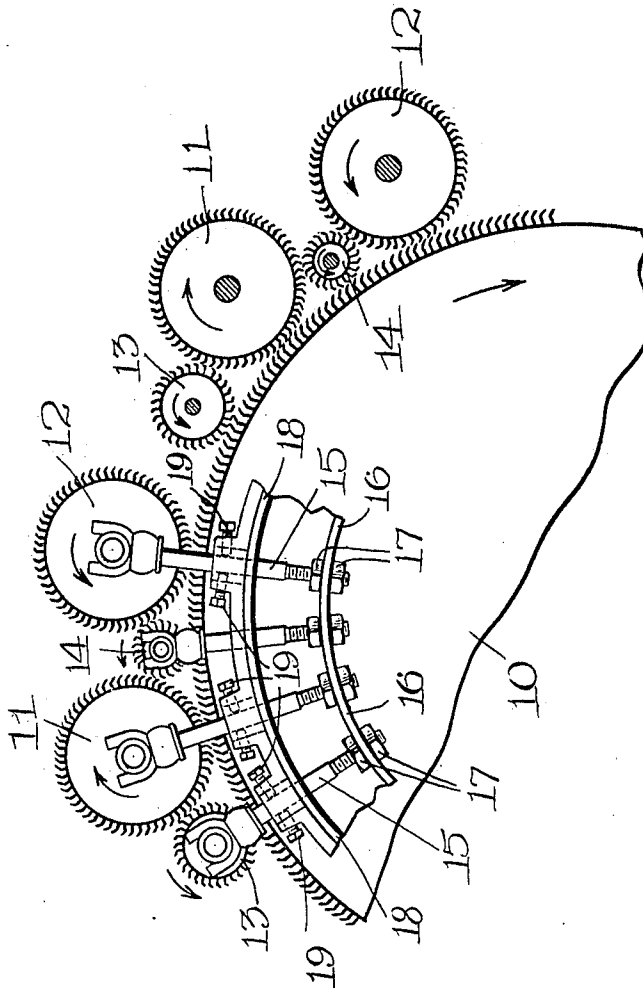


J. J. HENDERSON.
CARDING MACHINE.
APPLICATION FILED JAN. 18, 1909.

949,271.

Patented Feb. 15, 1910.



Witnesses:
C. F. Mearns
C. L. Hartnett

Inventor:
J. J. Henderson
By Attorneys
Southgate & Southgate.

UNITED STATES PATENT OFFICE.

JOHN J. HENDERSON, OF CORDAVILLE, MASSACHUSETTS.

CARDING-MACHINE.

949,271.

Specification of Letters Patent.

Patented Feb. 15, 1910.

Application filed January 18, 1909. Serial No. 472,772.

To all whom it may concern:

Be it known that I, JOHN J. HENDERSON, a citizen of the United States, residing at Cordaville, in the county of Worcester and State of Massachusetts, have invented a new and useful Carding-Machine, of which the following is a specification.

This invention relates to a carding machine, the principal object being to provide efficient means for more thoroughly stripping the fibers from a worker, particularly the ordinary first worker, than can be done with means such as is usually employed, and to so add to the efficiency that machines can be speeded up higher, so that they can do the work usually done by those of larger size.

Another object of the invention is to utilize the stripper of the second worker to perform an additional function, and thus to increase the efficiency of the machine.

Reference is to be had to the accompanying drawing which shows an end elevation of a portion of a carding machine constructed in accordance with this invention.

The carding machine is shown as having a main cylinder 10, a first worker 11, second worker 12, and first stripper 13, all constructed and operating in the usual manner, the first and second workers rotating in opposite directions. The machine is also provided with a second stripper 14 rotating in the same direction as the second worker and in contact therewith and with the cylinder. This stripper takes the material from the worker in the usual way and deposits it on the cylinder. It is also so located as to engage the first worker and is rotated at sufficiently high circumferential speed so that it will take such material from the teeth of the first worker as is not removed by the first stripper, thus adding greatly to the efficiency of the first worker and of the machine as a whole, because the first worker naturally takes a large part of the duty of the machine. In order to accomplish this result in an efficient manner, the second stripper 14 which is caused to rotate in the same direction as the second worker 12, rotates in the opposite direction to that of the first worker. This results therefore in its teeth moving in the same direction as the teeth of the first worker while they are in contact. The stripper is rotated at such a high speed that its teeth move faster than the teeth of the worker 11, and consequently

it strips such fibers therefrom as are left by the stripper 13. This results in substantially cleaning the first worker all the time, so that when its teeth come into engagement with the main cylinder they are substantially free from fiber. This is an improvement over the present practice, in which a single stripper is used for each worker, because it is inevitable that some fibers will be left on the worker, and very often this accumulates considerably before it is removed by its single stripper, and these accumulations, of course, prevent the worker from taking up a full quantity of fiber from the main cylinder.

It will be obvious that in addition to this, the efficiency of the stripper 14 for stripping the worker 12 is not impaired, because the fibers taken upon it from the first worker are removed by the main cylinder before they could be taken around again to the second worker. The worker 11 also back cards the fiber on the stripper 14 so that it is laid evenly thereby on the main cylinder.

The drawing shows a second set of workers and strippers like that described, and it will be understood that the invention is not limited to any particular number of sets.

It has been stated that the workers 11 and 12 are illustrated as rotating in opposite directions. In order to have the stripper 14 properly strip both workers it is caused to rotate in the same direction as one of them and at a higher circumferential speed than the other. The worker 13, however, may rotate in either direction and it is shown as rotating in the opposite direction to that of the worker 11. The several workers and strippers are as usual adjustable radially. This is provided for in a well known manner by supporting their bearings on rods 15 which are carried by a plate 16 on the end of the frame and adjusted and fastened by nuts 17.

In order to provide for properly locating the parts in accordance with this invention, the two workers and the stripper 13 preferably are adjusted in a direction at right angles to the usual direction of adjustment; that is, on a line parallel with the circumference of the nearest point of the main cylinder. This is accomplished by allowing a slight play at the bottom of each of the rods 15 and providing a passage through the guide plate 18, which is usually employed, sufficient to permit the rods 15 to

swing a short distance. Then screws or bolts 19 are employed to adjust each of said rods connected with the two workers and the stripper 13 and to hold them in adjusted positions.

In setting the parts up the stripper 14 is first adjusted so as to have the proper relation to the main cylinder. Then the workers 11 and 12 are also adjusted for the same purpose and finally each of them is adjusted up to the stripper 14 so as to cause that stripper to perform the functions above specified, and finally the stripper 13 is adjusted out and in and then laterally toward the frame or worker 11 to get it into proper position with respect thereto.

While I have illustrated and described a preferred embodiment of the invention, I am aware that many modifications may be made therein by any person skilled in the art without departing from the scope of the invention as expressed in the claims. Therefore I do not wish to be limited strictly to the specific arrangement shown and described but

What I do claim is:—

1. In a carding machine, the combination of a main cylinder, a first worker, a stripper therefor, a second worker rotating in the opposite direction from the first worker, and a stripper for the second worker rotating in the same direction as the second worker and at a greater speed than the first worker and in contact therewith, whereby said second stripper will clear the first worker.

2. In a carding machine, the combination of a main cylinder, a worker rotating in the same direction as the main cylinder, a stripper in front of the worker for taking the main part of the material therefrom, and a clearing stripper behind the worker, both of

said strippers rotating in contact with the worker and cylinder, the stripper behind the worker rotating at a greater circumferential speed than that of the worker and in the opposite direction so as to clear the material therefrom that is left by the first stripper.

3. In a carding machine, the combination of a main cylinder, a worker rotating in the same direction as the main cylinder, a stripper in front of the worker for taking the main part of the material therefrom, and a clearing stripper behind the worker, both of said strippers rotating in contact with the worker and cylinder, the stripper behind the worker rotating at a greater circumferential speed than that of the worker and in the opposite direction so as to clear the material therefrom that is left by the first stripper, said stripper behind the worker being adjustable toward and from the worker, and adjustable toward and from the center of the main cylinder.

4. In a carding machine, the combination of a main cylinder, a first worker, a stripper therefor, a second worker rotated in the opposite direction from the first worker, a stripper for the second worker rotating in the same direction as the second worker and at a greater speed than the first worker and in contact therewith, whereby said second stripper will clear the first worker, and means for adjusting one of said workers on a line substantially parallel with the nearest portion of the circumference of the main cylinder.

In testimony whereof I have hereunto set my hand, in the presence of two subscribing witnesses.

JOHN J. HENDERSON.

Witnesses:

ALBERT E. FAY,

C. FORREST WESSON.