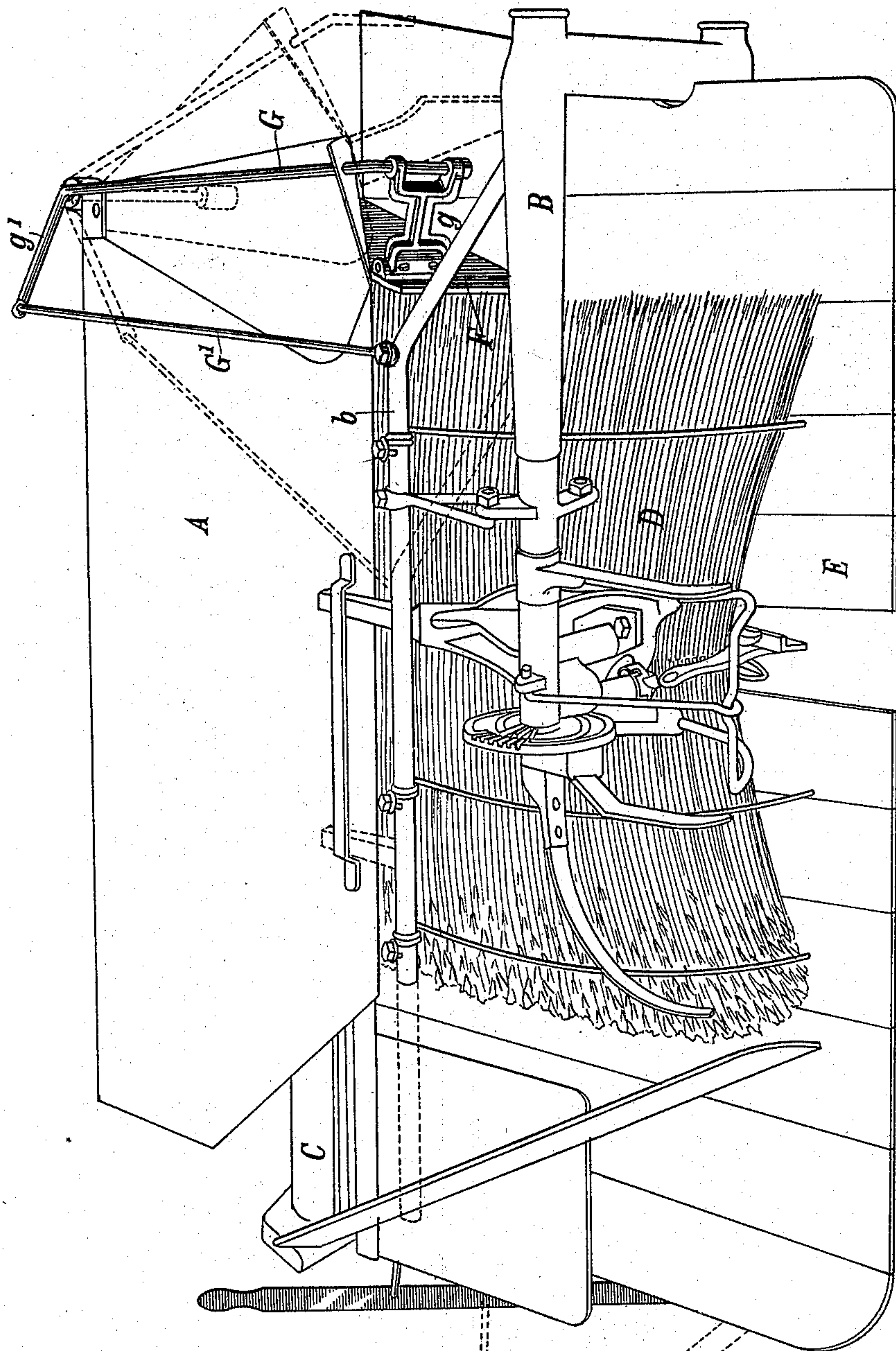


(No Model.)

T. SMITH.
ADJUSTING DEVICE FOR BUTTING BOARDS.

No. 568,149.

Patented Sept. 22, 1896.



WITNESSES:

John M Culver
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UNITED STATES PATENT OFFICE.

THEODORE SMITH, OF GEORGETOWN, ILLINOIS, ASSIGNOR TO THE MCCORMICK HARVESTING MACHINE COMPANY, OF CHICAGO, ILLINOIS.

ADJUSTING DEVICE FOR BUTTING-BOARDS.

SPECIFICATION forming part of Letters Patent No. 568,149, dated September 22, 1896.

Application filed January 28, 1895. Serial No. 536,406. (No model.)

To all whom it may concern:

Be it known that I, THEODORE SMITH, a citizen of the United States, residing at Georgetown, in the county of Vermillion and State of Illinois, have invented certain new and useful Improvements in Adjusting Devices for Butting-Boards, of which the following is a specification.

Butt-adjusting devices for evening and advancing the butts of the flowing stream of grain have been common in self-binding harvesters for many years. It has also been common to extend a rod or handle from the swinging end of these devices to a point on the machine convenient to the hand of the driver, so that the adjuster could be positioned farther forward or backward, as was necessary for the central binding of the grain. The necessity for the adjustment of the binding attachment for central binding has been recognized for many years, and means have been provided, usually consisting of a lever to adjust the binder along the delivery end of the harvester, so as to receive the grain more centrally. It has been found that both the moving of the binder and the adjuster is necessary, because of the great variation in the lengths of grain that may be encountered, even in the same field. It is easily seen, however, that the direction of movement of the binder and adjuster must be opposite; that is, when the binder is moved forward for short grain the adjuster should be moved backwardly. This necessitates, in the usual construction of machines, that the operator shall adjust his binder and then release the lever and grasp the lever for moving the adjuster. This takes time, and the attention of the driver is frequently so taken by the many conditions that the machine encounters that frequently the grain is not as centrally bound as is necessary for handling.

My invention consists in so attaching the adjuster to the binder that any movement of the binder for central binding shall be communicated to the adjuster and move it in the opposite direction. I accomplish this result by means of the devices illustrated in the drawing, in which the drawing is a perspective view of so much of the binding attachment positioned at the delivery end of the

harvester as is necessary to show my invention.

In the drawing, A represents the deflector that is attached to the harvester, as is common in self-binding harvesters, while B represents the self-binding attachment that is adjustable along the delivery end of the elevator of the harvester, of which C is the lower elevator-rod.

Grain D is shown in the drawing as being discharged into the binder onto the deck E, and is in position to be centrally bound.

The adjuster F is located at the delivery end of the elevator and receives its motion from the harvester, as is common in such constructions, while its lower end can be sustained in any of the many well-known ways. I have, however, shown it sustained by a rod G, that overhangs the deflector A. The upper end of the rod G is pivoted on the elevator, while its lower end carries a link *g*, that is attached to the adjuster F. It is plain to see that the rod G controls the position of the lower end of the adjuster F and that any movement imparted to it will change the position of the adjuster. I have therefore extended the rod backwardly beyond its pivot on the harvester, as shown at *g'*. I connect this extension *g'* with the binder-rail *b* by means of the link *G'*, which is a part of and moves with the binder B.

In the drawing I have shown the binder at its most forward position, with the adjuster thrown to the rear as far as it has seemed best for its most effective operation upon the grain. The driver grasps the lever, which adjusts the binder, and pulls the binder rearwardly, when the connecting-link *G'*, acting through the adjuster supporting-rod G, throws the adjuster forwardly. It is plain to be seen that any adjustment of the binder must therefore be followed by an adjustment of the adjuster in the opposite direction.

In the machine which I have shown in the drawing the upper elevator does not extend so far rearwardly as the lower elevator. This is a common construction at the present day in open-elevator harvesters, and the usual plan of supporting the upper elevator is to support it from the front, as shown in patent of S. D. Locke, No. 233,781, granted October

26, 1880, or to extend a rearward yoke, as is shown in the elevators upon the gleaner patented by Moses A. Keller, No. 221,922, granted November 25, 1879. Heretofore it has been customary to support the controlling-rod on the upper elevator-frame, but an overhung or front-supported elevator-frame is poorly adapted to support this rod, and in the construction herein described and claimed I have avoided attaching or supporting the rod to the frame in this class of machines, and the parts are arranged so as to be economically manufactured and so attached as not to interfere with the flowing stream of grain, while the appearance of the device is very good.

I am aware that it is not new to adjust the binder and adjuster in opposite directions by the same movement, and I do not, therefore, wish to claim such broadly.

What I do claim, however, is—

1. The combination with a movable binder adjustable along the delivery end of the harvester, of an adjuster located at the butts of the grain and pivoted to the harvester at its inner end, its outer end being supported and controlled by a bar pivoted to the harvester to swing in a direction opposite to the movement of the binder, and a rod attached to the binder at one end and connected to a

backward extension from the adjuster supporting and controlling bar at the opposite end.

2. The combination with a movable binder adjustable along the delivery end of a harvester, of an adjuster located at the butts of the grain and pivoted to the harvester at its inner end, its outer end being supported and controlled by a bar pivoted to the harvester to swing in the opposite direction to the movement of the binder, a backward extension of the adjuster supporting and controlling bar, and a rod connected at one end to the spring-rail of the movable binder and at its opposite end to the extension of the adjuster-rod.

3. The combination with a movable binder adjustable along the delivery end of a harvester, of an adjuster located at the butts of the grain and pivoted to the harvester at its inner end, its outer end being adapted to swing in the opposite direction to the movement of the binder, and an endwise-moving rod connected to the movable binder at one end and to a backward extension from the adjuster at its opposite end.

THEODORE SMITH.

Witnesses:

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