J. A. Partridge.

Spinning Mach.

No. 1,919.
32,923.

Patented Jul. 30, 1861.

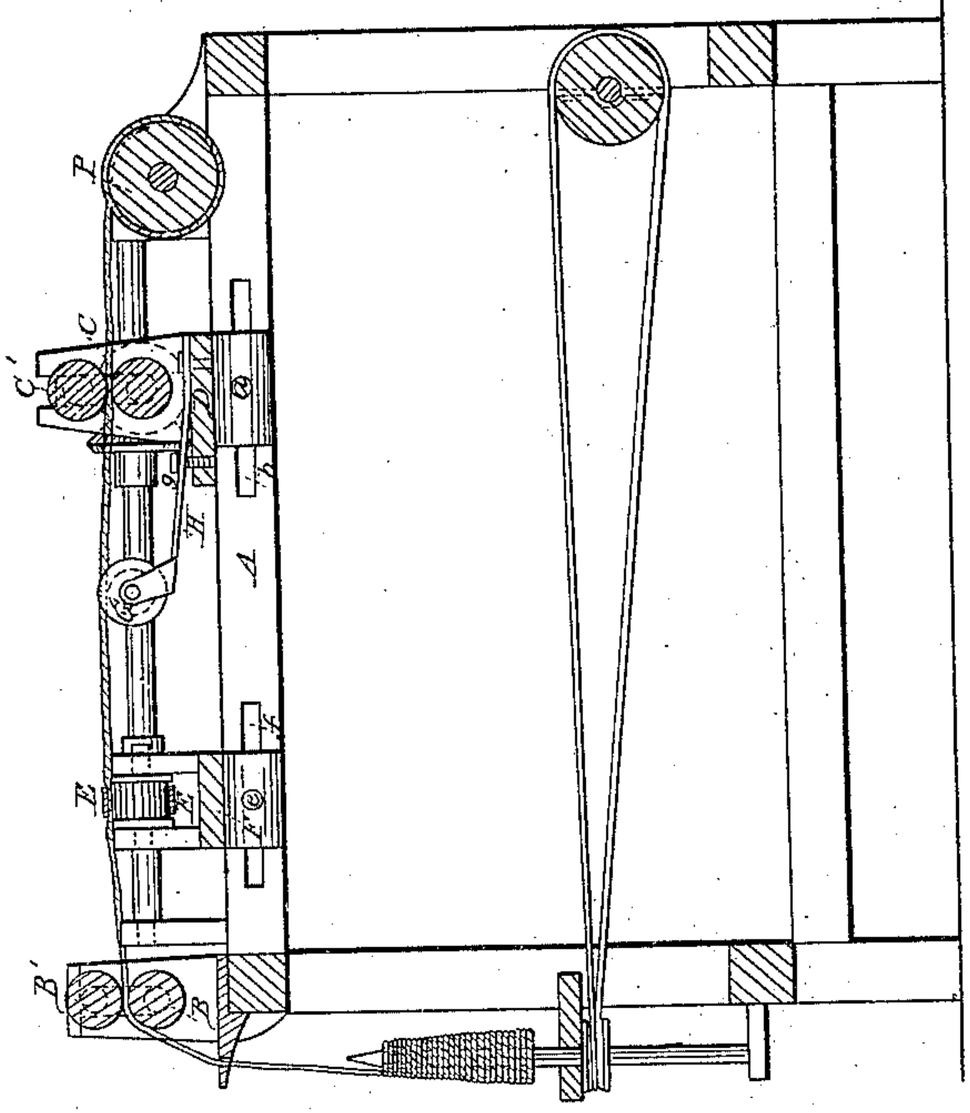

Fig. 2

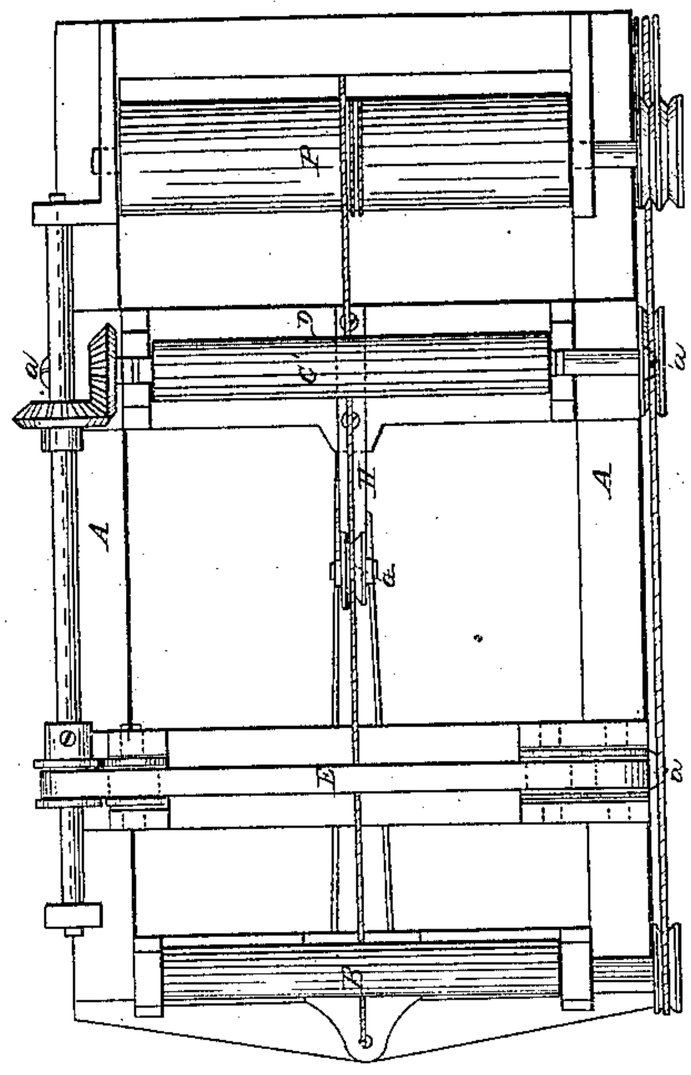

Fig. 3.

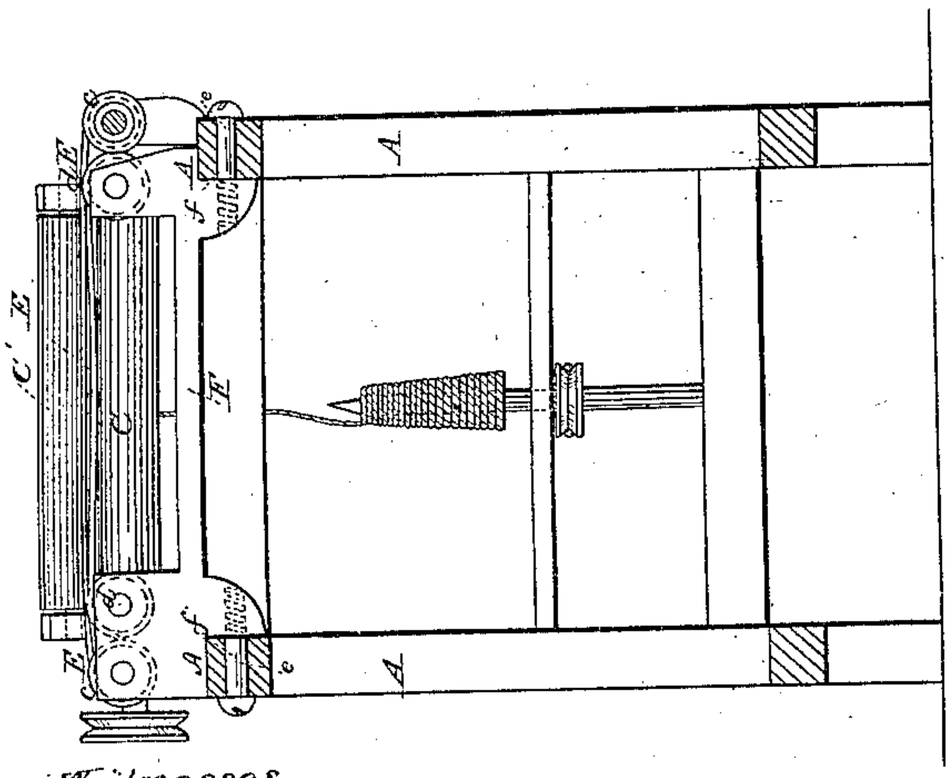

Fig. 1.

Witnesses.
J. V. Coombs
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UNITED STATES PATENT OFFICE.

JOHN A. PARTRIDGE, OF NEW YORK, N. Y.

SPINNING MACHINERY.

Specification of Letters Patent No. 32,923, dated July 30, 1861.

To all whom it may concern:

Be it known that I, JOHN A. PARTRIDGE, of the city, county, and State of New York, have invented certain new and useful Improvements in Machinery for Spinning Wool and other Fibrous Substances; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figures 1 and 2 are vertical sections, taken at right angles to each other, of a spinning frame with my improvements. Fig. 3 is a plan of the same.

Similar letters of reference indicate corresponding parts in the several figures.

To enable others skilled in the art to make and use my invention I will proceed to describe its construction and operation.

A. is the framing.

B. B′. are the front drawing rollers applied in fixed bearings in the usual manner.

C. C′. are the back drawing rollers.

D. is a beam which carries the bearings of the latter rollers, resting on the top of, and fitting between the sides of the framing to which it is secured by a screw *a*, on each side passing through a slot *b*, in the side of the framing and screwing into the beam. These slots, when the screws *a* are slackened, permit the beam to be moved back and forth to adjust the rollers C. C′. nearer to or farther from the front rollers B. B′. according to the length of the staple to be operated upon, so that the same spinning-frame may be employed for wool of all lengths of staple, the shorter staple requiring a less distance, and the longer staple a greater distance, between the back and front rollers.

P. is the roping spool which supplies the roping to the back drawing rollers.

E. is the endless band for giving direct or counter twist to the roping between the back and front drawing rollers, arranged to run upon four pulleys *c*, *c*, *d*, *d*, the bearings for whose journals are supported by a beam F. which rests upon the top of and is fitted between the sides of the framing to which it is secured by screws *e*, *e*, passing through slots *f*, *f*, in the sides of the framing, said slots, when the screws *e*, *e*, are slackened, permitting the beam to be moved back and forth to adjust the band E. at proper distances from the front and back drawing rollers as required to work most advantageously with the various lengths of staple.

The band E. also serves to detain or hold back the filler, while the operation of stretching or drawing is being performed by the rolls B. B′.

G. is the grooved roller applied between the band E. and the back drawing rollers for the prevention of the running back of the twist too tightly into the bite of the back drawing rollers and for causing the loose fibers to be lapped into the roping. This roller is arranged with its planes of revolution parallel to the planes of revolution of the drawing rollers and in such position that the roping will pass through the upper part of its groove, and is supported in this position by an arm H. which is attached to the back roller beam D. To provide for the adjustment of the said roller in a higher or lower position, that the roping may bear upon it with greater or less pressure, the arm H. is so constructed, of spring steel, that it tends to spring upward, and has a set screw *g*, so applied to it as to depress it to the required position according to the pressure required on the roping. Other means of adjusting the elevation of the roller may be employed. When the twist runs back too tightly into the bite of the back drawing rollers the grooved roller G. requires to be elevated to produce a greater pressure upon it, and vice versa. This grooved roller G. possesses the advantages over the fixed rest which has been sometimes used for the same purpose in its producing less friction on the roping and causing it to stretch more evenly, while it does not fray or roughen it, but on the contrary, by means of its groove, causes any loose fibers to lap into the roping.

I do not claim the invention of the endless band applied between the front and back drawing rollers to produce a direct or counter twist of the roping while drawing. Nor do I claim the use of a rest in other form than that of a grooved roller between

the back drawing rollers and the twisting device used between the back and front drawing rollers.

But, what I claim as my invention and desire to secure by Letters Patent; is—

1. Making the endless band E. adjustable toward and from the front and back drawing rollers substantially as and for the purpose herein specified.

2. The combination of the laterally adjustable band E. with the adjustable rollers C. C′. in the manner herein shown and described.

JOHN A. PARTRIDGE.

Witnesses:
WM. H. BAKER,
GARRET SERVIS.