

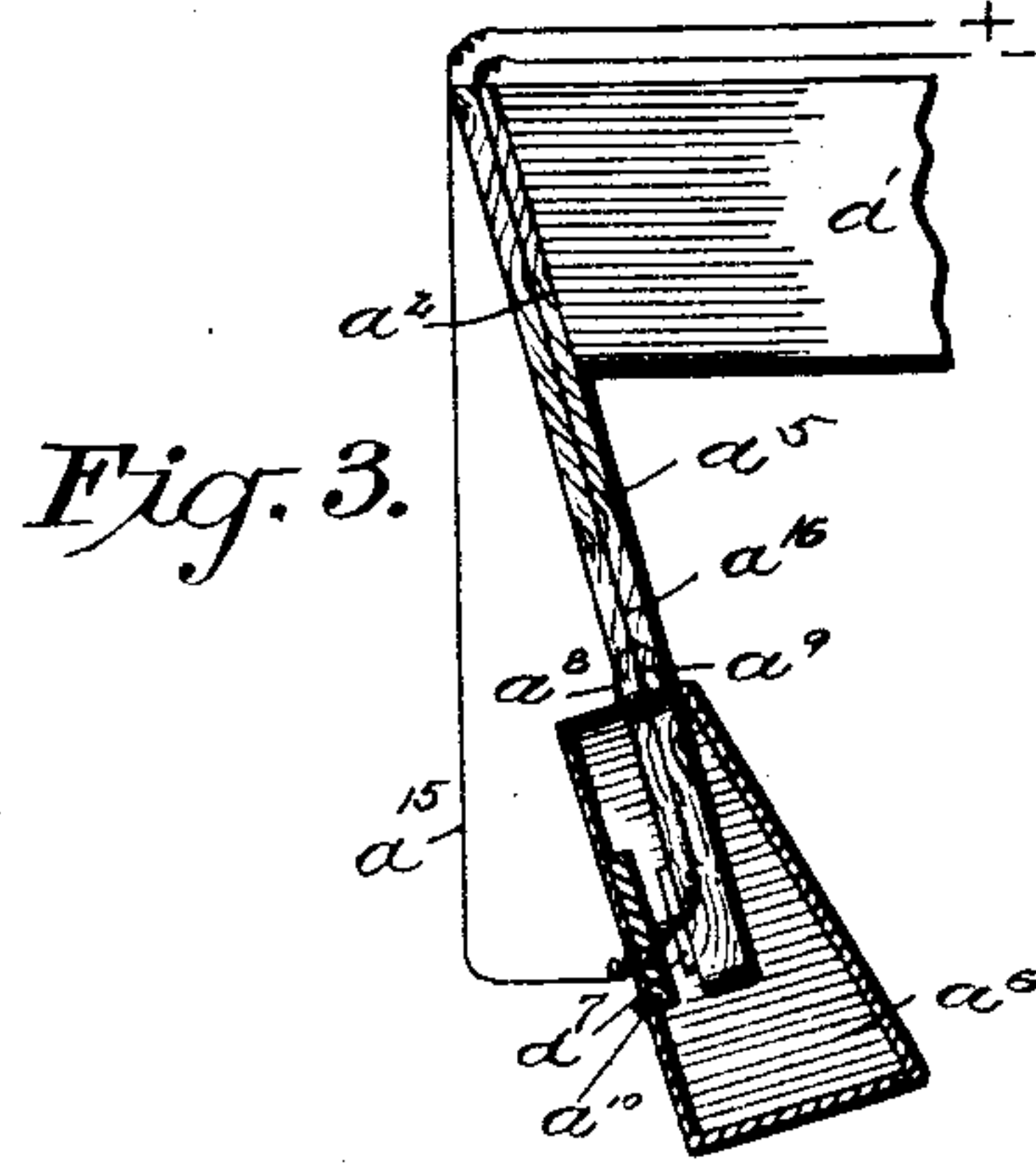
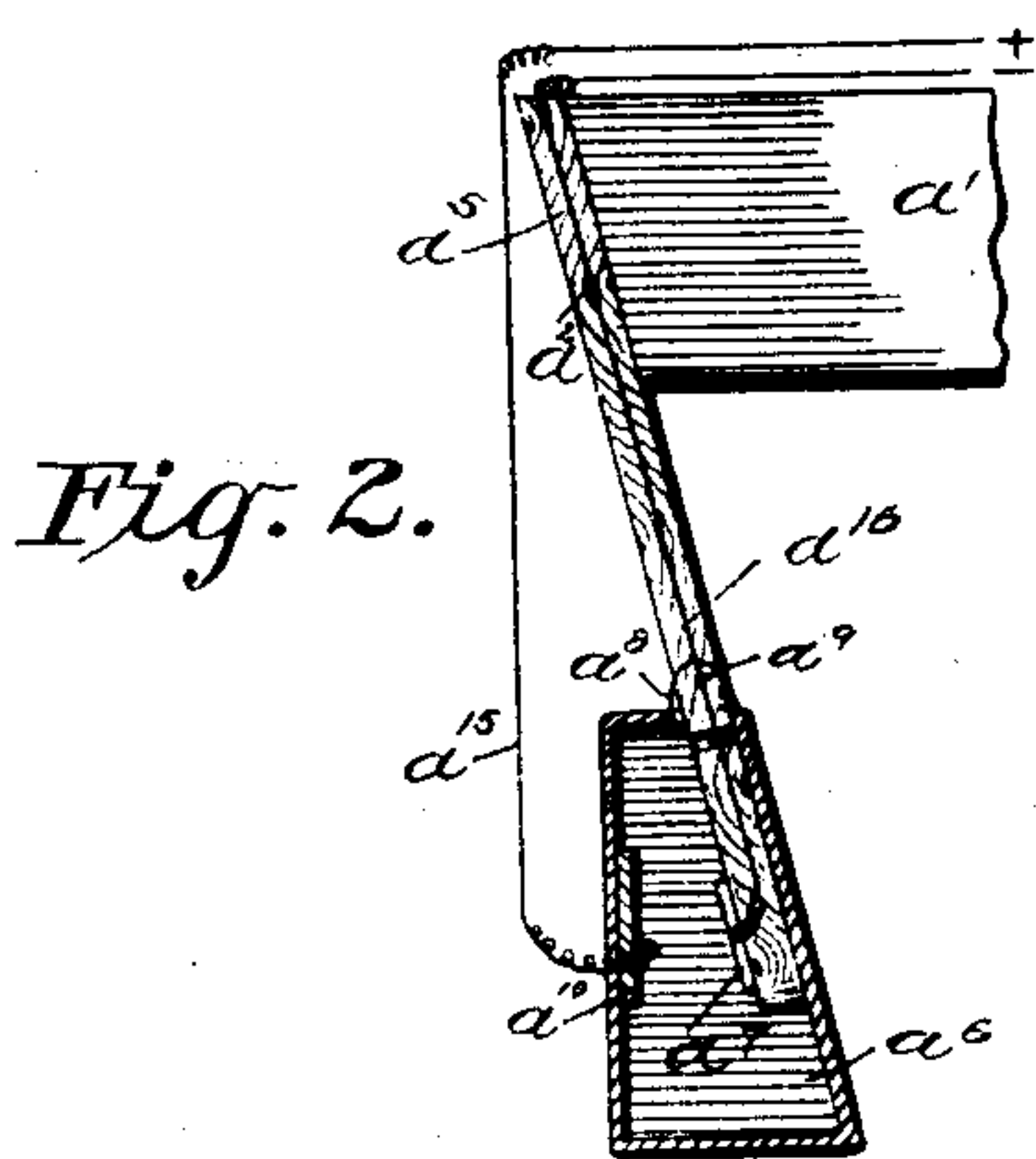
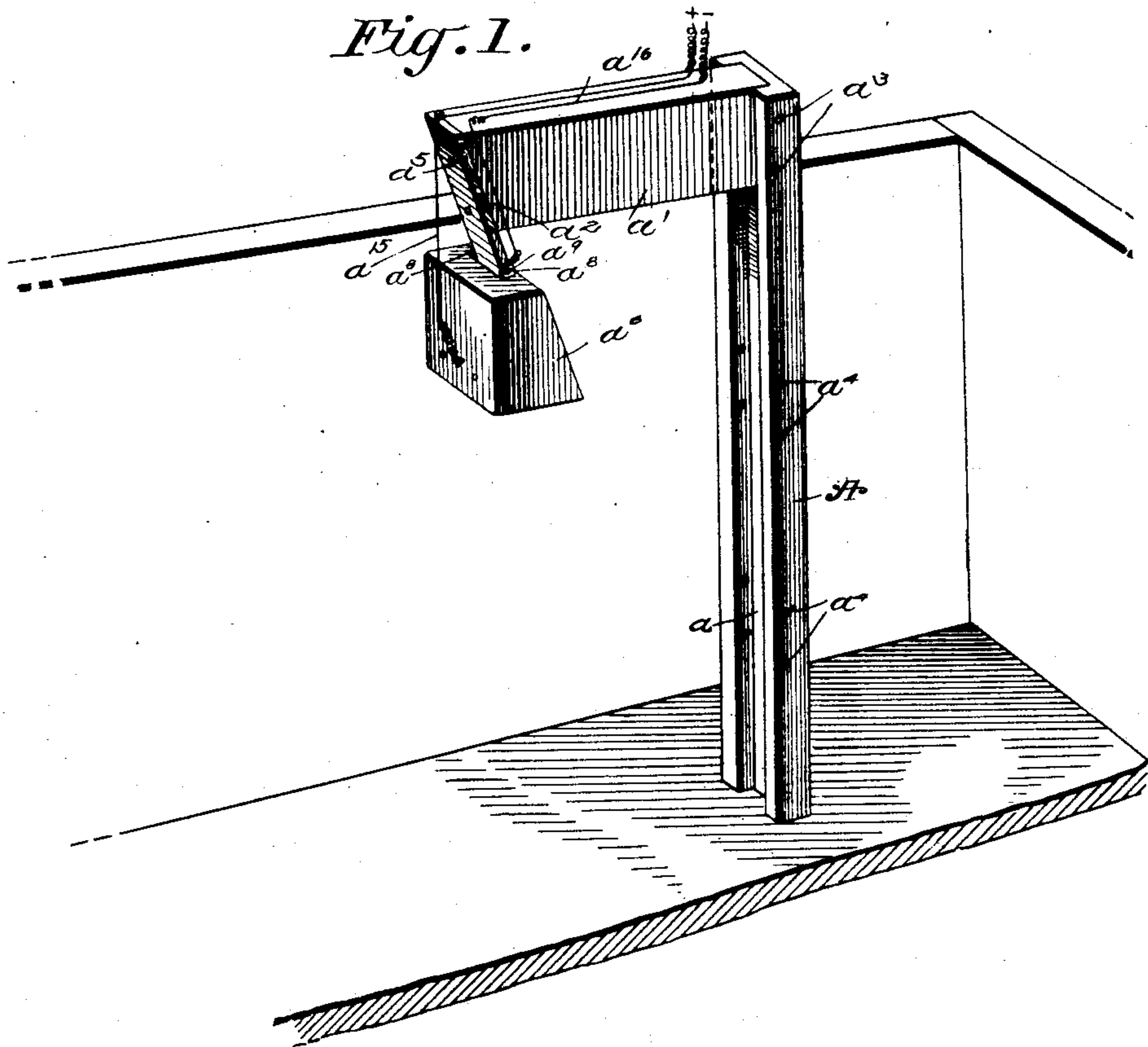
No. 831,911.

PATENTED SEPT. 25, 1906.

C. VERSTEEG.  
INDICATOR.

APPLICATION FILED FEB. 10, 1906.

2 SHEETS—SHEET 1.



WITNESSES:

*Samuel E. Dadey*  
C. E. Trainor

INVENTOR  
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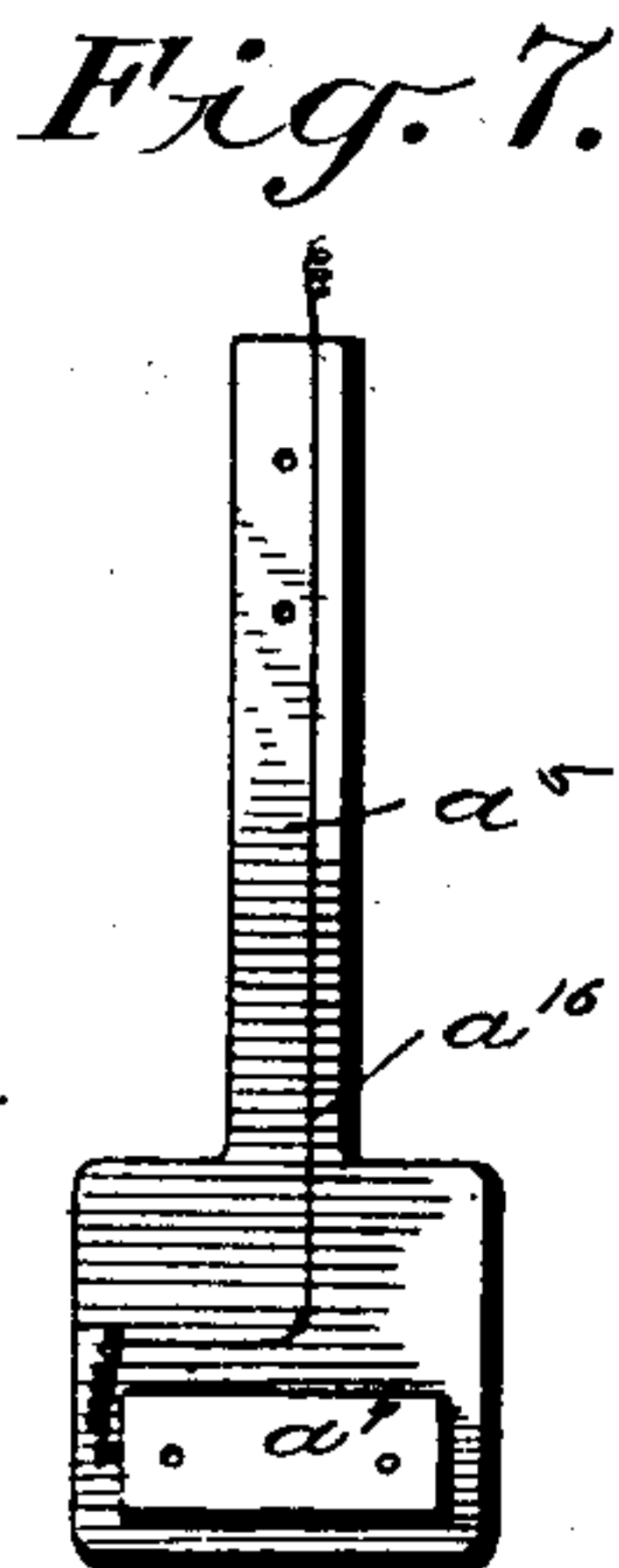
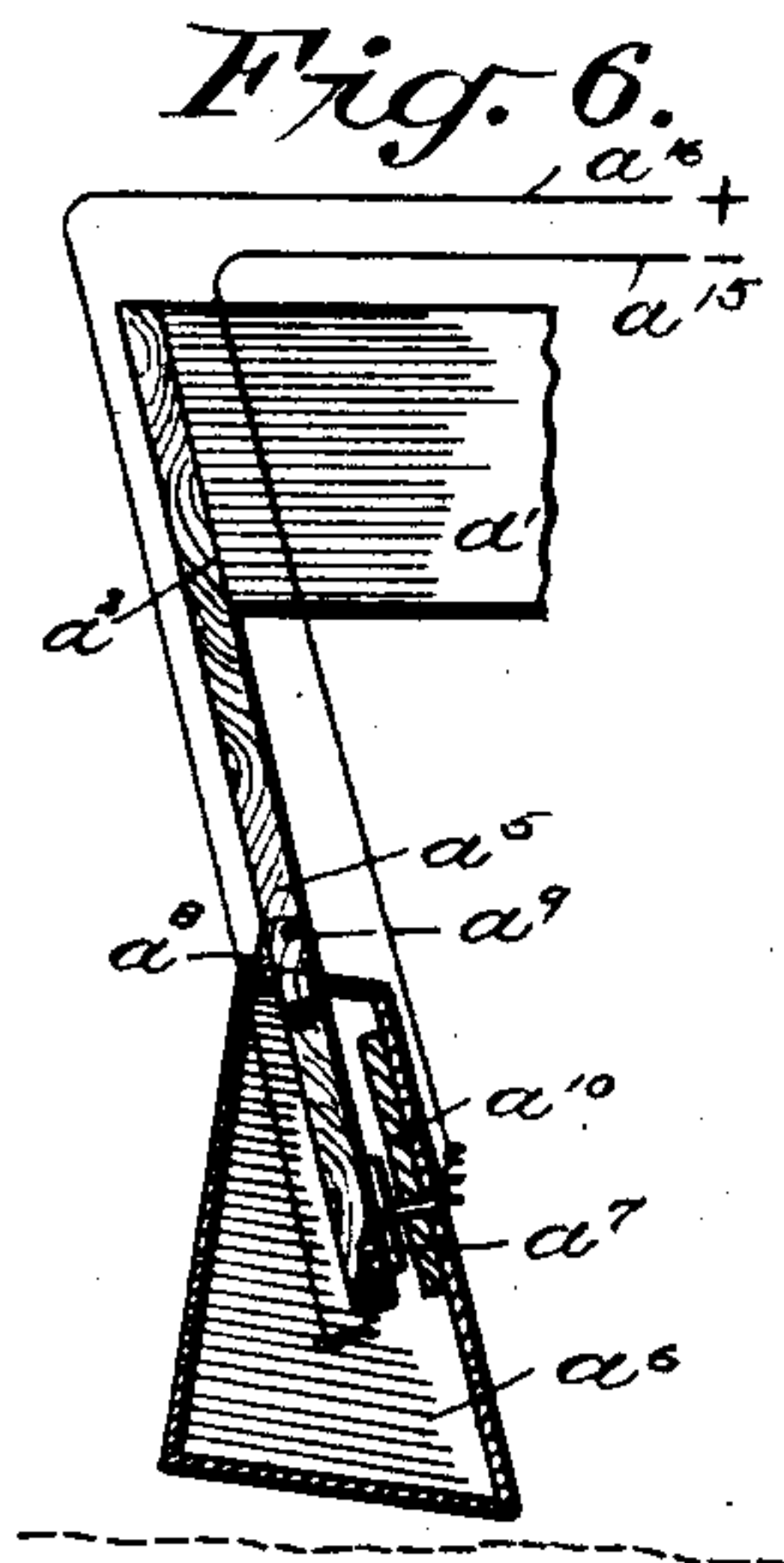
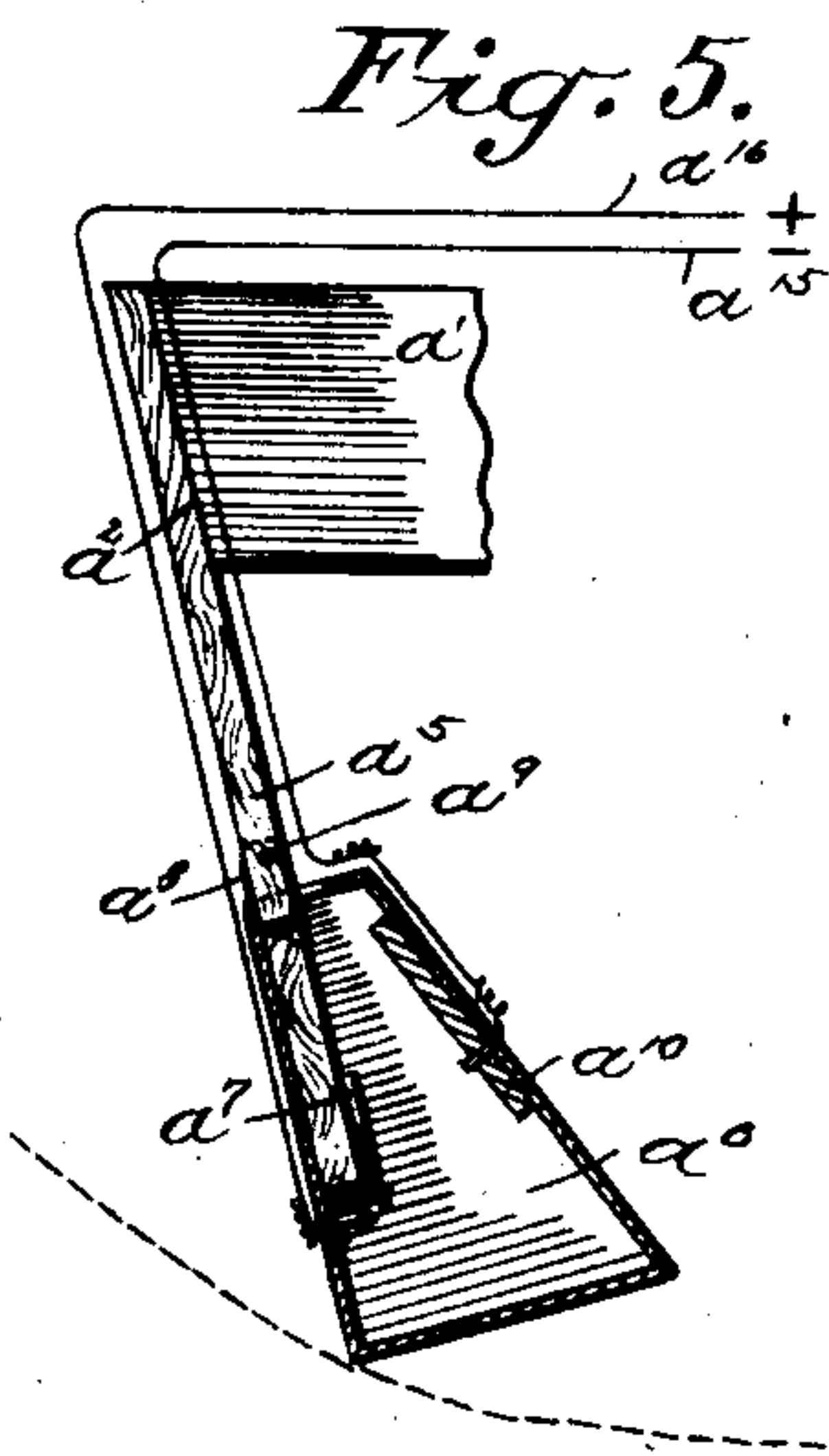
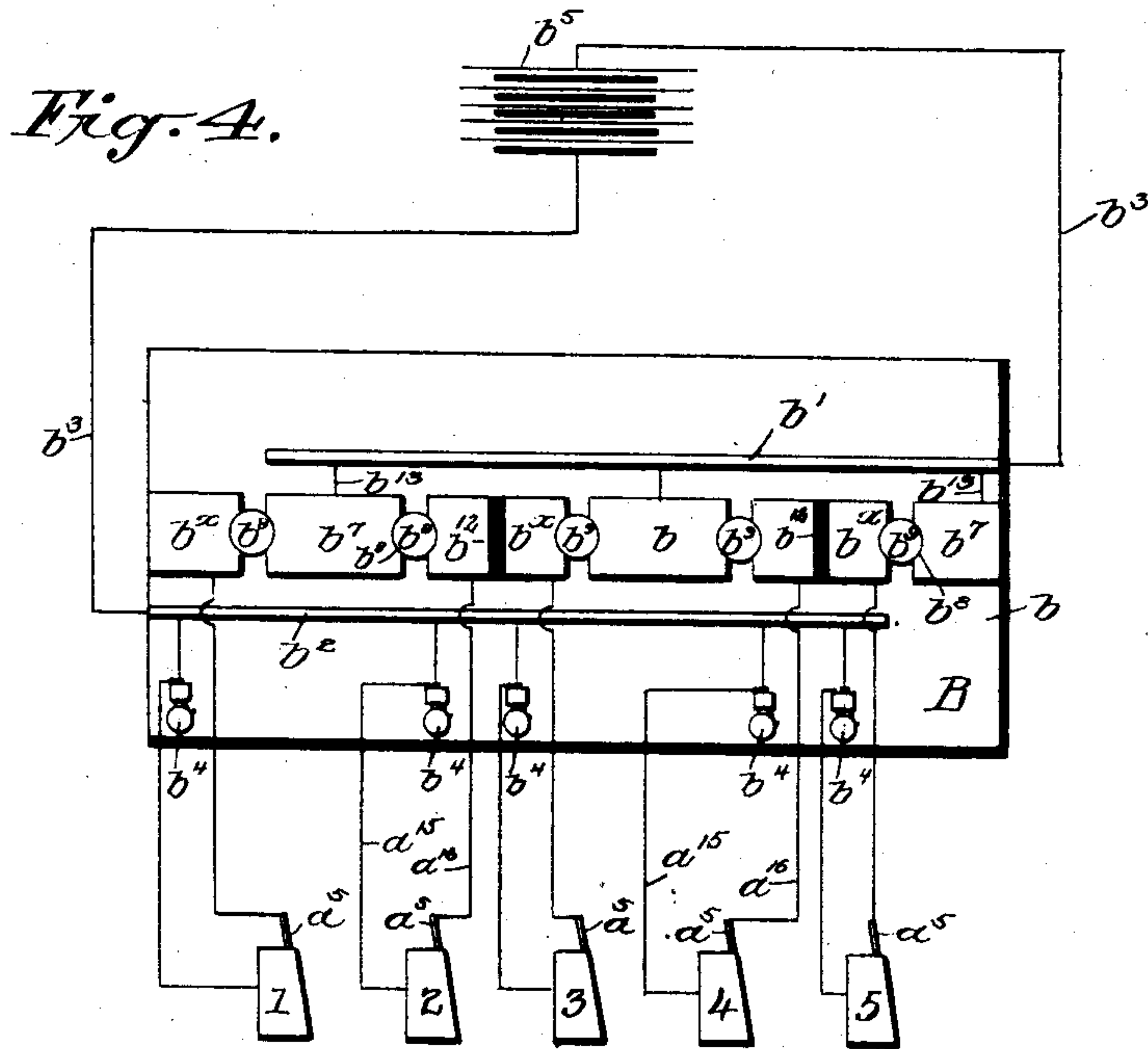
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2 SHEETS—SHEET 2.



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CHESTER VERSTEEG.  
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# UNITED STATES PATENT OFFICE.

CHESTER VERSTEEG, OF ASHTON, SOUTH DAKOTA.

## INDICATOR.

No. 831,911.

Specification of Letters Patent.

Patented Sept. 25, 1906.

Application filed February 10, 1906. Serial No. 300,466.

*To all whom it may concern:*

Be it known that I, CHESTER VERSTEEG, a citizen of the United States, and a resident of Ashton, in the county of Spink and State of South Dakota, have invented certain new and useful Improvements in Indicators, of which the following is a specification.

My invention is an improvement in indicators for grain-bins; and it consists in certain novel constructions and combinations of parts hereinafter described and claimed.

Referring to the drawings forming a part hereof, Figure 1 is a perspective view of my indicator in position in a bin. Fig. 2 is a vertical view through the swinging box and its supporting-plate, showing the parts in their normal position. Fig. 3 is a similar view showing the position of the parts when the circuit is closed. Fig. 4 is a diagrammatic view of a number of devices and the switch-board to which they are connected. Fig. 5 is a vertical section of a modified form, showing the parts in their normal position. Fig. 6 is a similar view showing the position of the parts when the circuit is closed, and Fig. 7 is a front view of the supporting-plate.

My indicator comprises an open electric circuit including a signal to be operated by the contact of the terminals of the circuit, the said terminals being arranged within the bin in a position to be moved into contact by the entering of the grain when it reaches a predetermined depth in the bin and in means for preventing the direct contact of the grain with the contact-points while permitting their movement toward and from each other.

In the present embodiment of the invention a support A is arranged within the bin, the support being provided with a longitudinal groove  $a$ , in which is slidably mounted the end of a block  $a'$ , the outer end of the block being beveled downwardly, as at  $a^2$ , for a purpose to be hereinafter described. The block  $a'$  is secured in adjusted position by means of bolts and nuts  $a^3$ , traversing openings  $a^4$  in the support and registering openings in the block. A plurality of pairs of openings  $a^4$  are arranged at different points upon the support, whereby to vary the position of the block with respect thereto. A plate  $a^5$  is secured to the beveled end  $a^2$  of the block  $a'$  and upon the lower face of the plate, near the lower end thereof, is a contact-point  $a^7$ . A closed box  $a^6$ , having in the upper face thereof a slot for receiving the end of the plate, is mounted to swing upon the plate by

means of ears  $a^8$ , turned up from the box and pivoted to the plate by the screws  $a^9$ . The inner face of the box is provided with a second contact-point  $a^{10}$ , arranged opposite to the contact-point  $a^7$  and adapted to be moved thereagainst when the box is swung toward the support.

In practice an indicator may be arranged in each bin, and the conductors from the indicators lead to a common switch-board arranged in some convenient part of the building. The switch-board B comprises a base  $b$ , having arranged upon the face thereof a plurality of conducting-bars  $b'$   $b^2$  parallel with and spaced apart from each other, the end of said bars being connected by the conductors  $b^3$  in an open circuit which includes a battery  $b^5$ . Between the contact-bars  $b'$   $b^2$  are arranged a plurality of longitudinal aligned and spaced plates  $b^7$   $b^x$ , the abutting ends of the plates being recessed, as at  $b^8$ , for the reception of plugs  $b^9$ , whereby to connect the plates with each other.

It will be evident from the drawings that the alternate plates  $b^x$  are divided vertically by a strip of insulation  $b^{12}$ . The upper contact-bar  $b'$  is connected to the intermediate plates  $b^7$  by means of the conductors  $b^{13}$ . The wires  $a^{15}$   $a^{16}$ , leading from the contact-points of the indicator, are connected, one with the contact-bar  $b^2$  and the other with a plate  $b^x$ , and a bell  $b^4$  is interposed in each of the conductors  $b^8$ .

It will be evident from the description that when the plugs are inserted in the openings the contact-points of each of the indicators 1, 2, 3, 4, and 5 are the terminals of an open circuit which includes the battery and the bell. When the box of the indicator is moved to bring its contact-points against the contact-points of the plate, the circuit is closed, and the bell rings until the plug corresponding to the indicator is removed from the switchboard. The removal of the plug breaks the circuit and stops the ringing of the bell.

It is obvious that a bell might be arranged in the circuit leading from the contact-bar to the battery or in the return-conductor, in which case all of the indicators would have a common bell, and drop-plates might be used in connection with the bell.

In Figs. 5 and 6 I have shown a slight modification of my indicator used to indicate the emptying of the bin instead of the filling. In this construction the contact-point of the



plate is arranged upon the upper face thereof and the contact-point of the box upon the inner face of the corresponding side of the box. It is evident that when the pressure is removed from the lower face of the box it will move by gravity in a position to bring the contact-points together and complete the circuit.

In a device of the character specified it is necessary to preserve the contact-points from direct contact with the grain, since the grain would tend to work in between the points and retain them asunder. The provision of the swinging box inclosing both of the contact-points effectually serves this end.

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

1. An indicator for grain-bins, comprising a vertical support arranged in the bin and having a longitudinal groove, a block adjustably mounted in the slot and projecting horizontally therefrom, the outer end of the block being beveled upwardly, a plate secured to the beveled end of the block, and having an electrical contact-point secured thereto, a closed box having a slot in its upper face and having ears at the ends of the slots, pivot-pins connecting the ears to the plate, said box normally depending vertically from the plate, and provided on its inner face with a contact-point for coacting with the point on the plate, an electric circuit having its terminals connected with the contact-points, said current including a signal operated by the contact of the contact-points.

2. An indicator for grain-bins, comprising a vertical support arranged in the bin, a block mounted for vertical movement on the support, a plate secured to the block and arranged at an angle thereto, said plate having a contact-point thereon, a box inclosing the lower end of the plate and hinged thereto, the box having a contact-point on the inner side of one of its faces for contacting with the point on the plate when said face is moving into parallelism with the plate, an electric circuit having its terminals in the contact-points of said circuit and including a signal operated by the closing of the contact-points.

3. An indicator for grain-bins, comprising a support vertically arranged in the bin, a plate adjustable vertically upon the support and arranged at an angle thereto, said plate having a contact-point arranged thereon, a box inclosing the lower end of the plate and movable with respect thereto, the box having

a contact-point for contacting with the point on the plate when the box is moved toward the support, and an electric circuit having its terminals in the contact-points, and including a signal.

4. An indicator for grain-bins, comprising a support arranged vertically in the bin, a plate having a contact-point adjustably mounted on the support, a box movable upon the plate and having a contact-point for coacting with the point on the plate, and an electric circuit having its terminals in the contact-points, and including a signal operated by the contact of the contact-points.

5. An indicator for grain-bins comprising a support, a plate on the support and provided with a contact-point, a box movably mounted on the plate and having therein a contact-point, and an electric circuit having its terminals in the contact-points, and including a signal, said box being adapted to be moved by the entering grain to close the circuit, and the plate being adjustable on the support, whereby to operate the signal on the attainment of a predetermined height by the entering grain.

6. An indicator for grain-bins, comprising a relatively fixed contact-point and a contact-point movable with respect thereto, and adapted to be moved into contact therewith by the entering grain, means for adjusting said contact-points vertically of the bin, and an electric circuit having its terminals in the contact-points and including a signal operated by the contact of the points.

7. An indicator for grain-bins, comprising an open electric circuit including a signal and a means for closing the circuit to operate the signal, said closing means being placed in the bin and comprising a support having a contact-point to which is attached one of the terminals of the circuit, and a box movable on the support and inclosing the contact-point, said box having therein a second contact-point to which is attached the other terminal of the circuit.

8. An indicator for grain-bins, comprising a plate provided with a contact-point, a box movably mounted on the plate and inclosing the contact-point, said box having therein a second contact-point, and an electric circuit having its terminals in the contact-points and including a signal, said box being adapted to be moved by the grain to close the circuit.

CHESTER VERSTEEG.

Witnesses:

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MELESIN SOWLES SLADE.