J. F. Fosdick.

Take-Up Motion.

No. 37,223. Patented Dec. 23, 1862.

Fig. 2.

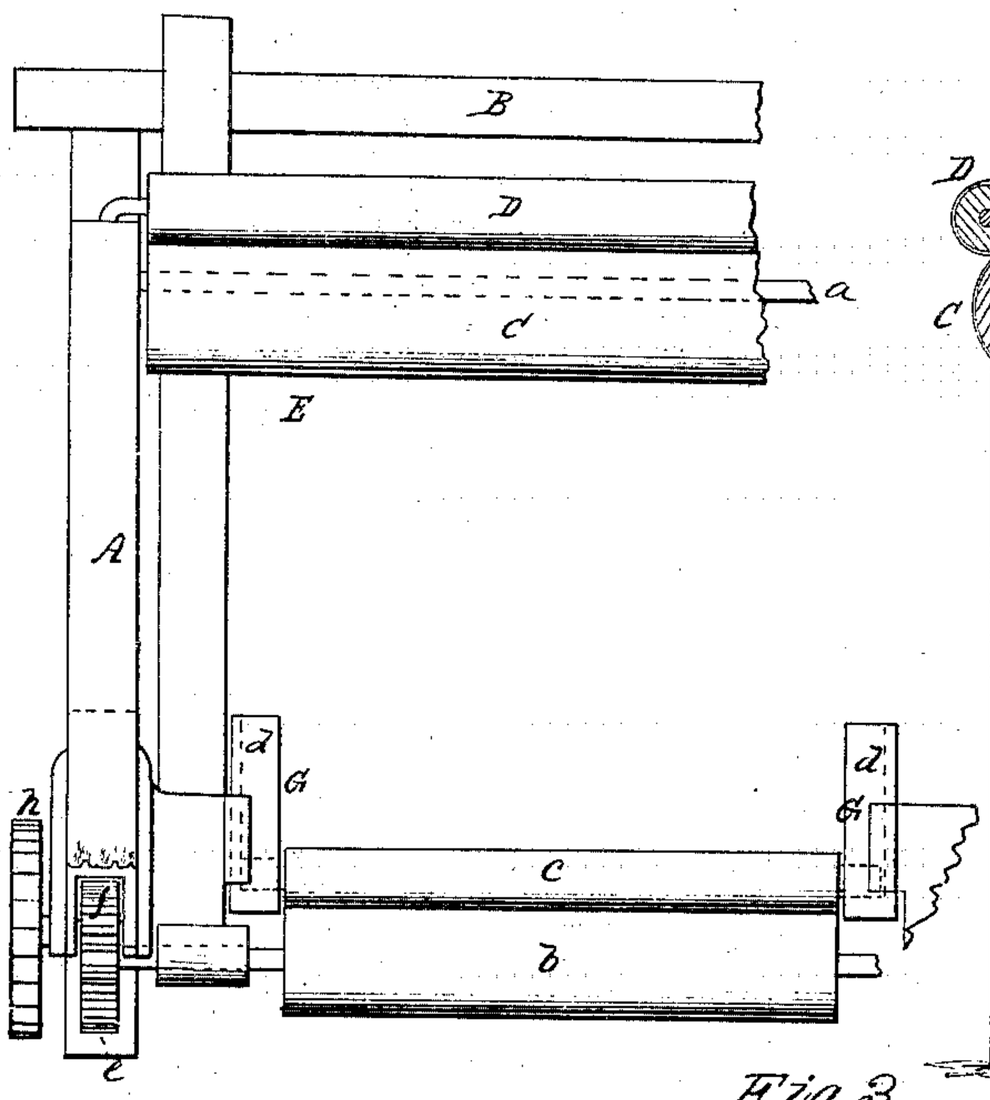


Fig. 1.

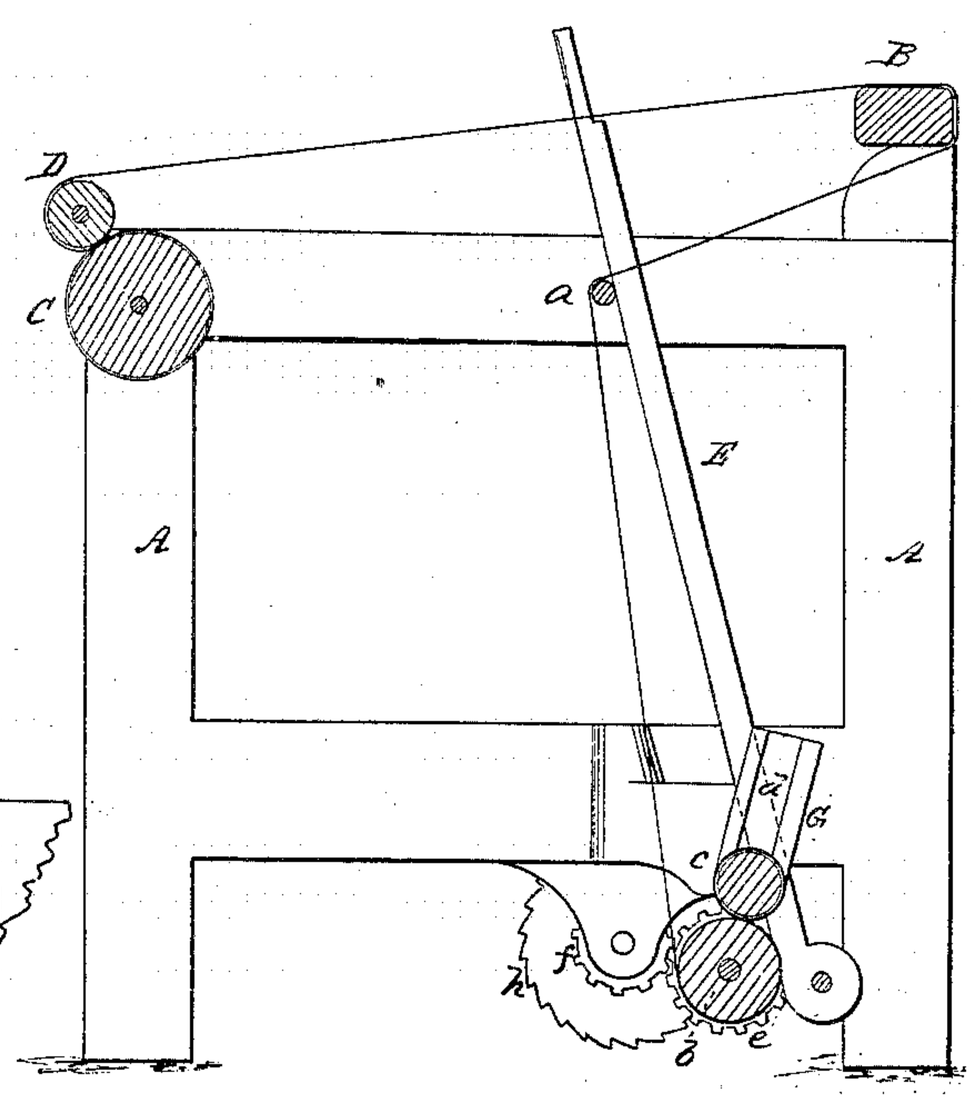
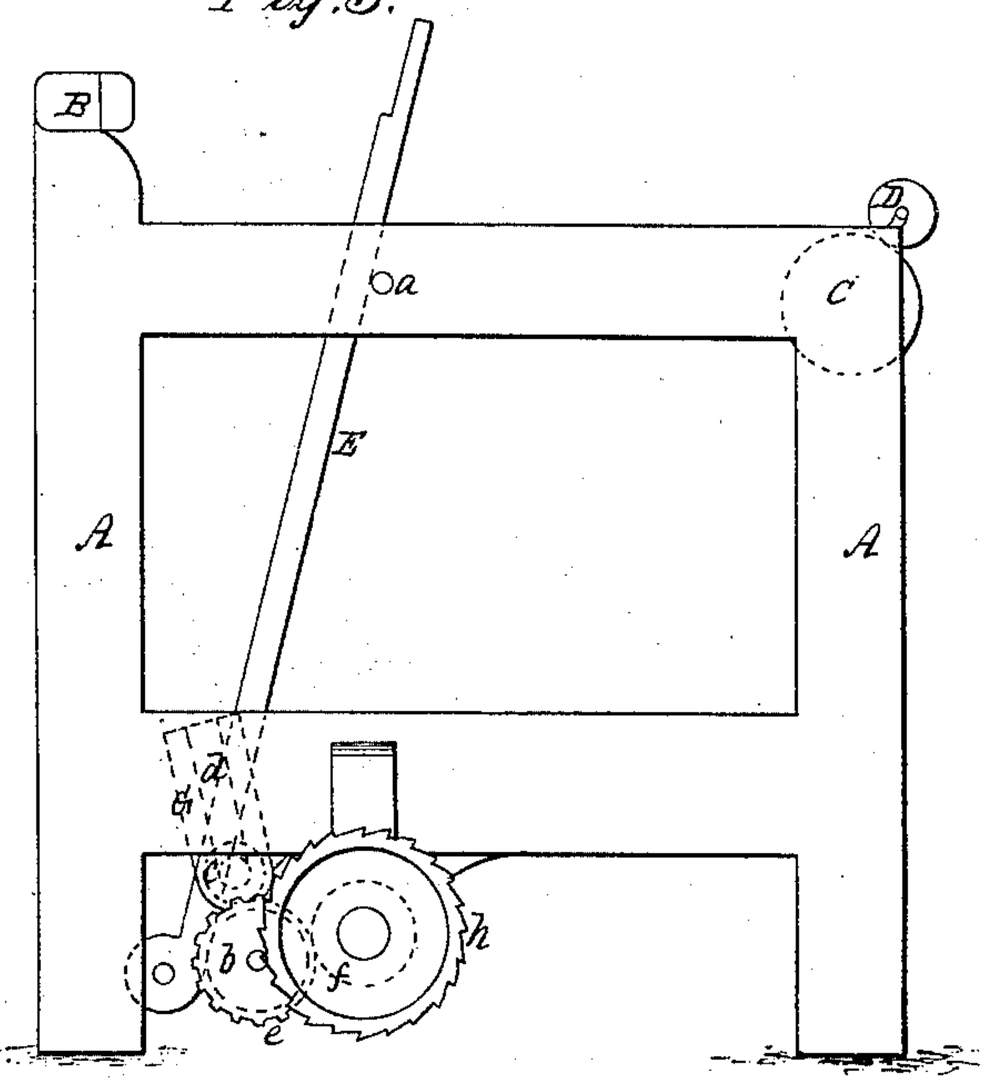


Fig. 3.



Witnesses

F. R. Hale Jr.

J. R. Bampton

Inventor

John L. Fosdick

UNITED STATES PATENT OFFICE.

JOHN F. FOSDICK, OF LOWELL, MASSACHUSETTS.

IMPROVEMENT IN LOOMS.

Specification forming part of Letters Patent No. **37,223**, dated December 23, 1862.

To all whom it may concern:

Be it known that I, JOHN F. FOSDICK, a citizen of the United States of America, and a resident of Lowell, in the county of Middlesex and State of Massachusetts, have invented a new and useful Improvement in Looms for Weaving Cloth; and I do hereby declare the same to be fully described in the following specification, and represented in the accompanying drawings, of which—

Figure 1 denotes a longitudinal section of my invention, as applied to a loom. Fig. 2 is a rear elevation of the same; Fig. 3, an end view of the loom-frame and the gears for operating the main take-up or draft roller.

My invention has reference to the winding of the cloth on a roller or beam in proportion as the weaving of such cloth may progress, and in carrying out my said invention I entirely dispense with the ordinary cloth-beam, as arranged immediately underneath the breast-beam, and which has generally to be operated by a variable take-up mechanism, and use in lieu thereof an arrangement of mechanism, by which I am enabled to obtain very important advantages.

The nature of my said invention consists in a cloth guide or rod, two rollers, and a guide-frame, as combined together and arranged with respect to the breast-beam as hereinafter explained.

In such drawings, A denotes the loom-frame, of which B is the breast-beam, C the yarn beam or roller, D the guide-roller for leading the yarn from the yarn-beam; and E is the lay.

In front of the lay, and across the loom-frame, or from end to end of it, a rod, *a*, is arranged horizontally. Below this rod and near to the floor there is a long roller, *b*, on which there is arranged another roller, *c*, each of whose journals run in grooves *d*, formed in two inclined posts, G G.

The cloth after passing over the breast-beam B is led through the lay, or between its swords and frame, to and over the guide-bar *a*, thence it is passed down to and underneath and about the roller *b*, and is fastened or secured to the peripheries of the roller *c*. The curved surface of the roller *b* should be covered with emery, or otherwise made rough, so as to enable it to hold the cloth, and draw it downward as it may be woven.

As the weaving of the cloth is regular in its progress, the rate of rotary motion of the cylindric surface of the roller *b* should correspond therewith. In consequence of the roller *c* being made to rest on the roller *b*, the latter while in motion will put the roller *c* in revolution, and cause it to wind up the cloth. As the roll of cloth may increase in size on the roller *c*, the latter will rise upward, and the roll will continue to so increase as long as the journals of the roller *c* may be within their guide-grooves *d d*.

It is necessary to apply to the shaft of the roller *b* some gearing or mechanism which will impart to the said roller its proper position—intermittent rotary motions. For this purpose a train of two gears, *e f*, may be applied to such shaft, and be actuated by a ratchet, *h*, to be set in motion by a draw-pawl, extended from the lay of the loom, the whole being so arranged as to produce a slight rotary motion of the take-up roller *b* during each retreat of the lay. Some of the advantages of my invention are as follows: First, it admits of the use of a positive, take-up motion being used, instead of a variable take-up mechanism; second, the cloth-beam or roller *c* is completely out of the way of the weaver or attendant of the loom, and allows him to stand close up to the breast-beam, and thus enables him to get at the work more conveniently than when the beam is arranged as heretofore in ordinary looms; third, quadruple or quintuple the amount of cloth can be wound at once on the roller *c* than can be taken up by a roller when placed immediately under the breast-beam. Besides there is no waste of remnants, and the wound cloth is kept free from wrinkles, as the cloth by being strained and made to pass over the guide-bar *a*, any wrinkles which may be formed in it while it may be on or passing around the breast-beam will be likely to be removed by the bar *a*.

I am aware of the invention described in the British patent of Charles Parker, such patent being numbered 2,679 for the year 1858. My invention differs materially therefrom, inasmuch as my said invention is an application or arrangement, in the manner hereinbefore specified, of a guide-rod, *a*, take-up roller, and a beam or roller with respect to the lay and the breast-beam. In my said arrangement,

the lay is wholly between the breast-beam and the said guide and take-up roller and its beam, the same causing the cloth to pass through the lay. One advantage of this arrangement is, that by means of it there is no projection of the cloth-beam beyond the frame of the loom, and so as to be in the way of the workman while standing at or being near the breast-beam. I therefore do not claim the invention of the said Parker; but

What I do claim is—

My improved application and arrangement, as described, of the guide *a*, the take up-roller *b*, the beam or roller *c*, and its guides *d d*, with respect to the lay and the breast beam of the loom.

JOHN F. FOSDICK.

Witnesses:

F. P. HALE, Jr.,

J. R. BAMPTON.