

No. 690,178.

Patented Dec. 31, 1901.

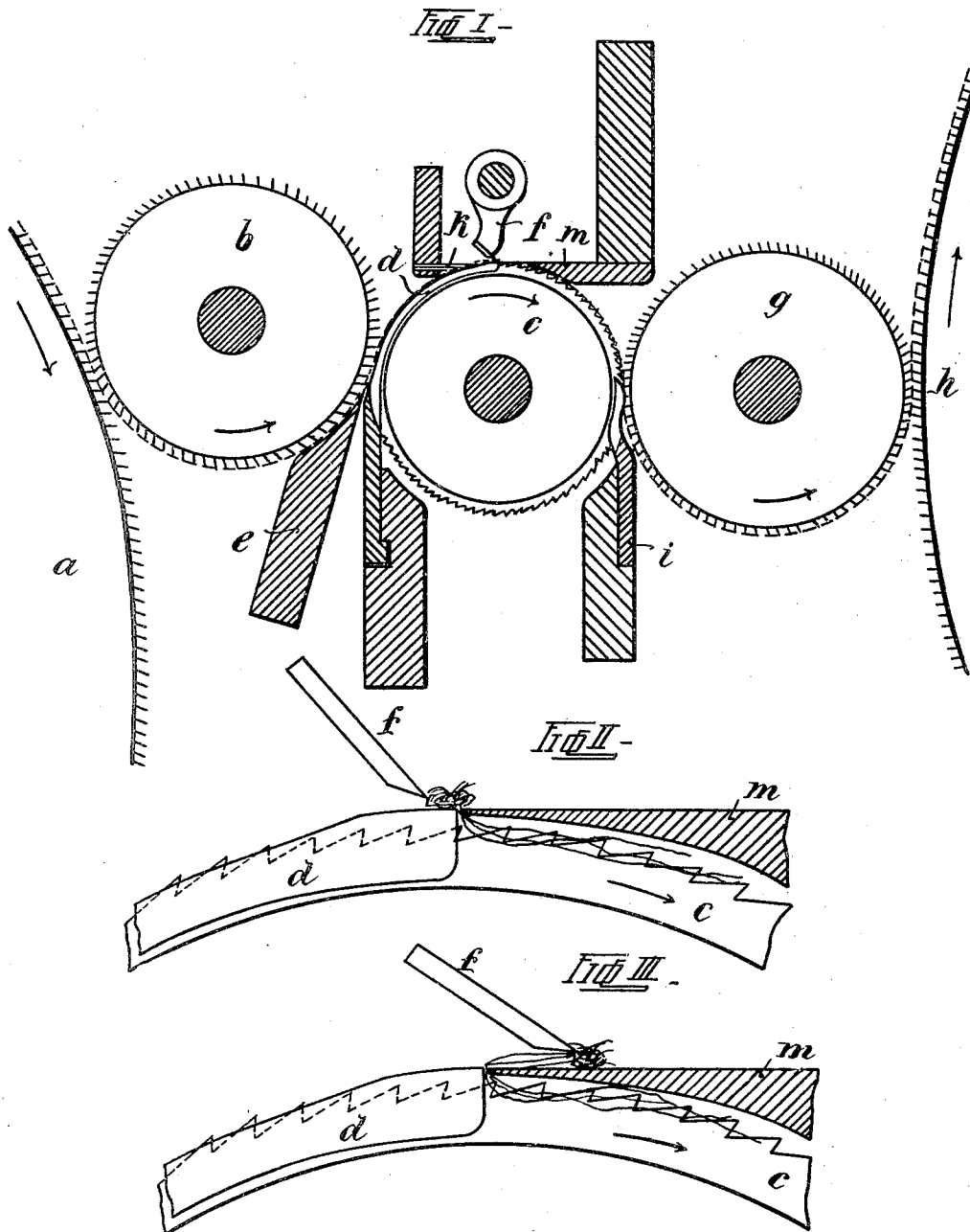
L. OFFERMANN.

DEVICE FOR REMOVING BURS FROM WOOL.

(Application filed Mar. 13, 1901.)

(No Model.)

2 Sheets—Sheet 1.



WITNESSES
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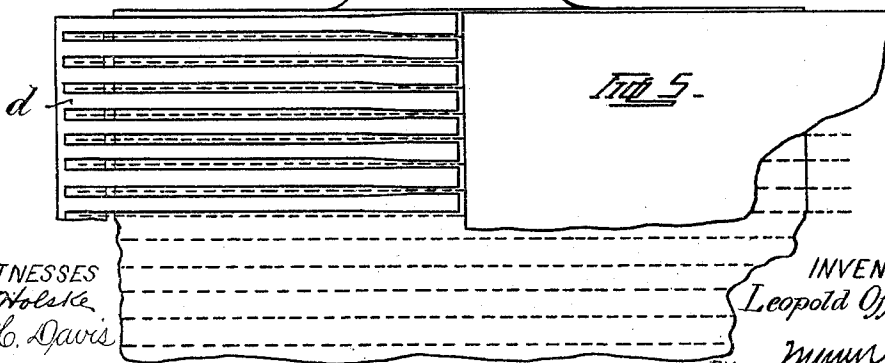
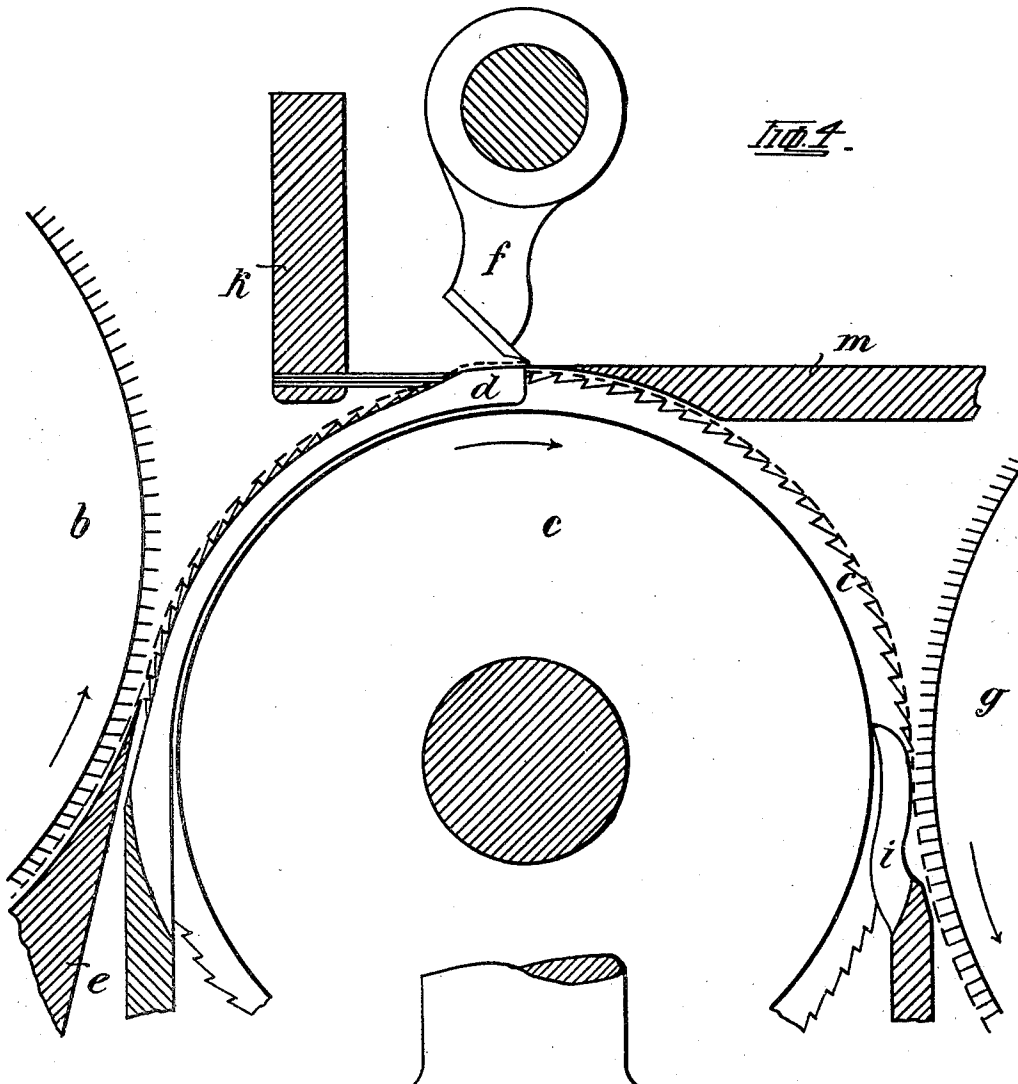
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2 Sheets—Sheet 2.



WITNESSES
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UNITED STATES PATENT OFFICE.

LEOPOLD OFFERMANN, OF LEIPSIC, GERMANY.

DEVICE FOR REMOVING BURS FROM WOOL.

SPECIFICATION forming part of Letters Patent No. 690,178, dated December 31, 1901.

Application filed March 13, 1901. Serial No. 50,965. (No model.)

To all whom it may concern:

Be it known that I, LEOPOLD OFFERMANN, a subject of the King of Prussia, German Emperor, and a resident of Leipsic, Germany, have invented new and useful Improvements in Devices for Removing Burs from Wool, of which the following is a full, clear, and exact description.

My invention relates to a device for removing burs from wool, such device comprising a bur-removing roller having a series of spaced toothed rings, between which are arranged bars similar to grate-bars and depressed relatively to the teeth at those points where the wool is taken off from a feeding-roller. Other portions of said bars adjacent to a barrier or retaining-bar are extended or raised beyond the teeth, so as to carry the burs contained in the wool out of the reach of the teeth and cause them to be retained by the barrier, whereupon they may be removed by a clearer.

The invention will be fully described hereinafter and the features of novelty pointed out in the appended claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a vertical section of the main parts of a bur-removing device constructed according to my invention. Figs. 2 and 3 are detail sectional elevations, drawn upon an enlarged scale, illustrating the operation of the clearer. Fig. 4 is a detail vertical section of a part of the bur-removing drum with the parts cooperating therewith, and Fig. 5 is a plan view of the said drum with parts broken away.

a is the rotary drum of a preliminary carding-engine, from which the wool is removed by the rotary-brush transferring-roller *b*, provided with carding projections, the wool being then carried to the rotary bur-removing drum *c*, having a series of spaced toothed rings. Between these rings are located longitudinal stationary bars *d*, the lower ends of which are secured to a transverse support *d'* and which form a grate-like structure. (See Fig. 5.) At the point where the roller *b* is nearest to the drum *c* the bars *d* are depressed relatively to the teeth of the drum, so as not to interfere with the removal of the wool from

the roller *b* by the teeth of the drum *c*. At a proper distance from this point of feed the bars *d* project beyond the teeth of the drum, so that any burs contained in the wool will be raised off the teeth, while the fibers will be held by said teeth and drawn over the bars *d*. To increase the hold of the drum upon the fibers, a stationary bar *e* is arranged adjacent to the roller *b* to engage the wool before it is transferred to the drum *c*, thus opposing a resistance to the removal of the wool and causing the fiber to pass to the inner ends of the drum-teeth. For a similar purpose I provide at the point where the bars *d* project beyond the teeth of the drum *c* a brush *k*, pressing against the said drum and adapted to force the fibers inward on the drum.

In advance of the free ends of the bars *d* is arranged transversely a barrier *m*, the distance between said ends and the barrier being sufficient for the passage of the fibers, but not large enough to allow burs to pass. As a consequence the fibers raised by the bars *d* (generally under tension) will be carried farther unhindered, while the burs will be retained by the barrier *m*.

To release the burs from the fibers holding them, I provide the oscillating or vibrating clearer *f*, which pulls the burs alternately in opposite directions, the action of this clearer being assisted by the constant forward pull exerted by the drum *c*. The result is a gradual removal or release of the burs from the wool. The clean wool is then taken off the drum *c* by a roller *g* and is transferred to the main drum *h* of the carding-engine. In order to prevent entanglement of the fibers while passing to the roller *g*, I provide a stationary grating or comb *i* at the adjacent portions of the drum *c* and roller *g*, the bars or prongs of said grating being arranged between the toothed rings of the drum *c*. The lower ends of the bars of the grating *i* extend adjacent to the roller *g*, so that the latter can remove from the said bars any loops that may be formed.

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

1. The combination of the rotary bur-removing drum provided with toothed rings, means for feeding the material to said drum,

stationary bars located between the toothed rings and provided with portions extended beyond said teeth to release burs therefrom, a transverse barrier located at said extended portions of the bars to hold the burs back while allowing the fibers to pass on, and a clearer arranged adjacent to said barrier to assist in freeing the burs.

2. The combination of the rotary bur-re-
moving drum provided with toothed rings,
means for feeding the material to said drum,
stationary bars located between the toothed
rings and provided with portions extended
beyond said teeth to release burs therefrom,
a transverse barrier located at said extended
portions of the bars to hold the burs back
while allowing the fibers to pass on, and a
swinging clearer mounted to move back and
forth adjacent to said barrier to assist in free-
ing the burs.

3. The combination of the rotary bur-re-
moving drum provided with toothed rings,
means for feeding the material to said drum,
stationary bars located between the toothed

rings and provided with portions extended
beyond the teeth to release burs therefrom,
a brush for pressing the fibers inward im-
mediately before they reach said extended por-
tions of the stationary bars, and means for
removing the burs released by said bars.

4. The combination of the rotary bur-re-
moving drum provided with toothed rings,
means for feeding the material thereto, means
for releasing and removing the burs from the
fibers as they are carried around by the drum,
a roller for taking the clean material off the
drum and conveying it to the carding-engine,
and a stationary grating or comb extending
adjacent to the said roller to prevent entan-
glement of the fibers.

In testimony whereof I have signed my
name to this specification in the presence of
two subscribing witnesses.

LEOPOLD OFFERMANN.

Witnesses:

RUDOLPH FRICKE,
CHAS. J. BURT.