

No. 658,183.

Patented Sept. 18, 1900.

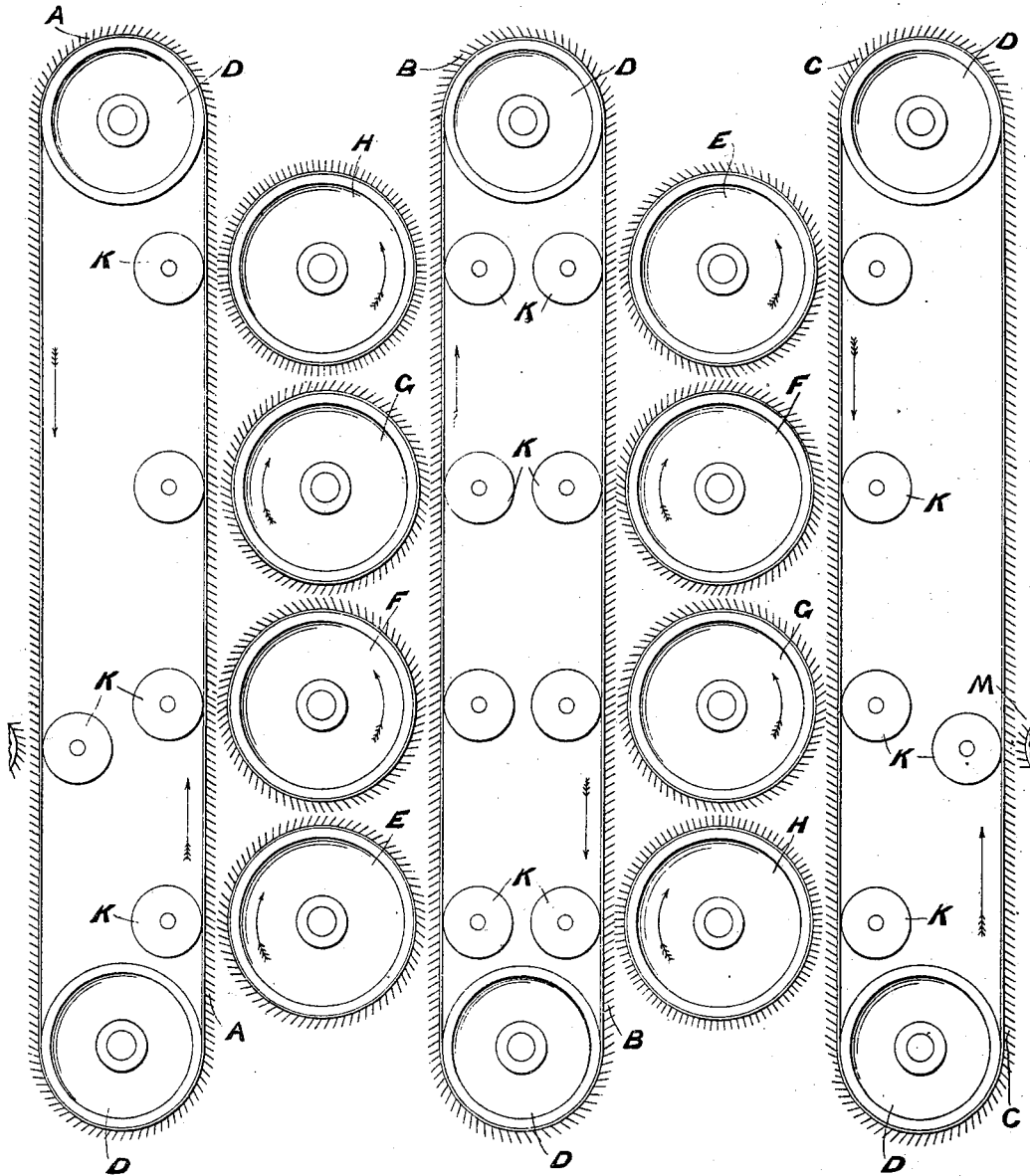
J. LEACH & F. HEPWORTH.
MACHINERY FOR CARDING WOOL.

(Application filed Mar. 28, 1900.

(No Model.)

2 Sheets—Sheet 1.

FIG. 1.



Witnesses

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attys

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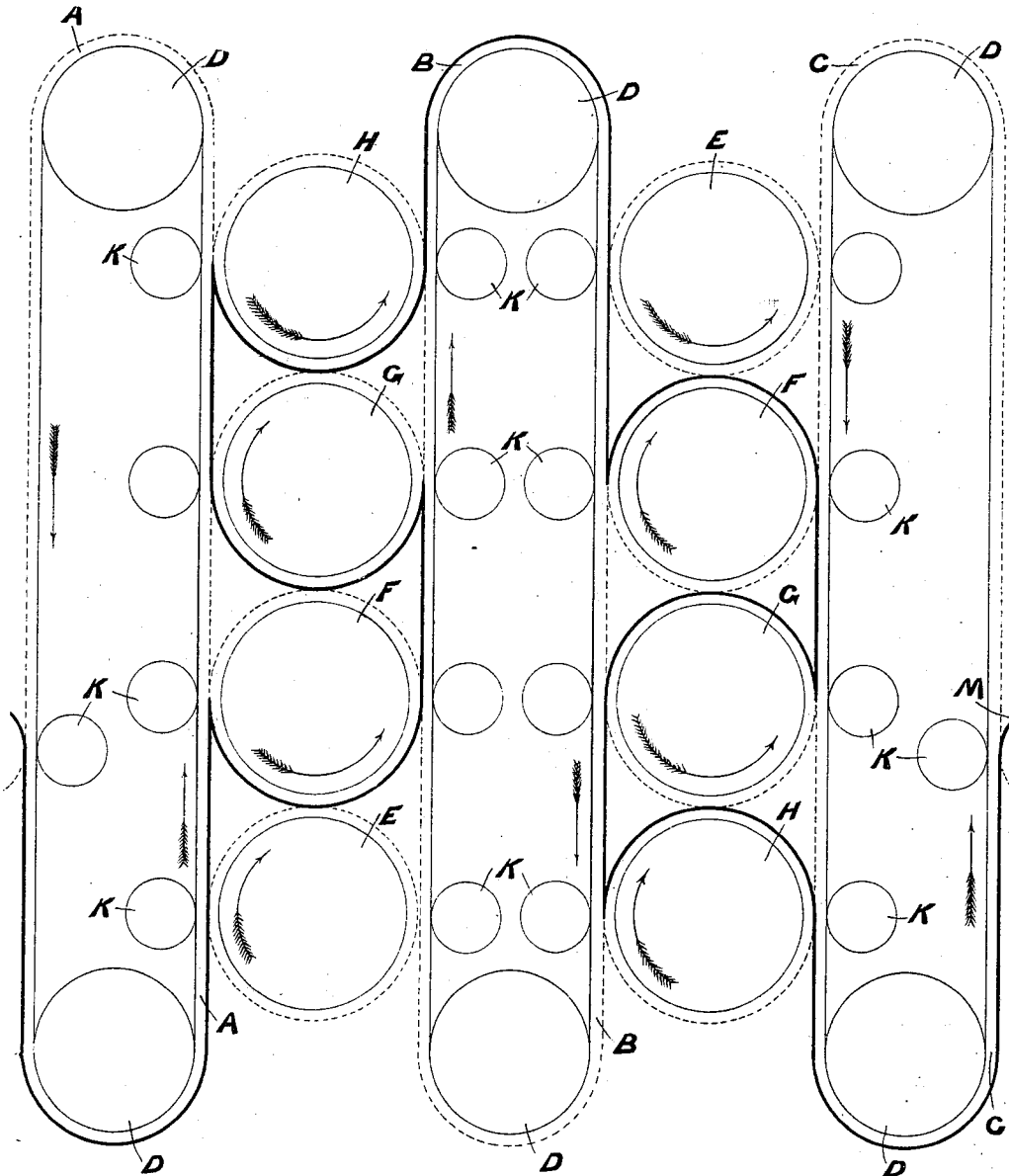
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2 Sheets—Sheet 2.

FIG. 2.



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UNITED STATES PATENT OFFICE.

JABEZ LEACH AND FRIEND HEPWORTH, OF HUDDERSFIELD, ENGLAND.

MACHINERY FOR CARDING WOOL.

SPECIFICATION forming part of Letters Patent No. 658,183, dated September 18, 1900.

Application filed March 28, 1900. Serial No. 10,429. (No model.)

To all whom it may concern:

Be it known that we, JABEZ LEACH, of 4 Alder Terrace, Fartown Green, Huddersfield, and FRIEND HEPWORTH, of 46 Lion Arcade, Huddersfield, England, subjects of the Queen of Great Britain and Ireland, have invented certain new and useful Improvements in or Connected with Machinery for Carding Wool and Like Fiber, (for which we have made application for a patent in Great Britain, No. 18,019, bearing date September 6, 1899,) of which the following is a specification.

The object of this invention is to construct a carding-machine in which endless carding-bands are employed, and according to this invention the bands are suspended between rollers and arranged in a pair or in a series parallel to one another and at a distance apart and having a number of carding-drums arranged between each pair of carding-bands, the carding-drums, acting in conjunction with one another and with the carding-bands, constituting a machine in which a carding action alternately takes place upon opposite adjacent surfaces of the carding-bands, whereby wool or other material under treatment is carded in a most efficient manner, and machines constructed according to this invention are compact and readily allow of the addition or subtraction of extra bands and drums, whereby the machine may be increased or reduced in size according to requirements.

Referring to the accompanying drawings, Figure 1 illustrates in side elevation a machine constructed according to our invention; and Fig. 2 is a diagrammatic view, also in side elevation, showing the course that the wool or other material will take in passing through the machine.

A, B, and C are three endless carding-bands, each of which is suspended between rollers D, all of which may be vertically and horizontally adjustable in order to regulate their respective positions and tension. The carding-bands A, B, and C are arranged vertically, and their carded faces are opposite and parallel to each other. Between the carding-bands A and B and B and C carding-drums E, F, G, and H are arranged, carried in bearings upon each side of the machine, the bearings being arranged capable of vertical and horizontal adjustment.

In order to regulate and support the surface of the carding-bands A, B, and C, supporting-rollers K are located behind the working surfaces of the carding-bands, the rollers K being carried in vertically and horizontally adjustable bearings.

The drums and bands may be driven by any suitable gearing, and the relative speeds of the drums to one another and to the carding-belts are as follows: The bands A, B, and C run at the slowest speed, drum E at a higher surface speed than the bands, F higher than than E, G higher than F, and H higher than G. The direction of rotation of the various parts is indicated by the arrows, and the inclination of the carding-teeth is clearly shown at Fig. 1.

The action of the carding-drums E F G H relatively to one another and to the carding-belts A and B is as follows: between E and A, carding; between F and A, doffing; between E and F, stripping off E; between F and B, carding and doffing off F; between G and B, doffing; between F and G, stripping off F; between G and A, carding and doffing off G; between H and A, doffing; between G and H, stripping off G; between H and B, carding and doffing off H.

The arrangement and action in the second or any subsequent series are substantially similar to that in the first, as above described, the wool or other material traveling downward through the machine in the alternate series.

The wool or other material to be carded is fed onto the belt A by any suitable arrangement of feeding means and travels through the machine, being acted upon in the manner as above described, taking the course indicated at Fig. 2 and being doffed from the band C by any suitable means at M.

The supporting-framework should be constructed so that any or all of the series of carding drums and bands may be removed or additional series added when desired, such arrangement also rendering the working parts of the machine readily accessible for cleaning.

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

1. A carding-machine having a pair of end-

less carding-bands, suspended between rollers, arranged parallel to one another and at a distance apart, in combination with a number of carding-drums arranged between the pair of bands, to effect an alternate carding action upon the opposite adjacent surfaces of the carding-bands, substantially as herein set forth.

2. A carding-machine having a series of endless carding-bands, suspended between rollers, arranged parallel to one another and at a distance apart, in combination with a number of carding-drums arranged between each pair of bands, to effect an alternate carding action upon the opposite adjacent surfaces of the carding-bands, substantially as herein set forth.

3. A carding-machine consisting of two carding-bands A and B, supported upon rollers

D, in combination with a set of carding-drums E, F, G, H, arranged between the bands A and B, together with supporting-rollers K and driving means, all arranged and acting substantially as herein set forth.

4. A carding-machine consisting of a series of carding-bands supported upon rollers D, in combination with sets of drums E, F, G, H, arranged between the carding-bands, together with supporting-rollers K and driving means, all arranged and acting substantially as herein set forth.

In witness whereof we have hereunto set our hands in presence of two witnesses.

JABEZ LEACH.

FRIEND HEPWORTH.

Witnesses:

P. NICHOLSON,

J. ALFRED BREWER.