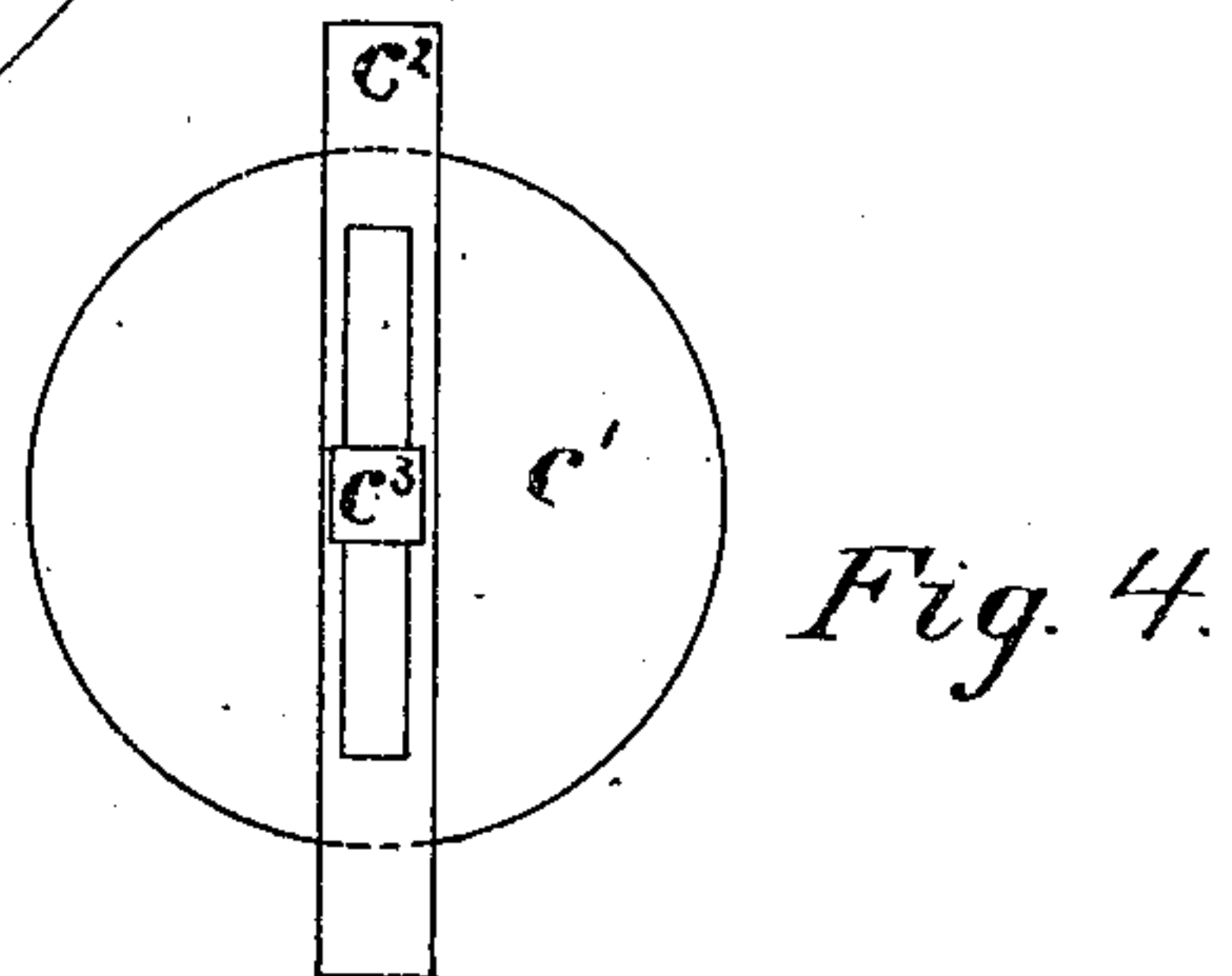
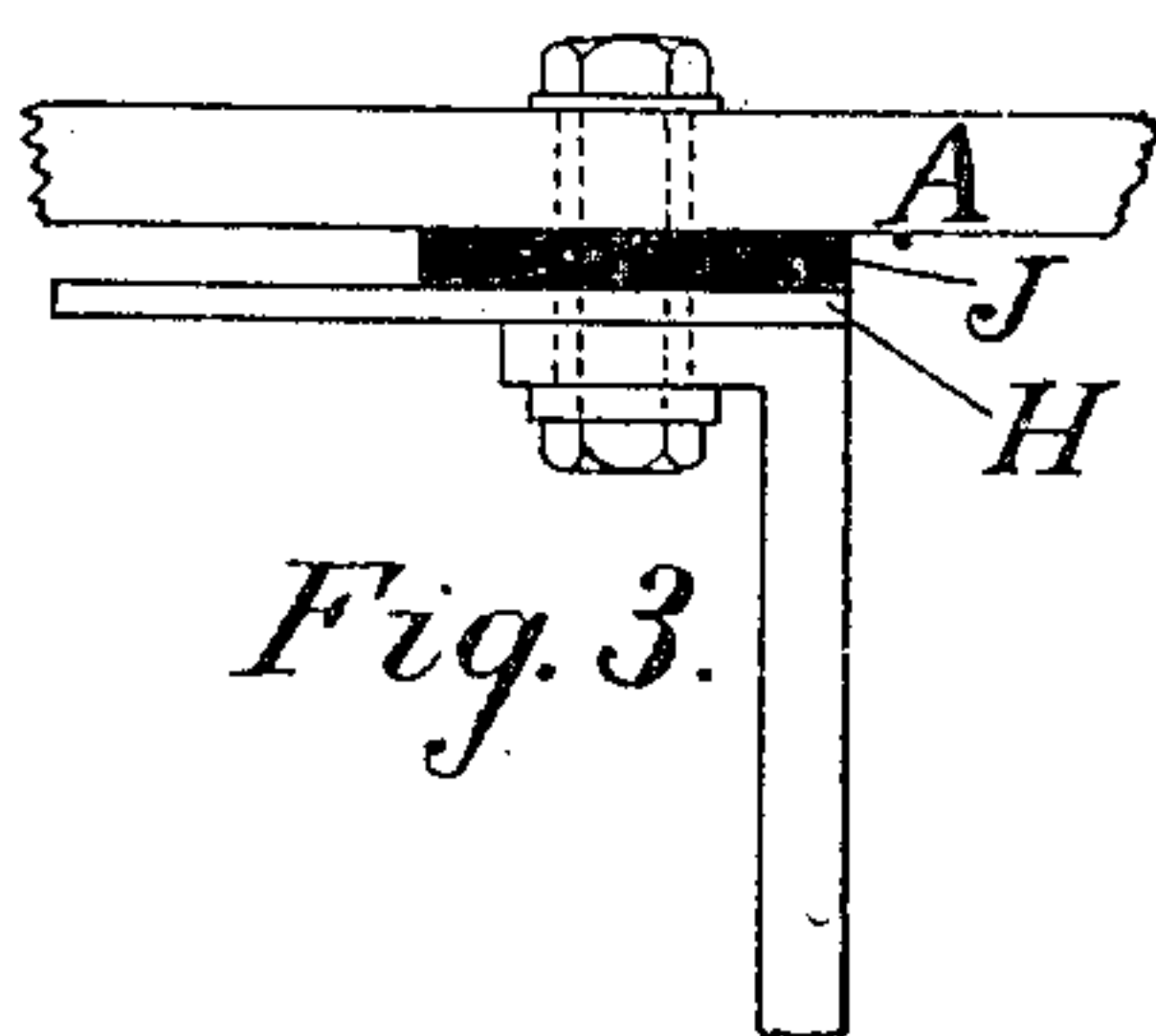
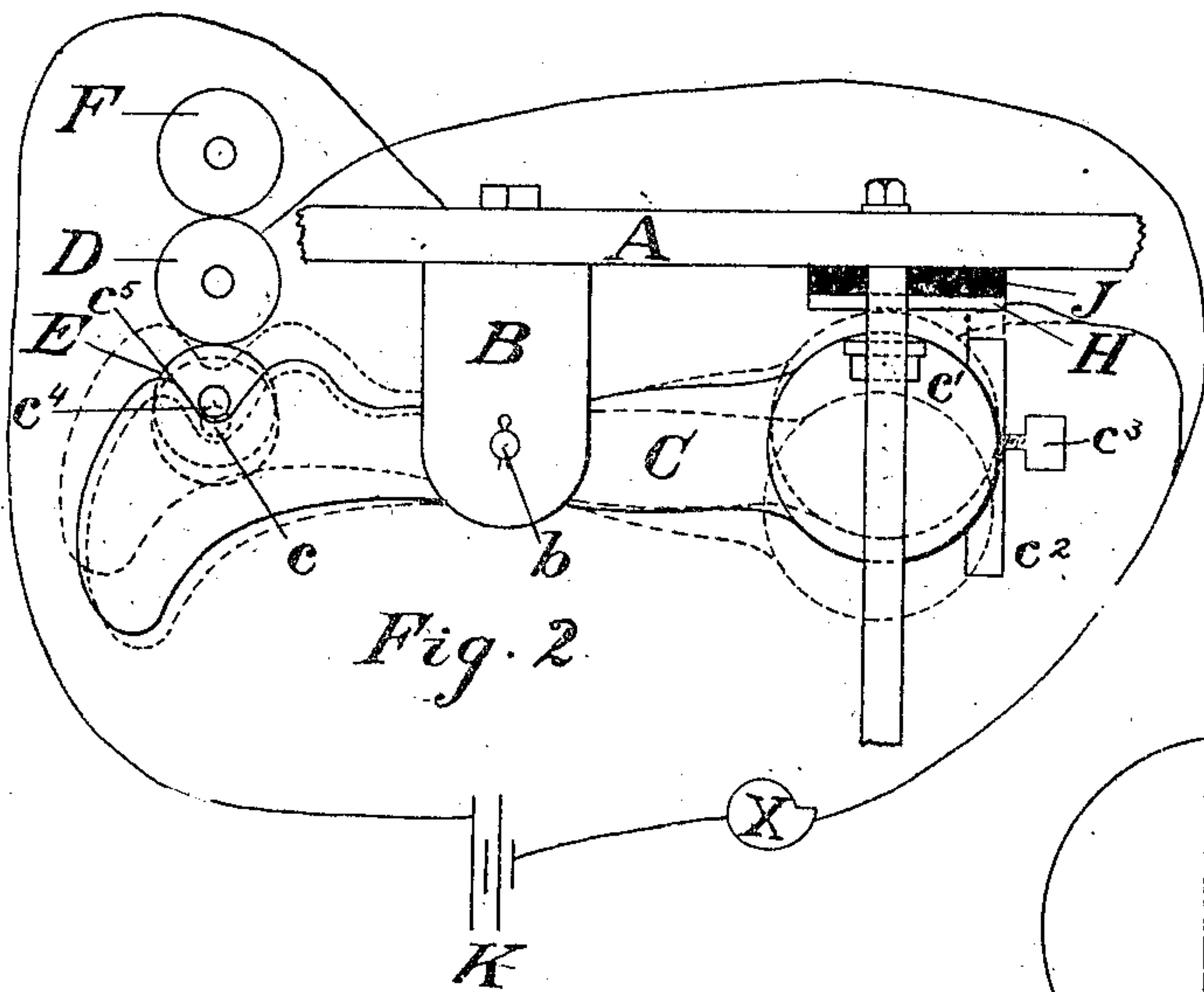
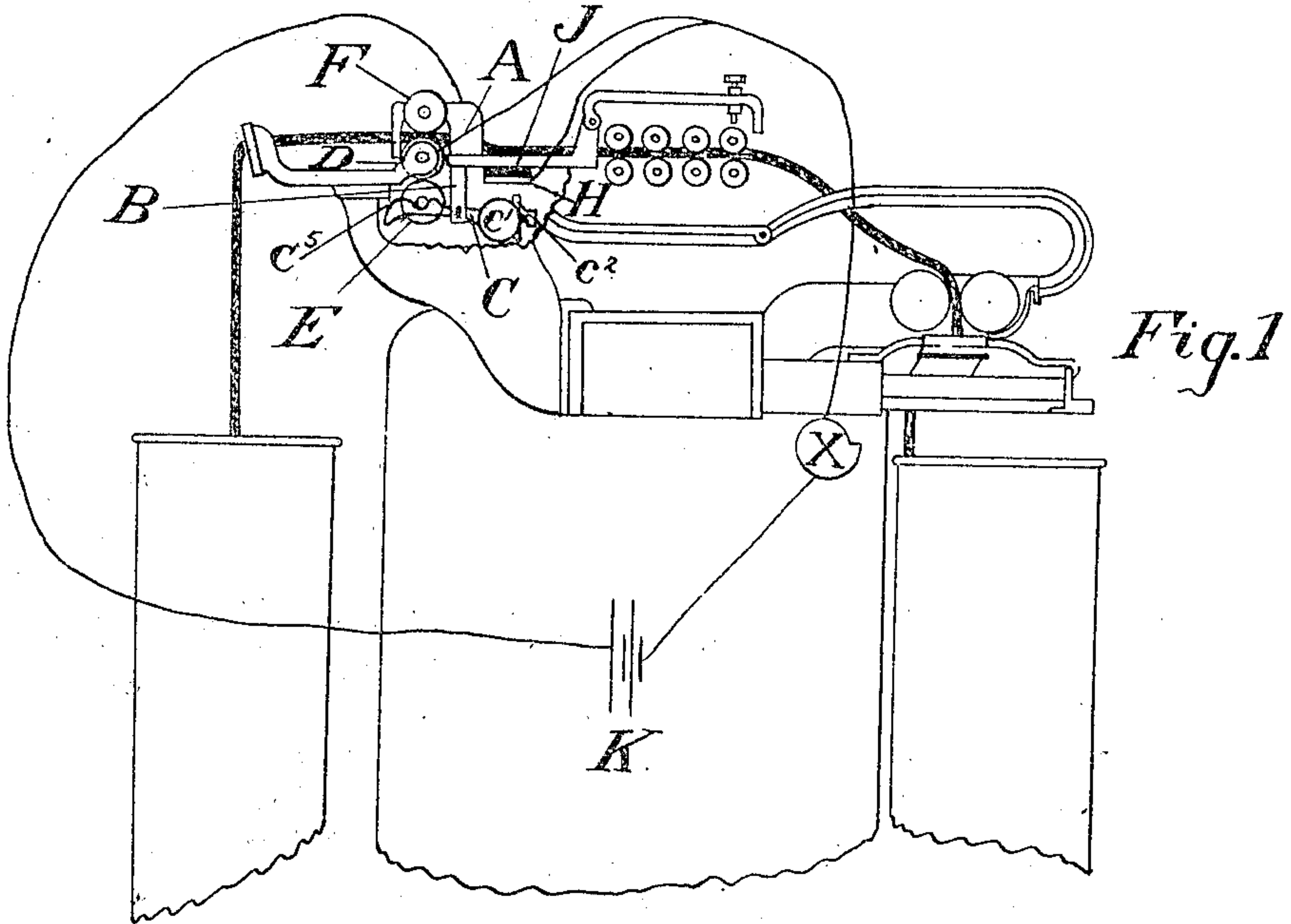


J. T. LEACH.
 STOP MOTION FOR DRAWING FRAMES.
 APPLICATION FILED JULY 23, 1906.

943,944.

Patented Dec. 21, 1909.



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JOSEPH T. LEACH, OF FALL RIVER, MASSACHUSETTS.

STOP-MOTION FOR DRAWING-FRAMES.

943,944.

Specification of Letters Patent. Patented Dec. 21, 1909.

Application filed July 23, 1906. Serial No. 327,260.

To all whom it may concern:

Be it known that I, JOSEPH T. LEACH, a citizen of the United States of America, and a resident of Fall River, in the county of Bristol and Commonwealth of Massachusetts, have invented an Improvement in Stop-Motions for Drawing-Frames, of which the following description, in connection with the accompanying drawings, is a specification, like characters on the drawings representing like parts in the different figures and in the description.

This invention relates to electric stop motions for drawing frames and other textile machinery in which a sliver of cotton or other fibrous material is passed between the rolls, and has for its object to stop the frame automatically in case the rolls become clogged. It is especially applicable to the clearer roll of a drawing frame and is shown applied thereto.

In the annexed drawings Figure 1 is a diagrammatic side view of the drawing frame showing the principal parts. Fig. 2 is an enlarged side view of my device applied to the clearer roll on the drawing frame. Fig. 3 is a front view of the contact plate showing the insulation thereof from the frame A. Fig. 4 is an end view of the adjustable contact piece.

A is the frame of the machine. It is electrically connected with one pole of the battery K.

H is a plate which is insulated from the frame of the machine by the insulation J, and is connected through the stopping mechanism X with the other pole of the battery.

The electric roll D is insulated from the frame A and is electrically connected through the stopping mechanism with the same pole of the battery as the insulated plate H.

Several forms of electrically operated devices for stopping a drawing frame are in common use, any one of which may be used. I have diagrammatically indicated such device by X.

The bracket B is fastened to the frame and is in electrical connection therewith. It carries the bearing lever C which is pivoted at b and is in electrical connection with the frame A and bracket B. C has near its front end a depression c which carries the hub c' of the clearer roll E. The clearer roll E runs in contact with the electric roll D over which runs the presser roll F. The

rear end of the bearing lever C is shaped into a ball c' sufficiently heavy to overcome the weight of the clearer roll E and hold E in contact with D. The clearer roll E is of non-conducting material and thus interrupts the circuit between the insulated electric roll D and the bearing lever C.

The operation of the machine is as follows: When the sliver of cotton wraps on the clearer roll, E or the electric roll D it forces E down overcoming the weight of the ball c' until the contact bar c² is brought into contact with the insulated plate H thereby completing the circuit through X and stopping the machine.

In all other stop motions for drawing frames with which I am acquainted the machine will run without the clearer roll on. But in my improved stop motion the machine will not run if the clearer roll is removed, because in such case the weight of the ball c' lifts the front of C at c⁵ into contact with the electric roll D, thereby again completing the circuit and stopping the machine.

c² is a slotted contact piece which is mounted on the back of the ball c' and is held in adjustment by the set-screw c³. It furnishes means for regulating the point at which the electrical contact is made when c' is forced upward by the sliver of cotton wrapping on the clearer roll E, or the electric roll D.

Having thus described my said invention I claim:

1. In an electric stop motion, an electric circuit, a movable roll supported by a lever counterweighted to retain said roll in an operative position, a counterweighted lever pivoted on a bracket carried by the frame of the machine, a contact plate in the path of said lever and insulated therefrom, and means actuated by said circuit for stopping the machine when said lever contacts with said contact plate.

2. In an electric stop motion, an electric circuit, an electric roll in circuit with one pole of the battery, a clearer roll, a lever in circuit with the other pole of the battery engaging said clearer roll and adapted to contact with said electric roll when said clearer roll is removed, and means for stopping the machine actuated by said circuit when completed by the contact of said lever with said electric roll.

3. In an electric stop motion an electric

circuit, a roll supported upon a counter-weighted lever, said lever being adapted to touch an electric roll and thereby to complete said circuit when the roll carried by
5 said lever is removed, a contact piece insulated from said lever and adapted to be touched thereby when the roll supported by said lever is removed, and means actuated by said circuit for stopping the machine.

10 4. In an electric stop motion an electric circuit, a roll, a lever engaging said roll and adapted to be moved by said roll when the sliver wraps on said roll and make a contact completing said circuit and also adapted to make a contact completing said circuit when
15 said roll is removed, and means actuated by said circuit for stopping the machine.

JOSEPH T. LEACH.

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