

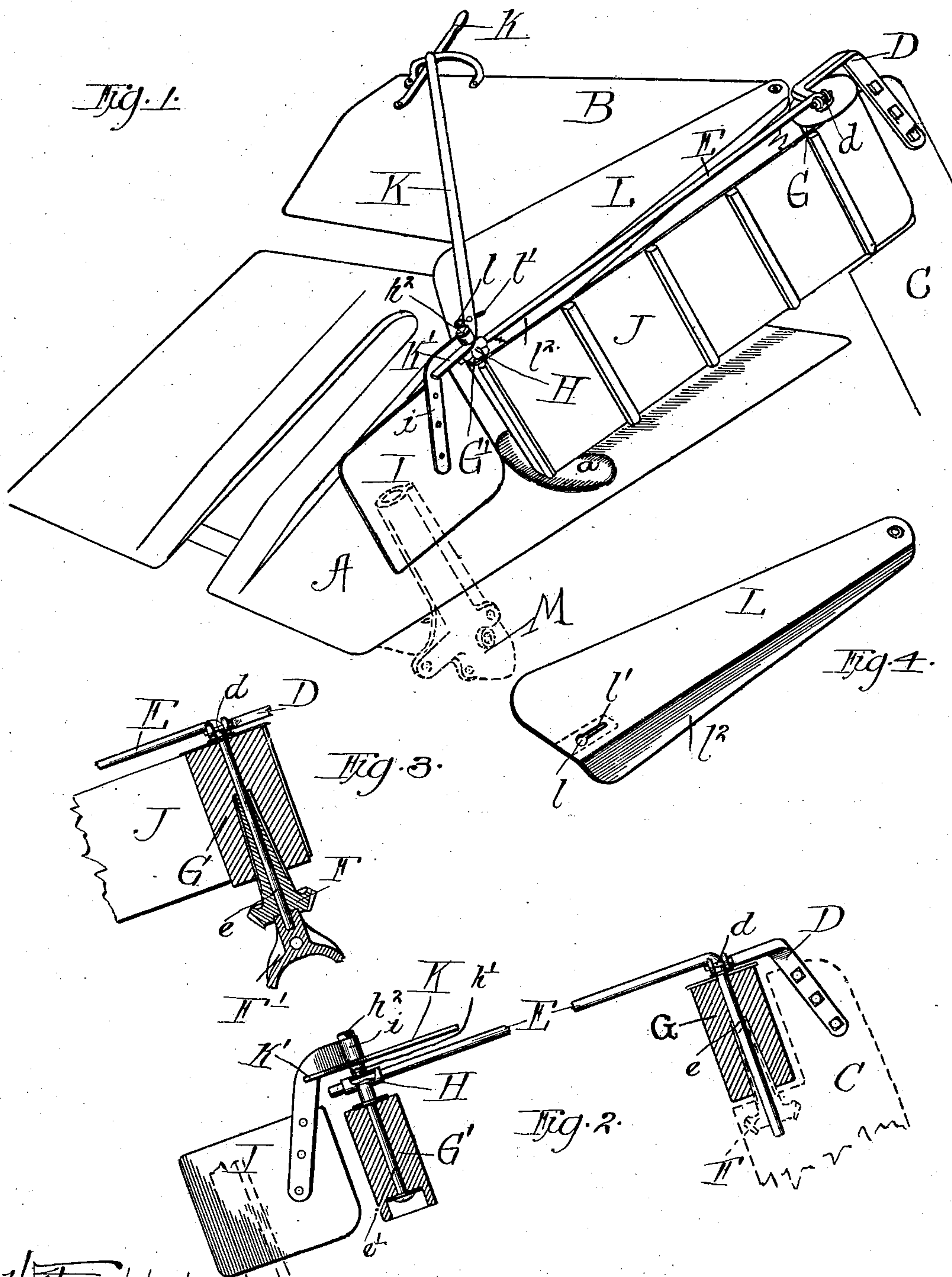
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J. F. STEWARD.  
BUTT ADJUSTER FOR HARVESTERS.

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NO MODEL.



Witnesses:  
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# UNITED STATES PATENT OFFICE.

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## BUTT-ADJUSTER FOR HARVESTERS.

SPECIFICATION forming part of Letters Patent No. 754,719, dated March 15, 1904.

Application filed November 20, 1903. Serial No. 182,045. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN F. STEWARD, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Butt-Adjusters for Harvesters, of which the following is a complete specification.

The object of my invention is to provide an adjuster which shall be effective in operation, simple and economical in construction, and easily assembled.

Referring to the drawings, Figure 1 is a perspective of the complete adjuster, the adjuster-operating lever, and the grain cover and deck. Fig. 2 is an elevation showing the framework of the adjuster. Fig. 3 is a detail section showing the construction and the manner of driving the upper roller of the adjuster; and Fig. 4 is a perspective of the adjuster-shield, which lies over the grain-shield and is movable with said adjuster.

In the drawings, A designates the deck of a harvester, B the grain-cover, and C the front A-frame, only a portion of the latter being shown, however. Secured to the upper end of the front A-frame C is the support D, which sustains the adjuster-rod E, forming in part the supporting-frame of the adjuster. The longitudinal portion of this adjuster-rod, or that portion thereof which extends parallel with the deck, is provided with an upper and lower arm *e* and *e'*, respectively, forming an axle-bearing for the adjuster-rollers. These arms extend transversely relative to the longitudinal portion of the said rod and are located substantially perpendicular to the grain-deck. While either of the arms may or may not be integral with the longitudinal portion of the adjuster-rod, it is preferred that only the upper arm *e* should be so constructed, and is so shown in the drawings. The arms *e* and *e'*, in connection with the longitudinally-extending portion of the rod E, may be regarded as constituting the adjuster-frame. The lower end of the upper arm *e* of the adjuster-rod E may be supported in any suitable manner, no particular means being shown in this instance. Whatever manner of support it has, however,

will be in connection with the elevator and reel-driving gearing, which are usually located on the front of the machine and with which the bevel-pinion F may be considered to engage.

On the upper arm *e* of the adjuster-rod E journals the adjuster-driving roller G, and F is a bevel-gear in effect integral therewith and by means of which the said roller receives motion from suitable driving mechanism. The adjuster-frame is sustained by means of the support D above the roller G and below the roller by the lower support F', a fragment of which is shown in Fig. 3. The said rod E is rigidly supported but free to turn in the above-mentioned supports, the horizontally-extending portion thereof sweeping a plane substantially parallel with the deck. On the lower end of this rod is adjustably secured the collar H. This collar H is provided with a downwardly-projecting stud or arm *e'*, which forms a bearing for the lower adjuster-roller G'. On the collar H is also an upwardly-projecting boss *h'*, tapped for the set-screw *h*<sup>2</sup>. This set-screw *h*<sup>2</sup> is of a length sufficient to enable it to pass through the sleeve *i* of the adjuster extension I, and thus afford a support for same. The set-screw *h*<sup>2</sup> not only affords a support for the adjuster extension, but also enables the collar H to be set at any desired position on the adjuster-bar E, in this way securing any desired degree of tightness in the butt-advancer or adjuster-canvas J. The set-screw *h*<sup>2</sup> also receives and supports the lower end of the adjuster-operating lever K, which extends to the rear end of the grain-cover B and connects with a hand-lever *h*. While the lever K, in the strict sense of the term, is not a lever but merely a connecting member, it will for convenience be called such.

Pivoted to the upper and forward portion of the grain-cover B, adjacent to the adjuster-driving roller G, is the shield L. The lower end of this shield is received by a rivet-head in and near the lower end of the adjuster-lever K, the rivet-head passing through the aperture *l* and then being free to move longitudinally



in the slot  $l'$  an amount sufficient to accommodate the movement of the adjuster. This provision for longitudinal movement relative to the shield L and the adjuster-lever K is made necessary from the fact that the pivotal points or centers of movement of the adjuster and shield are not coincident. A depressed edge  $l''$  is provided on the forward end of the shield L, which prevents the grain working up between the adjuster-canvas and said shield. The lower end of the adjuster-lever K, below its pivotal connection with the set-screw  $h^2$ , is bent stubbleward and engages the adjuster extension I, the bent portion  $h'$  of the said lever engaging the arm  $i$  of the said extension, thus preventing the latter swinging forward to a position in which it would be inoperative. In the manipulation of this lever it will be noticed by inspection of Fig. 1 that in swinging the adjuster from the rearward position therein shown the lower end of the adjuster extension will be moved or deflected rearwardly relative to the plane of the adjuster rollers or frame on which they are mounted. In the rearward movement of the adjuster by the lever K the reverse is true, so that the said adjuster extension is automatically moved to a position in which it will be more effective in the forward position of the adjuster and less obstructive in the rearward position of the adjuster.

In connection with the above-described action of the adjuster-lever it is to be observed that the bent end  $h'$  thereof will permit the adjuster extension I to yield rearwardly when it contacts the binder-frame M as the adjuster is moved forwardly. A portion of the binder-frame M is shown in dotted lines in Figs. 1 and 2.

The deck A is provided with a depressed portion  $a$ , the said depression being of an arcuate form in order to extend slightly above and below a point on the deck immediately beneath the path of travel of the lower roller of the adjuster. The object of this depression is to afford means of relief for any straws that may gather at that point and which would otherwise be held by the lower end of this roller. The extent of this depression is sufficient to render it effective in any position which the adjuster may occupy.

As shown in Fig. 1, the upper portion of the grain-deck recedes slightly from the adjuster-canvas. The purpose of this is twofold: first, to prevent the straw becoming engaged by the canvas at its upper end, and, secondly, that the upper margin of the depressed portion may serve to guide the canvas on the lower roller.

In order to facilitate the assembling of these parts, the securement of the adjuster-bar E to the support D is effected by means of a slot in the latter, a pin  $d$  securing the bar E therein.

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

1. In a butt-adjuster for grain-harvesters, in combination, a roller-supporting rod consisting of a longitudinally-extending portion provided with two parallel transversely-disposed arms at the upper and lower ends thereof, an adjuster-driving roller journaled upon the upper arm of said roller-supporting rod, means for communicating motion to the said driving-roller, supports for rigidly sustaining said rod and roller, a roller journaled upon the lower arm of said supporting-rod, an endless butt-advancer passing over said rollers, and means for controlling the position of the adjuster, substantially as described.

2. In a butt-adjuster for grain-harvesters, in combination, an adjuster-driving roller, means for supporting said driving-roller, an adjuster-rod in connection with said supporting means, said adjuster-rod extending from a point immediately above the said roller and in a direction substantially at right angles to the axis thereof, a lower roller, the bearing of which is supported on and releasably secured to the free end of said adjuster-rod, a butt-advancer passing over the said rollers, and means for controlling the position of said adjuster, substantially as described.

3. In a butt-adjuster for grain-harvesters, in combination, a roller-supporting rod consisting of a longitudinally-extending portion having at the upper end thereof an arm extending transversely relative thereto and continuous therewith, a driving-roller journaled on said arm, means for supporting the said adjuster applied to the arm of said rod, a roller adjustably secured to the free end of the said supporting-rod, a canvas passing over the said rollers, and a lever for controlling the position of the adjuster, substantially as described.

4. In a butt-adjuster for grain-harvesters, in combination, a roller-supporting rod consisting of a longitudinally-extending portion having at the upper end thereof an arm extending transversely relative thereto and continuous therewith, a driving-roller journaled on said arm, means for supporting the said adjuster applied to the arm of said rod at points above and below the said driving-roller, a roller adjustably secured to the free end of the said supporting-rod, a canvas passing over the said rollers, and a lever for controlling the position of the adjuster, substantially as described.

5. In a butt-adjuster for grain-harvesters, in combination, upper and lower rollers, a supporting-frame therefor, means for operating the said adjuster, a lever for controlling the position of the adjuster pivotally connected to the free end of said supporting-frame, an adjuster extension free to move rearwardly having its pivotal connection with the said



supporting-frame coincident with but independent of the pivotal connection of said controlling-lever therewith, substantially as described.

5 6. In a butt-adjuster for grain-harvesters, in combination, upper and lower rollers, a supporting-frame therefor, means for operating the said adjuster, a lever for controlling the position of the adjuster pivotally connect-  
10 ed to the free end of the said supporting-frame, the said lever being provided with a laterally-deflected end, and an adjuster extension free to move rearward but restrained from forward movement by said laterally-de-  
15 flected end and having its pivotal connection with the said supporting-frame coincident with the pivotal connection of the lever therewith, substantially as described.

20 7. In combination with a butt-adjuster for grain-harvesters, a lever for controlling the position thereof, a grain-cover and an adjuster-shield pivotally secured at its upper end to the said grain-cover and at its lower end connect-  
25 ed with and operated by the said controlling-lever, substantially as described.

8. In combination with a butt-adjuster comprising an adjuster-frame, upper and lower rollers, an endless butt-advancer passing there-  
over, and means for controlling the position of said adjuster, a grain-deck having that por- 30  
tion of its surface depressed which lies beneath the path of travel of the said lower roller of the adjuster, substantially as described.

9. In a butt-adjuster for grain-harvesters, in combination, upper and lower rollers, a supporting-frame therefor, means for operat- 35  
ing the said adjuster, a lever for controlling the position of the adjuster pivotally connect-  
ed to the free end of said supporting-frame, an adjuster extension also pivotally connected 40  
to the free end of said supporting-frame but independent of the pivotal connection of the controlling-lever, the said adjuster extension  
being free to move rearwardly but restrained 45  
from forward movement by the said controlling-lever, substantially as described.

JOHN F. STEWARD.

In presence of—

D. E. LOCKERT,  
J. C. WARNES.