T. TAYLOR.

Cotton-Cleaners.

No. 148,997. Patented March 24, 1874.

fig. 1.

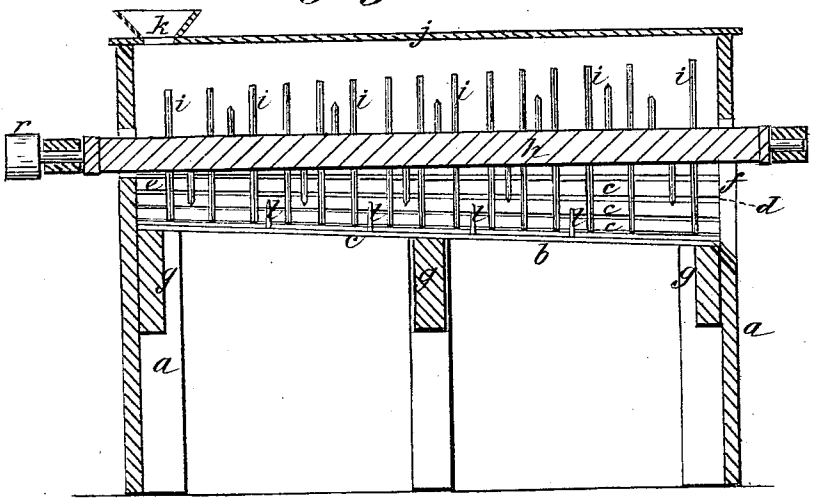


fig. 3.

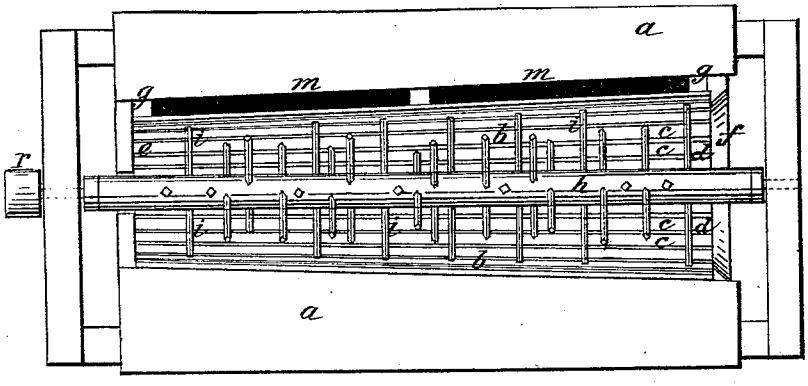
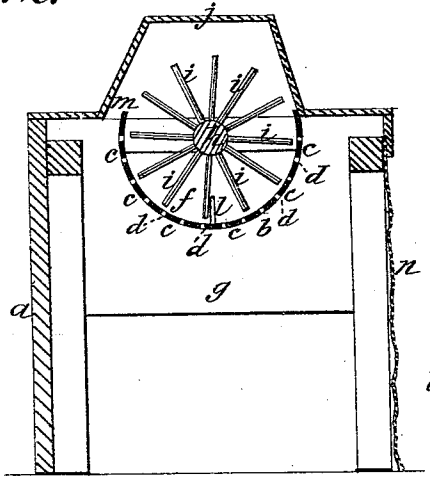


fig. 2.



Attest:
J. H. Rutherford
Wm. E. Schaffer

Inventor:
Thomas Taylor
by Johnson and Johnson
his Attorneys

UNITED STATES PATENT OFFICE.

THOMAS TAYLOR, OF MASON, TENNESSEE.

IMPROVEMENT IN COTTON-CLEANERS.

Specification forming part of Letters Patent No. **148,997**, dated March 24, 1874; application filed February 6, 1874.

To all whom it may concern:

Be it known that I, THOMAS TAYLOR, of Mason, in the county of Tipton and State of Tennessee, have invented a new and useful Improvement in Cotton-Thrashers, of which the following is a specification:

My invention relates to machines for cleaning cotton in the boll or pod—that is, separating the trash, dust, and dirt from it preparatory to its treatment in the gin. The invention I have made in such machine consists in the combination of a side outlet at the junction of the base with the cap with the chamber of the cap and the revolving armed shaft of a flaring concave, whereby the mass revolving in the cap-chamber will create a rotary current, and carry the dust out the side opening and beneath the concave along the length thereof, and thus blow out the dust from the closed cap without a fan, while the open-slatted concave serves as a sifter to the mass, and carries off the heavier portions of the dirt.

In the accompanying drawings, Figure 1 represents a vertical section of a machine embracing my invention; Fig. 2, a cross-section; and Fig. 3 a top view, with the cap removed to show the diverging form of the slatted concave.

Within a suitable oblong frame, *a*, is arranged horizontally a concave, *b*, consisting of long thin slats of wood *c*, with narrow spaces *d* between them. It is closed at one end, and open at the other, and in form flares outward with a gradual increase from its receiving closed end *e* to its open outlet end *f*, with the slats secured to end and middle supports *g* in the frame. An armed shaft, *h*, is arranged with its bearings in the frame to revolve centrally within the concave; and the arms *i*, besides being disposed in different radial positions, are also of varying lengths to suit the flaring form of the concave, which is inclosed by a cap, *j*, in form corresponding to the concave, leaving only a semicircular outlet opening, *f*, for the latter.

The cotton-bolls are fed to the cylinder by a hopper, *k*, at the small end of the cap, and they are whirled round against the edges of the slats and renovated by the action of the armed cylinder, the dust and dirt passing out the openings *d* in the concave. In this agitation of the cotton, the boll becomes enlarged, and it would tend to choke and clog in the concave but this is prevented by the approach to the outlet having an increasing area or flaring form, and which necessarily gives to the lower portion of the concave a gradual descent from the closed to the open end, the function of which is to cause the cotton-bolls to work gradually to the outlet and effect an automatic discharge as they are carried round under the violence of the revolving arms, the loosened and separated trash passing out with the cotton.

The lower slat or slats of the concave has pins *l* to aid the arms in their action upon the bolls. At the junction of the cap *j* with the concave there is, on the rear side, an opening, *m*, forming a communication outside of the concave with the interior of the cap, so that as the mass is revolved, the motion will tend to drive the dust from the cap-chamber out through this long opening by the side of the concave, and thereby aid in getting rid of the dust from the cap as well as from the concave, the said opening being formed by extending the rear side of the cap beyond the edge of the concave.

The front side of the frame is open for easy access to the bottom of the concave for the purpose of cleaning out the intervening slat-openings should they become clogged, and a curtain, *n*, closes this open side of the frame to confine the dust. The armed shaft is driven by a pulley, *r*, on one end.

The shaft-arms are of metal or wood, and the concave may be of such a length and taper from its discharging end as will be found best adapted to perform the functions and to produce the results stated.

I claim—

The side outlet *m* at the junction of the cap *j* with the flaring concave *b*, in combination with the cap-chamber and the revolving armed shaft *h*, substantially as described, whereby a rotary current is created in the cap to carry the dust out along the side of the concave.

THOMAS TAYLOR.

Witnesses:

R. F. MARTIN,

W. T. BOYD.