

J. E. ATWOOD.
Spinning-Frames.

No. 156,526.

Patented Nov. 3, 1874.

Fig. 2.

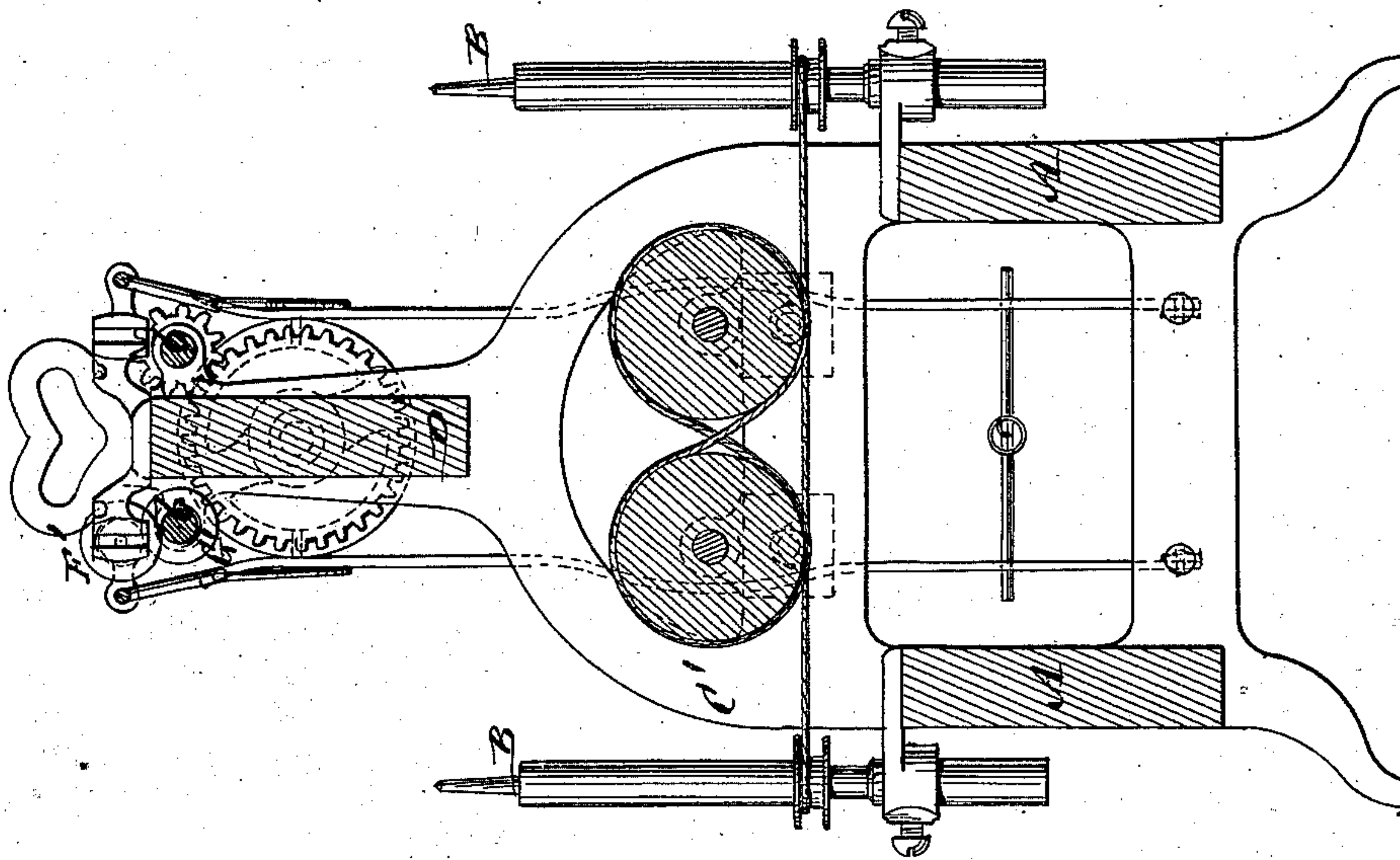
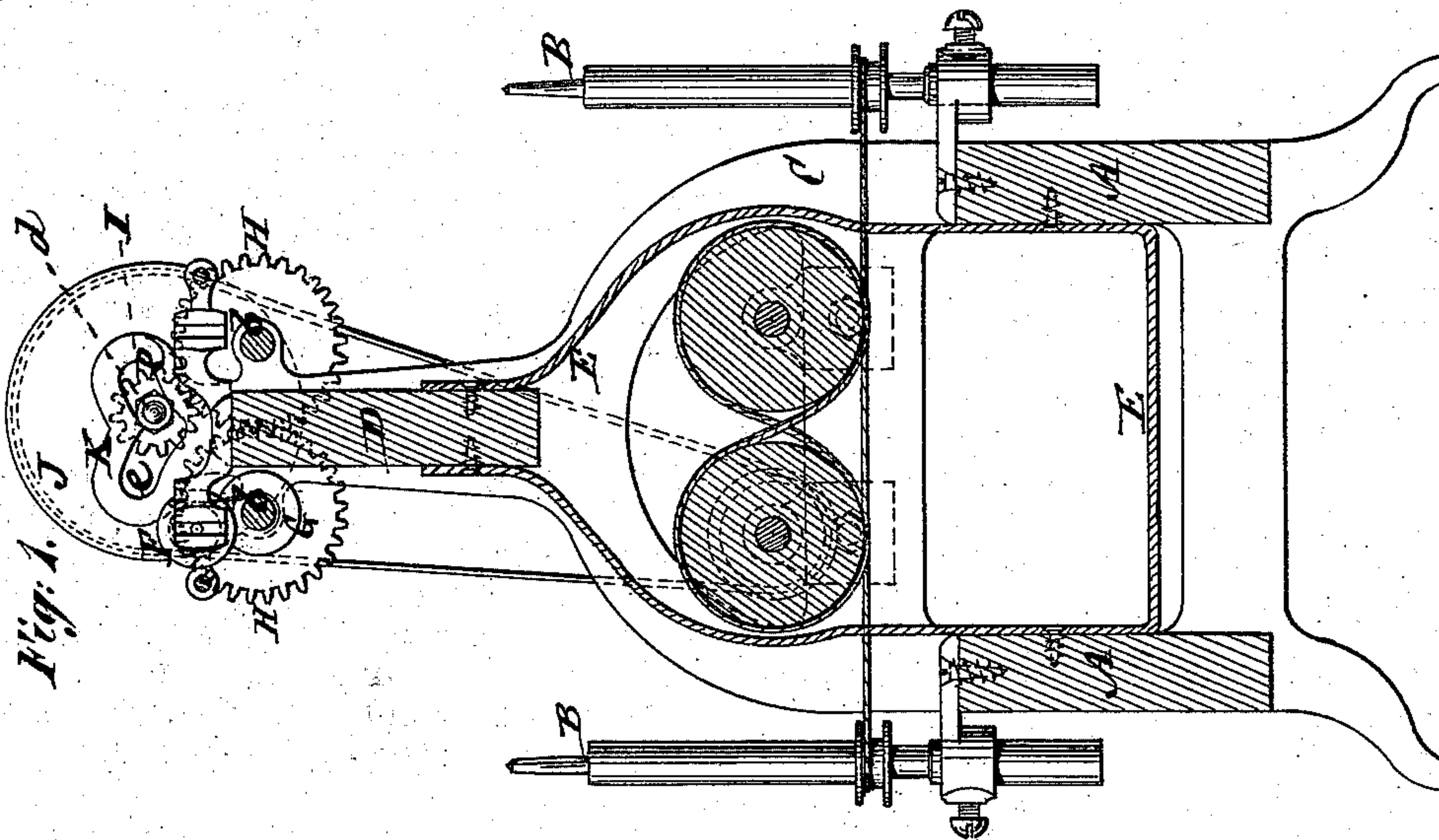


Fig. 1.



Witnesses:

Henry Cichling
Fred. Haynes

John E. Atwood
by his Attorneys
Brown & Allen

UNITED STATES PATENT OFFICE.

JOHN E. ATWOOD, OF MANSFIELD, CONNECTICUT.

IMPROVEMENT IN SPINNING-FRAMES.

Specification forming part of Letters Patent No. **156,526**, dated November 3, 1874; application filed March 17, 1874.

CASE B.

To all whom it may concern:

Be it known that I, JOHN E. ATWOOD, of Mansfield, in the county of Tolland and State of Connecticut, have invented an Improvement in Spinning-Frames, of which the following is a specification:

This invention relates to spinning-frames in which duplicate shafts operating the take-up or let-off reels or bobbins are used.

The invention consists in a combination, with gear-wheels on said shafts, one of which drives the other, of an intermediate wheel or pinion, and peculiarly-slotted bearing for the latter, whereby said pinion may be shifted not only to gear with either wheel on the shafts which operate the take-up or let-off reels, to drive the latter in the right direction, in whichever direction the overhead or other shaft that drives the pinion moves, but also to tighten the driving band or belt in both or opposite adjustments of said pinion.

In the accompanying drawing, Figure 1 represents a vertical transverse section of a spinning-frame, taken through the brace which connects the upper board or stringer that carries the take-up or let-off reels and the spindle rails or girts with each other. Fig. 2 is a similar section, taken on one side of said brace and looking in the reverse direction.

A A are the spindle rails or girts, and B B the spinning-spindles carried thereby, and arranged on opposite sides of the spinning-frame, said spindles being driven by bands from drums, in the usual or any suitable manner. C C' are the end pieces or supporting-standards of the main frame, connected by the girts A A, and being connected at their tops by the board or stringer D, which carries on opposite sides of it the usual take-up or let-off reels or bobbins, for operation in connection with the spindles B B. E is a brace, of which there may be any number between the end uprights or standards C C'. Said brace consists of a metal strap or piece bent to connect the spindle rails or girts A A with each other and with the board D, that carries the take-up or let-off reels, and suitably fastened, by screws or otherwise, to said girts and board. Such brace effectually stiffens or strengthens the frame without supporting the latter at more than its two ends by

the standards C C', thus facilitating the adjustment or set of the frame on the ground or floor of the building. H H are the spur-gears on the one end of each drawing-roll shaft or operating-shaft *b* of the take-up or let-off reels or bobbins, of which F F' are the reels proper, and G G' the drawing-rolls or drivers. These wheels H H gear with each other, whereby the one becomes the driver of the other. They are actuated by a pinion, I, on a stud, *d*, which pinion may be driven by a pulley, J, from an overhead shaft, as usual, or from any other shaft, and which, for convenience of description, I will term the main driving-shaft. This pinion I, with its stud *d*, and driving-pulley J are made capable of adjustment to opposite sides or in reverse directions, for the purpose of throwing the pinion I into gear with either wheel H, according to the direction in motion of the main driving-shaft, and so that in whichever direction the latter runs the take-up or let-off reels or bobbins will move in the required or right direction. To provide for this adjustment of the pinion I for this purpose, and also, when required, for tightening the driving belt or band of the pinion, the latter has its bearing in a portion, K, of the frame or top of the one end standards, such bearing or portion K being made with reversely-curved slots *e e*, that are arcs of circles struck, respectively, from the centers of the wheels H H, and within or along either of which the stud *d* is secured by a nut or otherwise, according to which wheel H is required to be driven, or to the degree of tightness it is necessary to give the driving-belt of the pinion. This forms a very simple and efficient gear or mechanism for the purposes specified.

I claim—

The combination, with the wheels H H and their shafts *b b*, for actuating the take-up or let-off reels, of the pinion I, with its stud *d*, and the bearing or portion K, provided with reversely-curved slots *e e*, for enabling the pinion to be adjusted relatively to the wheels H H, essentially as and for the purposes specified.

JOHN E. ATWOOD.

Witnesses:

HENRY F. ROYCE,
N. D. WEBSTER.