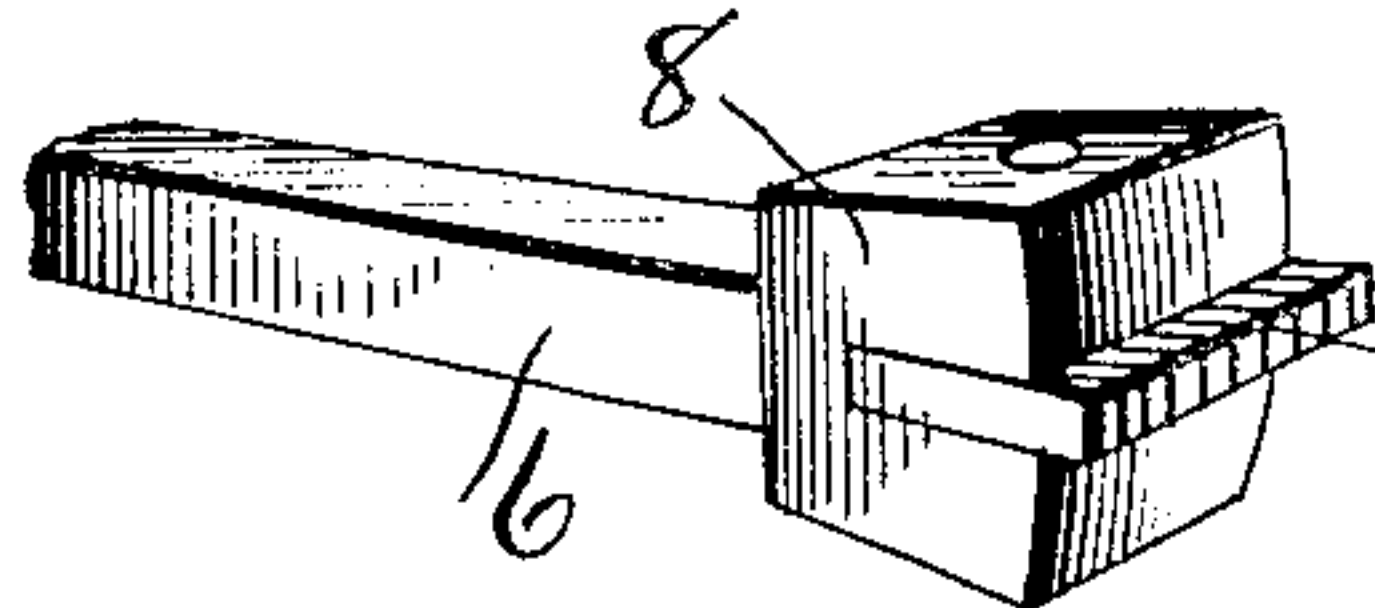
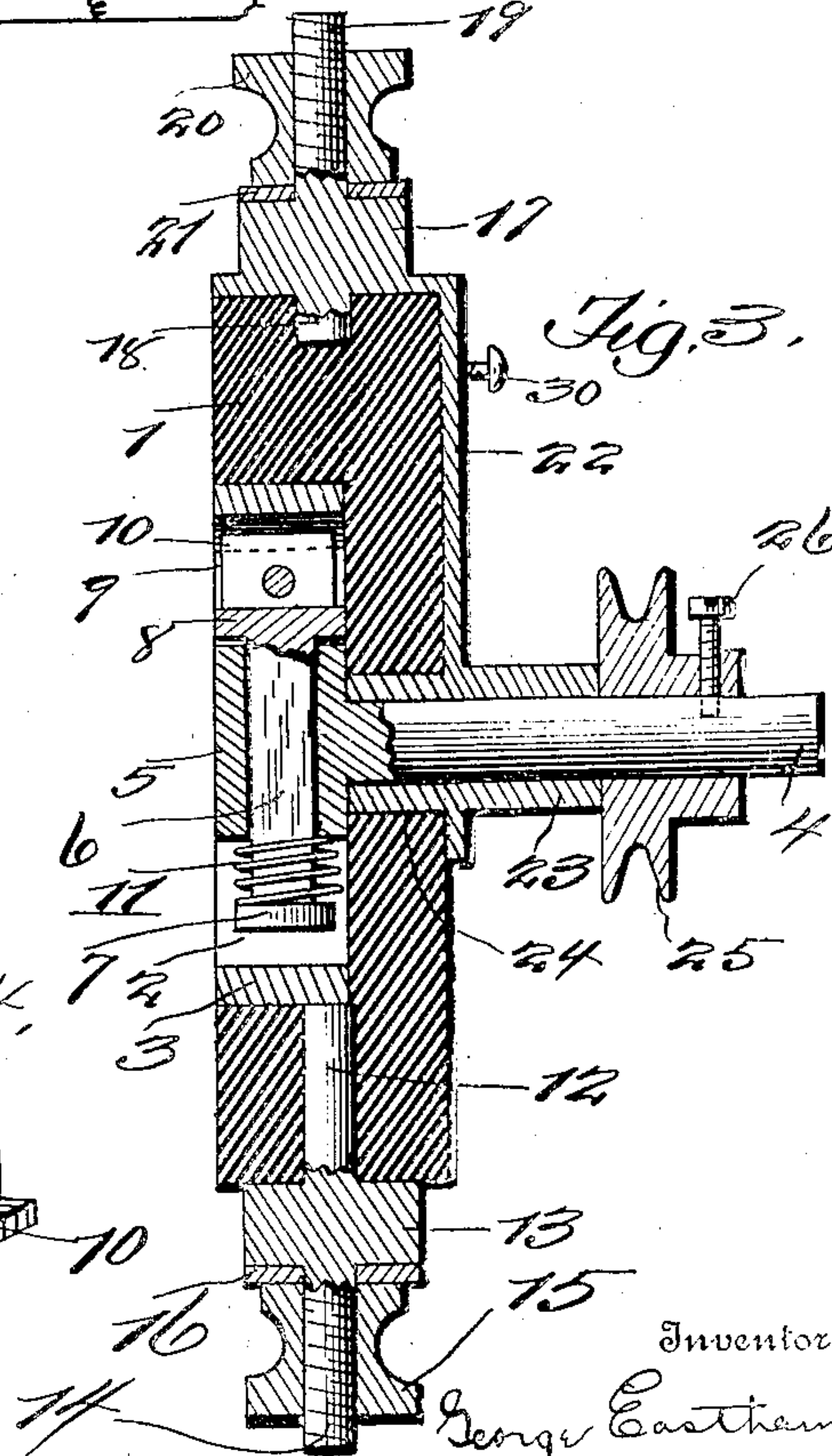
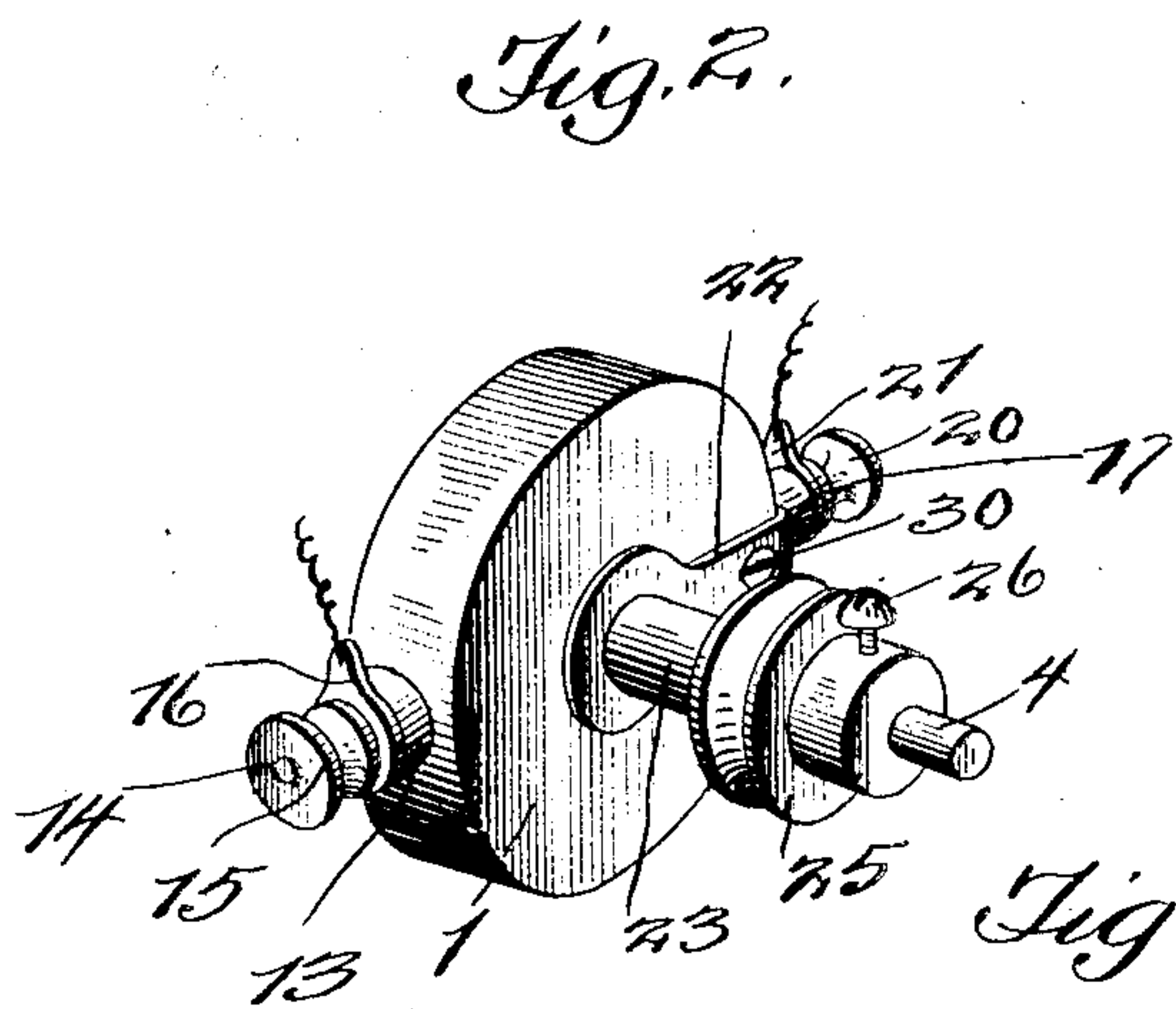
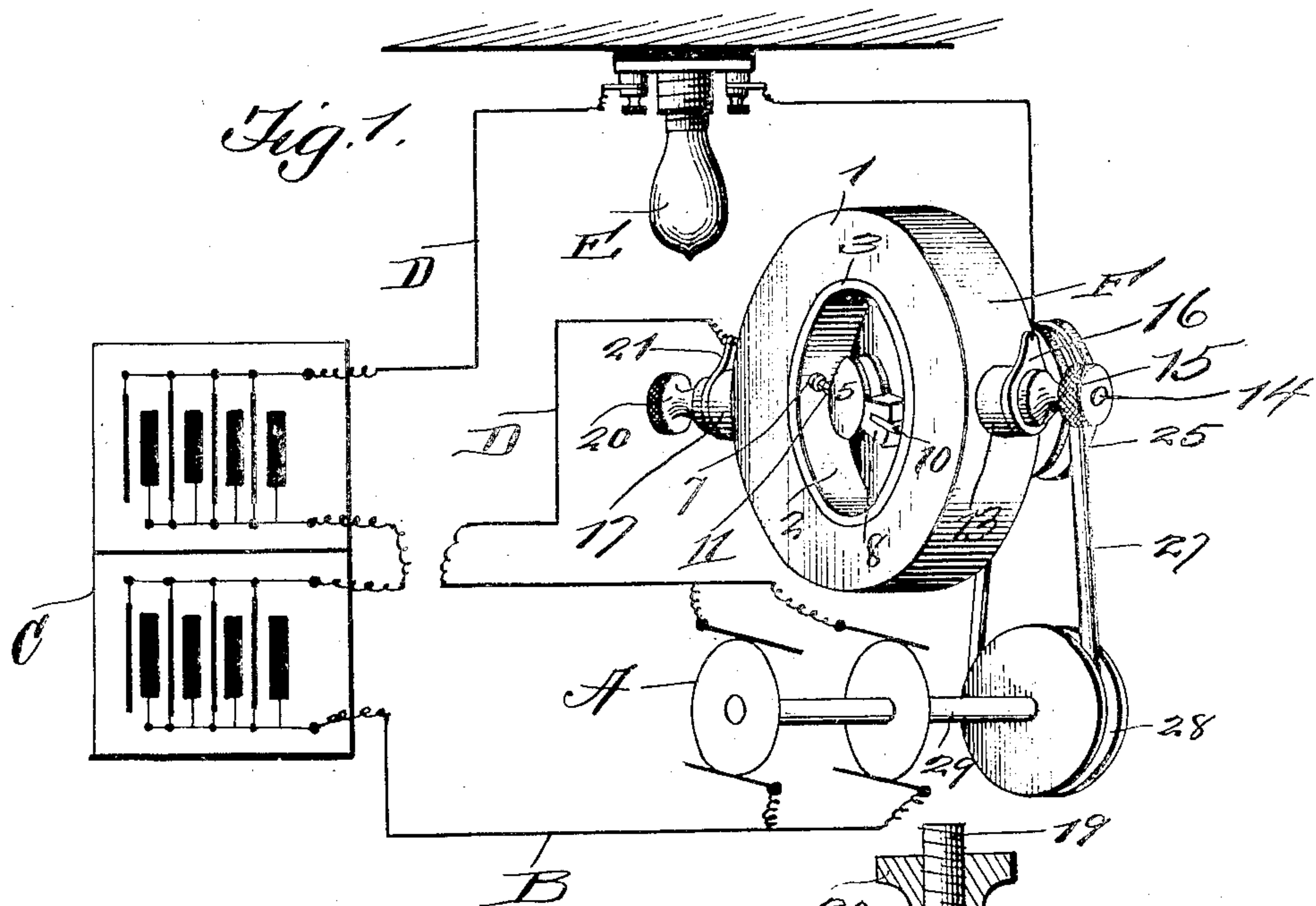


No. 860,907.

PATENTED JULY 23, 1907.

G. EASTHAM.
AUTOMATIC CUT-OUT.
APPLICATION FILED JUNE 2, 1906.



Witnesses

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AUTOMATIC CUT-OUT.

No. 860,907.

Specification of Letters Patent.

Patented July 23, 1907.

Application filed June 2, 1906. Serial No. 319,928.

To all whom it may concern:

Be it known that I, GEORGE EASTHAM, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Automatic Cut-Outs, of which the following is a specification.

This invention relates to new and useful improvements in automatic cut-outs and it particularly pertains to devices for establishing a storage battery circuit during the charging action of the dynamo and for breaking said circuit when the operation of the dynamo ceases.

The primary object of the present invention is to provide a device of the above type in which the circuit between the dynamo and storage cells is maintained closed by the action of an element whose movement is controlled by the centrifugal force imparted thereto through suitable gearing from the power shaft of the dynamo, and in which said element is positively moved to break the circuit when the dynamo ceases its operation.

The detailed construction will appear in the course of the following description in which reference is had to the accompanying drawings forming a part of this specification, like numerals designating like parts throughout the several views, wherein,

Figure 1 is a view illustrating my improved cut-out in perspective and showing diagrammatically the dynamo, storage cells signal lamp and connection of the various devices in the dynamo circuit. Fig. 2 is a perspective view taken from the rear face of my improved cut-out. Fig. 3 is an enlarged vertical transverse section thereof, and Fig. 4 is a partial perspective illustrating in detail the construction of the slidable circuit closing element.

In the practical embodiment of my invention the letter A designates a dynamo which is connected by a wire B with storage cells C arranged in series and connected with the dynamo by a return wire D in which is interposed a signal lamp E and my improved cut-out F. My invention embodies a stationary annular base plate 1 of insulating material, and with reference to which the constituent elements are mounted and have movement. The plate 1 is formed with a central annular recess 2, about the wall of which is disposed an annulus 3, of brass or other metal. A stub shaft 4 is journaled centrally of the base 1 and is provided within said recess with an enlarged head 5 formed with a longitudinal bore within which a pin 6 is slidably mounted. The pin 6 is illustrated in detail in Fig. 4 and is of rectangular proportions. Said pin is formed at one end with a head 7 and at its other end with an enlarged block 8 formed with a central longitudinal groove or recess 9 within which is suitably held a projecting brush 10, designed to bear against the annulus

3 in contacting relation. For the purpose of normally maintaining said brush out of contact with the annulus an expansive coil spring 11 is employed which surrounds the pin 6 and is interposed between the head 5 of the shaft 4 and the head 7 of the pin 6. A post 12 projects radially through the plate 1 and contacts with the ring 3. Said post is formed exteriorly of said plate with a block 13 carrying an integral threaded stem 14 upon which is mounted a nut 15 designed to engage a connection 16 surrounding the post and hold said connection against said block. A block 17 is similarly mounted upon the opposite side of the plate 1 and to this end is provided with a depending stud 18 projecting into said plate for a short distance and with a threaded stem 19 upon which a nut 20 for holding a wire connection 21, is mounted. The nut 17 is provided with a rearwardly extending arm 22 terminating in an integral collar 23 extending on each side of said arm, one portion of said collar 24 being mounted in an annular opening therefor in the plate 1 and serving as a bushing in which the shaft 4 is journaled. The shaft 4 carries a pulley 25 which is held rigid thereon by virtue of a set screw 26 in the well known manner. The pulley 25 is driven by a belt 27 from a pulley 28 mounted upon the shaft 29 of the dynamo A. The arm 22 is held against the plate 1 by a screw 30 threaded into said plate.

In practical use the dynamo A is driven from a suitable engine or motor and the movement thereof is communicated to the revolving shaft 4. When the dynamo has reached a selected speed the pin 6 is thrown outwardly by centrifugal force and closes the circuit, through the brush 10 and the ring 3. At this stage the batteries are being charged through the dynamo. When the engine is stopped and the movement of the dynamo ceases, the spring 11 forces the pin 6 inwardly and breaks the circuit so that waste of current through the dynamo is eliminated. The lamp E indicates whether the circuit is open or closed in the well known manner.

While the elements herein shown and described are well adapted to serve the functions set forth, it is obvious that various changes may be made in the proportions, shape and arrangement of the several parts without departing from the spirit and scope of my invention as defined in the appended claims.

Having fully described my invention I claim:

1. A device of the type set forth comprising an insulating base, having a recessed face, a contact ring within said recessed face, a bearing in said base centrally of said ring, a shaft projecting through said bearing, a contact pin slidably mounted in the end of said shaft and being designed to engage said ring by centrifugal force upon the rotation of said shaft and means for holding said pin normally out of engagement with said ring.

2. A device of the type set forth comprising an insulat-

ing base, a contact ring carried thereby, a shaft projected through said base centrally of said ring, a contact pin slidably disposed in the end of said shaft, and being designed to engage said ring by centrifugal force upon the
5 rotation of said shaft, and means for holding said pin normally away from said shaft.

3. A device of the type set forth comprising an insulating base, a contact ring carried thereby, a shaft projected through said base centrally of said ring, said shaft having
10 at its end an opening perpendicular to its major axis, a

pin having a contact head slidable in said opening and being designed to engage said ring by centrifugal force upon the rotation of said shaft, and means for holding said pin normally away from said ring.

In testimony whereof I affix my signature in presence of 15 two witnesses.

GEORGE EASTHAM.

Witnesses:

SAMUEL KEITH,

GEO. E. MILLER.