

(No Model.)

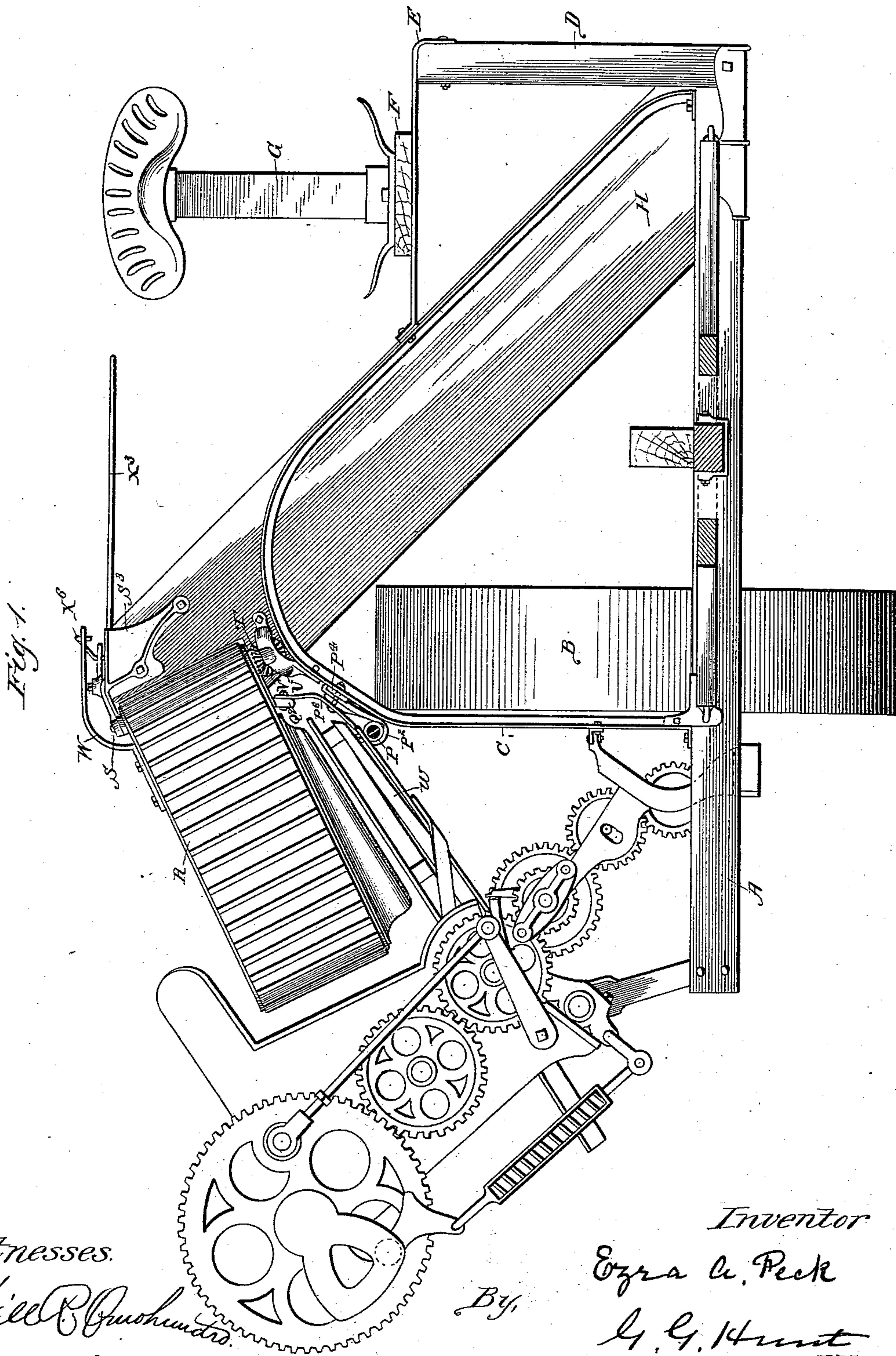
4 Sheets—Sheet 1.

E. A. PECK.

MECHANISM FOR SHIFTING THE BINDER AND GRAIN ADJUSTER IN
HARVESTERS.

No. 366,426.

Patented July 12, 1887.



Witnesses.

Will B. Quinlan
Julia F. Shawhan

By,

Inventor
Ezra A. Peck
G. G. Hunt
Atty.

(No Model.)

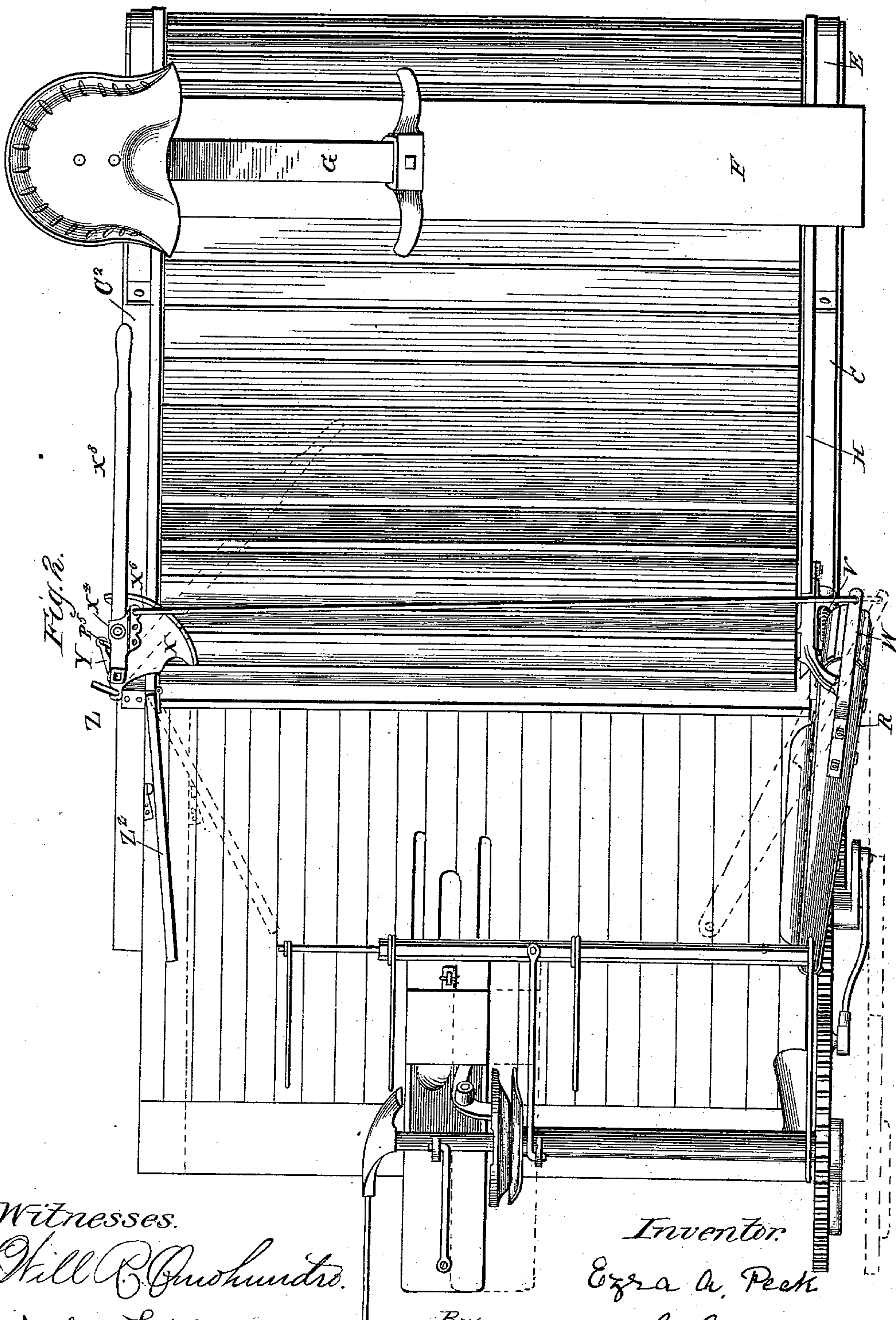
4 Sheets—Sheet 2.

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Witnesses.

Will B. Quohundro.

Jacob T. Shumham

By.

Inventor.

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(No Model.)

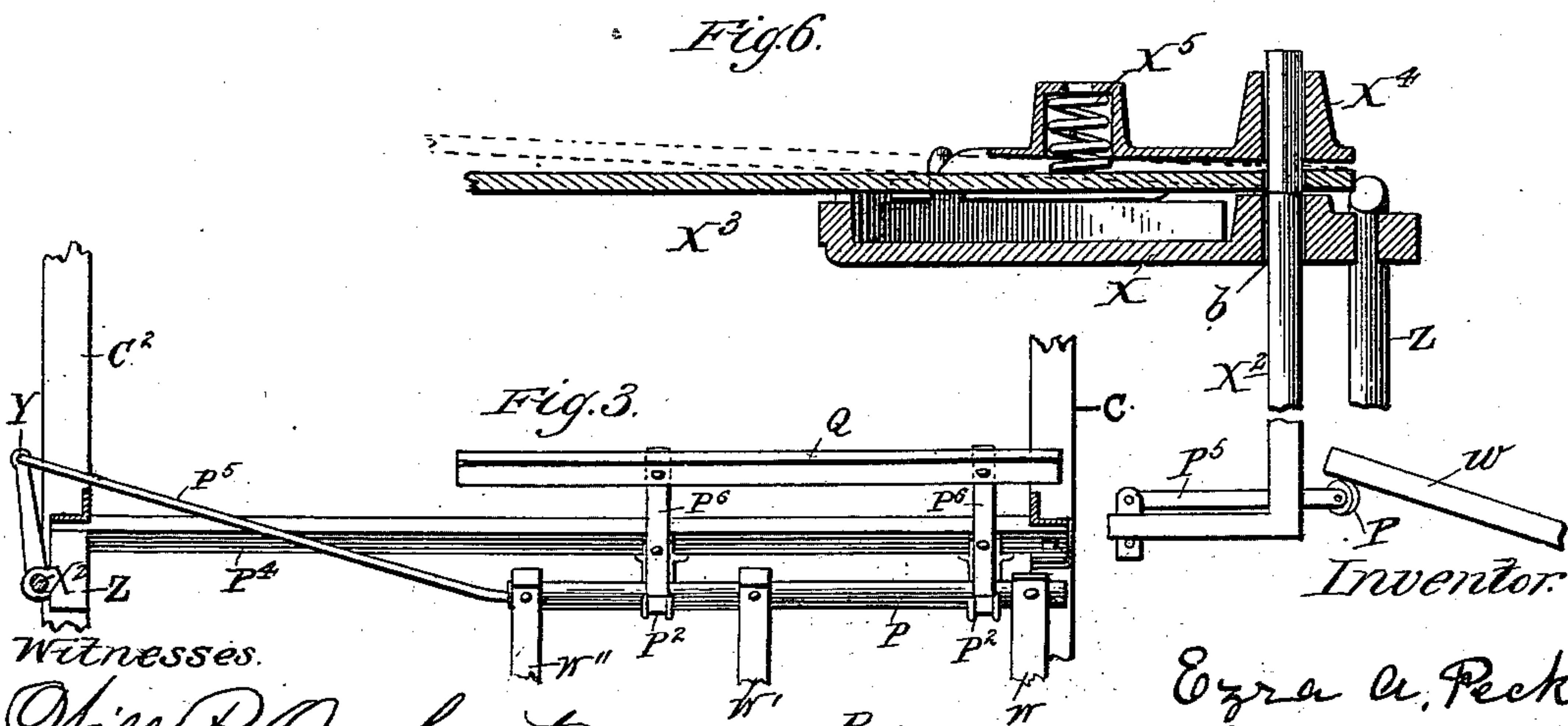
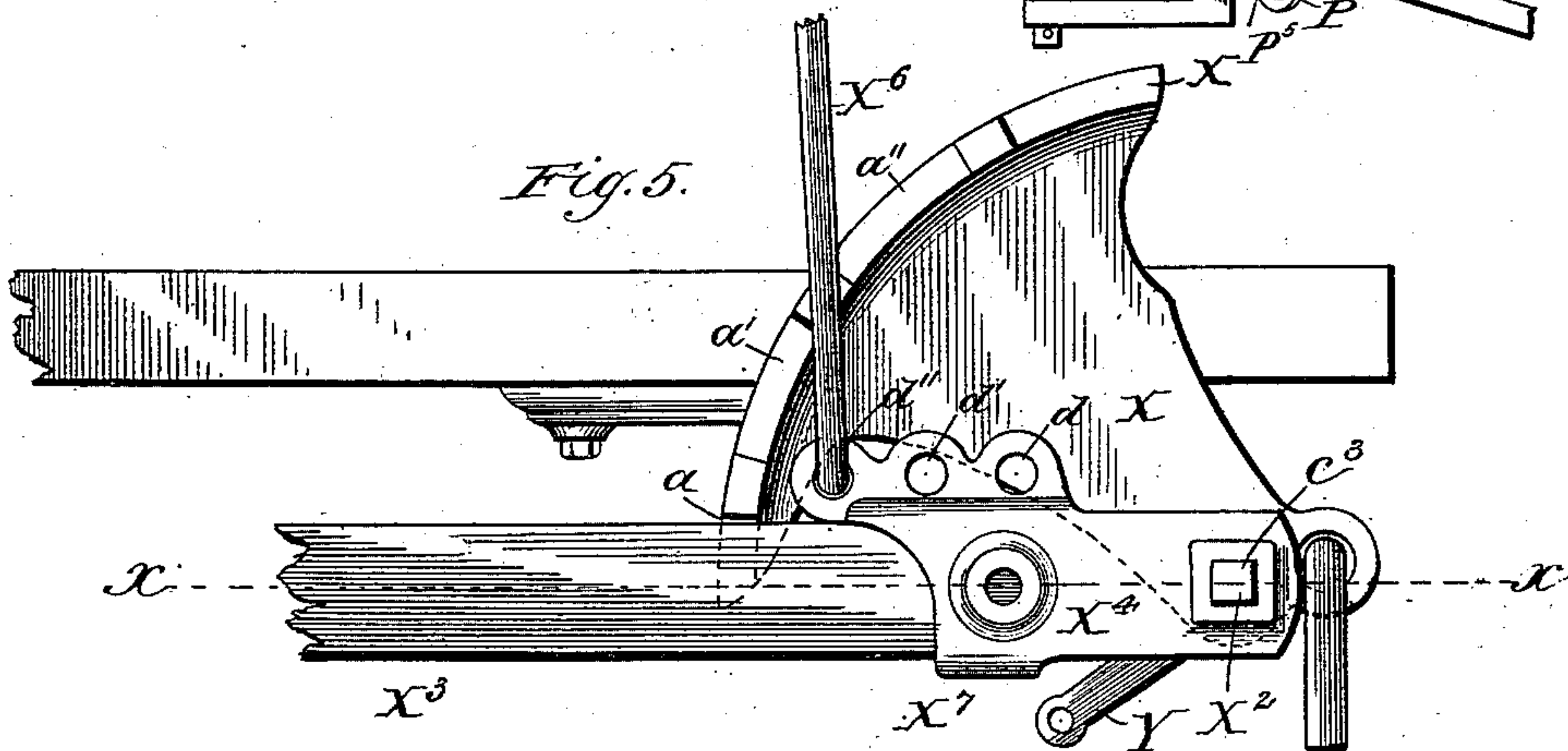
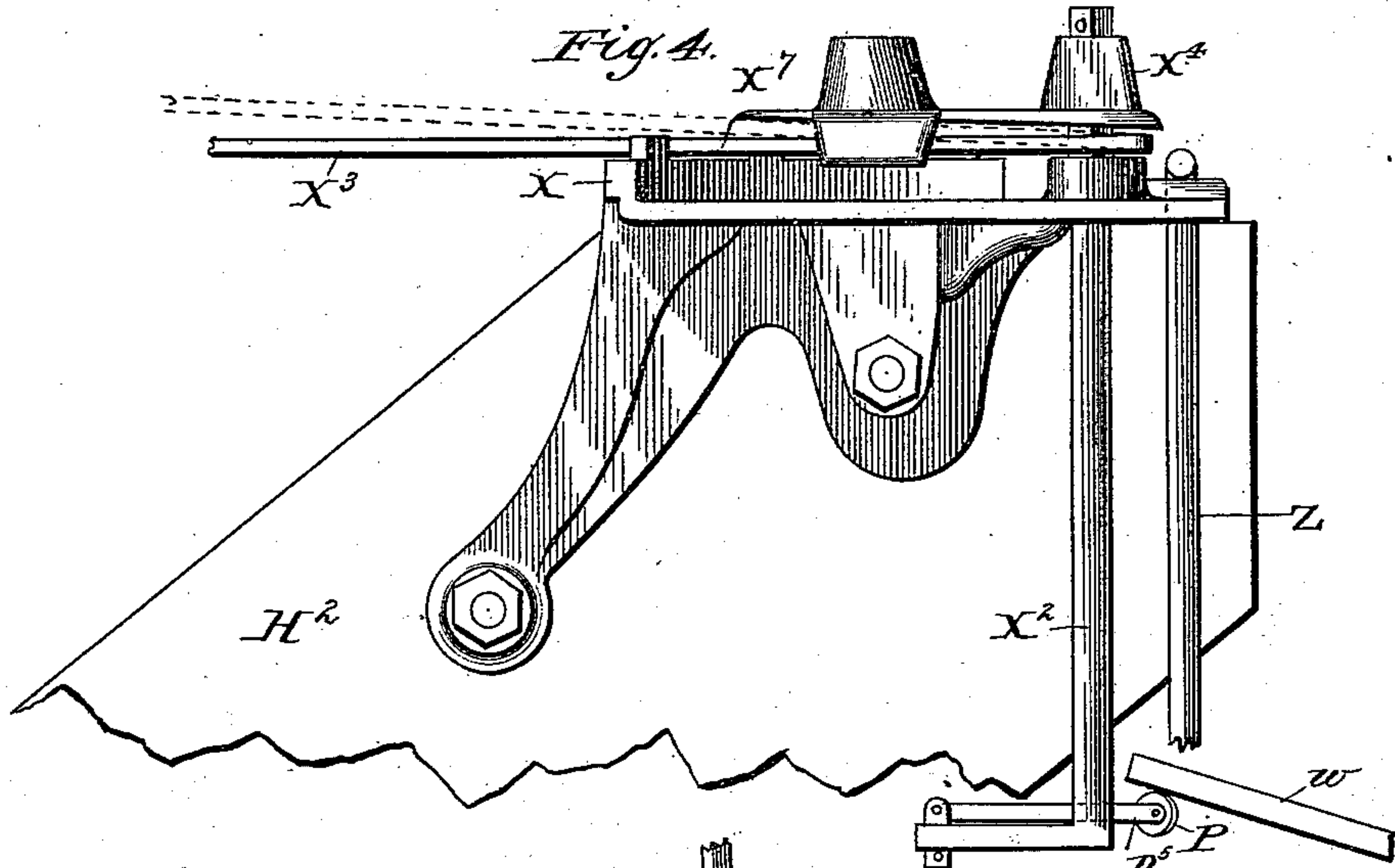
4 Sheets—Sheet 3.

E. A. PECK.

MECHANISM FOR SHIFTING THE BINDER AND GRAIN ADJUSTER IN HARVESTERS.

No. 366,426.

Patented July 12, 1887.



Witnesses.

Will R. O'Rourke
Julius F. Shumham

By

Ezra A. Peck
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(No Model.)

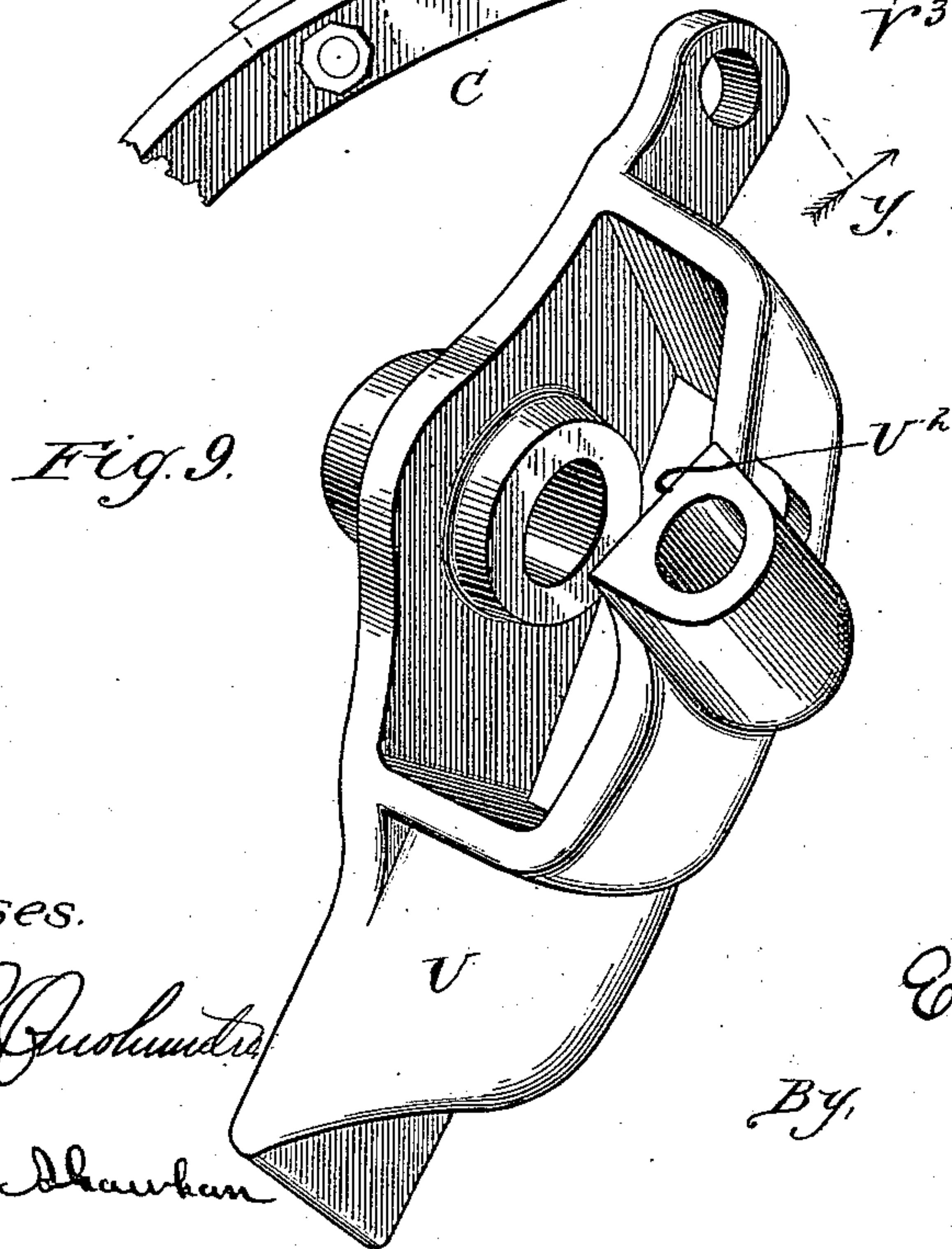
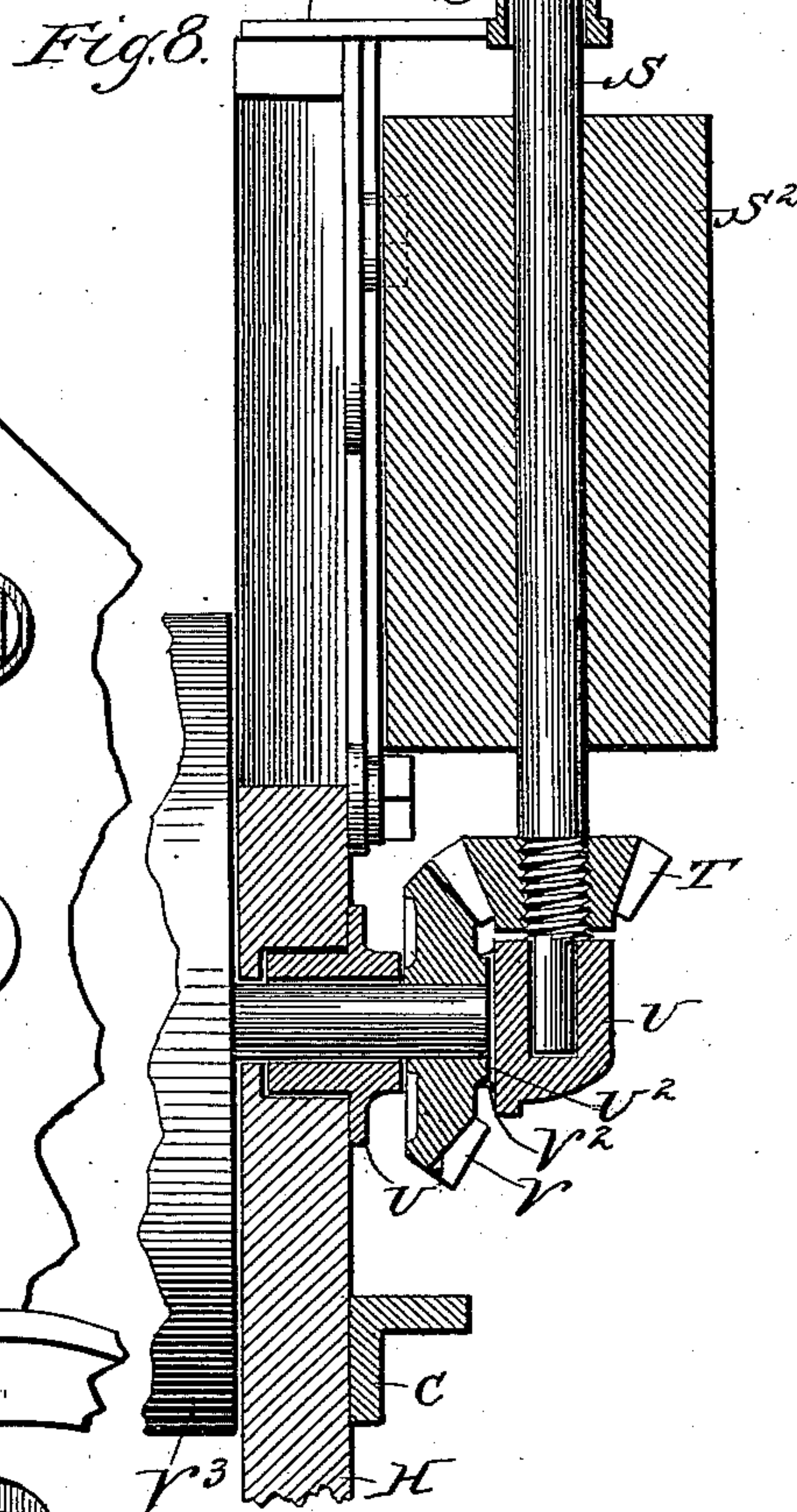
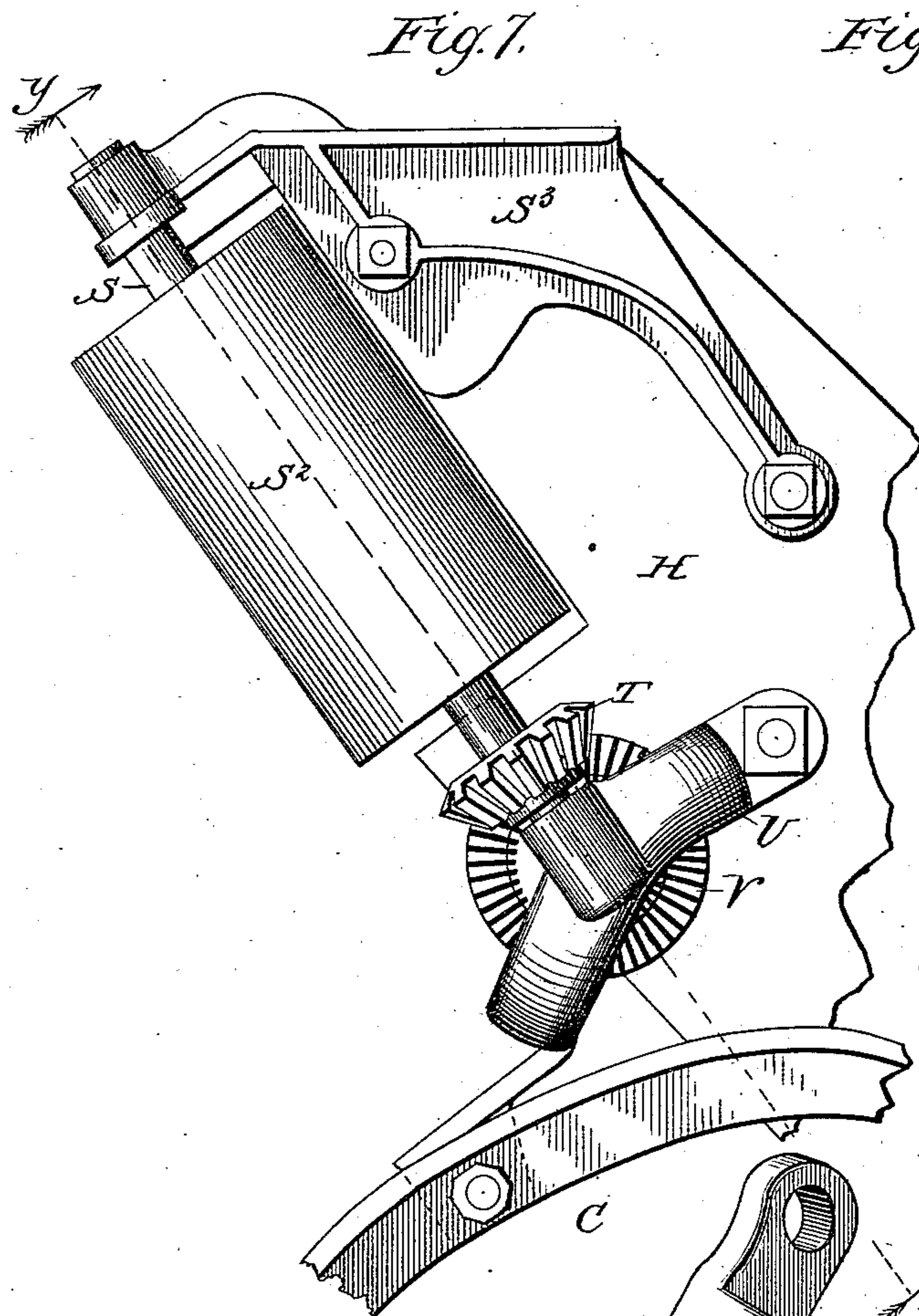
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E. A. PECK.

MECHANISM FOR SHIFTING THE BINDER AND GRAIN ADJUSTER IN
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Witnesses.

Will R. Quinlan

John F. Shawhan

Inventor.

Ezra A. Peck

By G. G. Hunt

Atty.

UNITED STATES PATENT OFFICE.

EZRA A. PECK, OF PLANO, ILLINOIS, ASSIGNOR TO THE PLANO MANUFACTURING COMPANY, OF SAME PLACE.

MECHANISM FOR SHIFTING THE BINDER AND GRAIN-ADJUSTER IN HARVESTERS.

SPECIFICATION forming part of Letters Patent No. 366,426, dated July 12, 1887.

Application filed May 17, 1886. Serial No. 202,468. (No model.)

To all whom it may concern:

Be it known that I, EZRA A. PECK, a citizen of the United States, residing at Plano, in the county of Kendall and State of Illinois, have invented certain new and useful Improvements in Mechanism for Shifting the Binder and Grain-Adjuster in Harvesters, of which the following is a specification.

My improvements relate to the means whereby the band is placed near the center of the bundle, and have for their object better and more durable devices than have heretofore been used. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a front elevation of a part of a harvester embodying my improvements. Fig. 2 is a plan of the same part of the harvester. Fig. 3 is a view, partly in plan and partly in section, of a part of the binder-shifting mechanism. Fig. 4 is a rear elevation of a part of the binder-shifting and grain-adjusting mechanism attached to the rear brace-board. Fig. 5 is a plan of the same parts as shown in Fig. 4. Fig. 6 is a vertical section on the line *xx*, Fig. 5. Fig. 7 is a front elevation of the upper part of the elevator-frame, showing the grain-adjuster-driving mechanism. Fig. 8 is a view from the stubble side of the machine, showing a portion of the elevator mechanism and a sectional view of the adjuster mechanism on the line *yy*, Fig. 7. Fig. 9 is a perspective view of the adjuster-gear bracket.

Similar letters refer to similar parts throughout the several views.

In Fig. 1 a front view of the main frame A, with a driving-wheel, B, elevator-frame C, brace-board H, and binder, is shown. To the upper part of the brace-board H is attached a cast-metal bracket, S³. This bracket is provided with an overhanging arm, which forms a bearing, in which the upper journal or end of the shaft S turns. The lower end of the shaft S rests in a box or step in a bracket, U. This bracket is adapted to receive a bevel-gear, V, which is rigidly attached to the end of the journal of the elevator-drum V³. A bevel-gear, T, is rigidly attached to the lower part of the adjuster-drum shaft S, by a screw or other suitable means. The bracket U is bolted to the brace-board H and frame C; or it

may be attached by any other suitable means.

The bracket U is provided on the interior of the gear-cavity with a flat abutting surface, U², Fig. 9, against which the end of the elevator-drum shaft abuts; or the gear V may be made so as to just fill the gear-space, and thus rest against the bracket on either side, and by this means the gear will always be held in position to mesh properly with its mate, F.

It will be seen that when the elevator-drum shaft revolves it will carry with it the bevel-gears, and through them the adjuster-drum S², which is fast to its shaft.

An adjuster-frame, R, of the usual form, is mounted on the journals of the drum S², as shown in Fig. 1. To the upper part of this frame a projecting arm, W, is attached. The frame R vibrates in the usual manner upon the journals of the shaft S. The binder is attached to the elevator-frame by hooks P² P², which are bolted to a cross-bar, P⁴, connected to both front and rear parts of said frame. A gas-pipe, P⁶, forming a part of the binder-frame, rests in these hooks P² P². The lower part of the binder-frame rests upon standards attached to the main frame, as shown in Fig. 7.

X is a bracket attached to the upper part of the rear brace-board, H². This bracket is formed with a horizontal segmental plate portion, as shown in Fig. 5. Around the outer curved edge of this portion is an upwardly-projecting flange provided with a series of notches, *a a' a''*, in which may normally rest a lever, X³. An aperture, *b*, in the bracket X forms a bearing for the upper part of a vertical rock-shaft, X². The upper end of this rock-shaft is squared, and upon the squared portion is placed the hub of an arm, X⁴, which has a hole corresponding to the square upon the rock-shaft. This arm is firmly secured to the rock-shaft, and lies a short distance immediately above the lever X³. The arm X⁴ is provided with a downwardly-projecting lug, X⁷, which lies alongside of the lever, as shown in Fig. 5. The front edge of the arm X⁴ is bent downward a distance corresponding with the lug X⁷, and between the rear lug, X⁷, and the bent-down portion of the arm is a space, in which the lever X³ lies. The lever X³ has a hole in the end where the rock-shaft passes through it large enough to allow the squared part of the rock-

shaft to turn in the hole; hence the rock-shaft serves the purpose of a pivot for the lever. When the lever X^3 is moved forward or back, the arm X^4 , which embraces it, goes with it, and thereby will turn the rock-shaft. The bent-down portion of the arm X^4 is provided with holes $d\ d'\ d''$, in which may be placed the hooked end of a rod, X^6 . A spiral spring, X^5 , lying in a cavity in the arm X^4 , serves to force the lever X^3 downward and keep the same in the notches in the bracket, and thus hold the lever in the desired position.

The forward end of the rod X^6 is provided with a hook, which goes into a hole in the arm W of the adjuster R, as shown in Fig. 2. The spiral spring X^5 will admit the outward end of the lever X^3 to be raised out of the notches in the bracket, when it may be moved as desired. The lower part of the rock-shaft turns in and is held in position by a bracket, Z, which is secured to the frame of the machine. The rock-shaft is provided with an arm, Y, which projects toward the platform side of the machine. To the outer end of this arm is loosely attached one end of a rod, P^5 , the opposite end of which is attached to the gas-pipe P of the binder-frame, as shown in Fig. 3.

Metal plates $P^6\ P^6$, bolted to the hooks $P^2\ P^2$ and cross-piece P^1 , hold the gas pipe P from rising out of the hooks. The upper ends of the plates $P^6\ P^6$ curve up far enough to serve as standards to support the grain-board Q, as shown in Figs. 1 and 3. By this means it will be seen that the plates $P^6\ P^6$ serve the double purpose of holding the gas-pipe of the binder from getting out of the hooks and of supporting the grain-board, and the same bolts that fasten the hooks also fasten the plates.

It will be perceived that as the lever X^3 is moved it will, through the medium of the rock-

shaft X^2 and connecting-rods X^6 and P^5 , move at one and the same time the grain-adjuster backward and the binder forward, or vice versa, thus dispensing with one lever, or other ordinary means, as heretofore used.

It will be seen by reference to Figs. 2 and 3 that the rod P^5 passes through and moves in the wheel-space beneath the elevator, thus getting it more out of the way of the lower mechanism of the binder.

The elevator-frames $C\ C^2$ are made of wrought iron or steel, and each frame—i. e., the front and rear—are formed of one piece bent in an arch form, as shown, and the ends are so made as to be adapted to bolt securely to the main frame of the machine.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination, in a harvester, of the metal elevator-frames $C\ C^2$, the elevator-drum V^3 , the bracket U, the adjuster R, having shaft S and arm W, the bracket X, the rock-shaft X^2 , the bracket Z, the lever X^3 , arm X^4 , spring X^5 , and rod X^6 , as hereinbefore shown and described.

2. The combination, in a harvester, of the metal elevator-frames $C\ C^2$, the elevator-drum V^3 , the bracket U, the bevel-wheels V and T, the bracket S^3 , the adjuster R, having shaft S and arm W, the bracket X, having notches $a\ a'\ a''$, the rock-shaft X^2 , having arm Y, the rod X^6 , the lever X^3 , the arm X^4 , provided with a spring, X^5 , and rod P^5 , connected to the part P of the binder-frame, as hereinbefore shown and described.

EZRA A. PECK.

Witnesses:

GEORGE G. HUNT,
JABEA F. SHAWHAN.