R. DESHA & W. A. MANAHAN.

Cotton-Cleaner.

No. 198,873. Patented Jan. 1, 1878.

Fig. 1.

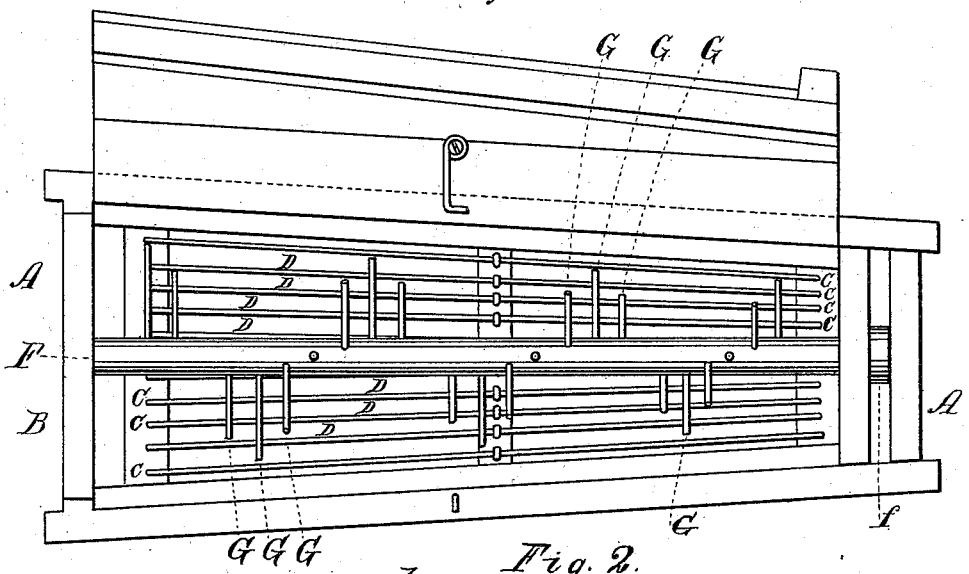


Fig. 2.

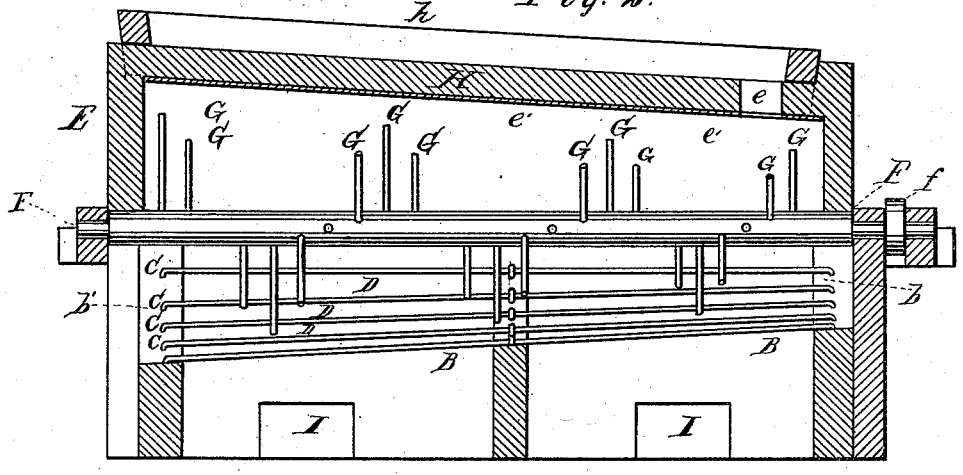
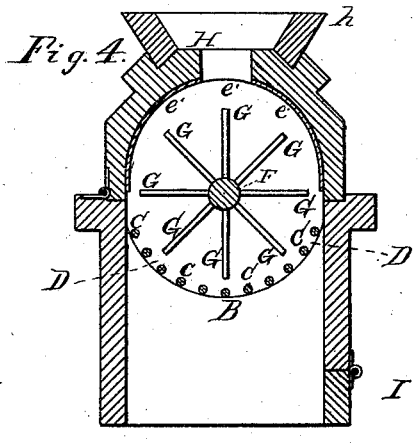


Fig. 4.



WITNESSES

Mary P. Utley.

Villette Anderson.

INVENTORS

Robert Desha,

Wm A. Manahan.

by E. W. Anderson.

ATTORNEY

UNITED STATES PATENT OFFICE.

ROBERT DESHA, OF MERIDIAN, AND WILLIAM A. MANAHAN, OF BOONEVILLE, MISSISSIPPI.

IMPROVEMENT IN COTTON-CLEANERS.

Specification forming part of Letters Patent No. **198,873**, dated January 1, 1878; application filed September 1, 1877.

To all whom it may concern:

Be it known that we, ROBERT DESHA, of Meridian, in the county of Lauderdale and State of Mississippi, and WILLIAM A. MANAHAN, of Booneville, in the county of Prentiss and State of Mississippi, have invented a new and valuable Improvement in Manahan Cotton-Cleaners; and we do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a plan view of our invention. Fig. 2 is a vertical longitudinal section, and Fig. 3 is a vertical transverse section, of the same.

This invention relates to machines for cleaning cotton in the boll—that is, separating the trash, dust, and dirt from it preparatory to ginning. It consists, essentially, in the combination, with a horizontal chamber, having the interior configuration of the frustum of a cone, and the lower half of its wall composed of separated longitudinal rods or grating, of a beater, consisting of a helical row of arms radiating from a central shaft, and increasing in length toward the larger end of said chamber, for the purpose of insuring the steady discharge from the chamber of the cotton after it has been sufficiently operated upon.

Within a suitable oblong case, A, is arranged horizontally a concave, B, consisting of longitudinal rods C, having spaces D between them, thus forming a grating. Said concave forms the lower half of the chamber heretofore referred to. It is closed at its narrow end *b* and open at its wide end *b'*, and, in form, flares gradually toward said wide end, which terminates on a lower level than the said narrow end, over which is arranged the inlet or receiving opening *e* in the top of the upper half E of the cleaning-chamber. This upper half E has a continuous inner wall, *e'*, but is flat on top, and is hinged longitudinally to casing A, so as to close upon the concave grating B, thus completing the formation of the cleaning-chamber.

Centrally of said chamber is arranged a shaft, F, journaled in bearings upon the top edges of the case A. This shaft projects beyond the narrow end of the case, terminating in a double bearing, and provided with a belt-pulley, *f*.

Surrounding the shaft F is a helical row of arms, G, which increase in length toward the wide end of the chamber.

When the machine is in operation this helical row of arms beats and cleans the cotton, and, also, acting as a propeller-screw, gradually forces the mass toward the wide open end of the concave, where the cleaned bolls are discharged.

It will be seen that clogging of the cleaning-chamber, while the machine is in operation, cannot occur when the beating-arms are arranged as just described.

The outer wall of the upper hinged half-chamber is a wooden casing, the top H of which inclines downward toward the narrow end of the chamber, and is entirely surrounded by a rim, *h*, thus forming a hopper, from which the receiving opening or inlet *e* leads into the cleaning-chamber. A large quantity of cotton may be piled upon the top of the machine, and, owing to the inclined position of said top, may be fed into the cleaning-chamber with great facility.

As the cotton is beaten and cleaned, the trash and dirt, which are removed therefrom by the action of arms G, fall through the spaces D between rods C into the lower part of case A, and may be raked out through the fall-doors I, hinged so as to open from a level with the bottom of case A.

Having thus fully described the construction and operation of our invention, we claim—

1. The combination of the closed half-chamber E, grated flaring concave B, having its wide end open, and shaft F, provided with a

helical row of arms, G, and increasing in length toward the discharging end, substantially as specified.

2. The combination of the grated concave B, a central shaft, provided with helically-arranged beating-arms, and the hinged upper half-chamber E, having an inner flaring curved wall, substantially as specified.

In testimony that we claim the above we have hereunto subscribed our names in the presence of two witnesses.

ROBERT DESHA.
WILLIAM A. MANAHAN.

Witnesses:
E. W. BATES,
J. P. DEMENT,
J. P. CARRAWAY,
RICHD. B. SMITH.