(No Model.) 3 Sheets—Sheet 1.

J. TYNING.

CARDING MACHINE.

No. 244,342. Patented July 12, 1881.

Fig. 1.

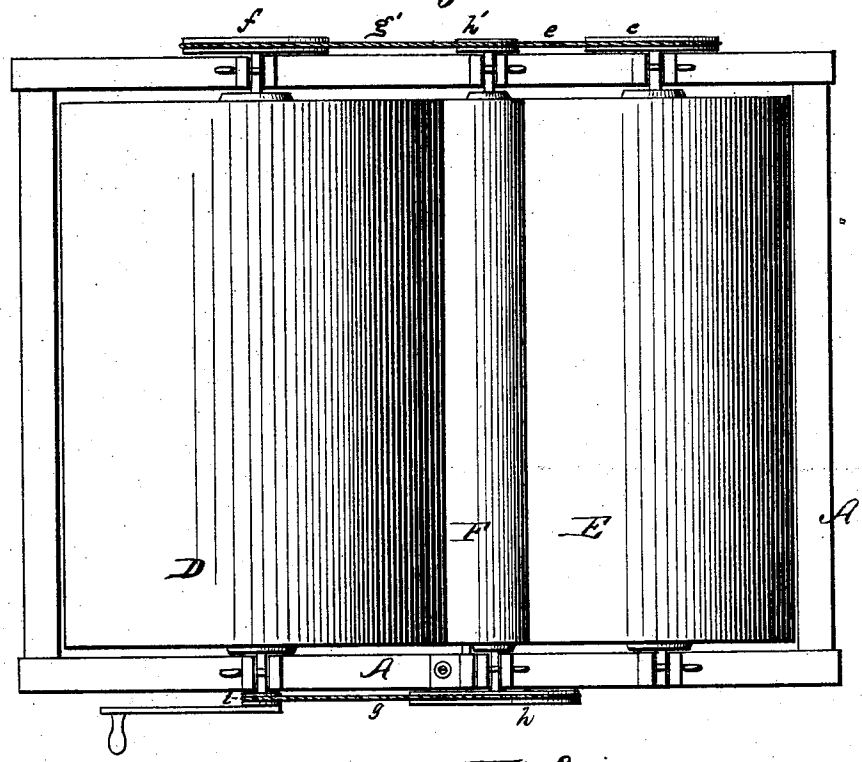
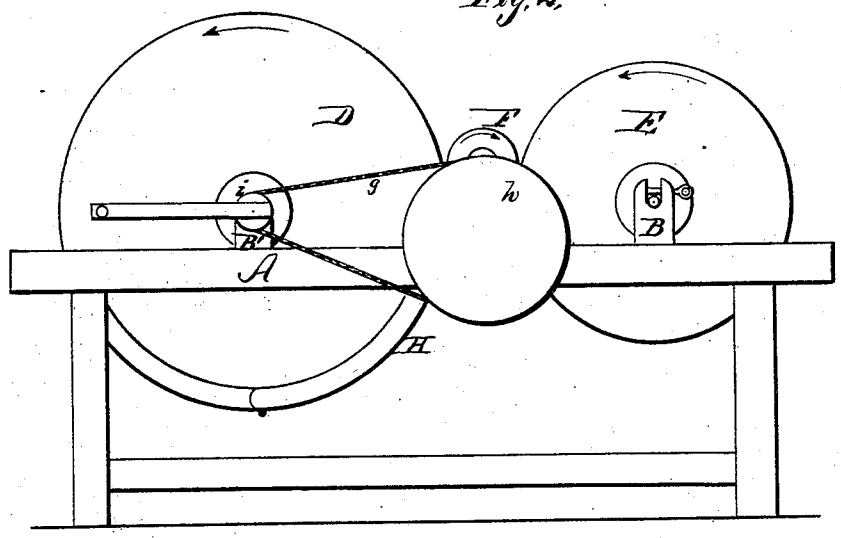


Fig. 2.



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(No Model.) 3 Sheets—Sheet 2.

J. TYNING.

CARDING MACHINE.

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Fig. 3.

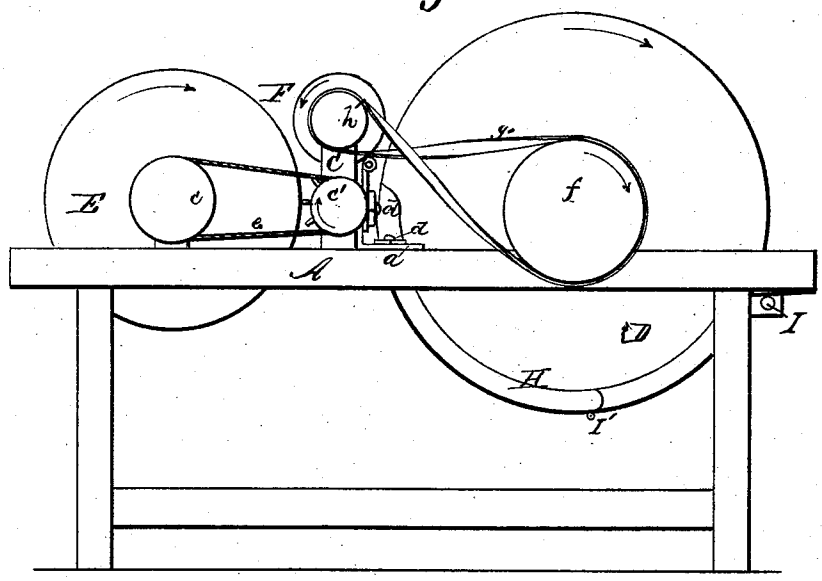


Fig. 4.

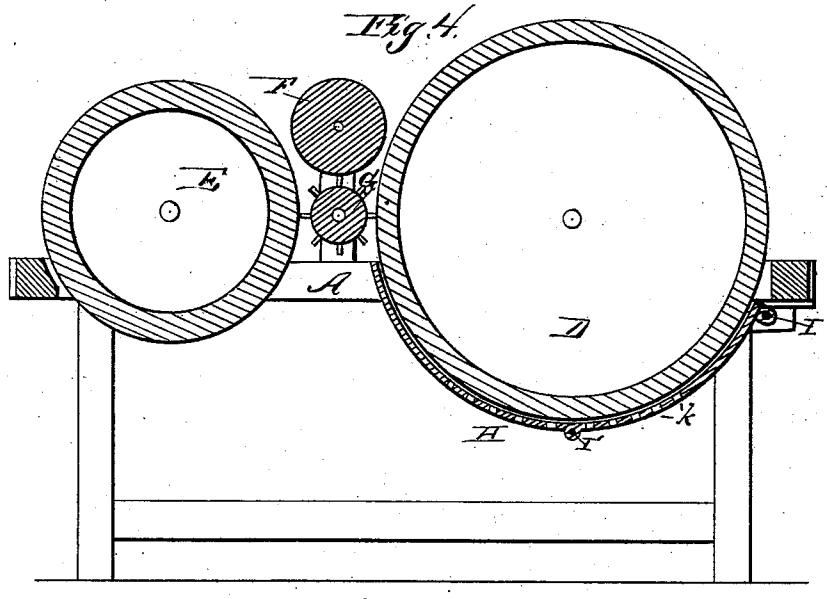
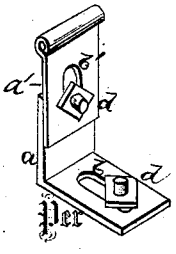


Fig. 5.



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(No Model.) 3 Sheets—Sheet 3.

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CARDING MACHINE.

No. 244,342. Patented July 12, 1881.

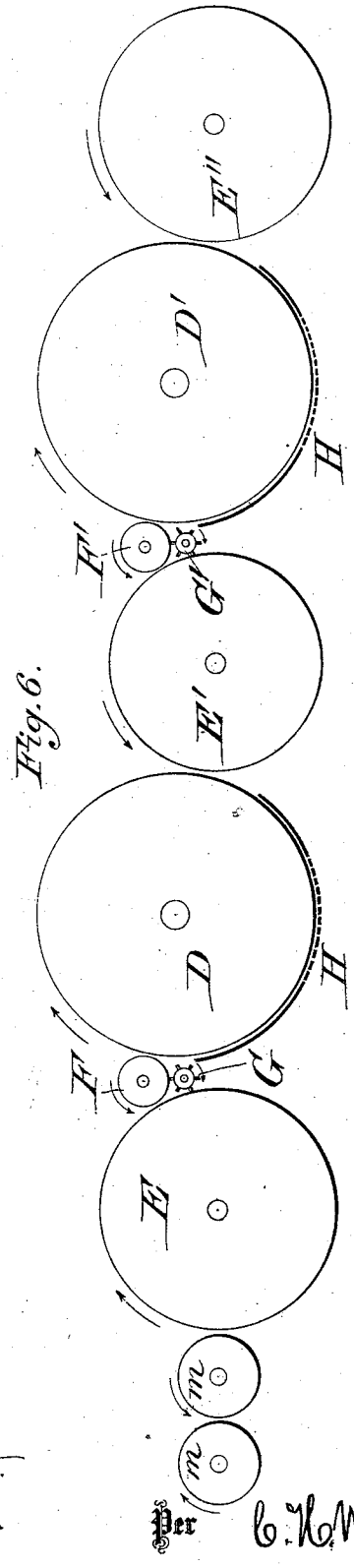


Fig. 6.

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UNITED STATES PATENT OFFICE.

JOHN TYNING, OF OSWEGO FALLS, NEW YORK, ASSIGNOR TO THE OSWEGO FALLS MANUFACTURING COMPANY, OF SAME PLACE.

CARDING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 244,342, dated July 12, 1881.

Application filed July 26, 1880. (No model.)

To all whom it may concern:

Be it known that I, JOHN TYNING, of Oswego Falls, in the county of Oswego and State of New York, have invented certain new and useful Improvements in Carding-Machines; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to certain improvements in carding-machines, having for its object to improve the operation and efficiency of the same; and it consists in the construction and arrangement of parts as will be hereinafter more fully set forth.

In the annexed drawings, which fully illustrate my invention, Figure 1 is a plan view. Figs. 2 and 3 are side elevations, taken on opposite sides. Fig. 4 is a section. Fig. 5 is a detail perspective view of the adjustable brackets; and Fig. 6 is an end view of carding-rollers, illustrating the manner of applying my invention.

A indicates the framing, which may be of any suitable or desired construction, and B B′ are stationary bearings for the cylinders. C is an adjustable bearing to receive the stripper and fan-roller, said bearing being adjusted and held in position by the movable bracket *a a′*, which is provided with the slots *b b′*, in which the set-screws *d d* are placed. The peculiar construction of these brackets admits of the adjustment of the bearings horizontally or vertically, as desired.

D and E are cylinders working in the bearings B B′, and provided with suitable operative mechanism. Between the cylinders D E is placed the stripper or roller F, revolving in adjustable bearings, and immediately beneath the said roller F is placed a fan or fan-roller, G. Beneath the cylinder D is hung a screen, H, that has a curvature to conform to that of the cylinder and is hinged upon the rods I, which extend crosswise of the framing. This screen is made in two parts, for convenience of attachment and removal, and is secured together at its center by means of a rod or bolt, I′, which may be withdrawn at will, thus permitting the separation of the two parts. The screen is also provided with any desired number of perforations or openings, *k*, which may be varied in size.

The shaft of the cylinder D being revolved in any suitable manner, motion is transmitted therefrom by means of the pulley *i* and belt or chain *g*, to the pulley *h* on the shaft of the fan-roller G, which is thereby caused to revolve in the same direction. On the opposite end of the fan-shaft is a pulley, *c′*, Fig. 3, which, by means of a belt, *e*, that passes over the pulley *c* on the shaft of the cylinder E, also causes the latter to revolve. At the same time the stripper or roller F is also made to revolve by means of its pulley *h′* and the belt *g′* that passes from the pulley *f* on the shaft of the cylinder D.

In Fig. 6 is shown an end view of the various rollers and cylinders of a carding-machine, illustrating the manner in which my invention is applied.

The cylinder E, which is provided with suitable cards, receives and carries forward the stock from the lickers-in *m m*, in the usual manner, and is then stripped by the stripper F of a portion, while that part which ordinarily falls to the ground is caught by the fan-roller G and brought upward, so as to give the stripper F another opportunity of catching hold of it. The stripper F is then stripped by the cylinder D; but in this operation there is again a considerable fall of stock from this cylinder. Before reaching the floor, however, the stock thus dropped is caught by the perforated screen H, which allows the dust, dirt, and very fine shoddy to escape while holding the good stock up until it is again caught by the cylinder D and deposited on the first doffer, E′. This doffer is stripped by the second stripper, F′, and, as before described, the stock which would otherwise fall to the floor is caught by the second fan-roller, G′, and is taken up again by the second stripper, F′, which is finally stripped by the cylinder D′. Under this latter cylinder is also arranged a perforated screen, which receives any stock that may fall from the cyl-

inder and holds it until it is again picked up by the cylinder D′ and finally deposited upon the second doffer, E″.

The cylinders E D D′ and fan-rollers G G′ are caused to revolve in one direction, while the doffers E′ E″ and strippers F F′ revolve in the opposite direction, as indicated by the arrows. The cards on these cylinders and rollers, as well as those on the lickers-in *m m*, are not shown in the drawings, but in practice are so disposed with relation to each other as to carry the stock continually forward, it being understood, of course, that the several cylinders, strippers, and doffers revolve, as usual, with relatively-different rates of speed. These various parts are mounted in a suitable manner and operated by means of any appropriate belting or gearing.

This construction and arrangement of parts prevents anything but the dirt and refuse material from falling out. By means of the fans and screens the fiber of the stock is separated from the dirt and preserved from loss by falling to the floor, which is not the case in many carding-machines, where large quantities of stock often fall to the floor and have to be gathered up with the dirt and again passed through the cards.

A carding-machine of this construction may be used for carding wool, cotton, flax, silk, or other stock, but is particularly adapted to the working of all kinds of low stock, especially in the carding of stock for carpets.

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

1. In a carding-machine, the combination of the cylinder E, stripper F, fan-roller G, cylinder D, and perforated screen H, substantially as shown and described.

2. In a carding-machine, the combination, with the stripper F and fan-roller G, of the adjustable bearings C, provided with movable brackets *a a′*, having slots *b b′* and set-screws *d d*, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

JOHN TYNING.

Witnesses:

SLATER LAYCOCK,

JAMES FRANK WILLARD.