

(No Model.)

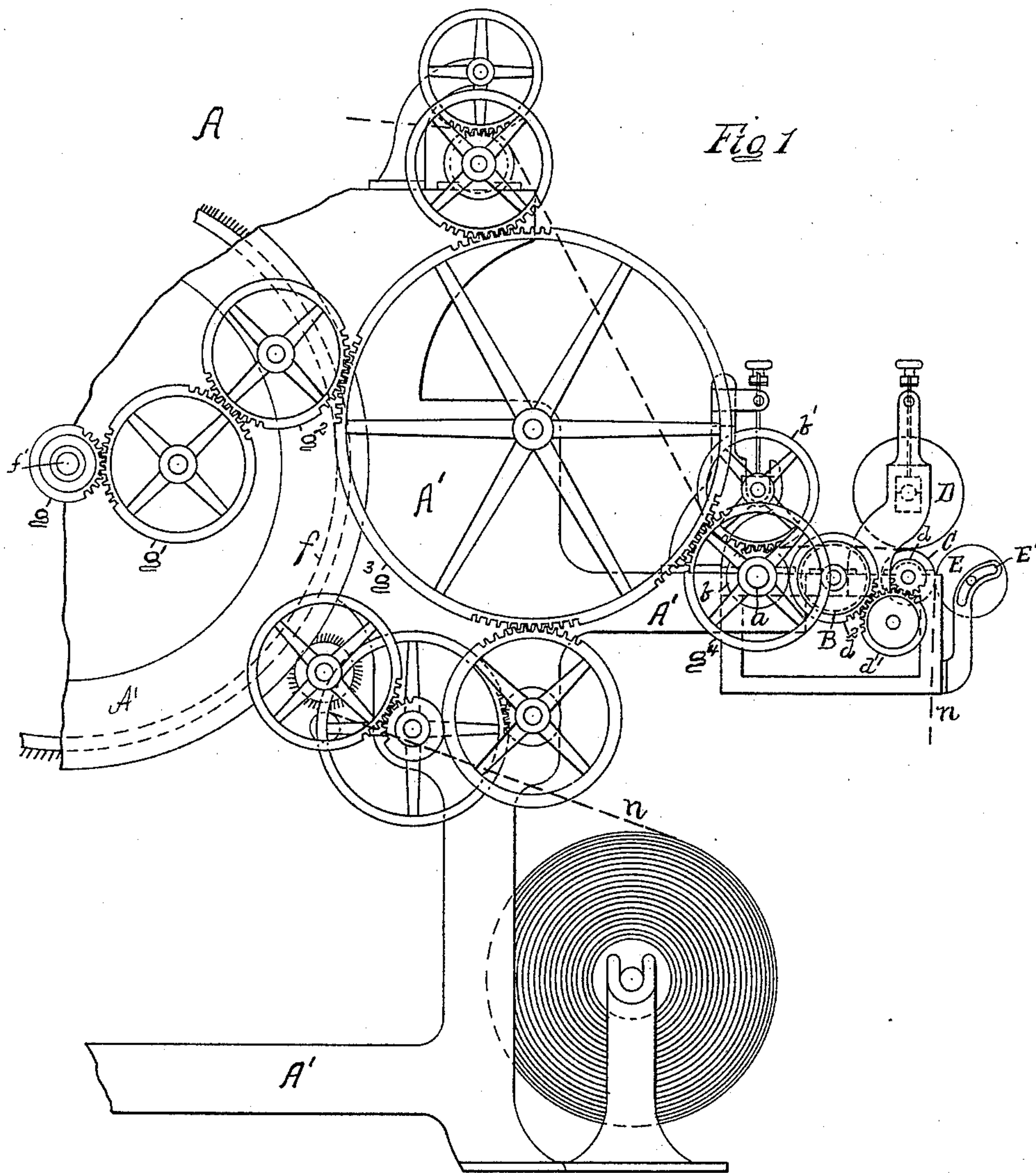
2 Sheets—Sheet 1.

J. CHEYNE.

DRAWING ATTACHMENT FOR CARDING MACHINES.

No. 391,781.

Patented Oct. 30, 1888.



Witnesses.

Alfred B. Watson.

James L. Linn

Inventor.

Tom Chynoweth.

Dolomieu's atty.

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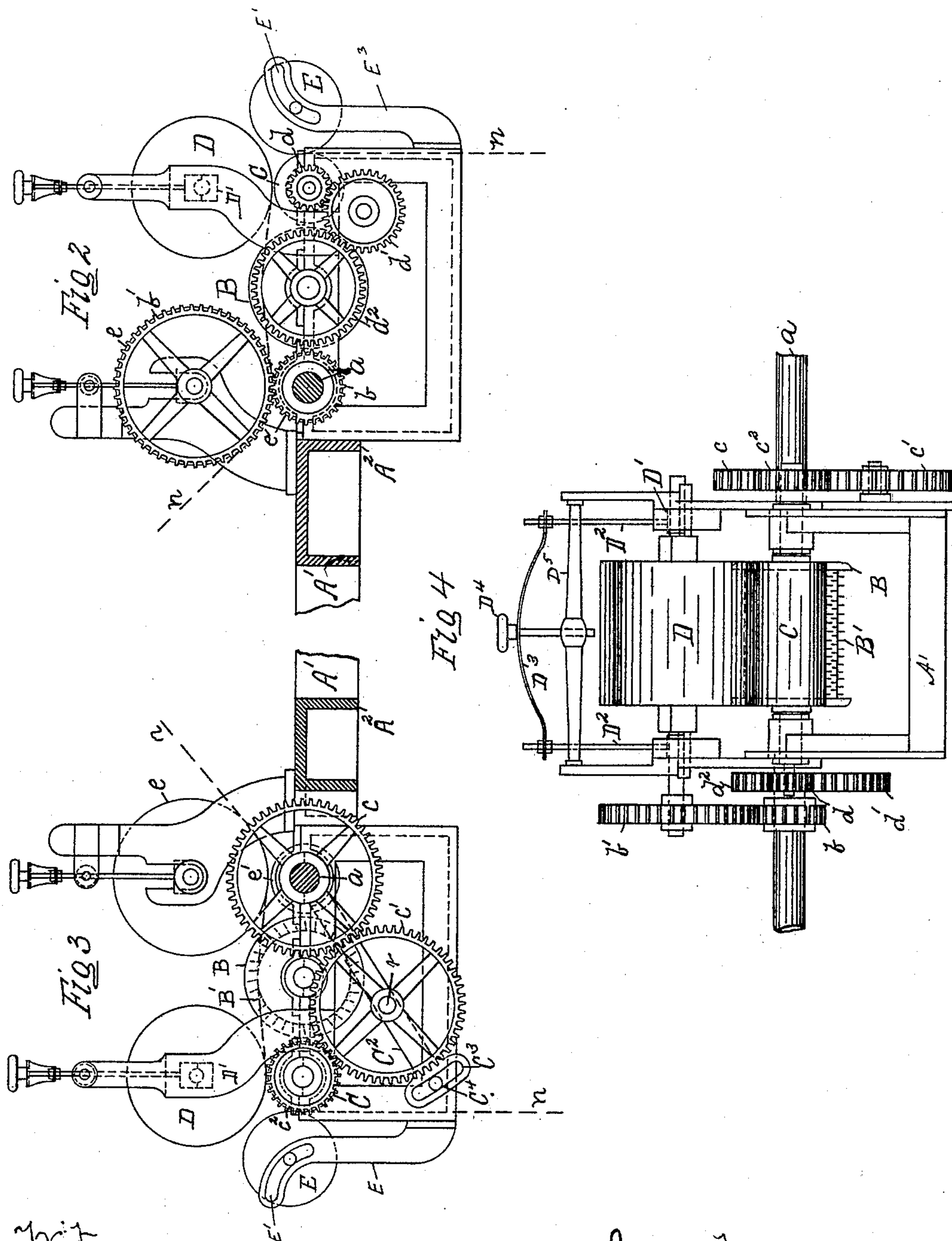
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Witnesses.

Alfred B. Watson.
James L. Lamm.

Inventor.

J. M. Cheyne.
John D. Dyer, atty.

UNITED STATES PATENT OFFICE.

JOHN CHEYNE, OF PATERSON, NEW JERSEY.

DRAWING ATTACHMENT FOR CARDING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 391,781, dated October 30, 1888.

Application filed June 15, 1888. Serial No. 277,162. (No model.)

To all whom it may concern:

Be it known that I, JOHN CHEYNE, a citizen of the United States, residing at Paterson, Passaic county, State of New Jersey, have invented a new and useful Improvement in Drawing Attachments for Carding-Machines, of which the following is a specification, reference being had to the accompanying drawings, forming a part thereof.

My invention relates to carding-machines, and has for its object to straighten out and partly draw the carded fiber in the carding-machine preparatory to transferring the same to the drawing-machine.

The invention resides in devices that are illustrated in the accompanying drawings, which will be hereinafter fully described, and pointed out in the claim.

Figure 1 is a side elevation of a portion of an ordinary carding-machine with my invention attached. Figs. 2 and 3 show opposite ends of my invention detached; and Fig. 4 is a front view of the same, in which figure the shaft is broken.

A represents a portion of an ordinary carding-machine, having the usual supporting-frame, A' , transverse brace A^2 , shaft a , rollers e e' , cylinder f , and gears g , g' , g^2 , g^3 , g^4 , b , b' , and c . The machine, which is constructed as usual, need not, it is thought, be further described herein.

In bearings suitably arranged in the machine-frame I journal rollers B and C. In the periphery of the roller B, I arrange pins or teeth B' , which teeth or pins are adapted to pass through the carded jute or other fiber and straighten out the same longitudinally preparatory to the fibers passing to the roller C and between the said roller C and roller D, which last-mentioned rollers, owing to the quickness of their speed, are adapted to partly draw the carded and straightened fiber preparatory to the transfer of the fibers to the drawing-machine. The roller D is arranged in bearings D' , formed in an upward-projecting part of the frame A' , and receives its motion from the roller C by its contact therewith, but is held in contact more or less yieldingly with the roller C, to accommodate the fiber n , by rods D^2 , spring D^3 , and screw D^4 , that con-

nect cap-bearings D' and cross-bar D^5 , as shown. The jute or other fiber passes from between the rollers C and D to an idler-roller, E, and between the idler E and drawing-roller C. The idler E is arranged in slots E' , that are formed in projecting portions E^3 of the machine-frame, and in said slots the roller E is adapted to accommodate itself to the wants of the fibers.

The roller C is provided with gears c^2 and d , the former of which gears with and is actuated by an intermediate gear, c' , which latter gears with and is turned by a gear, c , fixed on the shaft a , which shaft and roller e' thereon are turned by gear g^4 , that gears with and is rotated by gear g^3 , that meshes with and is actuated by gear g^2 , which latter gears with like gear-wheel, g' , that receives its motion from pinion g , fixed on the cylinder-shaft f' , as shown.

The roller e receives its motion from a pinion, b , on the shaft a , that gears with a gear, b' , on the said roller e . The toothed roller B is turned by an intermediate gear-wheel, d' , that meshes with and is turned by a pinion, d , on the roller C, while the intermediate d' gears with and imparts motion to gear d^2 on roller B.

The intermediate gear, c' , from which the roller C receives its motion, is arranged on a stud, r , fixed in a bar, C^2 , which bar at its upper end is pivoted on the shaft a , and which has a slotted lower end, C^3 , that is secured to the frame A' by a bolt, C^4 , and which can be adjusted to suit a larger or smaller gear, c' , to regulate the speed of the roller C.

The machine is supposed to be in motion and the carded fiber n to be delivered to the roller B by rollers e e' . The fiber, while the same is passing over the roller B to the drawing-rollers C and D, is penetrated and straightened by the action of the pins or teeth B' . The carded and straightened fiber then passes between the rollers C and D, and is partly drawn by the last-mentioned rollers, and passes between the idler E and roller C, preparatory to the transfer of the fiber to the drawing-machine.

The toothed roller B and drawing-roller C may be speeded up indefinitely to accomplish the straightening and drawing of the fiber, by reason of which the carding-machine can be

run at a higher speed to increase the production of the same, while the drawing-machine to which the straightened and partly-drawn fiber is taken from the machine A can complete the drawing of the jute or other fiber at a quickened speed with less strain by reason of my invention. Thus it will be seen that a given quantity of jute or other fiber can be carded and drawn with a less number of carding and drawing machines by reason of my invention, while the spun yarn made from a cheaper material will by reason of the same command a higher price in the market than will yarn made from the best material without the use of my invention.

Having described my invention, what I claim as new, and desire to secure by Letters Patent, is—

The combination, with rollers *e e'* and gears thereon, of the roller B, provided with teeth and the gear thereon, gear *d'*, the roller C and gears on said roller, the roller D, roller E, the rods *D²*, spring *D³*, the screw *D⁴*, gear *e'*, the bar *C²*, having slot *C³*, and bolt *C⁴*, all arranged and operating substantially as described.

JOHN CHEYNE.

Witnesses:

JAMES CAUNCE,
WILLIAM STEWART.