

(No Model.)

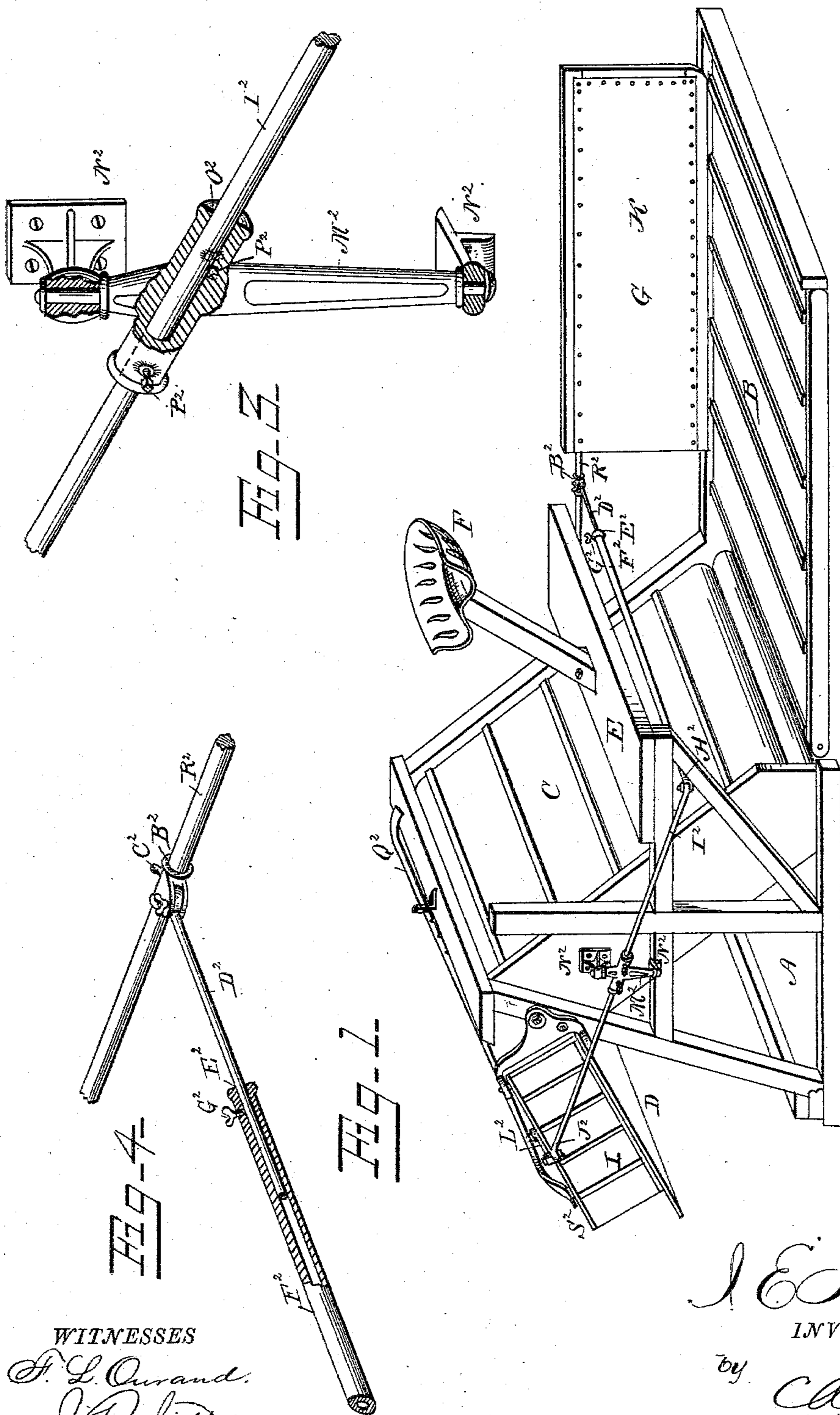
2 Sheets—Sheet 1.

I. E. ARNER.

SELF BINDING HARVESTER.

No. 281,227.

Patented July 17, 1883.



WITNESSES
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J. R. Sittell,

I. E. Arner,
INVENTOR
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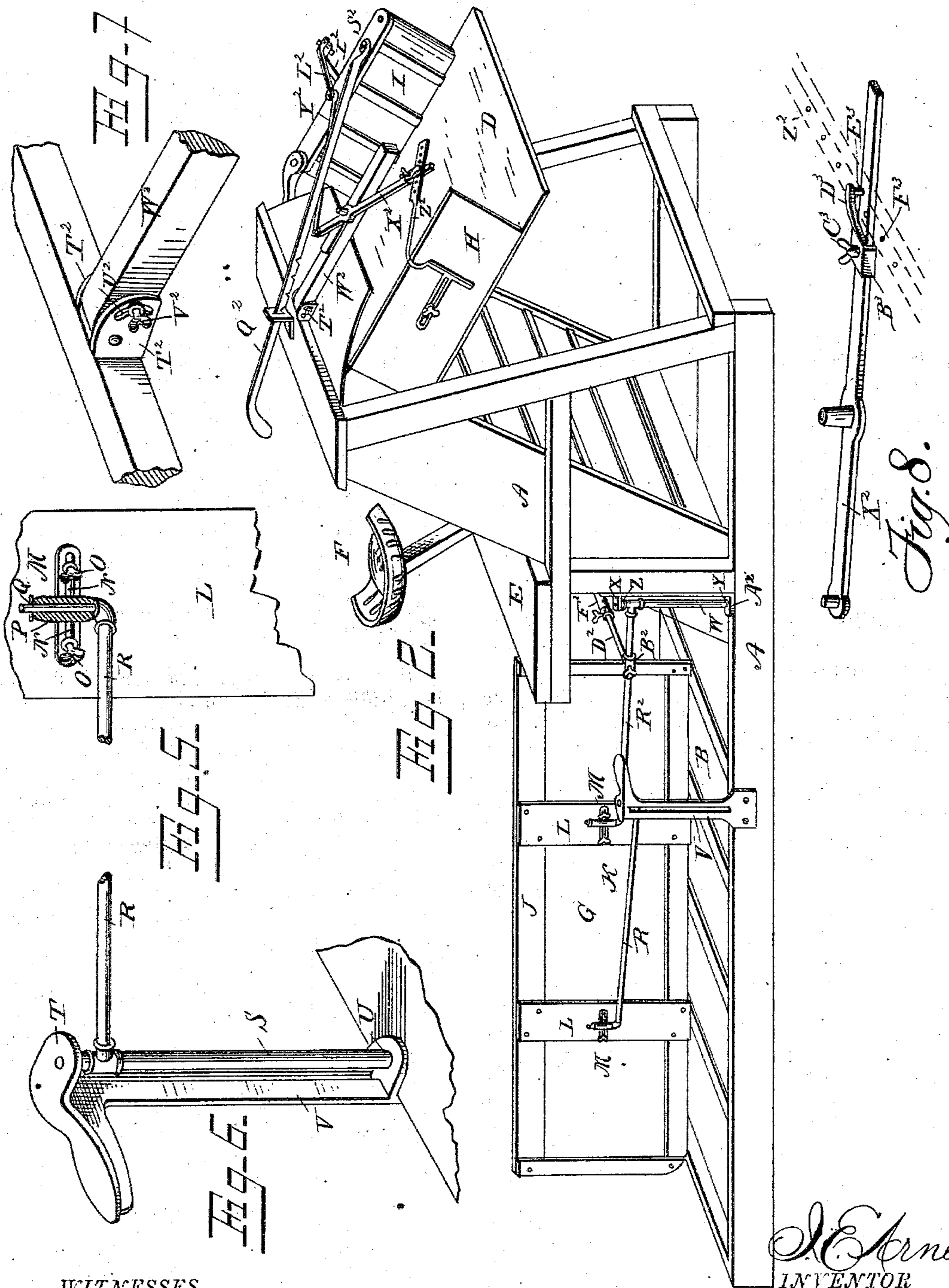
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UNITED STATES PATENT OFFICE.

IRVING EDDIE ARNER, OF HOLLOWAY, MICHIGAN.

SELF-BINDING HARVESTER.

SPECIFICATION forming part of Letters Patent No. 281,227, dated July 17, 1882.

Application filed March 20, 1883. (No model.)

To all whom it may concern:

Be it known that I, IRVING E. ARNER, a citizen of the United States, residing at Holloway, in the county of Lenawee and State of Michigan, have invented a new and useful Self-Binding Harvester, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to self-binding harvesters; and it consists in certain improvements on my Patent No. 272,016, whereby the facility of adjustment of the back board and head and butt guides is increased, and the efficiency and operation of the mechanism generally enhanced.

In the drawings, Figure 1 is a front perspective view of a harvester-frame having my improved adjusting mechanism. Fig. 2 is a like view taken from the rear. Figs. 3, 4, 5, 6, 7, and 8 are detail views.

Referring to the drawings, A designates the frame of the harvester. B is the carrier or platform canvas. C is the elevator-apron. D is the binder-table or deck. E is the seat-plank, and F is the driver's seat, all of which may be of any suitable construction.

G designates the back board, which is longitudinally disposed in relation to the machine, and H I, respectively, the head and butt guides on the binder-table D, these being relatively adjustable by means of suitable connecting mechanism, as shown in the above-mentioned patent. The back board, G, is constructed with a suitable frame, J, carrying a canvas facing, K, and having two upright pieces, L L, secured at its back, as shown. On each of these pieces L L is arranged a longitudinally-adjustable socket, M, that is adjustable by means of the slots N and set-screws O, and is formed with a cylindrical portion, P, as shown in Fig. 5.

In the cylindrical portion P of each socket is received the end or extension Q of a bar or rod, R, on which the back board swings over the carrier-apron B, said extension Q being at right angles to the main portion of the rod. One of the rods, R, is secured to a vertical rock-shaft, S, having bearings at its top and bottom, T U, respectively, in an upright bracket, V, secured to the frame A in rear of the back board, and serving the double purpose of a bearing for shaft S and a step to enable the driver to gain his seat. The other bar, R², is

in like manner secured to a rock-shaft, W, vertically disposed, and having bearings X Y, respectively, at the top and bottom, in brackets Z A², secured on the frame A.

B² is a collar arranged to slide on the rod R², and adjustable thereon by means of a set-screw, C². (See Fig. 4.) To this collar is pivoted a rod, D², that is received into the tubular end E² of a transverse rod, F², that extends under the seat-plank to the front of the harvester-frame. The rod D² is adjustable in the tubular end E² by means of a set-screw, G², working through the latter. By means of the adjustable sockets M, the adjustable collar B², and the adjustable connection between the rods D² and F² the position of the back board in relation to the carrier-canvas can be regulated as desired.

To the front end, H², of the rod F² is pivoted an inclined swinging bar or rod, I², that has its upper end, J², connected with the butt-guide I, that is arranged to swing over the binder-table, by a pivoted link, L², as shown. This rod I² has its bearing in a vertically-disposed rock-shaft, M², journaled in brackets N² N² on the frame A, the said shaft M² being provided with a socket, O², which receives the rod I², and having set-screws P² P², that work into the said socket and secure the said rod I² in position. The latter rod can be adjusted in the said socket by operating the set-screws to alter the relative adjustment of the butt-guide on the binder-table and the back board over the carrier-canvas.

Q² is the rod by which the butt-guide is governed, the said rod being pivoted to the latter near its lower end, S², so that little power is required to operate the mechanism to effect the relative adjustment of the back board and guides.

T² T² are two plates secured to the frame A, at the top of the elevator portion of the said frame, and provided with slots U², through which work set-screws V². Between the plates T² is pivoted the end of a beam, W², that extends down centrally over the binder-table, and is adapted to swing on its pivot in adjusting, and to be secured by the set-screws V².

It will be observed that by simply operating set-screws V² the beam W² can be adjusted by swinging its free end vertically, this adjustment being desirable to delicately alter the

relative adjustment of the levers and connecting-rods that are connected to the said beam. Under some circumstances this beam W^2 can be rigidly secured in position. On this adjustable beam W^2 is fulcrumed a lever, X^2 , that is connected with the butt-guide I by a pivoted rod, Y^2 , extending from the top end of the lever to the top of the said guide. To the lower end of the lever is pivotally connected another rod, Z^2 , that is pivoted to the swinging head-guide H, arranged to swing over the binder-table. The pivotal connection between the rod Z^2 and the lever X^2 is formed by a collar, B^3 , arranged to slide on the end of the said lever, and having a set-screw, C^3 , by which it can be secured in position. The said collar is provided with an extension, D^3 , having a pin, E^3 , that is adapted to engage any one of a series of perforations, F^3 , in the end of the rod Z^2 . By means of this sliding collar and pivotal connection adjustment of the head-guide H in relation to the lever can be readily effected. The head and butt guides on the binder-table can thus be readily regulated from the driver's seat, to adapt them to varying lengths of grain, so that the latter will be delivered in compact and even form upon the table.

The operation and advantages of my present invention are obvious. By means of the different adjustable connections the relative adjustment of the back board and the two guides on the binder-table, which adjustment is effected by one move of the operating lever or rod Q^2 , can be altered to suit varying sizes and conditions of grain.

I claim as my invention—

1. The combination of the longitudinally-adjustable sockets arranged on the back of the back board, horizontally-swinging rods, their upturned ends having bearings in the said

sockets, and arranged to swing in the same horizontal plane, and the vertically-disposed rock-shafts, to which the swinging rods are secured and on which they swing, as set forth.

2. The combination of the swinging rods carrying the back board, a collar arranged to slide on one of said rods, and carrying the pivoted rod D^2 , a tubular rod in the end of which the rod D^2 is adjusted, and a rod connecting the said tubular rod with the butt-guide on the binder-table, as set forth.

3. The combination of swinging rods carrying the back board, a collar arranged to be adjusted on one of the said rods, a tubular rod or bar pivotally connected to the said collar, the inclined rod pivotally connected to the said tubular rod or bar and to the butt-guide on the binder-table, and a vertically-disposed rock-shaft forming a bearing for the inclined rod, as set forth.

4. The combination of a pivoted beam arranged over the binder-table, and adapted to swing on its pivot, a lever fulcrumed on the said pivoted beam, a pivoted rod connecting the lever with the butt-guide, a collar on the other end of the said lever, arranged to slide on and to carry pivotally a rod connecting with the head-guide, whereby the head and butt guides can be simultaneously adjusted, and this adjustment readily altered by means of the adjustable pivotal connections, as set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

IRVING EDDIE ARNER.

Witnesses:

L. S. COWLES,
CHARLES BURRIDGE.