverse rod. Upon the said shafts are rigidly attached the gear-wheels H H' and idler-wheels I I'. Rigidly attached to the gear-wheels H H' are the pinions K K', engaging with the spring tappets L L', pivoted to the said idler-wheels. Upon the winding-shaft M are the pinions O O', arranged to turn loosely thereon, and the clutch P sliding upon a key. Both the pinions O O' and the clutch P are provided with studs in order that either pinion may be made to revolve with the shaft M, as

may be desired, by the lateral movement of lever R actuating the said clutch. When it is desired to wind the spring F the pinion O, engaging with the fixed wheel H, is made to rotate with the winding-shaft, and when the spring F' is to be wound, the pinion O' is made to rotate with the same. The wheels I I' engage with the train of spur-gears and pinions S S' T U V W X, which transmit the power of the same to the shaft Y. Upon the shaft Y are the wheels a b, which are made to engage with the wheels c and d, as may be desired, by sliding the same upon the shaft f, to which they are keyed, by the lateral movement of the lever h. The said shaft f is the driving-shaft, to which a balance-wheel (not shown) is attached, and which imparts motion to the sewing-machine to which it is connected.

The operation of the machine is as follows: When the springs have been wound, the elastic force thereof is imparted to the shafts E E', which in turn impart rotary motion to the wheels H H', rigidly attached thereto. The said wheels H H' are locked to the idler-wheels I I', through the medium of which motion is imparted to the train of gears S S' T U V W X.

Having thus described the construction and operation of my invention, I will state what I claim and desire to secure by Letters Patent in the following clauses:

1. The combination of the spiral springs F F', shafts E E', gears H H', pinions O O', winding-shaft M, and clutch P, when arranged and operating in such a manner that either spring may be wound independently of the other, as described.

2. The arrangement of the gears H H', idler-wheels I I', pinions K K', spring tappets L L', train S S' T U V W X, wheels a b c d, shaft f, and lever p, when operating together, as and for the purposes described.

In testimony that I claim the foregoing I have hereunto set my hand this 3d day of July, 1871.

HARVEY S. BARNES.

Witnesses:

THOMAS W. TASKER,  
ROSEL D. CAMPBELL.

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