

R. KOREF.

DOFFER OR KNOCKING-OFF APPARATUS FOR THE DOFFER ROLLERS OF CARBING MACHINES.

APPLICATION FILED JULY 29, 1909.

966,565.

Patented Aug. 9, 1910.

2 SHEETS—SHEET 1.

Fig. 1

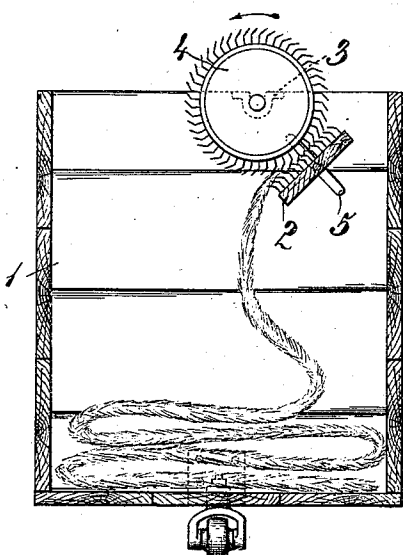


Fig. 3

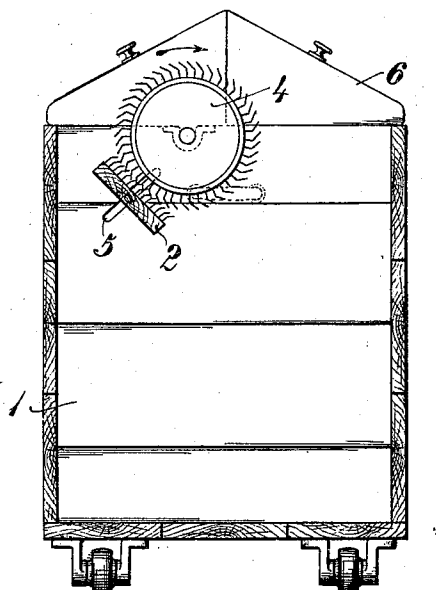


Fig. 2

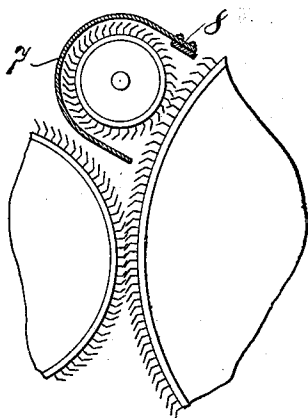
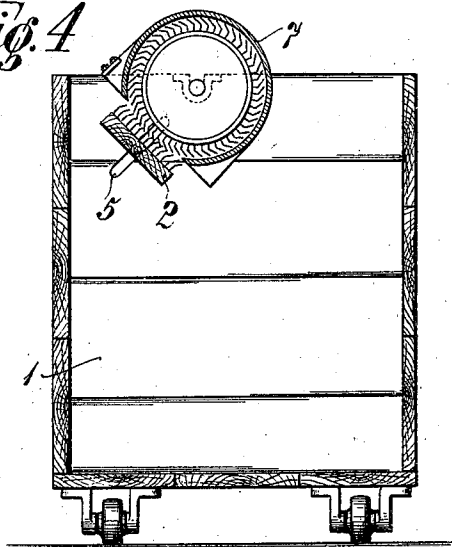


Fig. 4



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Fig. 2

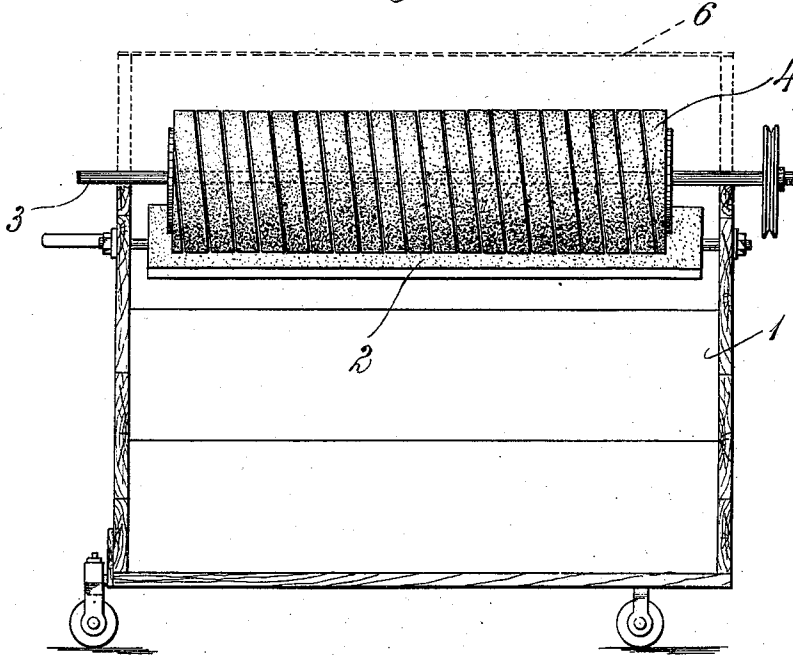


Fig. 5

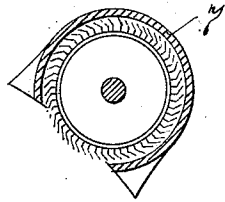
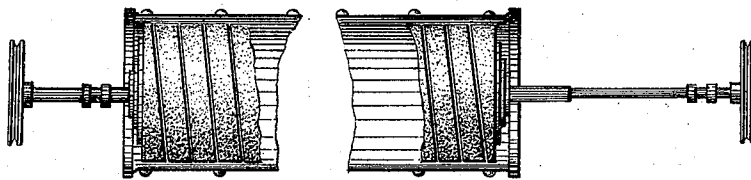


Fig. 6

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UNITED STATES PATENT OFFICE.

RICHARD KOREF, OF VIENNA, AUSTRIA-HUNGARY.

DOFFER OR KNOCKING-OFF APPARATUS FOR THE DOFFER-ROLLERS OF CARDING-MACHINES.

966,565.

Specification of Letters Patent.

Patented Aug. 9, 1910.

Application filed July 29, 1909. Serial No. 510,209.

To all whom it may concern:

Be it known that I, RICHARD KOREF, consulting engineer, a subject of the Austrian Emperor, and resident of 17 Servitengasse, Vienna IX, Austria-Hungary, have invented an Improved Doffer or Knocking-Off Apparatus for the Doffer-Rollers of Carding-Machines, of which the following is a specification.

In carding machines it is well known that in order to free the drum or the doffing fillet from cotton or any other fibrous material from time to time a knocking-off roller with teeth is used, and that roller is set as required on the drum or on the doffing fillet and takes the fibrous material off the former. From time to time it is necessary to clean the doffer or knocking-off roller from the fibrous material which it has taken up and the operation is performed by hand with brushes fitted with teeth. This mode of cleaning the doffer rollers is very troublesome and occupies a great deal of time, while it has many other disadvantages. The doffer roller has to be shifted from one machine to the other, and the operation of clearing is itself very troublesome, as the roller has frequently to be scraped as often as three times. Further, two operators are required for the work, one of them turning the roller, and the other handling the brush, while the material cleaned off drops into a basket or bag, which has to be carried from one machine to another. It is thus necessary to leave a large space between the machines. Over and above that, the carding projections of the roller are subjected to great strain by the hand work in clearing off the fiber and are rendered unserviceable in a very short time.

The object of the present invention is to overcome these difficulties.

Under my invention a brush is adjustably fitted in a carriage, in a suitable position therein so that the doffer or cleaning roller, which is laid in two open bearings fitted on the carriage presses with its teeth against those of the brush and as they are turned alternatively backward and forward the fibrous material on the roller becomes detached in a continuous mass and falls into the carriage.

In the drawing, the subject of the invention is shown in some of its forms by way of example.

Figure 1 shows in cross sectional elevation the doffer or cleaner carriage with the doffer or cleaner roller laid in it. Fig. 2 is a form of the same apparatus, shown in longitudinal section. Fig. 3 shows the same in cross section. Fig. 4 shows a modification in cross sectional elevation. Figs. 5 to 7 show details, in longitudinal and in cross section.

The doffer or cleaner carriage 1 is made of suitable size, and inside, and longitudinally of the carriage, there is fitted a brush 2 mounted with scraping teeth. At the top edge of the carriage on the two front ends, open bearings 3 are provided and into these the doffer or cleaner roller 4, with its spindle, can be laid. The brush 2 can be adjusted in slots 5 against the roller 4 by means of set screws, in order to bring the scrapers on the roller and on the brush into contact with one another, as far as the knees or bends of the wires. To clean the fibrous material off the roller 4, all that is required is to cause the latter to turn alternatively backward and forward, by means of a rope pulley fitted on the spindle of the roller or other turning means, until its whole circumference is quite cleared of the adhering fibers. The fibers become detached from the roller in the form of a continuous sheet (as shown in Fig. 1), which is collected in the body of the carriage. After the cleaning has been effected the roller 4 remains lying in the wagon and it may be carried away in it. In that way not only is the transporting of the cleaning roller effected more easily, but the cotton or other fiber that has been cleaned off is also removed at the same time.

By the action of the brush which is fitted over the whole length of the carriage, the cotton or other fiber can be removed at one turning of the roller and in the form of a complete covering of the roller, so that one single cleaning is sufficient. A further advantage of the present invention is an economy of labor owing to the rapid removal of the cotton from the doffer roller, while again the heavy roller can be shifted about quite easily on the carriage.

In the embodiment of the invention shown in Figs. 2 and 3 the carriage is fitted with a lifting lid or cover 6 as a protection against the escape of dust.

As shown in Figs. 4 to 7 the doffer roller is fitted with a hood 7 which prevents the

emission of any dust. This hood is so constructed that a space of about 15 mm. is left between it and the ends of the wires forming the scraper on the roller 4. The hood is
 5 open at the places where the doffer roller is to be fixed in tension on the drum or on the doffing fillet. Around one side of the hood a strip of felt 8 is fastened which prevents the exit of the dust produced.

10 In the operation of clearing the roller 4, which the cotton fibers collect on, it is found in experience that the diameter of the roller is increased about 15 mm., so that the space above mentioned is filled up. The effect is
 15 that the dust which is raised must penetrate into the cotton which is cleared off, as elsewhere there is no room for it. In that way not only is the raising of dust prevented but losses are also avoided, as the material
 20 cleared off becomes heavier in weight owing to the dust. According to Fig. 6, the hood envelops about three-quarters of the circumferential surface of the roller and is fitted with projections on its edges.

Having fully described my invention, what I claim and desire to secure by Letters Patent is:—

A cleaning device of the class described comprising in combination, a box like support mounted on rollers and provided on the
 30 upper margins of its walls with open bearings and slots radially disposed with respect to said bearings, a doffer roller mounted in said slots and movable toward and away
 35 from said rollers, and a hood partially surrounding said roller and having its edges spaced apart to permit said brush to be advanced toward said roller, said hood having
 40 a strip of felt or the like, substantially as and for the purpose set forth.

In testimony whereof I affix my signature in presence of two witnesses.

RICHARD KOREF.

Witnesses:

ALFRED BERAN,
 ERNEST FUGGER.