

H. W. CALDWELL.

DELIVERY GATES FOR CONVEYER BOXES.

No. 174,617.

Patented March 14, 1876.

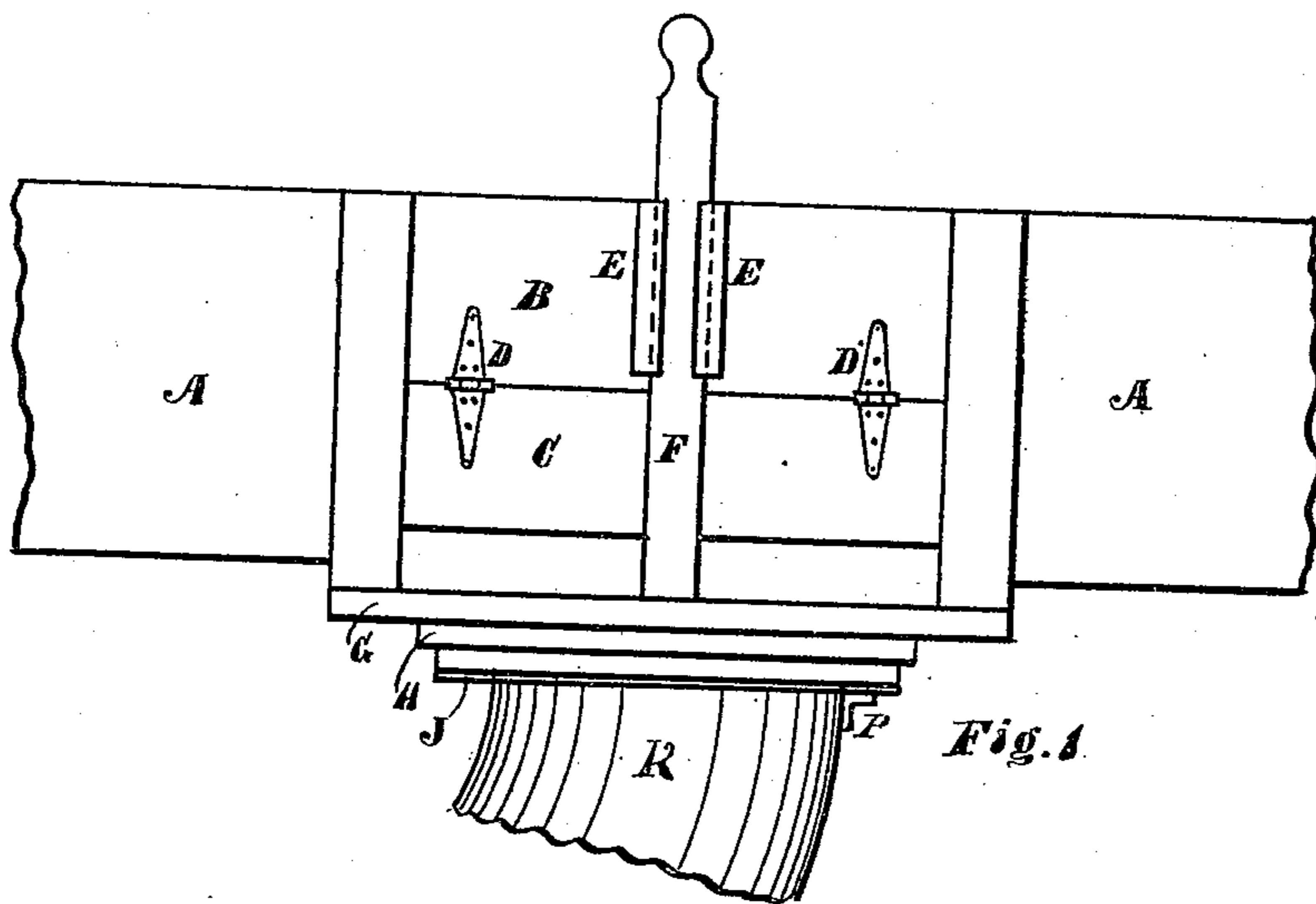


Fig. 1.

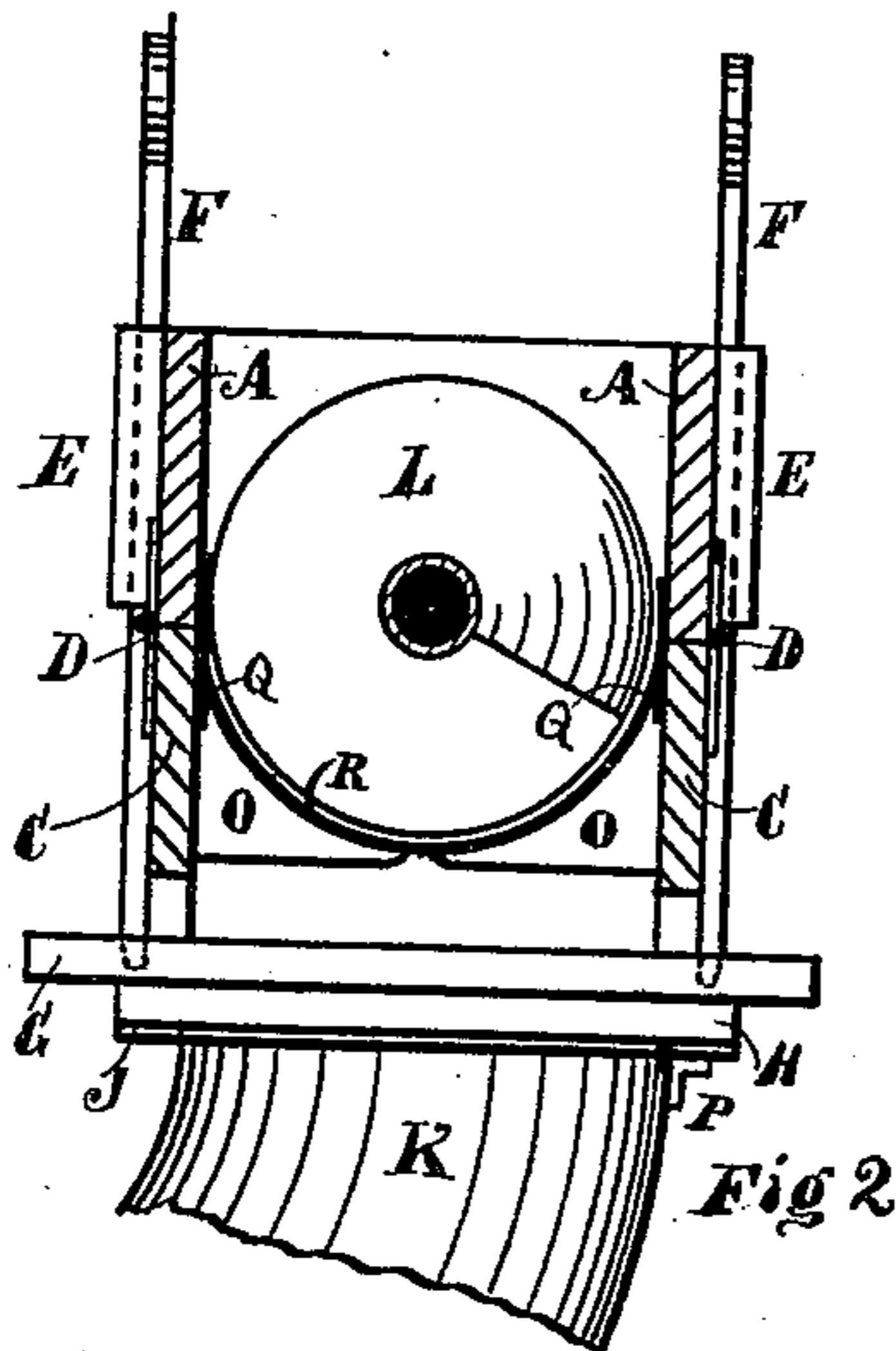


Fig. 2.

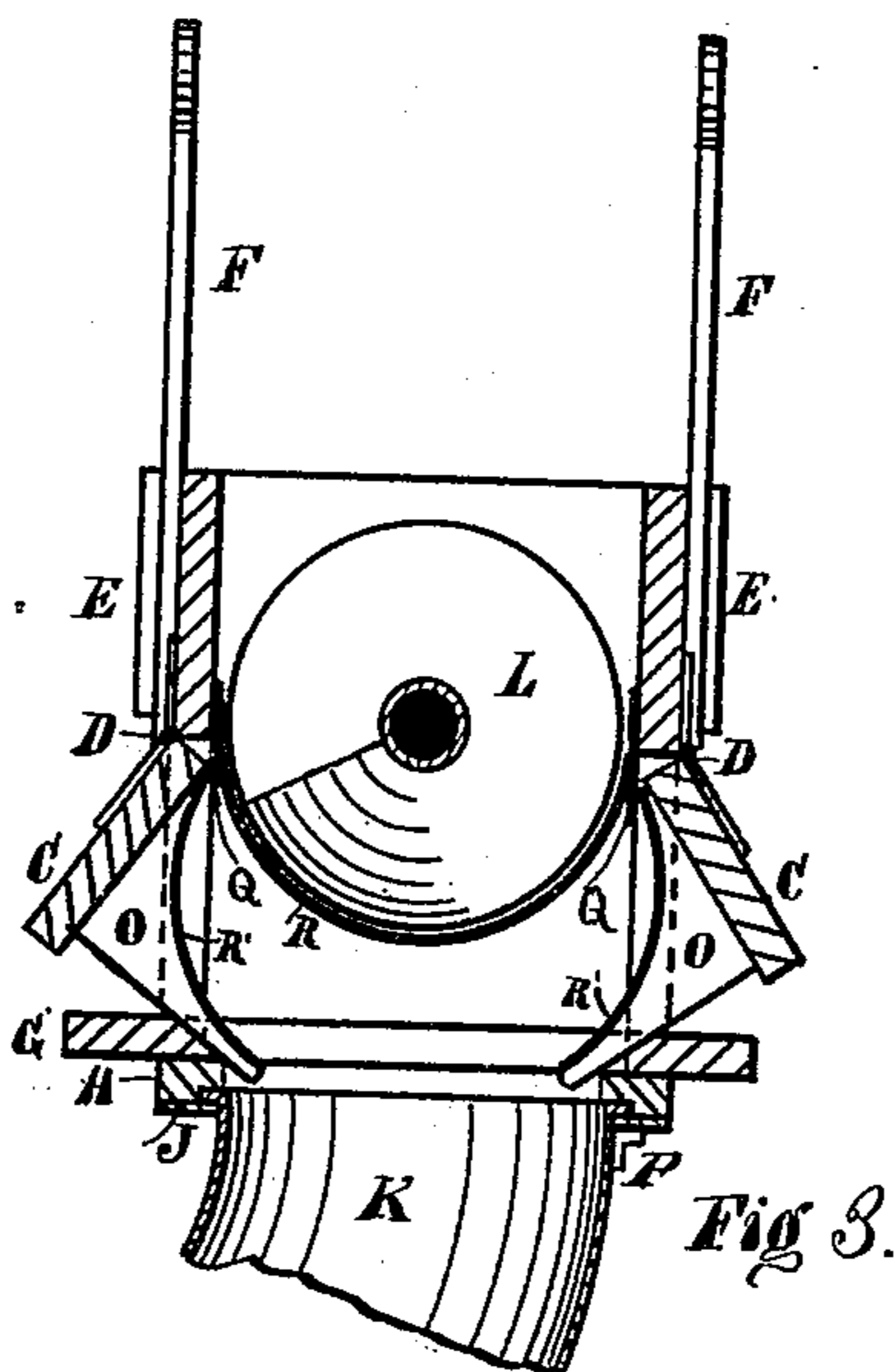


Fig. 3.

WITNESSES;

Wm. J. Davis
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UNITED STATES PATENT OFFICE.

HENRY W. CALDWELL, OF INDIANAPOLIS, INDIANA.

IMPROVEMENT IN DELIVERY-GATES FOR CONVEYER-BOXES.

Specification forming part of Letters Patent No. **174,617**, dated March 14, 1876; application filed January 3, 1876.

To all whom it may concern:

Be it known that I, HENRY W. CALDWELL, of Indianapolis, county of Marion, State of Indiana, have invented a new and useful Delivery-Gate for Conveyer-Boxes, of which the following is a description, reference being had to the accompanying drawings.

My invention consists of the construction and arrangement of a pair of doors, hinged to the conveyer-box, the inner sides of which conform with the curve of the metallic bottom of the conveyer-box, and the outer sides form part of the box. The curved portion of the doors when closed form a continuation of the curved metallic bottom, and leaves no imperfect parts or holes in which the material can be left, and become mixed with other materials when a change has been made; also, in the combination of the doors with the conveyer-box and the curved or angular revolving delivery-spout, whereby grain or other material can be distributed from one gate in the conveyer-box into several bins or receptacles below, and always leave the spout so that if any material that is being conveyed should accidentally get into it, the said material will be conveyed into the receptacle that the spout is over, thus preventing grain and other material from being scattered, lost, or mixed.

The invention of some positive arrangement whereby the grain or other material that is being conveyed can be under the control of the operator, and be delivered in any required bin or receptacle without loss, or leakage, or mixing the different grades of material, or stopping the machinery, has been found to be necessary. These results have been accomplished by my invention, of which the following is a description of the accompanying drawings.

Figure 1 represents a side elevation of my improved side-swinging doors or delivery-gates and their connections with the conveyer-box, together with the curved delivery-spout. Fig. 2 is a cross-section of the same, showing the swinging doors closed, to allow the grain or other material to be conveyed over them. Fig. 3 is a cross-section of the same, showing the doors open for the grain or other material to be delivered into the delivery-spout, and from there to the required receptacle.

A A represent the sides of the conveyer-box, which are united together at the bottom by the curved metallic trough R. The delivery-opening is cut out of the metallic trough R, of the proper size, and on each side of the delivery-opening the sides A of the conveyer-box are partially cut away, and pieces C, of the proper size, are then fitted into the openings, and hinged to the narrow part B of the sides A by the hinges D D'. On the inside of each of these hinged doors C are secured braces O. Their upper edges are curved to conform with the curve of the trough R, and covered with a metallic cover, so formed as to lap over the ends of the delivery-opening formed in the curved metallic bottom R, and arranged to make a perfect joint in the center when the doors are closed, so as not to leave any recess to hold grain or other material. These doors, when closed, form a continuous trough, in which the conveyer-screw L revolves; and, by my improved delivery-gate and revolving spout, it is not necessary to stop the machinery while delivering the grain, as the hinged doors can be closed while the conveyer-screw is in motion, and the position of the spout changed to other bins, when the delivery-gate can be again opened and allow the grain to be delivered in the bin which is under the spout. The delivery-openings in the trough R are made of sufficient length and width to give free delivery to the material that is being conveyed, and prevent the same from being carried over the opening; and at the hinged joint of the doors with the conveyer-box an apron, Q, or any other ordinary device, may be attached, to cover the joint, and prevent grain or other material from lodging therein and obstruct the closing of the doors. On the outside of the box A A, and attached to the narrow part B, above, and near the center of, the doors C C, are arranged gibbed guides E E, in which operate the slides F. The lower ends of the slides fit into holes formed in the projecting base-piece G, and hold the doors C C' firmly together until required to be opened, when, either by hand, or any ordinary mechanism, the slides F are raised up, thus releasing the doors, and they swing open, owing to the greater weight of the curved inner parts and the position that the hinges occupy, and

the grain or other material that is being conveyed along the trough passes out at the delivery-gate and enters the curved or angular spout K, where it is delivered into any desired bin with which the spout K may connect. The spout K is formed with a flange at its upper end, which works on the flanged piece J, secured to the base-pieces H G of the conveyer-box, as shown in the drawings. At the upper end of the spout K, on the rear side, is secured a bracket, P, which rests against the lower edge of the flange-plate J, and prevents the spout from being tipped up while the grain or other material is being delivered through it.

What I claim as new, and wish to secure by Letters Patent, is—

1. In a conveyer-box, a delivery-gate formed

of two doors, C C', hinged to the sides of the conveyer-box at D D', and formed with their inner edges curved, and covered with a metallic covering, and operated by the slides F to open and close the same, substantially as and for the purposes set forth and described.

2. In a conveyer-box, the delivery openings or gates, operated in connection with the curved or angular delivery-spout K, constructed and operated substantially as set forth and described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

HENRY W. CALDWELL.

Witnesses:

E. O. FRINK,

I. S. LANG.