(No Model.)

J. F. STEWARD.

BUTT ADJUSTER FOR GRAIN BINDERS.

No. 557,447. Patented Mar. 31, 1896.

Fig. 1.

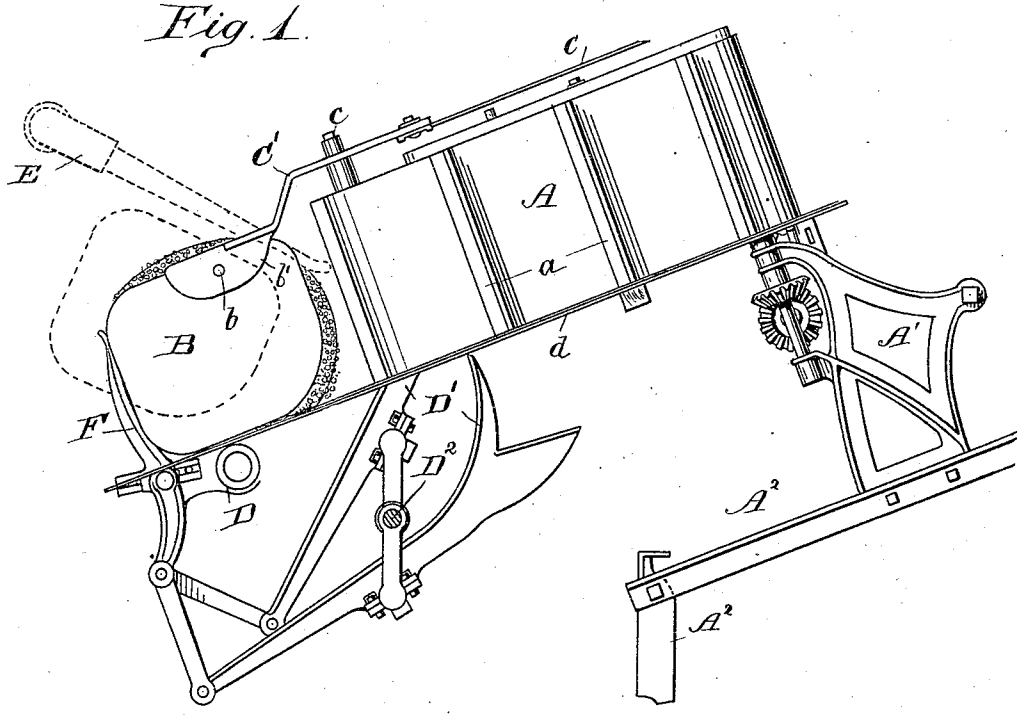

Fig. 2.

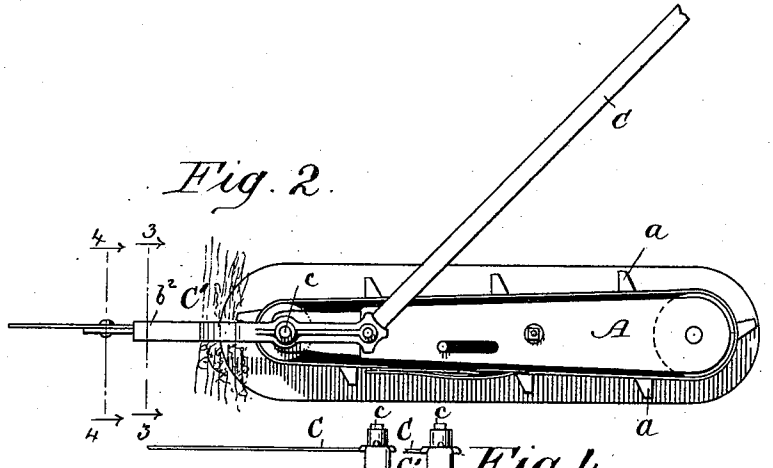

Fig. 3

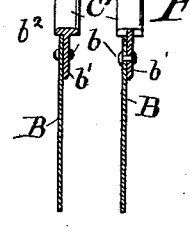

Fig. 4.

Witnesses
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UNITED STATES PATENT OFFICE.

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BUTT-ADJUSTER FOR GRAIN-BINDERS.

SPECIFICATION forming part of Letters Patent No. 557,447, dated March 31, 1896.

Application filed June 10, 1895. Serial No. 552,245. (No model.)

To all whom it may concern:

Be it known that I, JOHN F. STEWARD, of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Butt-Adjusters for Grain-Binders, of which the following is a full description, reference being had to the accompanying drawings, in which—

Figure 1 is a front elevation showing as much of an automatic grain-binder as is necessary to describe my invention. Fig. 2 is a plan view; Fig. 3, a sectional elevation on the line 3 3 of Fig. 2. Fig. 4 is a sectional view on the line 4 4 of Fig. 2.

My invention relates particularly to the butt-adjuster extension of the kind shown in a patent granted to me February 20, 1883, and numbered 272,598, and this invention may be considered as an improvement upon the device shown in the above-mentioned patent.

D is the binder attachment, which may be of any of the well-known kinds, and is shown as having packers D′ carried upon the packer-shaft D^2 in the usual manner, the said packers operating to pack the grain against the resistant F. The butt-adjuster A is located upon the front edge of the binder-deck *d* and is supported upon a bracket A′, which is secured to the harvester-frame, parts of which, A^2, are shown. It is driven in the usual manner from the harvester-gearing and is adapted to be swung, upon the shaft of its driving-roller as an axis, fore and aft for the purpose of securing central binding, and to be held in various positions of adjustment by means of the usual adjuster-lever C. The said lever C preferably terminates in a casting C′, having a hub *c*, by which it is pivoted upon the adjuster, and having an extension *b*′, upon which is pivoted the butt-adjuster extension B, the office of which is the same as the office of the extension shown in the above-mentioned patent—namely, to provide a surface against which the butts of the straws of the forming gavel may accumulate in order that a square end may be given to the bundle.

Heretofore, and especially when aggressive lugs are used, straws and weeds are carried in between the adjuster and the extension, as shown in Fig. 2, and accumulate there in certain conditions to an extent sufficient to make the adjuster-canvas slip. By so pivoting the extension, as at *b*, that it can be swung away from the adjuster by the accumulations spoken of above the slipping of the adjuster-canvas can be overcome. Again, when the adjuster extension is so pivoted the accumulations can be carried away by each bundle when being discharged. By these means an adjuster with more aggressive lugs (such as those *a* shown in the drawings) can be used, and the adjuster can be driven at a slower rate of speed, which is very desirable, thereby rendering the said adjuster more effective in its operations, and the difficulty caused by the lugs carrying in short straws and trash is overcome, because every bundle discharged is thus allowed to carry with it the accumulation made during the forming of that bundle, and the parts are thus always kept clear of trash, short straws, grass, &c.

Gravity is found sufficient to return the plate B to position after being raised when the pivot is placed as shown. Any force that is the equivalent of gravity may be depended upon to bring the plate into position.

The preferred method of pivoting the extension upon the lever C is shown in the drawings, where the pivot *b* may be simply a rivet through the vertical flange *b*′ and the said extension B, the said flange having a broad face to hold the said extension in its proper position. A rib b^2 upon the lever C serves as a stop to prevent the board B from swinging toward the adjuster when in its normal position.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In a grain-binder the combination with a traveling butt-moving device adapted to be adjusted fore and aft at its lower end relative to the line of advance of the harvesting-machine, a loosely-pivoted board B located adjacent to the butt-moving device and extending stubbleward, said board so supported as to be capable of movement away from the end of such butt-moving device, and thereby prevent straws of grain from choking the space between the said butt-moving mechanism and said board substantially as described.

2. The combination of the butt-moving mechanism A, the board B and the connecting mechanism C'; said mechanism loosely pivoted to the butt-moving device by an axis vertical to the plane of adjustment of the said butt-moving device, and the extension B loosely pivoted to the said connecting mechanism by a substantially horizontal axis substantially as described.

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Witnesses:
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