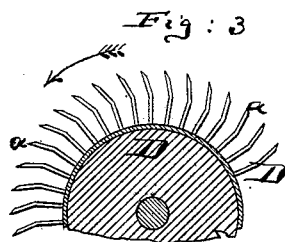
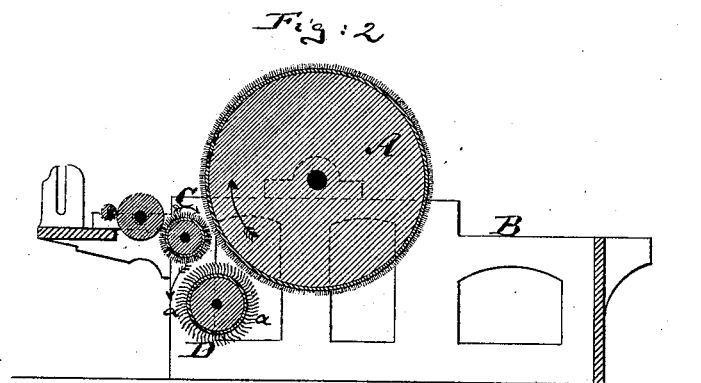
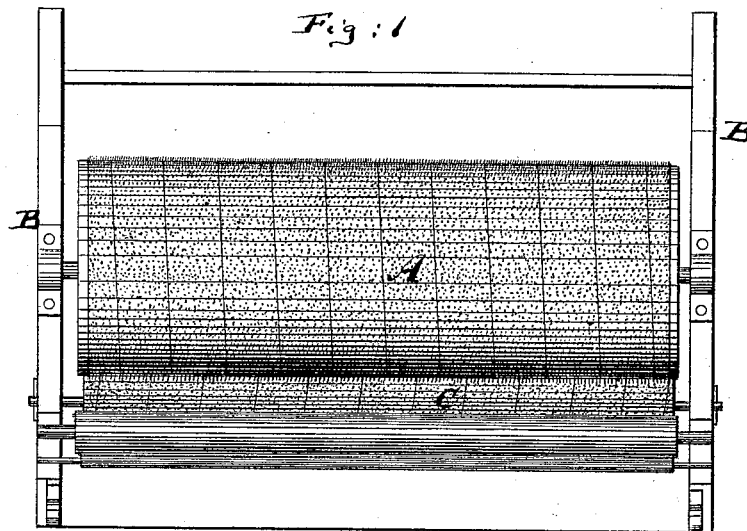


P. HAUSER.  
Cleaning Apparatus for Carding-Machines.  
No. 215,920.      Patented May 27, 1879.



Witnesses:

John C. Tunbridge.  
T. B. Hoosier

Inventor:

Peter Hauser  
by his attorney  
A. J. Briesen

# UNITED STATES PATENT OFFICE.

PETER HAUSER, OF ZÜRICH, SWITZERLAND.

## IMPROVEMENT IN CLEANING APPARATUS FOR CARDING-MACHINES.

Specification forming part of Letters Patent No. **215,920**, dated May 27, 1879; application filed August 29, 1878.

*To all whom it may concern:*

Be it known that I, PETER HAUSER, of Zürich, Switzerland, have invented an Improvement in Cleaning Apparatus for Carding-Machines, of which the following is a specification.

Figure 1 is a top view of my improved carding-machine. Fig. 2 is a vertical transverse section of the same; and Fig. 3, a detail cross-section, on an enlarged scale, of the cleaning-cylinder, part thereof being broken away.

Similar letters of reference indicate corresponding parts in all the figures.

The object of this invention is to do away with the necessity of removing the large drum of a carding-machine, and yet not to interfere with the quality or purity of the sliver which is delivered from the machine, and thus to economize labor and reduce also the waste of the machine, because I only cause the impure portions of the wool or cotton to be discharged by the cleaning-cylinder, leaving the good fibrous parts to be properly carded. I moreover obtain a greater quantity of carded fiber from a given quantity of lap on a given machine, a greater quantity of sliver, and a greater saving of carding-teeth.

My improved apparatus consists of a large carding-drum, A, hung in the frame B in the usual manner, and supplied with the fiber by a suitable licker-in, C. But one such licker-in is shown; but two may be used, one above the other. Below the licker-in is placed the cleaning-drum D, which is much smaller in diameter than the large drum A, as indicated, and on which the teeth are placed to incline in the direction of the rotation of the cleaning-drum D, as clearly shown in Figs. 2 and 3.

The cleaning-drum is covered with a band carrying projecting teeth *a a* of angular form, each tooth being sharply pointed, in contradistinction to the ordinary flat-ended teeth, and preferably triangular in cross-section.

The teeth on the cleaning-drum are set farther apart than on the carding-drum; but are equally spaced to uniformly cover the surface of the drum. In fact, there should, on the cleaning-drum, be about one hundred teeth on a piece of strap measuring thirty-six by twenty-five millimeters. The rapidity of motion

of the cleaning-drum to the main drum should be as 1.3 to 1. The structure of the carding-teeth of the large drum A and of the licker-in and also the rapidity of their rotation can be as usual; but the construction of the teeth and the relative rapidity of the cleaning-drum D should be as above stated. The cleaning-drum D is to be placed as closely as possible to the large drum A, yet without touching the same; but from the licker-in C it should be, say, one-half to one millimeter distant.

On cards which have but one licker-in, as in the drawings, the cleaning-drum D is placed directly below the same, as indicated. Where there are two lickers-in the cleaning-drum will be below the lower.

It will be perceived that the cleaning-drum D revolves in opposite direction to the licker-in C, which is next to it, and also in opposite direction to the large drum A, and that, owing to the position and arrangement of its teeth, it is admirably adapted for the removal from the large drum of the remaining knots which the licker-in and also the other carded rollers may have left therein. The pointed teeth on the cleaning-drum will serve to offer less resistance to the fiber than the flat-ended teeth of the main drum. Therefore the cleaning-drum is admirably adapted to and does take from the large drum A all impurities; but it does not take therefrom the clean fiber, which the large drum has flatter teeth to retain.

Any fiber taken by the cleaning-drum will be restored to the large drum, whose teeth will remove it from the cleaning-drum as soon as presented. I therefore clean the large drum of impurities by the isolated cleaning-drum, and do not require any other or stripper drum wherewith to take the fiber from the cleaning-drum.

I am aware that a cleaning-drum having flat-ended teeth and in contact with the main drum and with a stripper-drum has already been used. This I do not claim.

I am also aware that it is not new to place a fancy roller close to the main drum of a carding-machine, the teeth on such fancy roller being inclined opposite to their plane of rotation. Such an arrangement of fancy roller I do not claim, nor do I claim any arrangement by which

the fiber is merely adjusted on the drum, but not taken away therefrom and then restored; but

I do claim—

The combination of the main carding-drum A with the isolated and continuously-revolving cleaning-drum D, which is set with elongated teeth having tapering pointed ends, said teeth being inclined in the direction of their rotation, and adapted to remove impuri-

ties and fibers from, and thereupon to restore the fibers but not the impurities to, the main drum, substantially as specified.

The foregoing description of my invention signed by me this 23d day of February, 1878.

PETER HAUSER.

Witnesses:

M. WEIDMANN,  
S. H. M. BYERS.