

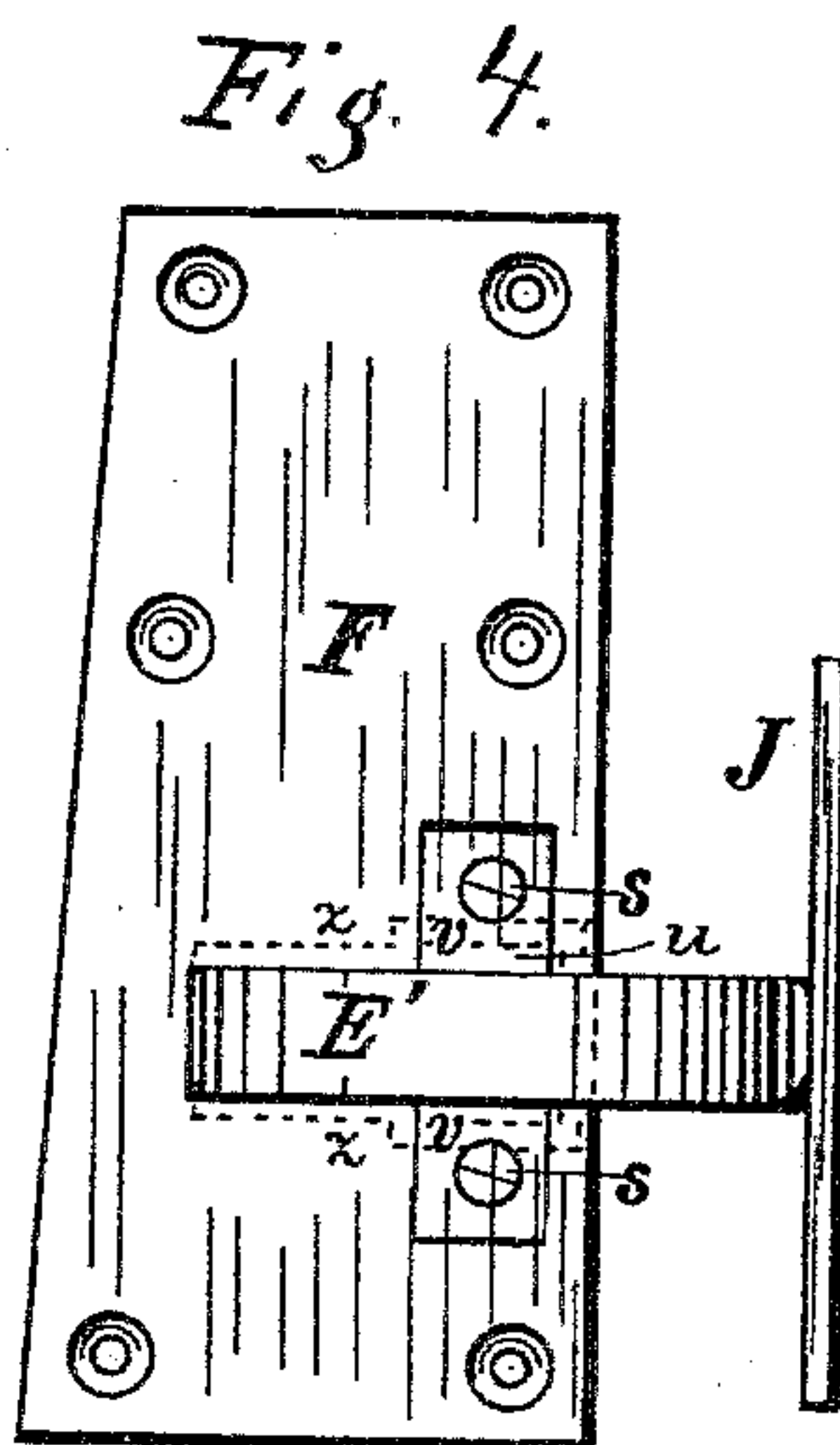
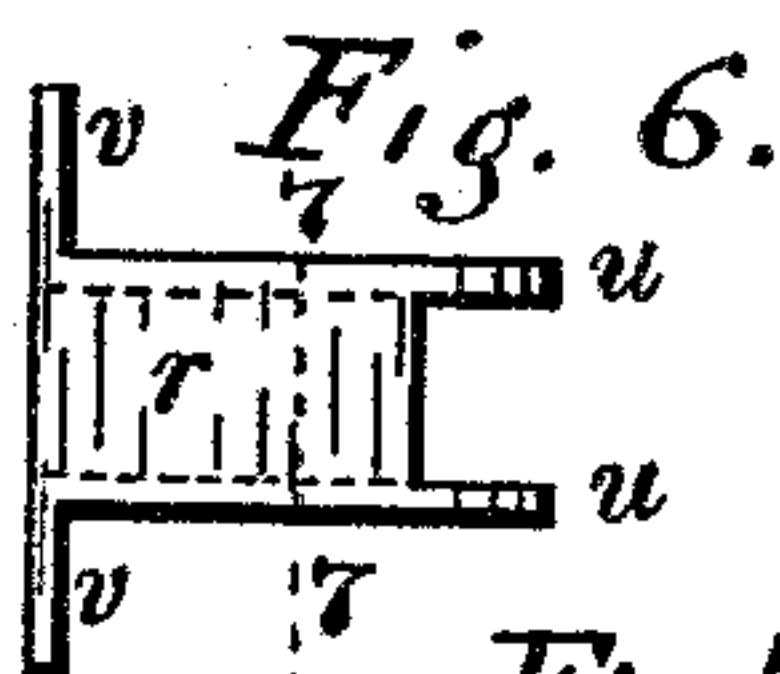
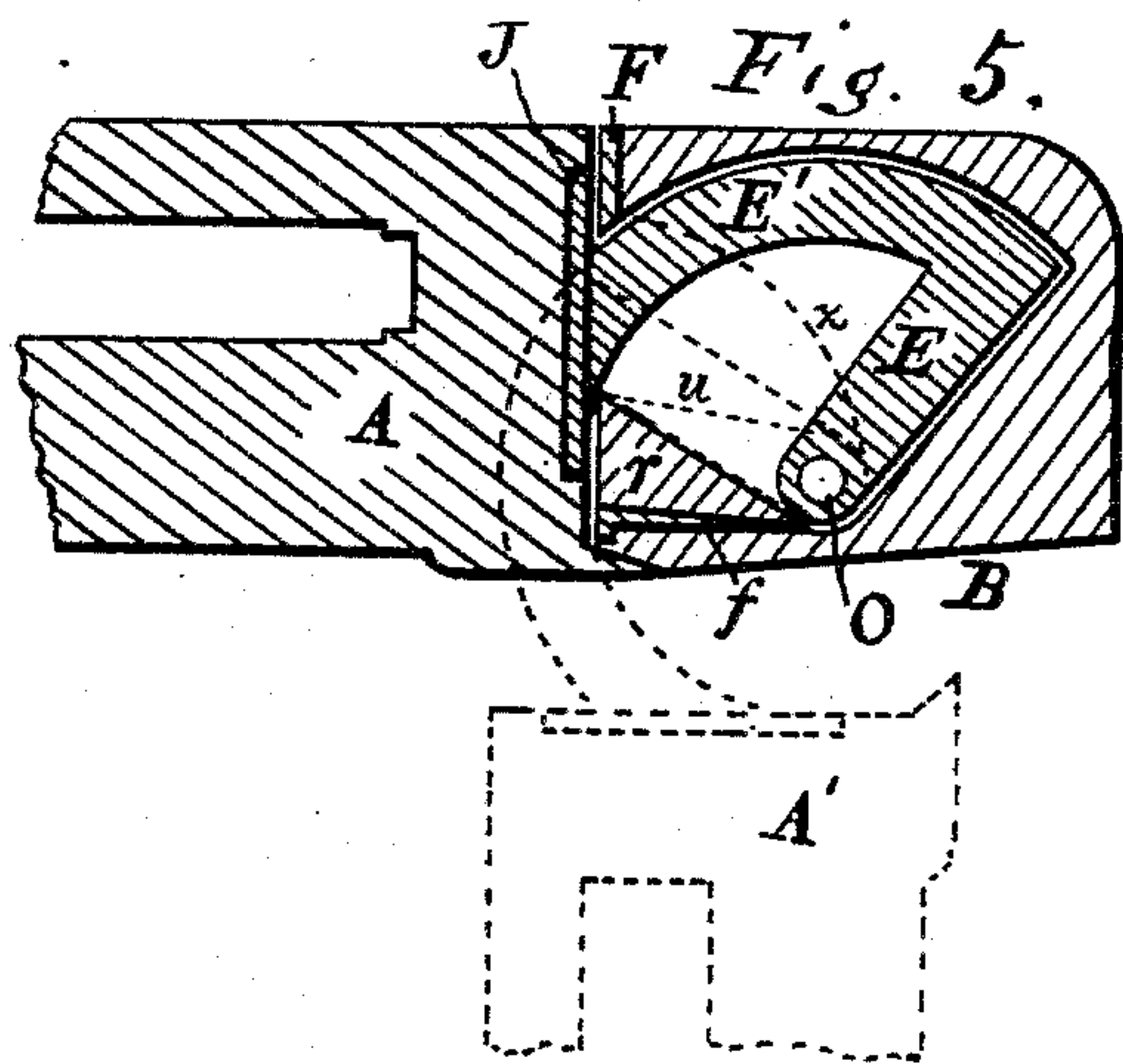
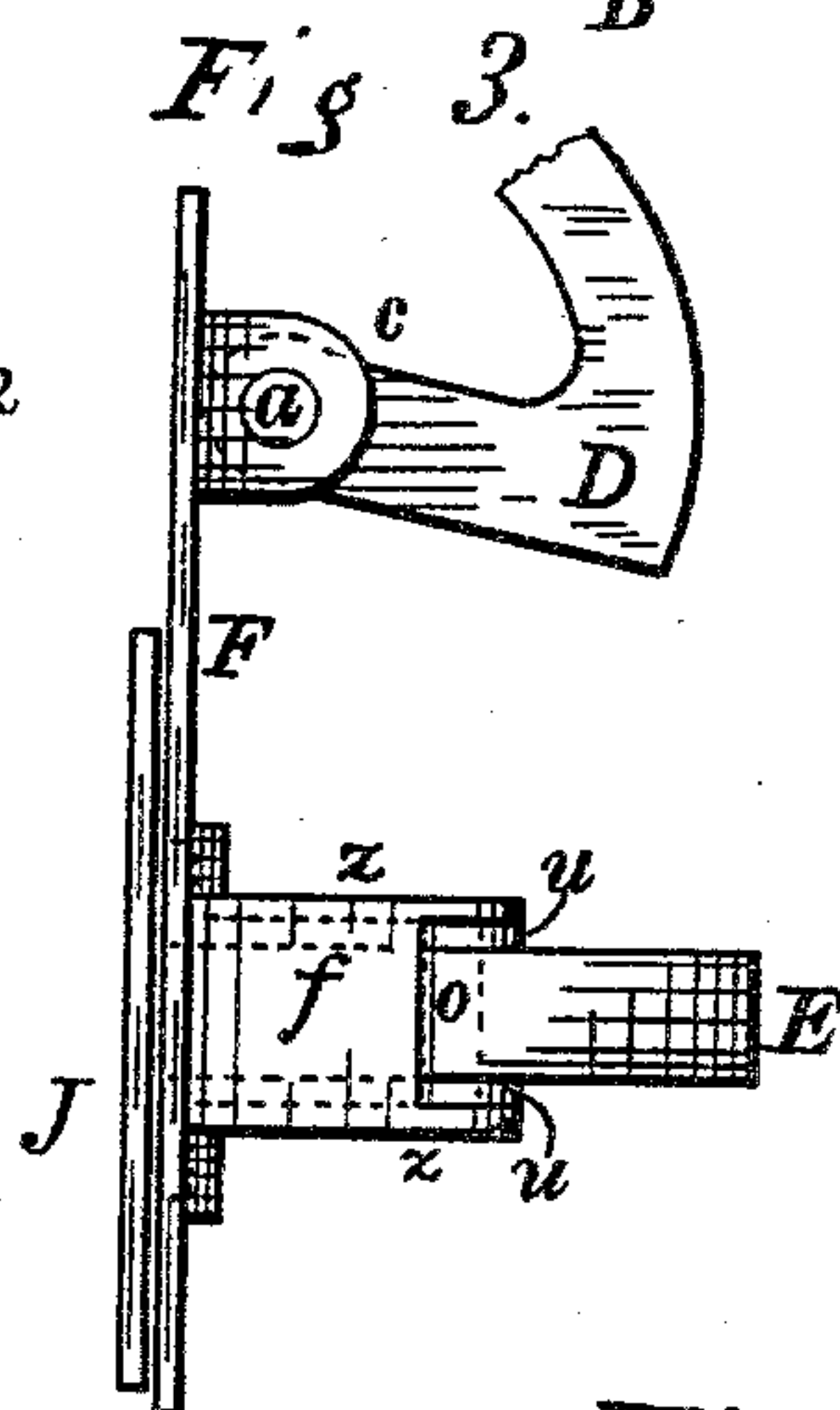
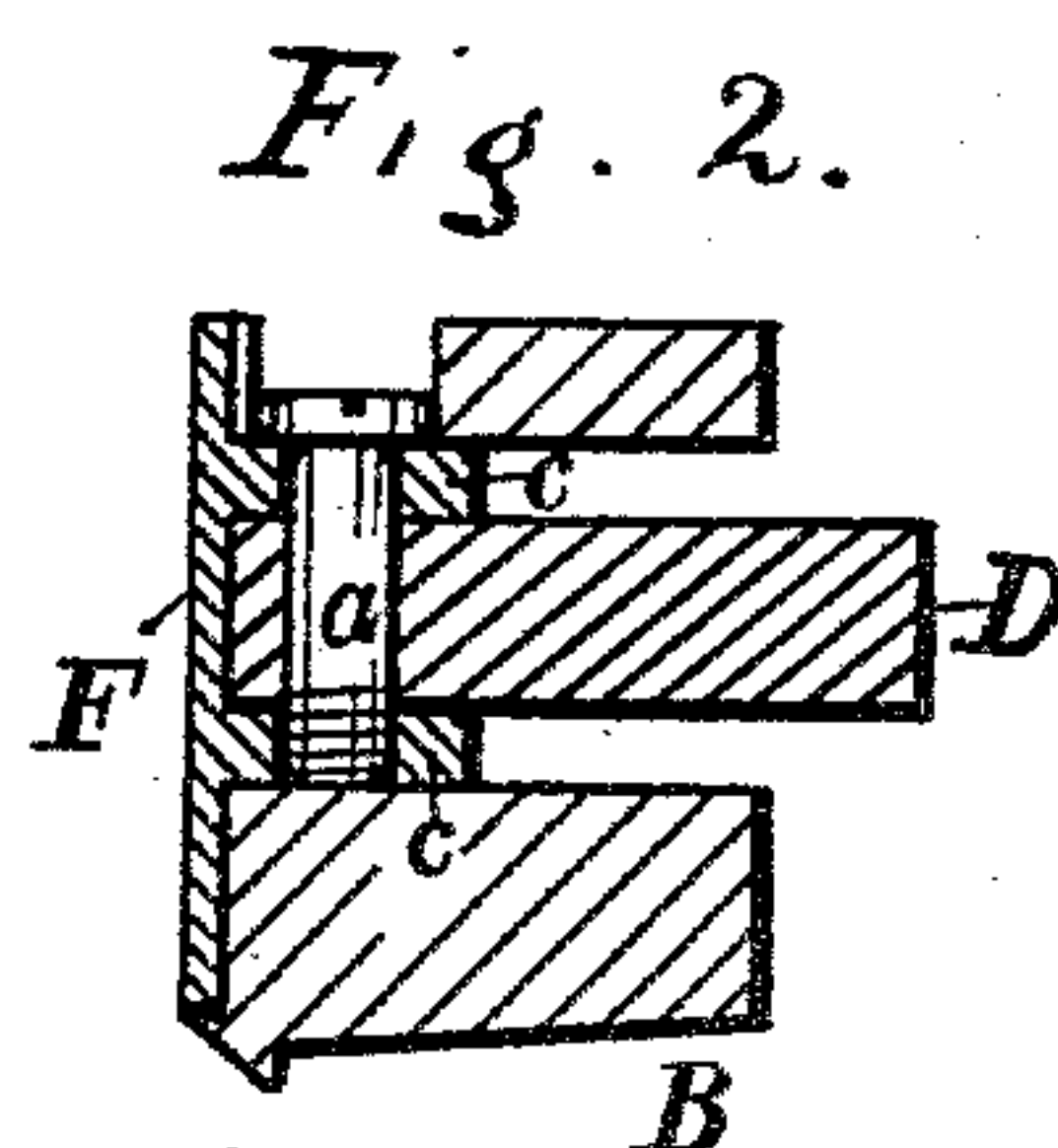
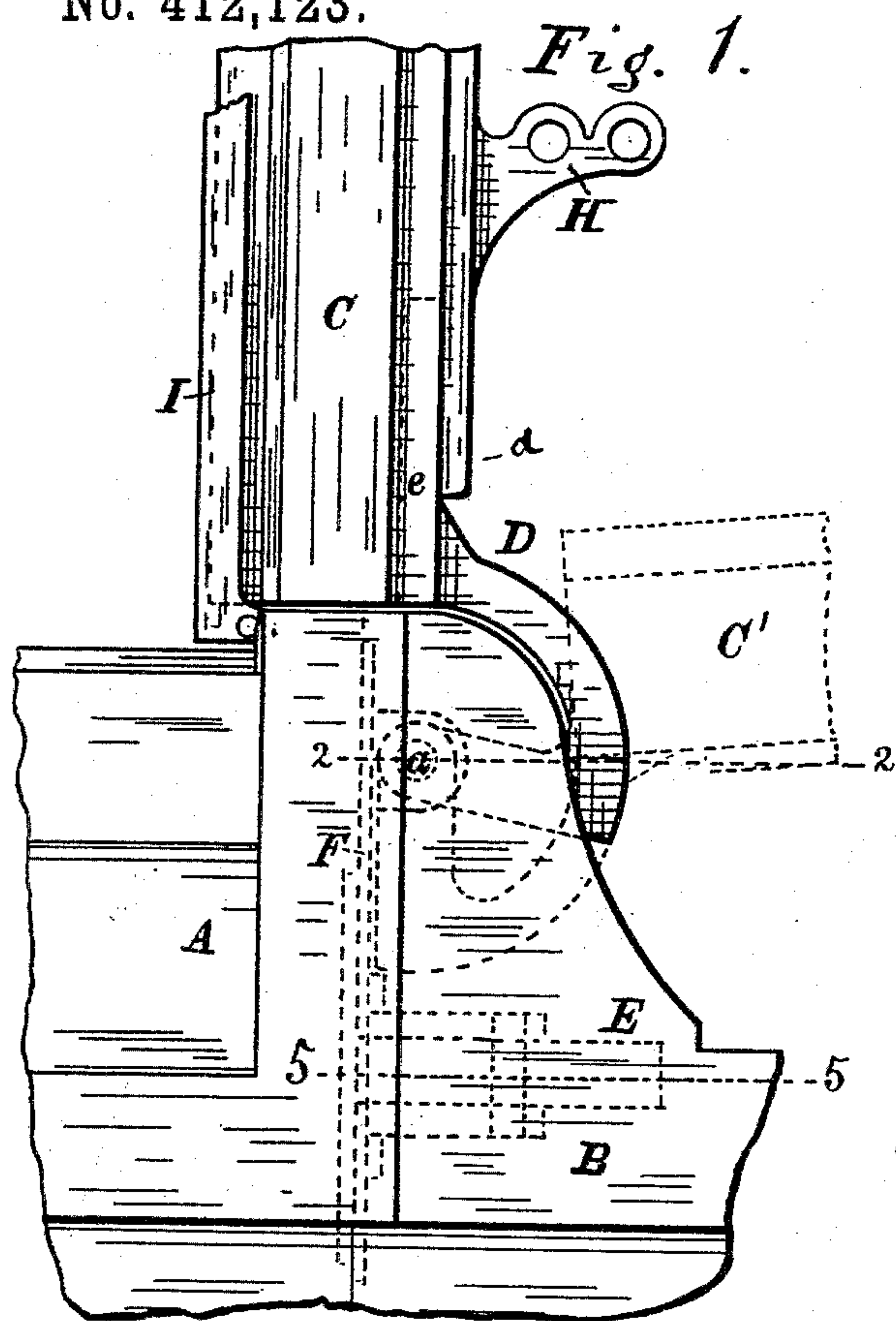
(Model.)

2 Sheets—Sheet 1.

G. H. ROYCE.
CARRIAGE HINGE.

No. 412,123.

Patented Oct. 1, 1889.



Witnesses:

A. Sarge, Jr.

C. G. Crannell.

Inventor:

George H. Royce,
By Geo. B. Selden.

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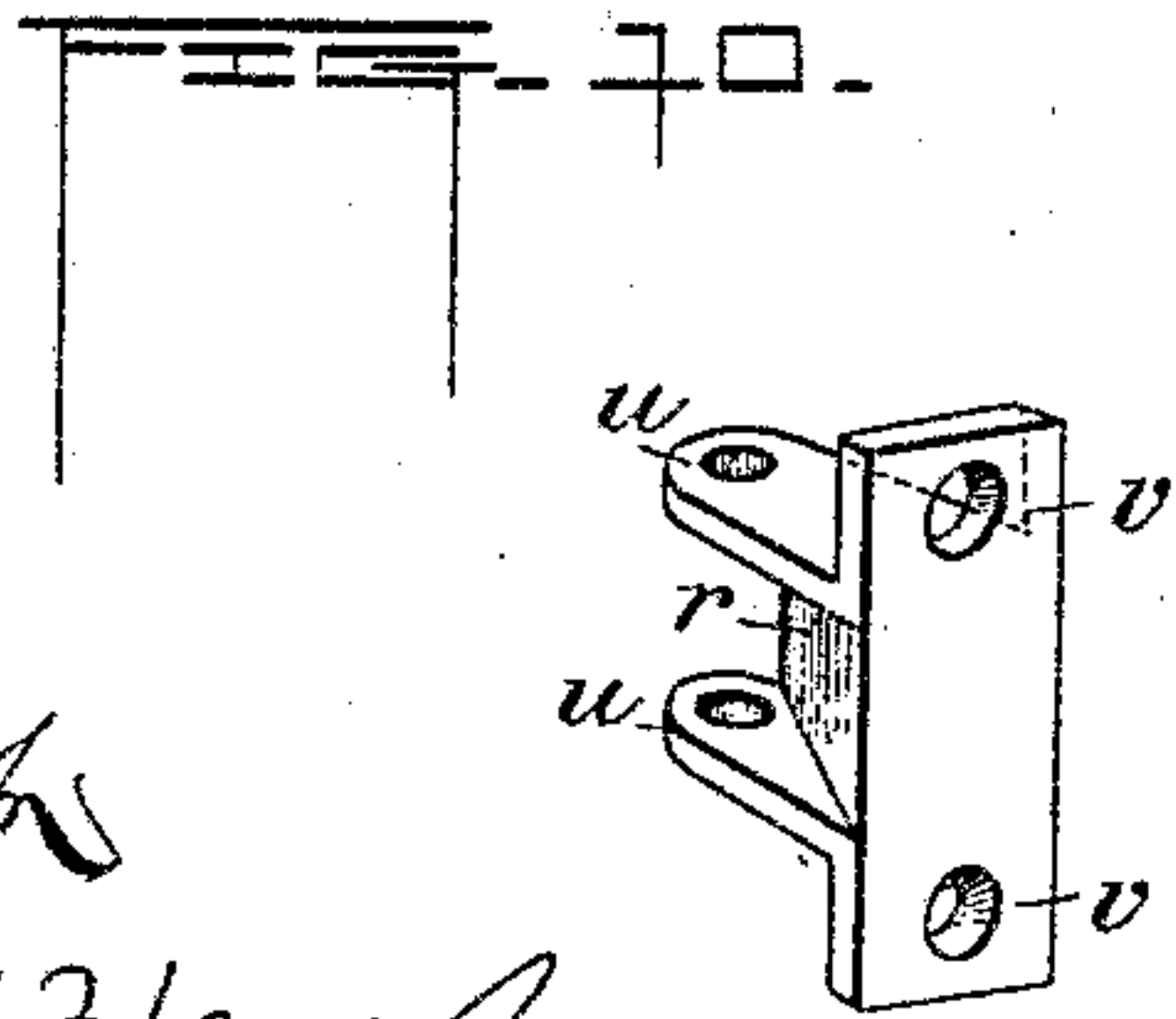
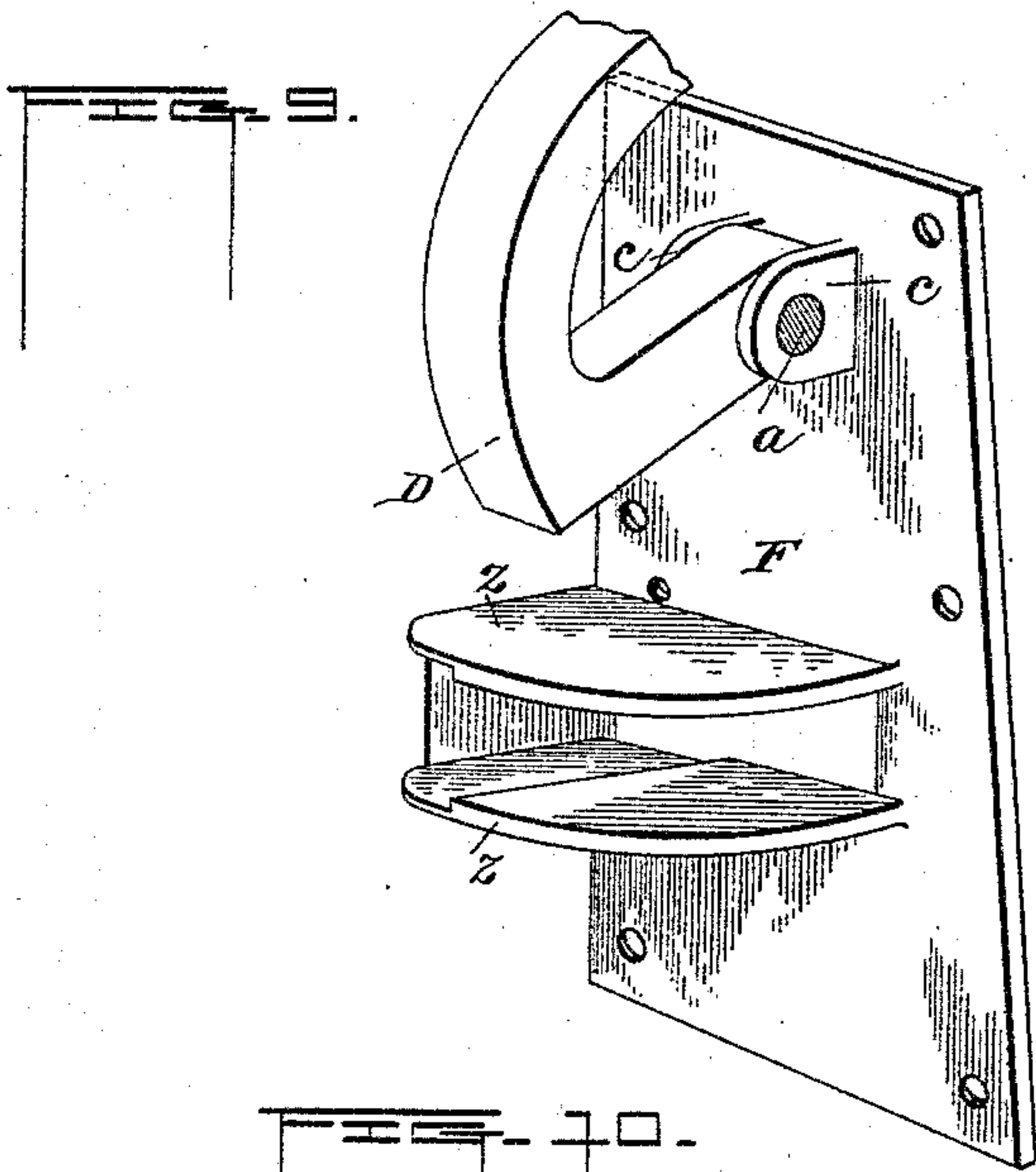
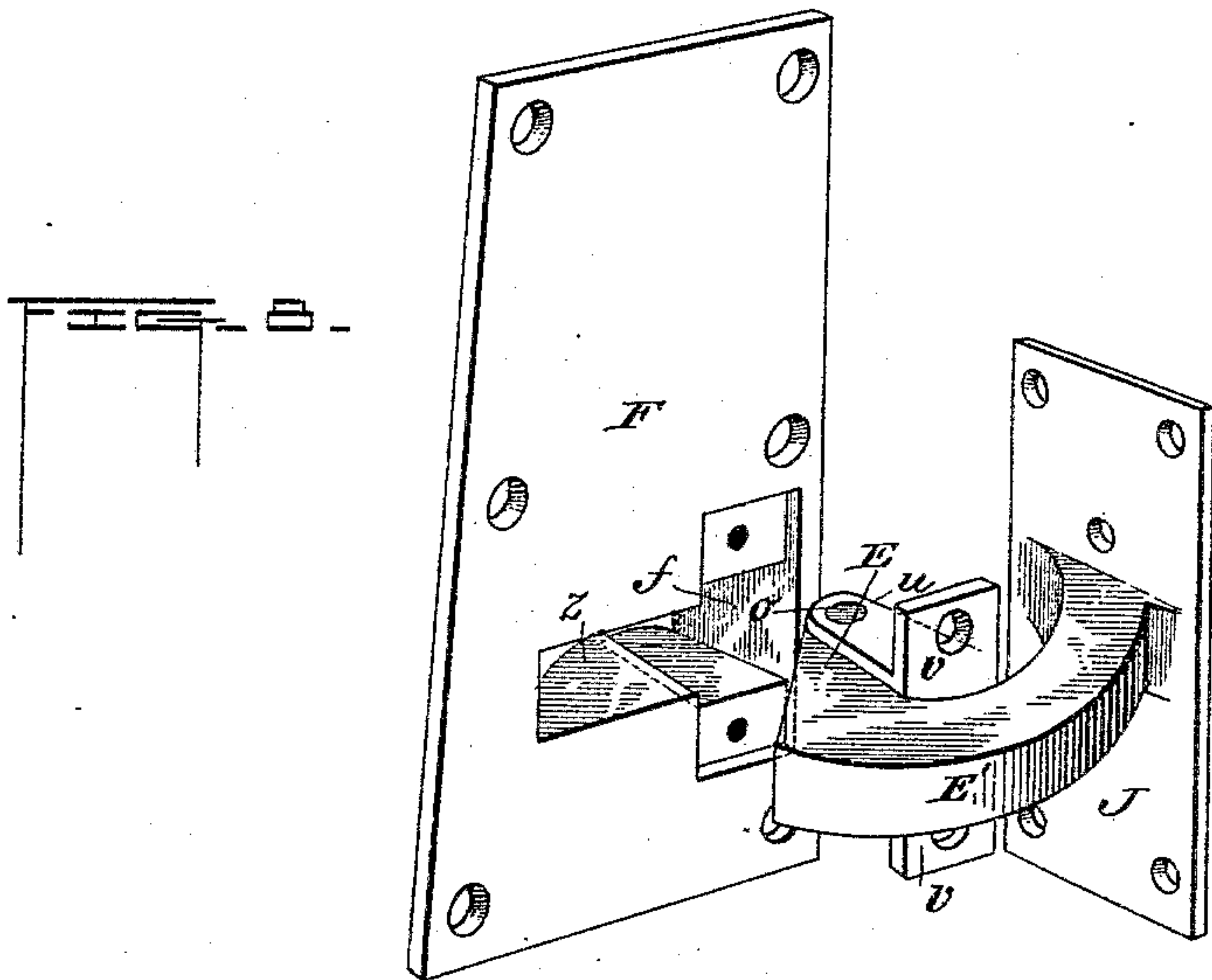
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2 Sheets—Sheet 2.

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CARRIAGE HINGE.

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WITNESSES.

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Franklin H. Hong

INVENTOR.

George H. Royce
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UNITED STATES PATENT OFFICE.

GEORGE H. ROYCE, OF ROCHESTER, NEW YORK, ASSIGNOR TO THE JAMES CUNNINGHAM SON & COMPANY, OF SAME PLACE.

CARRIAGE-HINGE.

SPECIFICATION forming part of Letters Patent No. 412,123, dated October 1, 1889.

Application filed January 8, 1889. Serial No. 295,761. (Model.)

To all whom it may concern:

Be it known that I, GEORGE H. ROYCE, a citizen of the United States, residing at Rochester, New York, have invented certain Improvements in Carriage-Hinges, of which the following is a specification, reference being had to the accompanying drawings.

My invention relates to an improved combined hinge for carriage-doors and folding tops. It is fully described and illustrated in the following specification and accompanying drawings, and the novel features thereof specified in the claims annexed to the said specification.

My improved combined hinge for carriage-doors and folding tops is represented in the accompanying drawings, in which—

Figure 1 is a partial side elevation of the body, door, and back pillar representing my invention. Fig. 2 is a section on the line 2 2, Fig. 1. Fig. 3 is a side elevation of the hinge-plate detached. Fig. 4 is an elevation of the same, as seen from the left hand in Fig. 3. Fig. 5 is a section on the line 5 5, Fig. 1. Fig. 6 represents the detachable pivot-supporting arm. Fig. 7 is a section on the line 7 7, Fig. 6. Fig. 8 is a perspective view of a hinge-plate and hinge-arm plate in position to be immediately joined. Fig. 9 is a perspective view of the opposite side of the hinge-plate, and Fig. 10 is a perspective view of the plate in which the inner end of the hinge-arm is hinged.

In the accompanying drawings, A represents the door, B the body, and C the back pillar, of a carriage provided with my improved hinge. The back pillar is supported by the curved offset hinge-arm D, so that it may be folded down, as indicated at C', Fig. 1, and the door is carried by the concealed hinge-arm E E', so that it can be swung open, as shown at A'.

F is the hinge-plate, which is secured to the edge of the body B and supports the pivots for both the hinge-arms D and E. The hinge-arm D is sustained by the screw *a*, inserted in the lugs *c c*, cast with the plate F. An opening in the body permits the insertion or removal of the screw when it is desired to disconnect the pillar C. The body is slotted to permit the swinging of the hinge-arm on the pivot *a*, as represented by the full and

dotted lines in Fig. 1. The pillar is provided with the bracket H, to which the bows are pivoted, as usual. The end of the hinge-arm D passes under the plate *d* of the bracket H, as represented by the dotted lines *e*, Fig. 1. 55

The pivot of the hinge-arm E, which carries the door, is represented at *o*. It is inserted in the removable supporting-arm *r*, which is secured to the hinge-plate F by the screws *s s*, passing through the plate *v*, inserted in a recess in the plate F. The supporting-arm *r* extends inward from the plate *v*, terminating in the projections *u u*, which receive the pivot or pin *o*. On the side next the arm E a channel is formed in the arm *r*, into which the hinge-arm swings when the door is opened, as indicated by the dotted lines in Fig. 5. On each side the opening in the plate F, through which the curved portion E' of the hinge-arm passes, are located the flanges *z z*, which project inward from the plate F and are recessed to receive the projecting plates *u u* of the arm *r*. Outside the arm *r* the plates *z z* are connected by the plate *f*. It will thus be seen that the arm *r* is supported on three sides by the plates *z z* and *f*, so that it is firmly attached to the hinge-plate E and supported against any strain it can receive from the swinging of the door. The plate F is thickened about the recess for the plate *v*. 60 65 70 75 80

J is a plate on the end of the curved hinge-arm E', to which the door is secured by screws or bolts. The door is also provided with a lower hinge, which may be, and preferably is, of the same construction as the door-hinge herein shown. 85

The detachable arm *r* permits the hinge-arm E to be removed from the wood-work, which, in the construction heretofore adopted, had to be taken to pieces to permit access to the pivot *o*. 90

The door is fitted with a sliding glass, which is supported by the ordinary folding window-support I. 95

By my improvement I secure a cheaper and more durable construction than has been previously used. The curved arm E' fills the opening in the hinge-plate, so that no open space is left when the door is swung outward. 100

The plate F strengthens the portion of the body to which it is attached, and the arrangement of the parts facilitates access to them for the purpose of repairs.

5 I claim—

1. The plate F, adapted to be secured to a coach-body and provided on one side with a hinge-arm D, adapted to be secured to the folding pillar and also provided on the same
10 side with flanges to support the detachably-fixed arm *r* of the door-hinge, substantially as set forth.

2. The combination, with the body B, of the door A, concealed bent hinge-arm *EE'*, plate F,

and detachable pivot-supporting arm *r*, substantially as described. 15

3. The combination, with the hinge-plate F of a concealed carriage-door hinge provided with internally-projecting flanges *z f*, of the detachable pivot-supporting arm *r*, inserted between the flanges and secured to the
20 outer face of the plate, substantially as described.

GEORGE H. ROYCE.

Witnesses:

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