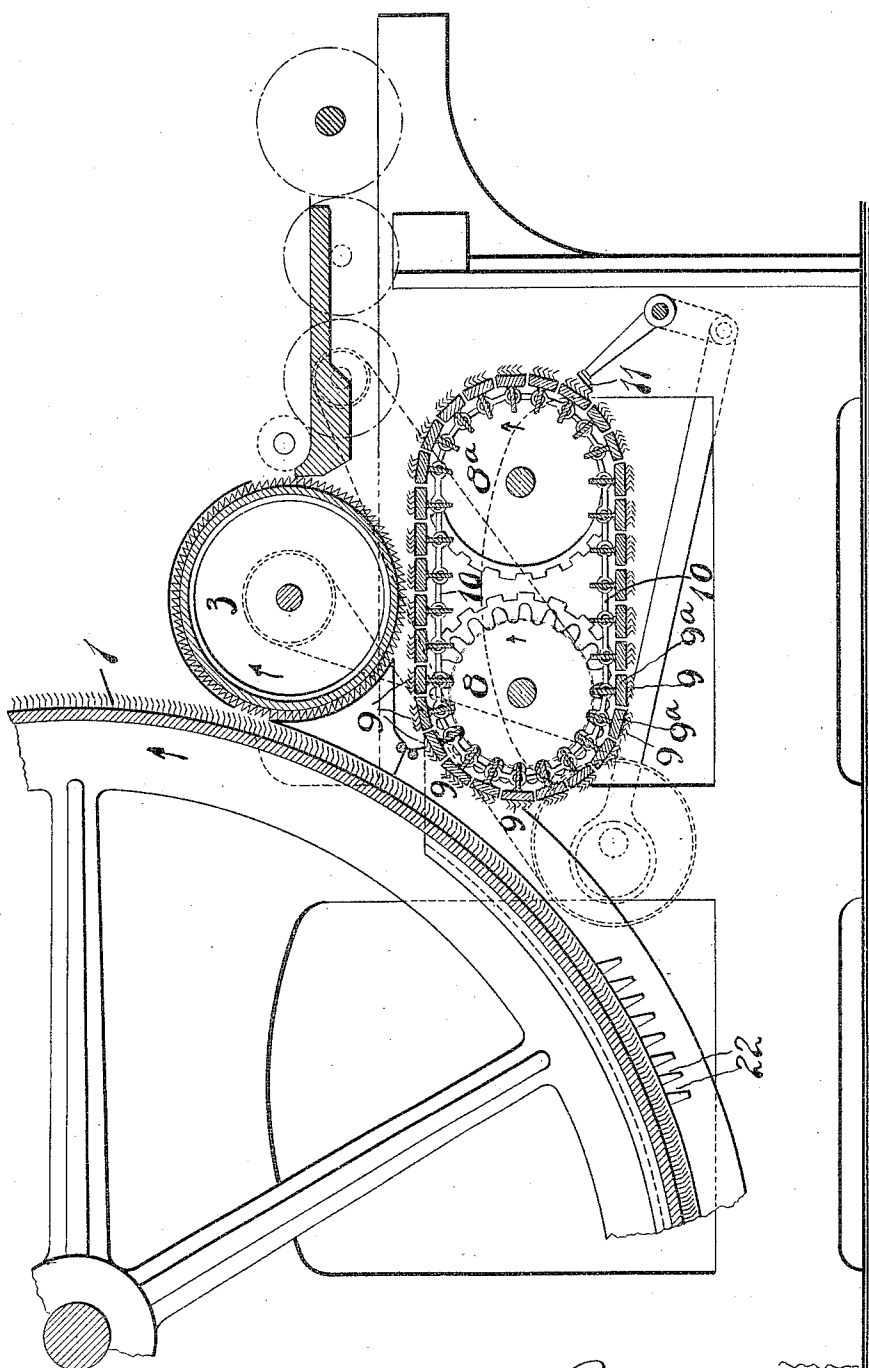


P. HARDMAN.
CARDING MACHINE.
APPLICATION FILED AUG. 4, 1911.

1,049,475.

Patented Jan. 7, 1913.



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UNITED STATES PATENT OFFICE.

PETER HARDMAN, OF WILLIMANTIC, CONNECTICUT.

CARDING-MACHINE.

1,049,475.

Specification of Letters Patent.

Patented Jan. 7, 1913.

Application filed August 4, 1911. Serial No. 642,235.

To all whom it may concern:

Be it known that I, PETER HARDMAN, a citizen of the United States, residing at Willimantic, county of Windham, State of Connecticut, have invented certain new and useful Improvements in Carding-Machines, of which the following is a full, clear, and exact description.

My invention relates to improvements in carding machines of the type set forth in my former Patent No. 993,677 dated May 30, 1911.

In the accompanying drawing, as shown in a single view, and by side elevation, is a portion of the carding machine constructed to embody my invention.

1 represents the surface of the main cylinder, the surface of which is provided with the usual card clothing.

2—2 represent the bars of a cylinder screen.

3 represents the lickerin roll of the ordinary type.

The machine is provided with the usual feed and lap rolls.

The stock is fed to the lickerin roll 3 which is provided with the usual saw-toothed surface to carry the stock to the cylinder 1.

The direction of rotation of the several parts is illustrated by arrows thereon, respectively, and it will be seen that adjacent surfaces of the cylinder 1 and the lickerin roll 3 revolve in the same direction, the former having the greater surface speed, as customary.

8 represents the stripping cylinder, the surface of which is provided with the card clothing 9. In this particular instance the card clothing 9 is not movably carried by or secured to the cylinder 8, but is nevertheless carried thereby in a unique manner, for, as will be seen, the card clothing 9, in this instance, is mounted upon a chain which travels on the surface of the cylinder 8. This chain is indicated at 10 and in the preferred form is not only mounted on the cylinder 8, but travels over a supporting roller or cylinder 8^a to the rear of the cylinder 8 after the manner of a driven chain. The card clothing proper is mounted upon what may be termed flats 9^a, which are suitably carried by the chain 10.

11 represents a comb for the card clothing 9; the comb may be mounted in any suitable manner.

The cylinder 8 has a surface travel in the same direction as the surface travel of the adjacent lickerin roll, but the surface speed of the former is very much slower than the surface speed of the latter, so that any impurities and short fibers contained in the stock traversing between the cylinders 3—8 will be thrown or stripped therefrom.

By arranging the card clothing 9 for the stripping cylinder 8 in the manner described, a very much greater area is provided than would be possible with the card clothing rigidly secured to the surface of the stripping cylinder. Again, by arranging the card clothing of the stripping cylinder, as shown, should said part of card clothing become injured, the same can be easily removed and replaced, whereas if the card clothing were rigidly carried by the surface of the stripping cylinder, it would be a much more difficult task to make such repairs, since it might involve the replacement of the entire card clothing for said cylinder.

Where the card clothing of the stripping cylinder is arranged on a long chain or belt, as shown, any ordinary bridge support may be arranged below the upper run of said belt to hold the chain against sagging and thereby hold the clothing up to the work. So also the bearing supports for the roll 8^a may be adjusted to and fro relatively to the bearing supports for the stripping cylinder 8 for the purpose of adjusting the tension of the chain or belt, and also to permit said rolls to be brought closely together when it is desired to remove the belt. By this simple means greater compactness is provided than where the clothing is carried rigidly on the surface of the stripping cylinder. In other words, I found that in a given space a greater surface of area of card clothing may be provided for the purposes of stripping by the improved arrangement shown herein, wherein the clothing is loosely carried on the stripping cylinder as distinguished from that form in which the clothing is carried rigidly or fixedly upon the stripping cylinder.

The means for driving the several rolls and cylinders may comprise any well-known power transmitting mechanism driven from a suitable source of power, the particular construction of such means being in no way essential to the present invention.

While I have referred to the part 10 as a

chain, obviously in a broad sense, any chain or belt-like device might constitute an equivalent carrier for the card clothing for the surface of the stripping cylinder.

5 What I claim is:

1. In a carding machine, a main carding cylinder, a lickerin roll adjacent thereto, the adjacent surfaces of said cylinder and roll moving in the same direction, the former at
10 a greater speed, a stripping cylinder arranged closely adjacent to the lickerin roll, the adjacent surfaces of said roll and said stripping cylinder moving in the same direction, the latter at a very much slower
15 speed, card clothing for the surface of the stripping cylinder, said clothing being carried by a belt or chain mounted on the main body of said stripping cylinder, and means for removing impurities and short

fibers from the card surface of said stripping cylinder.

2. In a carding machine, a main carding cylinder, a lickerin roll adjacent thereto, the adjacent surfaces of said cylinder and roll moving in the same direction, the former at
25 a greater speed, a stripping cylinder having card clothing thereon arranged adjacent to said lickerin roll, a belt-like device separating said card clothing from the main body of said stripping cylinder, and a guide
30 support adjacent to the stripping cylinder for said belt-like device, and means for removing impurities and short fibers from card surface last referred to.

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Witnesses:

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."