

D. PARKS.
 MULTIPLE HULL BOARD FOR COTTON CLEANING MACHINES.
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1,357,586.

Patented Nov. 2, 1920.

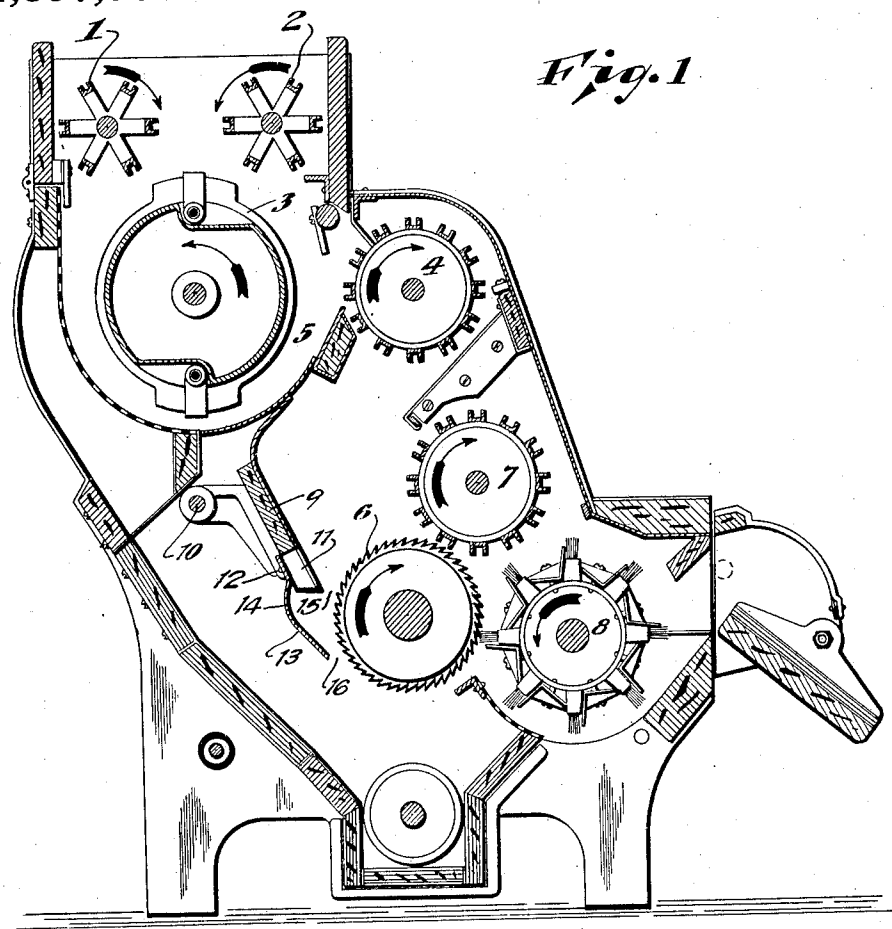


Fig. 1

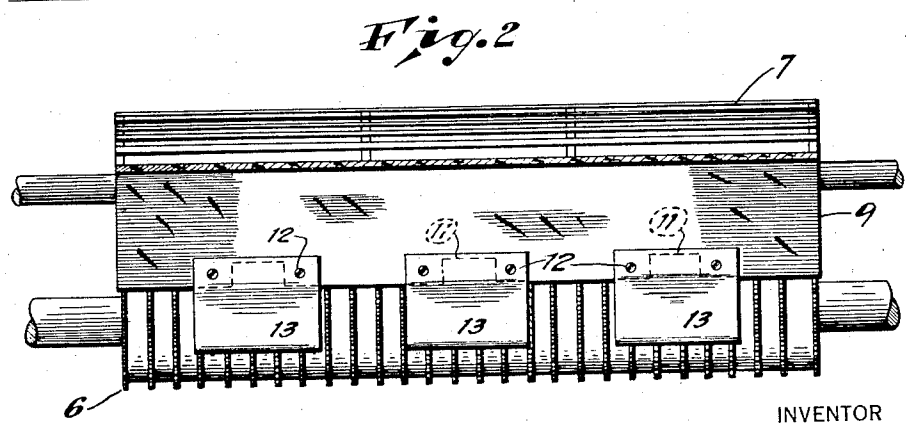


Fig. 2

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MULTIPLE HULL-BOARD FOR COTTON-CLEANING MACHINES.

1,357,586.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, DENNIS PARKS, a citizen of the United States, residing in the city of St. Louis and State of Missouri, have
5 invented new and useful Improvements in Multiple Hull-Boards for Cotton-Cleaning Machines, of which the following is a specification.

This invention relates to boll breaking and
10 cotton separating machines of the type shown in various prior patents granted to myself or John E. Mitchell, and has reference to an improvement in the construction and operation of the hull board.

15 The general object of the invention is to provide for the ready escape from the working chamber of unbroken bolls, or unseparated hulls, while to a very large extent preventing the escape past the saw cylinder of
20 any cotton.

This object is attained by the use of a hull board having the construction hereinafter described and claimed.

In the drawing:—

25 Figure 1 is a cross-sectional view of a machine of the type described having my improved hull board mounted therein; and

30 Fig. 2 is a view in rear elevation of the hull board and the parts immediately in front of the same.

Referring now to the drawing the numerals 1, 2 indicate the feed rollers, 3 the boll breaking cylinder, 4 the picker roll for withdrawing the cotton and hulls from the
35 boll chamber 5, 6 the saw cylinder, 7 the kicker roll and 8 the doffer brush cylinder, the construction and operation of these parts being familiar to those skilled in the art, and not entering, as such, into the present
40 invention. The numeral 9 indicates my improved hull board, which is mounted on a rod 10 having bearings in the end walls of the machine. In its lower edge portion this
45 board is provided with a series of openings 11 at intervals throughout its length, which openings are large enough to permit the discharge of unbroken bolls, unseparated hulls, or other large bodies. In the drawings, the
50 hull board is shown provided with three of these openings, although a greater number may be employed if desired. These openings, in practice, are about two inches in width. Secured on the under side of the
55 hull board, as by screws 12, are plates 13, located, respectively, under the openings 11,

and being curved downward from the point of attachment to the hull board, as indicated at 14, to provide space for the fall of the bolls, or other bodies, below the lower end of the hull board 9. The plates 13 provide, in
60 effect, a lower, sectional hull-board, constituting, with the upper hull board 9, a double hull board construction.

In operation, bolls and unseparated hulls will fall through the opening 11 upon the
65 plates 13 and will ultimately discharge off of the ends of these plates and be carried out of the machine. Any cotton escaping through the openings with the bolls will
70 lodge upon the plates 13, which will cause such cotton to be forced again into contact with the saw cylinder, which latter will carry the cotton back into the chamber above the main hull board.

In the regular double hull board construction, shown for example in the patent
75 to Mitchell No. 1,030,913, the upper hull board must be set far enough away from the saw cylinder to permit the discharge of the larger bodies getting into the machine, and
80 this causes the discharge of some cotton onto the lower hull board. In the present construction the hull board may be adjusted to have the bottom of the upper hull board 9
85 close enough to the saw cylinder to prevent the escape of cotton, except at the openings referred to, provided for the discharge of unbroken bolls, and at these points the plates
90 13 underneath will serve to reclaim any cotton escaping through these openings, as explained above.

The principle of operation is much the same in both cases, except that, in the present case, as provision for the escape of bolls
95 and other large bodies is only made at intervals throughout the length of the upper hull board, by means of the openings 11, instead of having the entire bottom edge of the upper hull board separated a sufficient distance for such purpose, as in the case of
100 the construction of the patent referred to, more cotton will be carried up by the saws from the product on the upper hull board, and, therefore, less cotton will pass through to the lower hull board sections 13, and the
105 cotton falling on the lower hull board sections will practically all be recovered, as the bolls, or unseparated hulls to which the cotton adheres can only escape in a lateral direction from the hull-board sections 13, 110

and the saws will have ample time to catch up the adhering cotton before the bolls, or the like, fall off of said hull board sections.

It will be understood, of course, that the space 15 between the lower edge of the upper hull-board and the saw cylinder and the space 16 between the lower edge of each plate 13 and the saw cylinder is each of sufficient width to permit the escape past the saw cylinder of small pieces of hull, as occurs in either the single or double hull board construction in all machines of the type referred to.

I claim:—

1. A boll breaking and cotton separating machine affording a working chamber, a saw cylinder operating in said chamber, and a hull board inclined downwardly toward, and cooperating with, said saw cylinder to feed material thereto, and providing in its edge portion an opening of one size past the saw cylinder for the escape of hulls and an opening of a larger size for the escape of bolls and other products larger than hulls.

2. In a boll breaking and cotton separating machine, in combination with a saw cylinder, a hull board cooperating therewith provided with two supports occupying different planes and inclined downwardly toward the saw cylinder to provide a gravity feed of material fed thereon toward the saw cylinder, the lower edge portions of said supports defining, respectively, the sizes of openings past the saw cylinder for the escape of hulls, and the lower edge portion of the upper support being provided with an opening located immediately over the lower support for the escape of bolls and other products larger than hulls.

3. In a boll breaking and cotton separating machine, in combination with a saw cylinder, a hull board cooperating therewith providing an upper support inclined downwardly toward the saw cylinder and having

its lower edge portion provided at intervals with openings and a series of lower supports located, respectively, under said openings, and also inclined downwardly toward said saw cylinder, the lower edge portions of said supports defining, respectively, the sizes of openings past said saw cylinder for the escape of hulls, and the openings in said upper support being large enough for the escape of bolls and other products larger than hulls.

4. In a boll breaking and cotton separating machine, in combination with a saw cylinder, a multiple hull board cooperating therewith comprising an upper hull board inclined downwardly toward the saw cylinder and having its lower edge portion provided at intervals with openings, and a lower sectional hull board comprising a series of plates also downwardly inclined toward said saw cylinder and secured in separated relation on the under side of said support and beneath the respective openings therein, the said hull boards, at their lower edges, defining, respectively, the sizes of openings past the saw cylinder for the escape of hulls, and the openings in the upper hull board being large enough for the escape of bolls and other products larger than hulls.

5. A multiple hull-board for cotton cleaning machines, comprising an upper hull-board having its lower edge portion provided with a series of separated openings, and a lower sectional hull-board comprising a line of plates secured in separated relation on the under side of said upper hull-board and beneath the respective openings therein.

6. A multiple hull-board according to claim 5 in which the plates are bent downwardly and outwardly with respect to the lower edge portion of the upper hull-board.

In testimony whereof, I have hereunto set my hand.

DENNIS PARKS.