

(No Model.)

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A. O. SLENTZ,  
GRAIN BINDING HARVESTER.

No. 385,285.

Patented June 26, 1888.

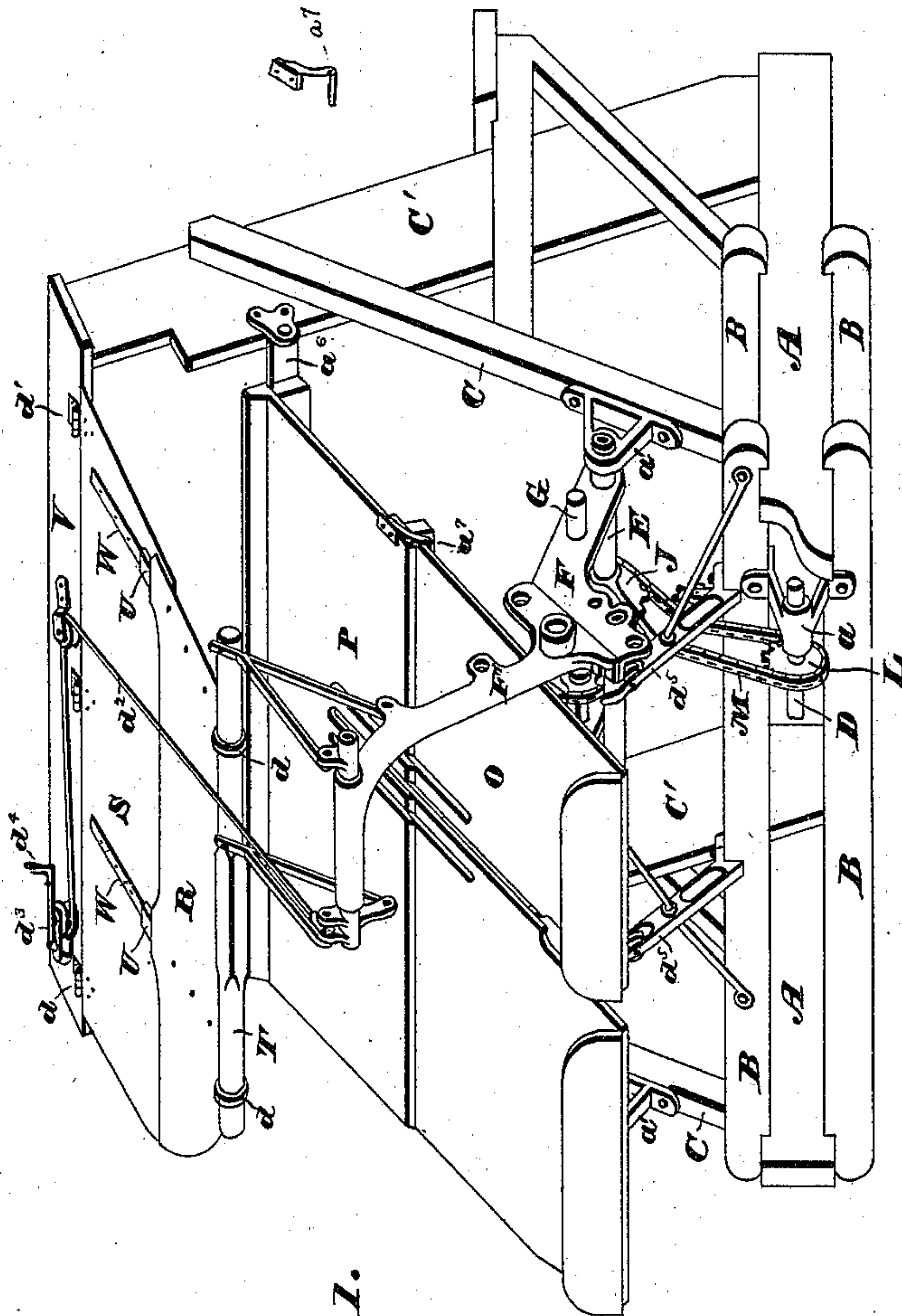


Fig. 1.

WITNESSES:

*Harry Freese*

*Chas. T. Miller*

*Albertus O. Slentz*

INVENTOR,

BY

*N. H. Miller*

ATTORNEY.

(No Model.)

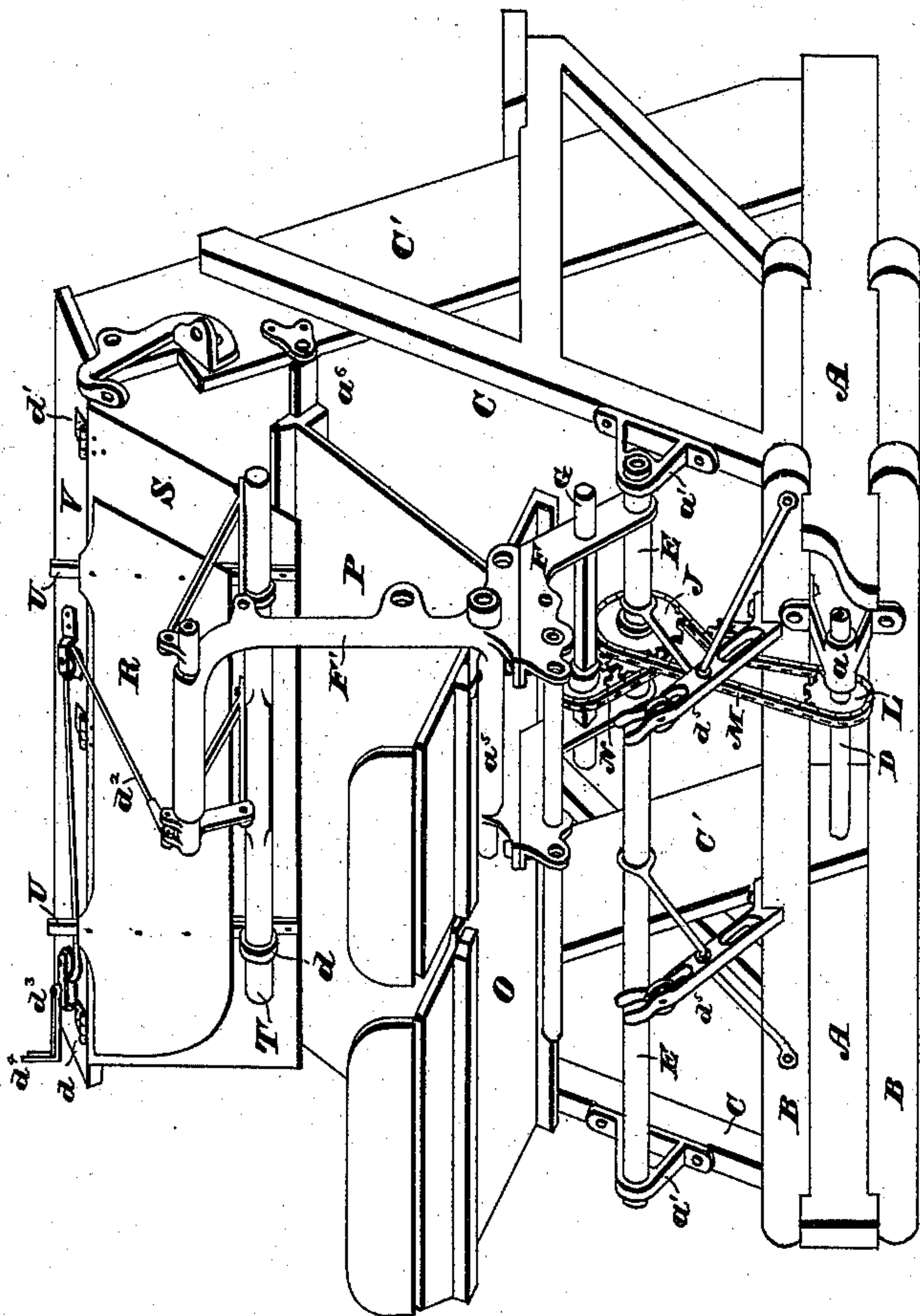
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*Fig. 2.*

WITNESSES:

Harry Grease-  
Chas. V. Miller.

Albertus O. Slutzky

*INVENTOR,*

BY

т.к. миль.

**ATTORNEY.**

(No Model.)

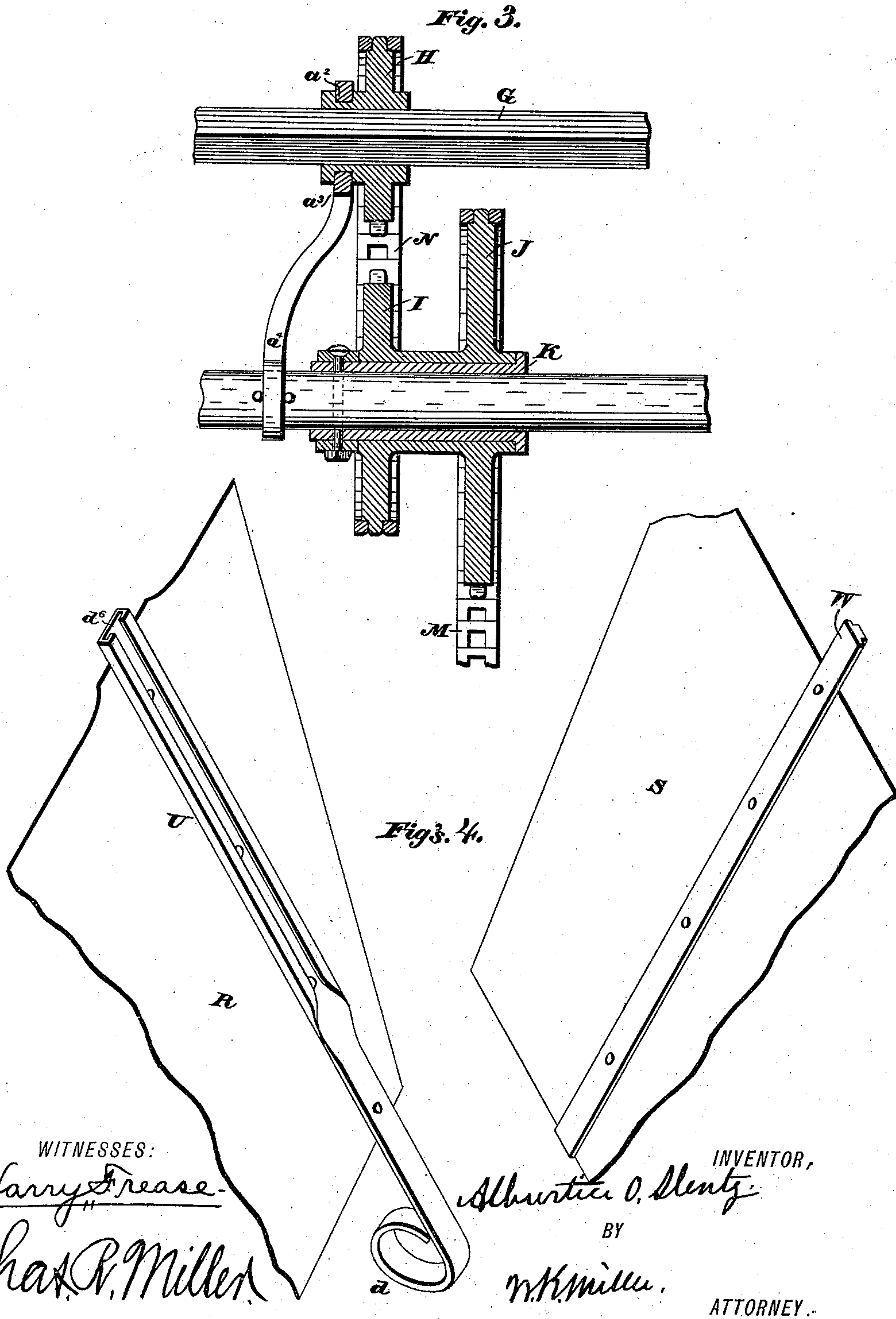
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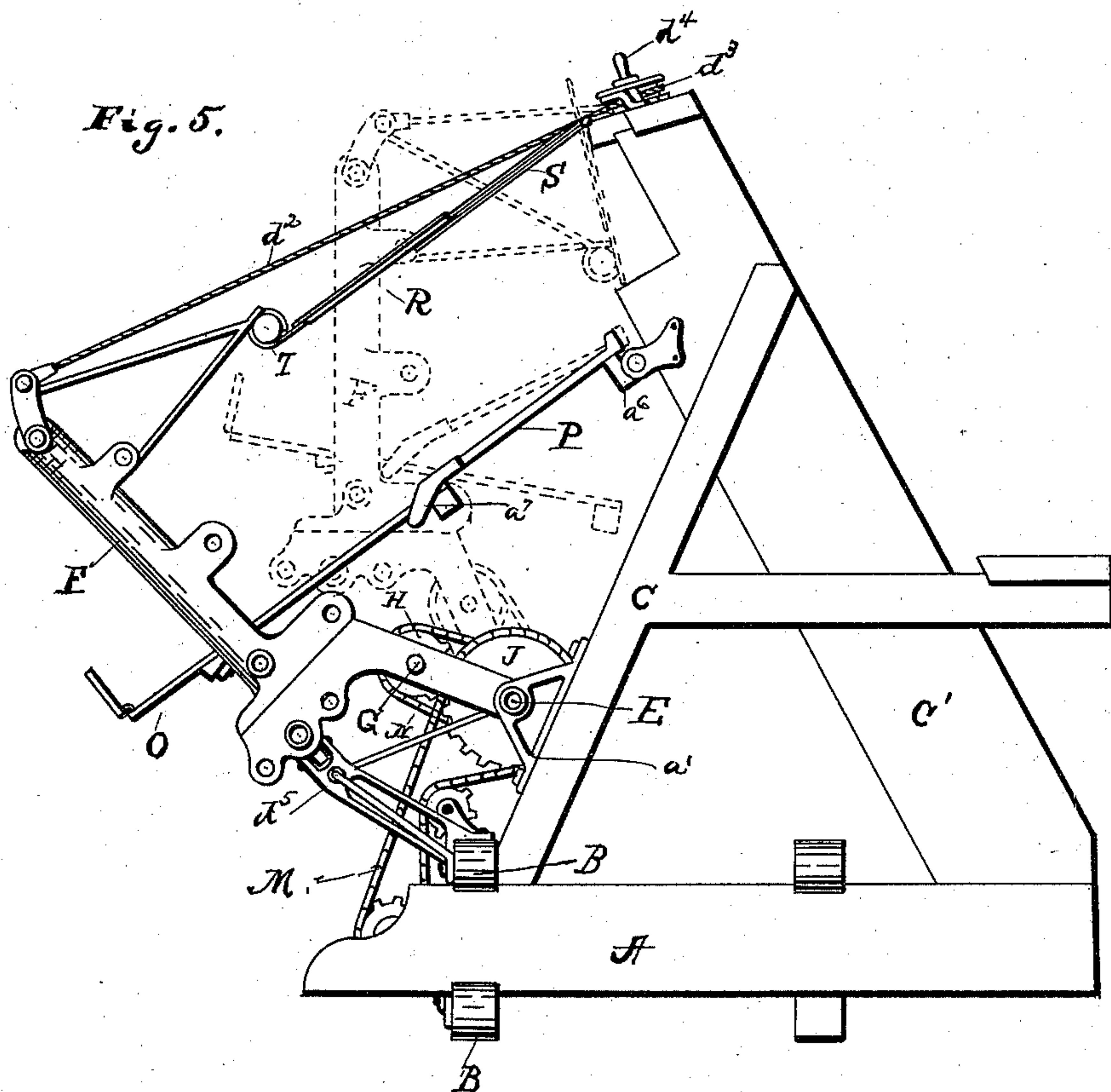
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WITNESSES:

*Harry Freese*  
*Atlee Pomerene*

*Albertus P. Slentz* INVENTOR.

BY

*W. K. Miller* ATTORNEY.

# UNITED STATES PATENT OFFICE.

ALBURTICE O. SLENTZ, OF CANTON, OHIO, ASSIGNOR TO THE PEERLESS REAPER COMPANY, OF SAME PLACE.

## GRAIN-BINDING HARVESTER.

SPECIFICATION forming part of Letters Patent No. 385,285, dated June 26, 1888.

Application filed November 29, 1886. Serial No. 220,163. (No model.)

*To all whom it may concern:*

Be it known that I, ALBURTICE O. SLENTZ, a citizen of the United States, and a resident of Canton, county of Stark, State of Ohio, have  
5 invented a new and useful Improvement in Grain-Binding Harvesters, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, making part of this specification.

10 My invention relates to improvements in grain-binding harvesters; and it consists in providing means by which the packers and binding mechanism may be actuated during the raising, lowering, or folding movements of  
15 the binder parts about a pivotal point outside of the center of the packer and binder actuating shaft.

My invention also relates to and consists in providing a storm-deck that may be contracted,  
20 expanded, and folded to adapt it to the upward, downward, and folding movements of the binder.

My invention also consists of and relates to the detail and combination of parts as described and set forth in the specification and  
25 claims.

As my invention is applicable to many of the well-known forms of grain-binding harvesters now in use, I will proceed to describe  
30 my improvements, referring only to the harvester parts as conjunctive thereto.

Figure 1 is an isometrical view of a fragment of a harvester-frame, showing my improvements as embodied in a binder in normal position. Fig. 2 is same view showing the parts  
35 folded up. Fig. 3 is a sectional view of the means used for transmitting power from the harvester-shaft to the packer and binder actuating shaft. Fig. 4 is a view of two fragments of the storm-deck, showing the means employed by which the storm-deck may be contracted, expanded, and folded, as herein-  
40 after described. Fig. 5 is an end elevation.

Similar letters of reference indicate corresponding parts in all of the figures of the drawings.

Letters A represent the sills of the harvester-frame; B, the cross-beams; C, the binder-supporting frame; C', the elevator side-boards.

D is a section of the harvester-sickle-driving shaft supported in brackets *a*.

E is a binder-supporting shaft, to which the binder-frame F has a pivotal connection and about which the binder may be swung. Said shaft E is supported by the brackets *a'*, secured to the frame-pieces C. The packer and  
55 binder actuating shaft G is supported by and journaled in the binder-frame F. A portion of this shaft is square, as shown in Fig. 3, on which there is loosely mounted a sprocket-wheel, H, in the hub of which there is an annular groove, *a*<sup>2</sup>, in which there is fitted a yoke, *a*<sup>3</sup>, having an arm, *a*<sup>4</sup>, extended and attached to the shaft E. By this means the wheel  
60 H is held in position, allowing the shaft G to move through the wheel H as the binder is moved forward or back to adapt it to the cut grain to be bound.

Letters I and J represent sprocket-wheels, that may be integral, having one common hub,  
70 or clutched together, if preferred. Said wheels rotate about a sleeve, K, fixed to the supporting-shaft E.

On shaft D, which has a geared connection with and may be rotated by the harvester-driving wheel, (not shown in the drawings of this application,) there is mounted a sprocket-wheel, L, which is connected with wheel J by the chain M, and by said chain the wheel J may be rotated about the shaft E. The wheel  
80 I, integral therewith or coupled thereto, may be rotated in like manner. The sprocket-wheels I and H are connected by the chain N, by which the wheel H and the packer and binder actuating shaft may be rotated. Motion being imparted from the shaft D may be conveyed by the chain M to the wheel J, and from the wheel I by chain N to the wheel H and shaft G, thus securing a continuous rotary movement to the shaft G and the proper  
85 movement to the binder, allowing the binder to be raised or lowered or folded up during the progressive movement and operation of the machine, as the packer and binder actuating-shaft and its driving-wheel H are rotated  
90 about a common supporting-center without interrupting or disengaging the means employed to secure a continuous movement of the shaft



G; or, if preferred, the wheels I and J may be rigidly connected to the shaft E, which may rotate in journal-bearings provided in the brackets  $a'$ .

5 To allow of the raising and folding movement of the binder or binder-frame, a binder or grain deck is provided composed of two sections, O and P. Section O is rigidly connected to the lower part,  $a^5$ , of the binder-frame standard F', (see Fig. 2,) and may be  
10 rotated about the binder-supporting bar E with the binder-frame, for the purpose of raising the binder, as hereinbefore mentioned. Section P is supported by cross-bar  $a^6$ , which  
15 is connected to and supported by the elevator side-board C'. The two sections O and P are connected by a grasping finger,  $a^7$ , secured upon section P and reaching down under section O, so as to allow section O to slide through  
20 between the finger  $a^7$  and the lower edge of section P, as shown in Fig. 2. There is also provided a storm-deck composed of two sections, R and S, adapted to fold together, as shown in Fig. 2. In Fig. 4 is shown a frag-  
25 ment of sections R and S, the lower edge of section R having means provided by which it may be hinged to or about the bar T of the binder-frame. In this case a plate, U, having a groove,  $d^6$ , is provided, having at its outer  
30 end a ring,  $d$ , to embrace the bar T, forming a hinge connection thereto. Section S has a hinged-connection,  $d'$ , with the harvester-frame piece V, as shown in Figs. 2 and 3, and is provided with a T-shaped plate or slide,  
35 W, adapted to fit into the groove  $d^6$  in plate U on section R. These parts are put together as shown in Fig. 1, and when the binder is raised the plate U will slide up on the plate W, as shown in Fig. 2, and when the binder  
40 is in operation the deck, formed of the sections, as stated, may be contracted or expanded, as the case may be, covering the space between the bar T and the top of the harvester-frame piece V, or may be folded by the raising of  
45 the binder, as shown in Fig. 2.

To raise and fold the binder as hereinbefore mentioned, there is provided a cable or cord,  $d^2$ , and windlass  $d^3$ . By turning the crank  $d^4$  the cord  $d^2$ , one end of which is at-  
50 tached to the binder-frame and the other to the windlass, may be wound about the windlass and the binder raised or lowered, as desired, or folded up during the progressive movement and operation of the machine, or  
55 for convenience in passing obstructions. When down, the binder may rest on the supports  $d^5$ ; but I do not regard the supports  $d^5$  necessary, as the binder may be carried on the cord or cable  $d^2$ .

60 Having thus fully described the nature and object of my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a grain-binding harvester, the combination, with the harvester-frame, of a binder-supporting frame having a hinged connection 65 with the harvester-frame at a point outside of the center of the binder and packer actuating shaft, and means for raising and lowering the binder-deck during the progressive movement of the machine, whereby the binder may be 70 raised to pass obstructions or folded over upon the machine and secured in either elevated or depressed adjustment, substantially as set forth.

2. In a grain-binding harvester, the combination, with a binder-frame pivotally secured 75 to a harvester and a packer and binder actuating shaft mounted in said frame, of gearing by which said shaft may be rotated about its own center, while it is moved bodily with the 80 binder-frame as the latter is being moved about its pivot to the harvester frame.

3. The combination, in a grain-binding harvester, of a binder-supporting frame having a pivotal connection with the harvester-frame, 85 a packer and binder actuating shaft mounted in said binder-supporting frame, a wheel, H, carried by and adapted to rotate said packer and binder shaft, and the wheels I and J, adapted to be rotated about a center corre- 90 sponding with that of the pivotal connection of the binder-supporting frame with the harvester-frame and geared to wheel H, substantially as set forth.

4. The combination, in a grain-binding harvester, of a pivotal binder-frame and a storm- 95 deck adapted to be contracted and expanded to cover the space over the grain-deck between the binder-frame and the upper part of the harvester-frame as the binder is raised or 100 lowered, substantially as shown, and for the purpose set forth.

5. In a grain-binding harvester, the combination of a pivoted binder-frame and a storm- 105 deck, one end secured to the harvester and the other to the binder, and adapted to be contracted or expanded over the grain-deck with the raising, lowering, or folding of the binder, substantially as set forth.

6. In a grain-binding harvester, the combination, with the pivoted binder-frame, of the 110 expansible storm-deck composed of two sections, one section pivoted to the binder-frame and the other section to the harvester-frame, the said sections having interlocking mechan- 115 ism, whereby they are connected to each other, so as to slide one upon the other as the binder is folded, substantially as set forth.

In testimony whereof I have hereunto set my hand this 23d day of November, A. D. 1886.

ALBURTICE O. SLENTZ.

Witnesses:

CHAS. R. MILLER,

W. K. MILLER.