

(No Model.)

W. A. TURBAYNE.  
AUTOMATIC SWITCH FOR MAST ARMS.

No. 497,104.

Patented May 9, 1893.

Fig. 1.

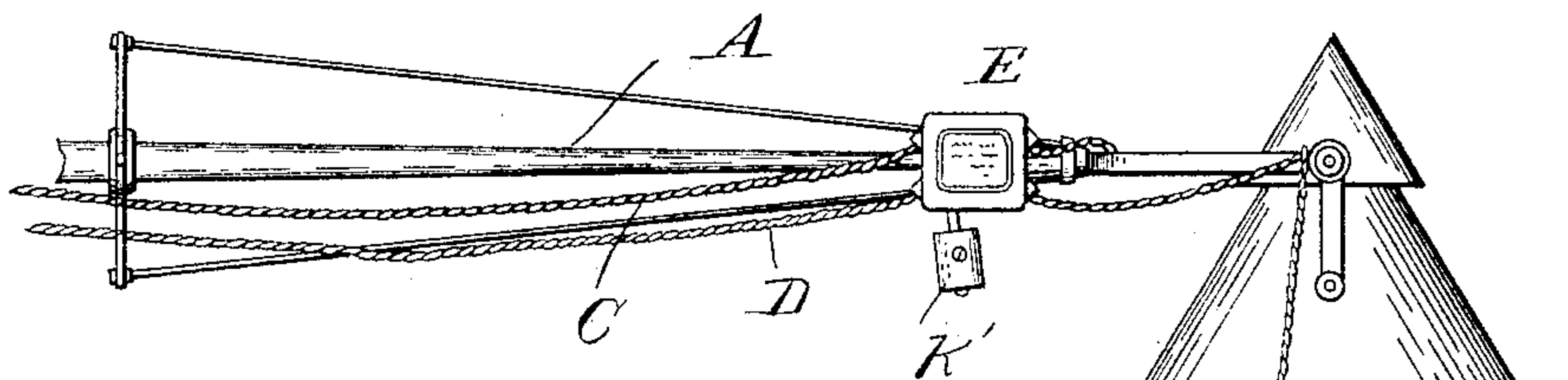


Fig. 2.

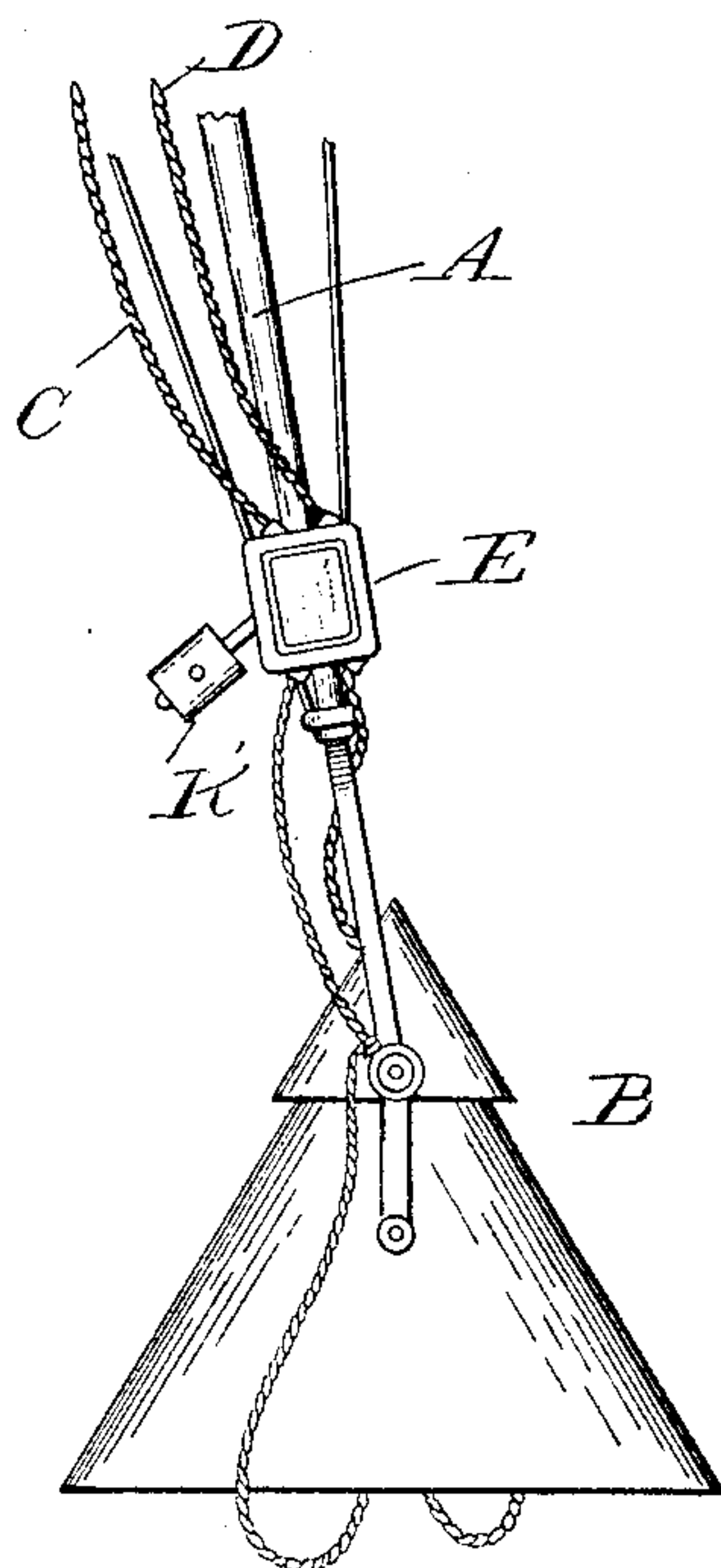


Fig. 3.

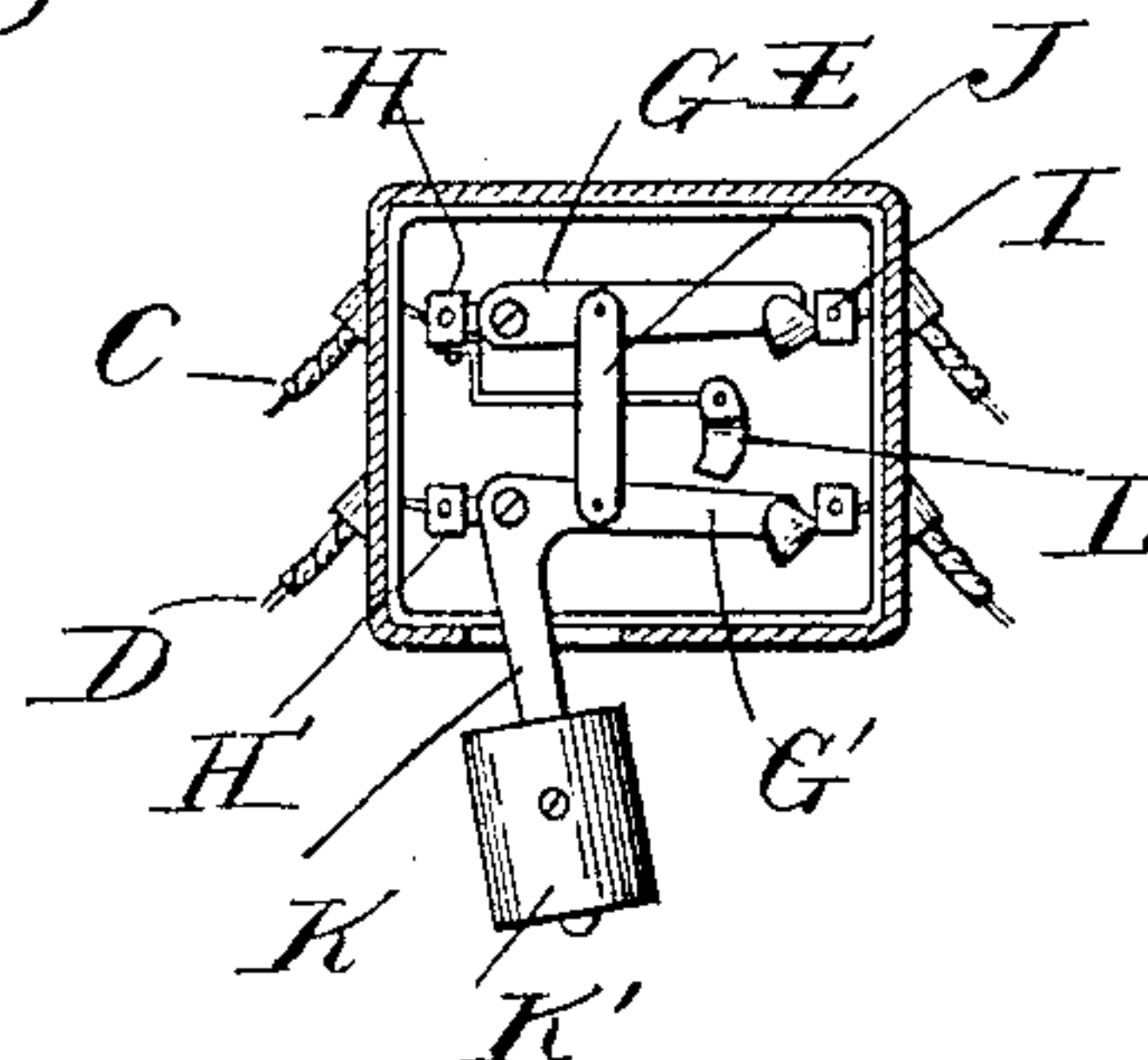
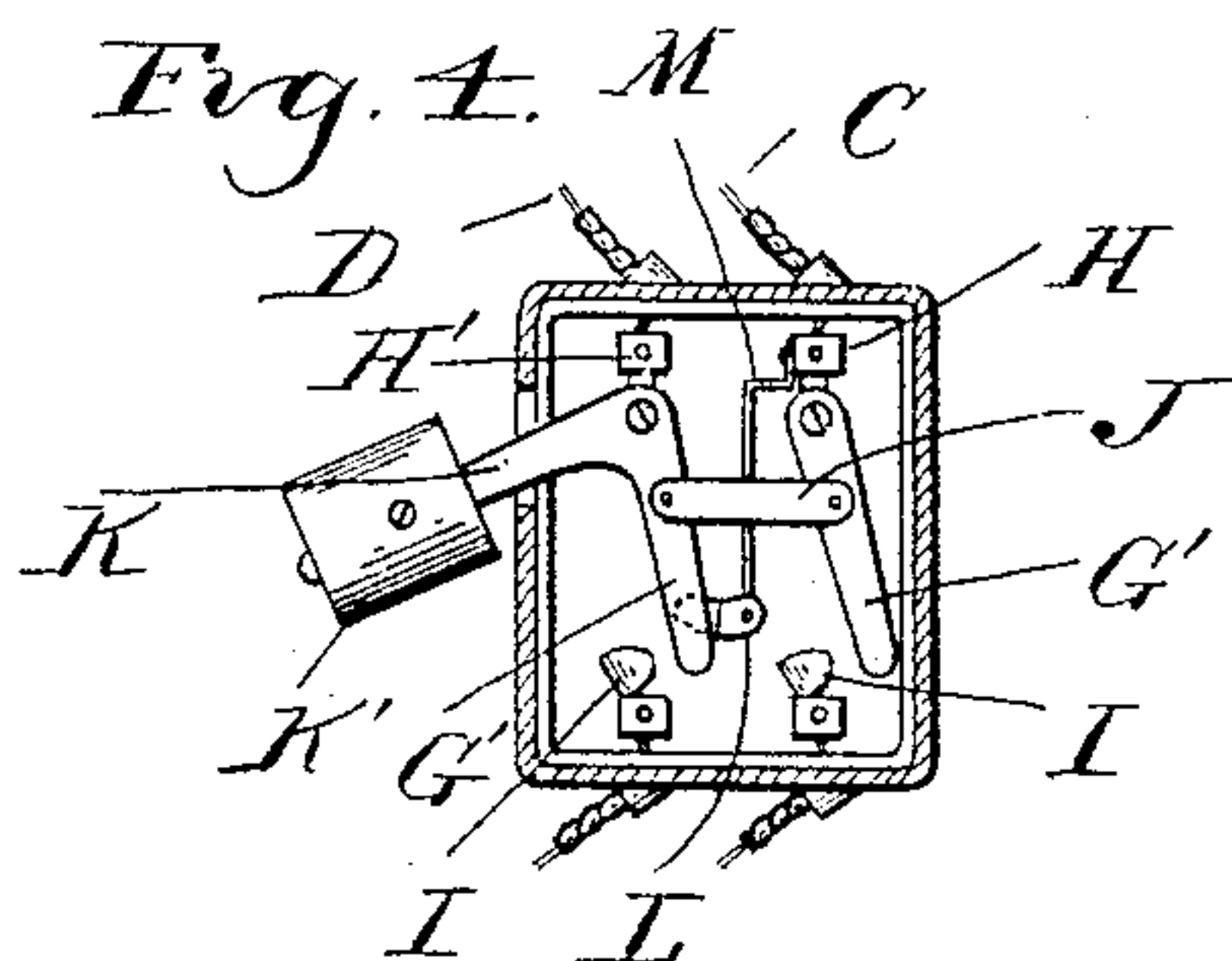


Fig. 4.



Witnesses  
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# UNITED STATES PATENT OFFICE.

WILLIAM A. TURBAYNE, OF DETROIT, MICHIGAN.

## AUTOMATIC SWITCH FOR MAST-ARMS.

SPECIFICATION forming part of Letters Patent No. 497,104, dated May 9, 1893.

Application filed November 5, 1892. Serial No. 451,106. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM A. TURBAYNE, a citizen of the United States, residing at Detroit, in the county of Wayne and State of Michigan, have invented certain new and useful Improvements in Automatic Switches for Mast-Arms, of which the following is a specification, reference being had therein to the accompanying drawings.

10 The invention consists in the peculiar construction of an automatic switch designed to cut out an electric arc lamp from the circuit upon the lowering of the mast arm.

15 The invention further consists in the peculiar construction of the contact arms and a weight acting to normally hold the same in position to complete the circuit to the lamp and for automatically short circuiting the current through the switch upon the lowering of 20 the mast arm, and further in the peculiar construction, arrangement and combination of the various parts all as more fully hereinafter described.

25 In the drawings, Figure 1 is an elevation of a mast arm showing the lamp in its normal position, as in use. Fig. 2 is a similar elevation showing the lamp lowered. Fig. 3 is a vertical, central section through the switch, the parts being in the position shown in Fig. 30 1. Fig. 4 is a similar section through the switch showing the parts in the position when the arm is as shown in Fig. 2.

35 A is a mast arm pivoted to a mast and adapted to be raised and lowered for the purpose of renewing the carbons, &c., in the lamp B which is pivotally suspended at the outer end of the said arm.

C and B are the conductors leading to and from the lamp respectively.

40 E is a switch box secured preferably near the end of the mast arm and into which these wires lead.

45 G and G' are two contact arms connecting the binding posts H and H' with the contacts I at the opposite end of the switch box.

J is a connecting bar made of insulating material, pivotally connected at each end to the two arms G and G' respectively.

50 K is a lever preferably formed integral with the arm G' having a weight K' adjust-

ably secured thereon and extending normally in a slightly forward inclined position, so that its weight will act to hold the two arms G G' tightly against the contacts I, thereby insuring the passage of the current to the lamp 55 notwithstanding vibrations or oscillations of the arm in the wind.

When the arms A are lowered to the position shown in Fig. 2, it is evident that the weight K' will move forward as the arm lowers rocking the bell crank arm of the lever K 60 and arm G' and lifting the two arms G G' from their contacts and both being moved together by means of the connecting bar J. Before the arm G' breaks its connection with its 65 contact I it will engage upon an intermediate contact L, the parts being so arranged that further movement of the arm G' will break the connection with its contact I, while the weight K will hold it firmly against the con- 70 tact L. The circuit will now be maintained through the conductor C and connecting wire M from that conductor to the contact L, thence through the arm G' returning through the conductor D short-circuiting the lamp and 75 allowing the operator to handle the same without any possibility of injury. As soon as the arm A has returned to its horizontal position the weight K' will rock the two contact arms back to their initial position, as shown in Fig. 3. 80

I do not limit myself to the specific form herein shown and described.

What I claim as my invention is--

1. The combination with a movable mast arm, a lamp and conductors therefor, of a 85 switch on the mast arm beyond the support thereof and means carried by the arm for actuating the switch by the movement of the arm.

2. The combination with a swinging mast arm, lamp and conductors therefor, of a switch 90 and means mounted upon and independent of the mast arm for actuating the switch upon the movement of the arm, substantially as described.

3. The combination with the movable arm, 95 the conductors, a switch in said conductors comprising switch arms connected together, a weighted lever acting to normally hold said arms in the lamp circuit, adapted upon the movement of the arm to break such connec- 100



tion and a shunt circuit closed when the lamp circuit is broken, substantially as described.

4. The combination with the movable arm, the conductors, the switch in said conductors  
5 adapted to open the lamp circuit and close a shunt circuit, and a weighted lever acting pendulously to actuate said switch upon the movement of the arm, substantially as described.

10 5. The combination with a swinging support, a lamp on the same, and conductors for

the lamp, of a switch carried by the support and a weight for actuating the switch upon the movement of the support, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM A. TURBAYNE.

Witnesses:

JAMES WHITTEMORE,  
M. B. O'DOHERTY.