2 Sheets--Sheet 1.

J. & J. DOBSON.

Carding-Machine.

No. 165,716. Patented July 20, 1875.

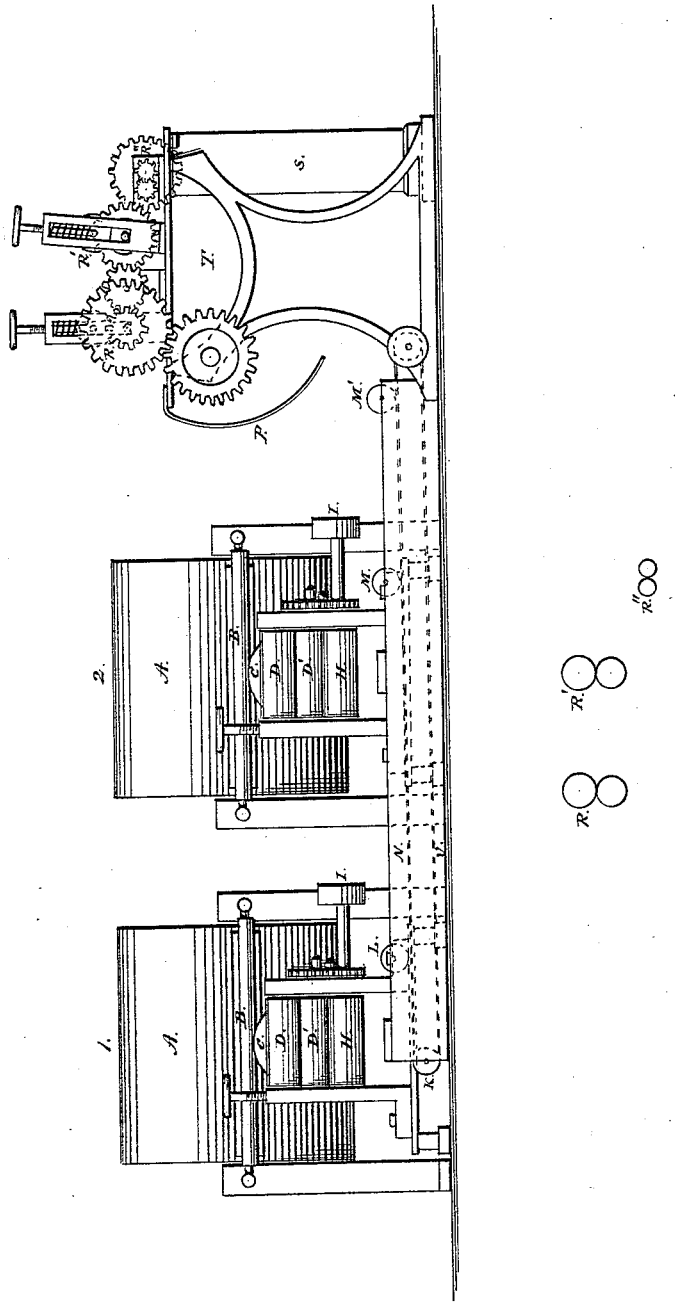

Fig. 1.

Witnesses:

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Inventors:

John Dobson

James Dobson

by their atty George E. Buckley

2 Sheets--Sheet2.

J. & J. DOBSON.

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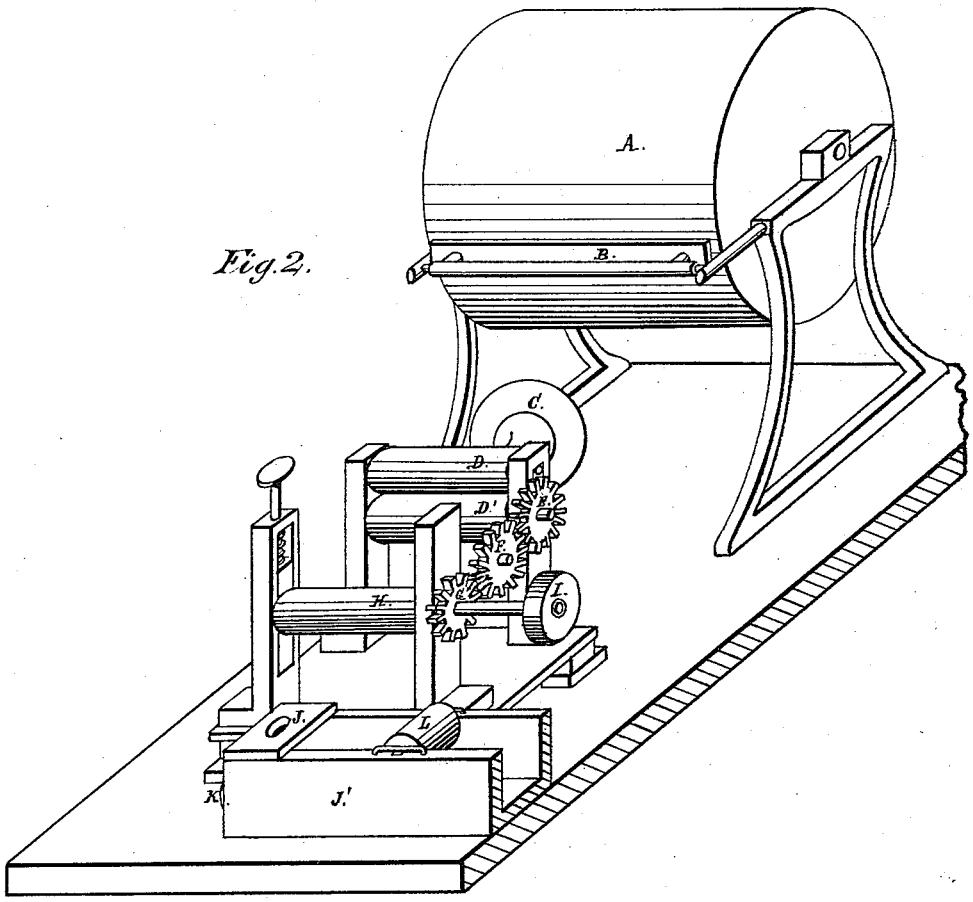
Fig. 2.



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UNITED STATES PATENT OFFICE.

JOHN DOBSON AND JAMES DOBSON, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN CARDING-MACHINES.

Specification forming part of Letters Patent No. **165,716**, dated July 20, 1875; application filed June 7, 1875.

To all whom it may concern:

Be it known that we, JOHN DOBSON and JAMES DOBSON, both of the Falls of Schuylkill, Philadelphia, State of Pennsylvania, have invented certain new and useful Improvements in Machines for Carding and Drawing Wool; and we do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the annexed drawings making part hereof.

Our invention consists of the combination, with a carding-cylinder and an endless apron to carry the sliver, of a pair of rolls to take the sliver of wool from the cylinder, operated by pinions or belts, and placed intermediately between the carding-cylinder and the endless carrying-apron; also, of the combination, with the carding-cylinder and an endless apron, of a pair of rolls operated by power applied to the end of the axes of one or more of them, and set between the cylinder and the carrying-apron, and a pair of rolls similarly operated and situated at the other end of the said carrying-apron, which latter rolls draw the sliver between them and the first pair; also, of the combination of a carding-cylinder, an endless apron, and a pair of drawing-rolls located between them, with weighted superincumbent single rolls.

To enable others skilled in the art to make and use our invention, we will describe its construction and mode of operation.

In the drawings, Figure 1 is an elevation of our machine, showing the cards, trough for the endless apron, and the delivery-head. Fig. 2 is a detached perspective view of one carding-cylinder, drawing-rolls, fluted roll, and part of the trough for the endless apron.

A is the carding-cylinder for carding the wool; B, the doffer-comb for taking the bat from the cylinder; C, a disk or cone, having an opening in the middle; D D′, two rollers operated by geared pinions E F G and pulley I, which latter is turned by a belt from the shafting. H is a carrying single roller. J is an opening to receive the sliver of wool to the endless carrying-apron in the trough J′. K is an end pulley to carry the apron. L M are weighted rollers to keep the bat or sliver down on the endless apron N, which is mounted on pulleys K and O. P is a dependent smooth apron or plane to sustain the sliver of wool in its passage to the first pair of rollers, R, of the delivery-head T. R R′ R″ are the drawing-rolls of the delivery-head. S is a can or box to receive the sliver at the completion of the operation. V is a trough containing endless apron N.

The wool is taken in a broad bat from the cylinder A by the comb B, and passes through the cone C, which contracts it to a narrow sliver; thence to the rollers D D′, which draw it from the cylinder. After passing between these rollers it passes over the fluted roller H, through opening J onto the endless apron N, and, being kept down on the apron by the rollers L M M′, it is carried over the plane P to and between the rollers R R′ R″ into the box S. The sliver is drawn by the rollers D D′, and also from these rollers by the endless apron N, also from the endless apron N at M′, and along its course by the rollers R of the delivery-head, or by whatever rollers may be substituted for R. If the delivery-head were omitted the sliver would be drawn by the rollers R″ in place of rollers R, which rollers R″ throw the sliver into the box S. This box, when filled, is removed for the subsequent manipulation of the sliver in the process of converting it into yarn, and is supplanted by another box. The sliver is, by these several means, thus drawn considerably before it is subjected to the actual operation of the delivery-head, and the fibers composing it are straightened out and longitudinally evenly arranged before reaching the point R″. Thus any subsequent drawing can be consistently dispensed with.

Several carding-cylinders can be employed to feed automatically to the endless apron N, though we have shown only two, numbered 1 and 2. Thus the employment of a number of mill-hands can be dispensed with, as one hand can overlook and attend to several cards.

The superincumbent rollers L M M′ serve to confine the sliver down upon the apron N.

We have heretofore shown more particularly the construction of delivery-head T in our patent of November 25, 1873, No. 144,840.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. The combination, with a carding-cylinder

and an endless apron to carry the sliver, of a pair of rolls to take the sliver of wool from the cylinder, operated by pinions or belts, and placed intermediately between the carding-cylinder and the endless carrying-apron, substantially as described.

2. The combination, with a carding-cylinder and an endless apron, of a pair of drawing-rolls set between them, and a pair of drawing-rolls situated at the other end of said carrying-apron, substantially as described.

3. The combination of a carding-cylinder and an endless apron with a pair of drawing-rolls situated between them, and weighted single rolls superincumbent upon the endless aprons, substantially as described.

JOHN DOBSON.
JAMES DOBSON.

Witnesses:
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ALBERT E. ZACHERLE.