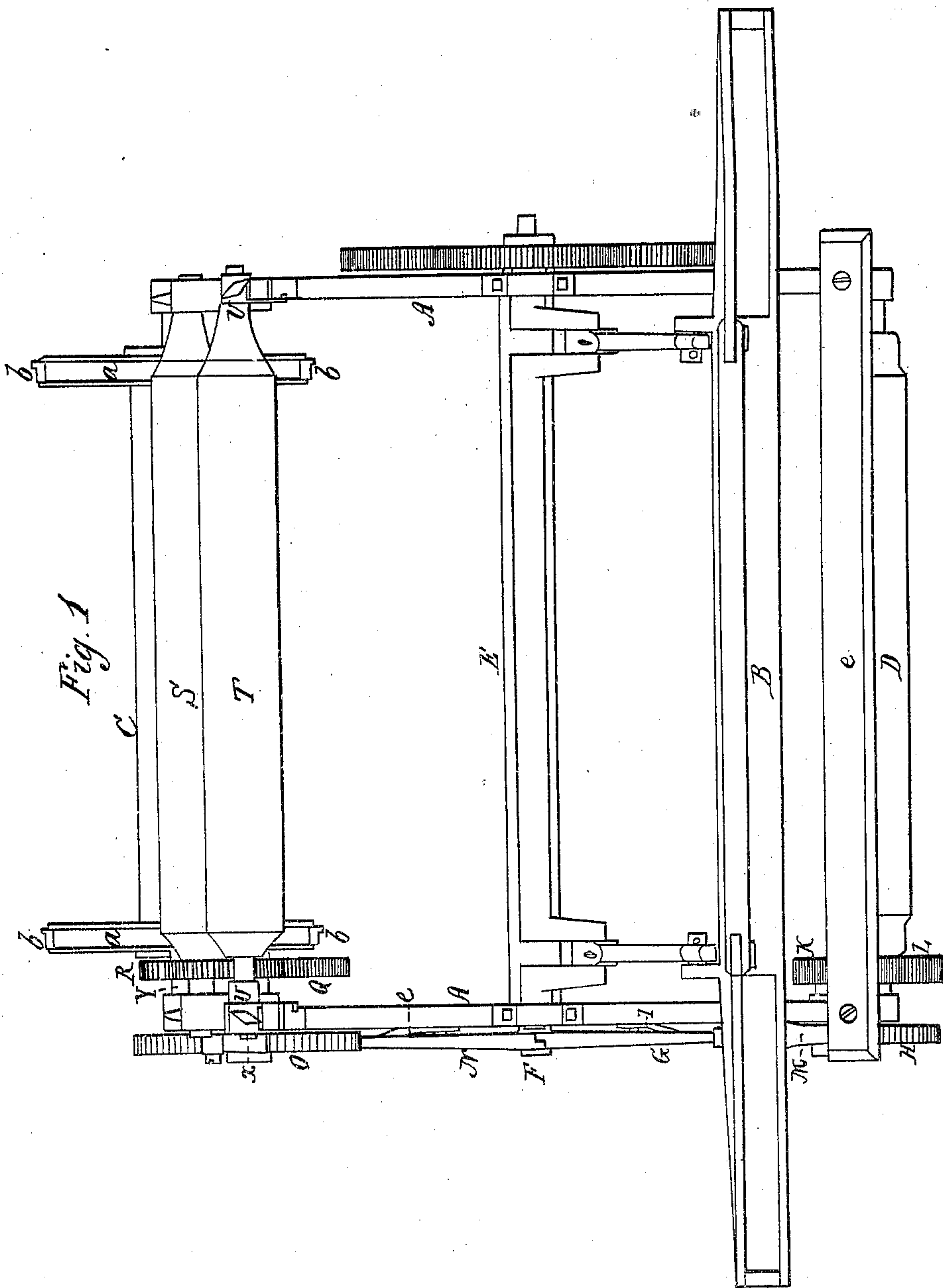


A.H. Boyd.

Take-Up for Loom.

N^o 6,157.

Patented Mar. 10, 1849.



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Fig. 2. Patented Mar. 10, 1849.

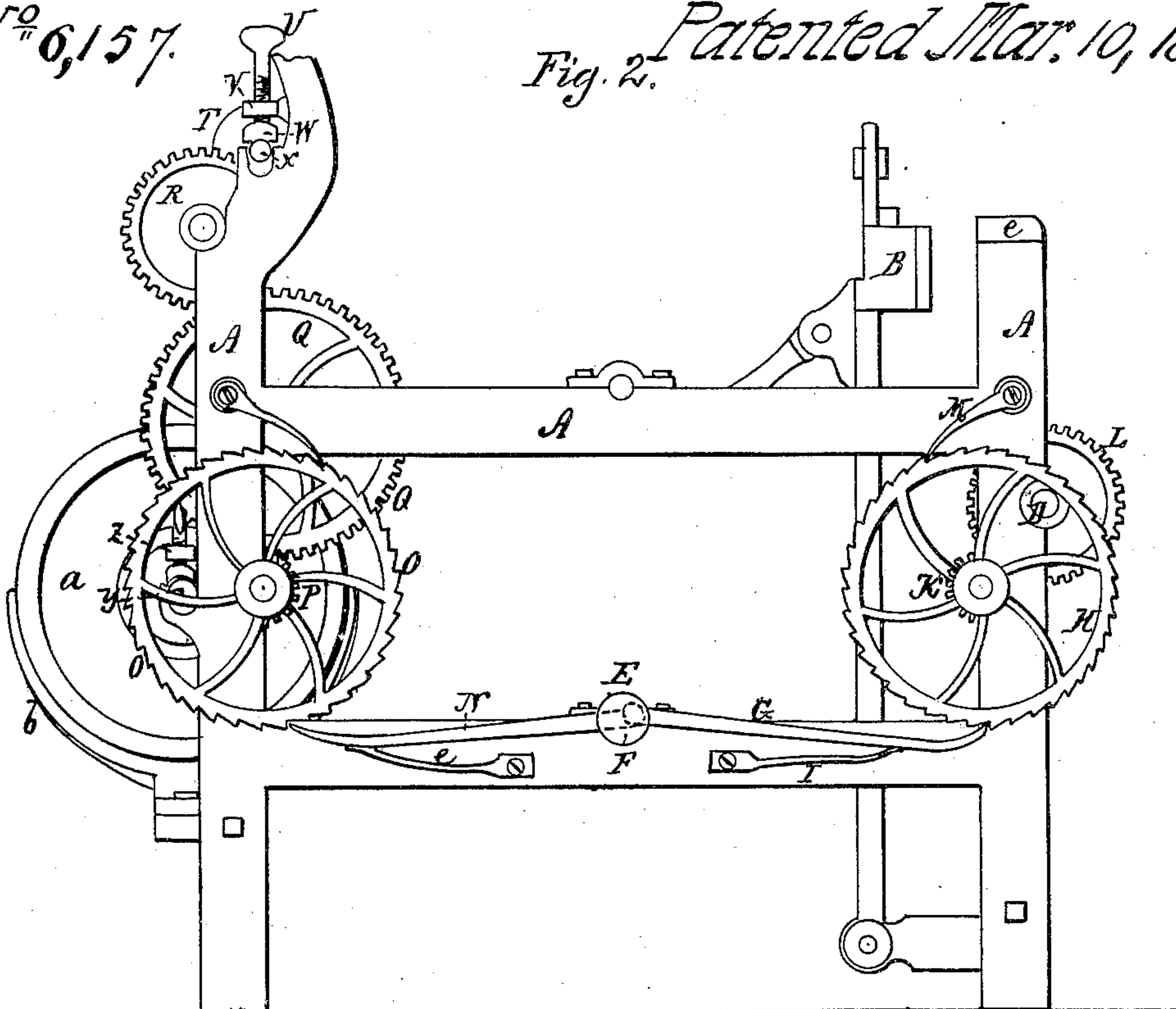
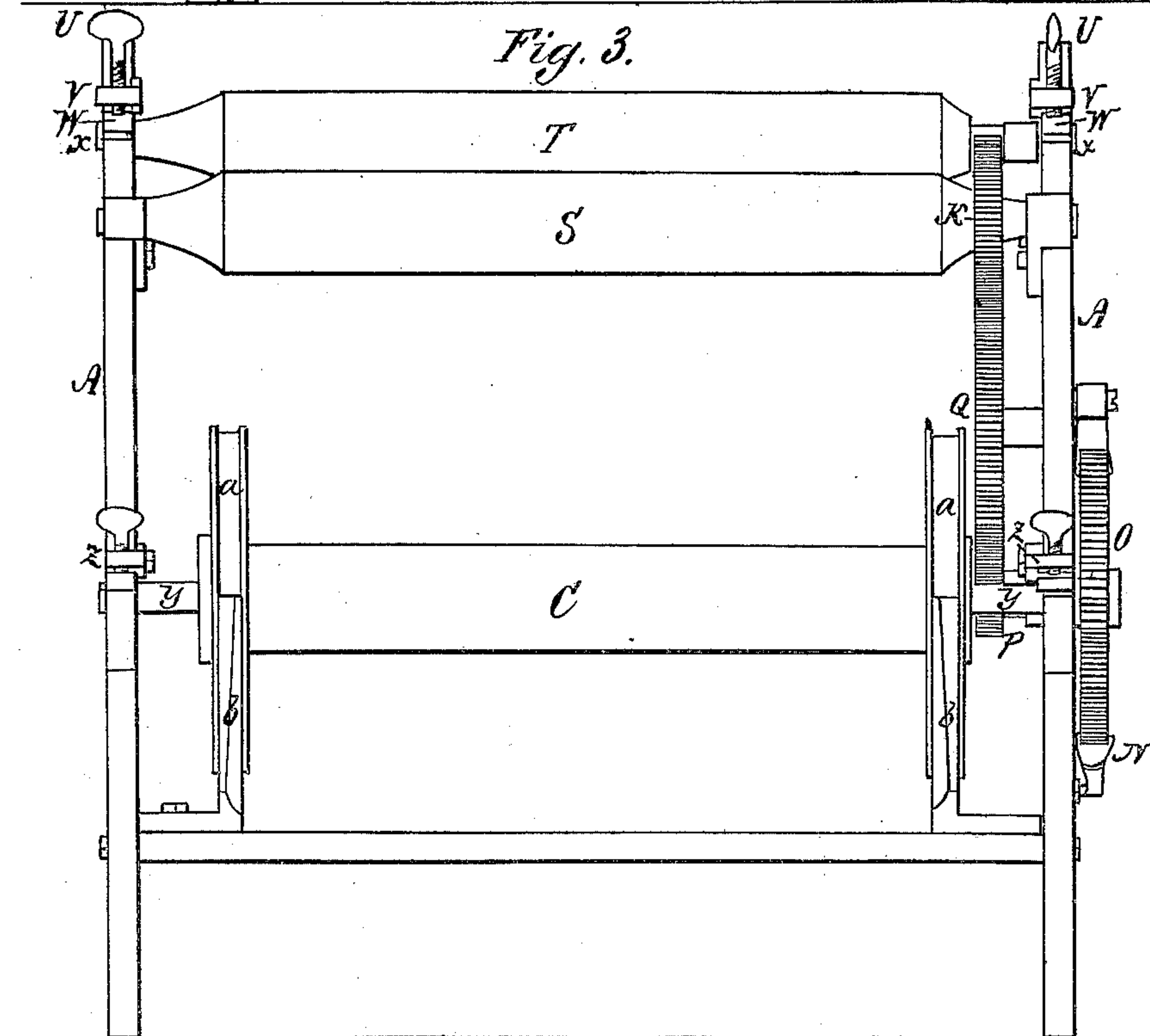


Fig. 3.



UNITED STATES PATENT OFFICE.

AMOS H. BOYD, OF SACO, MAINE.

DELIVERY AND TAKE-UP MOTION OF LOOMS.

Specification of Letters Patent No. 6,157, dated March 10, 1849.

To all whom it may concern:

Be it known that I, Amos H. Boyd, of Saco, in the county of York and State of Maine, have invented a new and useful Improvement in Looms for Weaving; and I do hereby declare that the same is fully described and represented in the following specification and accompanying drawings, letters, figures, and references thereof.

Of the said drawings Figure 1, denotes a top view of a loom frame and my improvement added thereto. Fig. 2, is an end elevation of the same, and Fig. 3, is an elevation of the yarn beam side of the loom.

In the above mentioned figures, A, exhibits the loom frame, B, the lay, C, the yarn beam or roller on which the warp yarns are wound. D, the roller which imparts motion to the cloth roller, which is not shown in the drawings but may be supposed to be a simple roller made to rest on the roller D, and to be rotated by the regular intermittent progressive revolving movement of said roller D, in order to take up or wind up the cloth as fast as it is woven. The said roller D, is revolved by a positive motion or combination of machinery, the same being as follows.

E, is the main driving shaft of the loom. It has an eccentric F, or small crank, on one end of it, which is made and applied to an impelling pawl G, in such manner that when the shaft E, is revolved, a reciprocating longitudinal movement will be imparted to the said pawl so as to give motion to a ratchet wheel H, with the teeth of which the pawl is made to operate, and against which it is pressed by a spring I, arranged as seen in Fig. 2. On the shaft of the ratchet wheel H, is a small toothed pinion K, which gears into a cogged wheel L, fixed on the shaft of the roller D. A retaining pawl M, is disposed over and upon the ratchet wheel H.

I shall now proceed to describe the positive motion or combination for delivering the warps at regular intervals of time as occasion may require.

The same eccentric F, which gives motion to an impelling pawl G, is made wide enough to receive and impart motion to another impelling pawl N, which is disposed as seen in Fig. 2, and operates or turns a ratchet wheel O, against which it is forced upward by a spring e. On the shaft of the said wheel O, is a small gear or pinion P, which engages with a larger or communi-

cating gear Q, which in its turn connects with a toothed gear R, fixed on the axle of the lower feed roller S, of two feed rollers S, T, the whole being arranged as seen in the drawings. The said two feed rollers are to be covered with leather or some other suitable material, which will grasp the warps with sufficient tenacity to prevent them from being slipped forward between the rollers by the lay when it beats up. The upper feed roller is borne or pressed down against the lower one or the warps between them, by two thumb screws U, U, which are respectively screwed through stationary ears or projections V, V, and abut against the saddles W, W, which are placed respectively on the journals x, x, of the top roller. The yarn beam axle or shaft Y, has similar screws and contrivances applied to it as seen at Z, Z, the same being for the purpose of pressing two friction wheels a, a, (fixed on the yarn beam) down respectively upon two stationary curved stirrups or friction rests b, b, arranged as seen in the drawings.

The gearing and mechanism of the two positive let off, and take up motions or combinations, is so made as to cause the let off motion to deliver, at regular intervals of time, the warp threads as fast as they may be combined with the weft and beaten up by the lay and reed and taken up or wound on the cloth roller.

The warps pass from the yarn beam upward over the lower feed roller and between it and the upper feed roller, thence through the harnesses, the reed of the lay, thence over the breast beam c, thence down to and are wound upon the cloth roller.

What I claim as my invention is—

The combination of a set of two or more feed rollers, and mechanism for operating them, as described, with the yarn beam and take up motion or mechanism of the loom; the whole being arranged and made to operate together essentially as specified; the said feed rollers serving not only to firmly hold the warps under the beating up action of the reed, but to deliver them out at the rate required.

In testimony whereof I have hereto set my signature this fifteenth day of April, A. D. 1848.

AMOS H. BOYD.

Witnesses:

O. D. BOYD,
PHILIP EASTMAN.