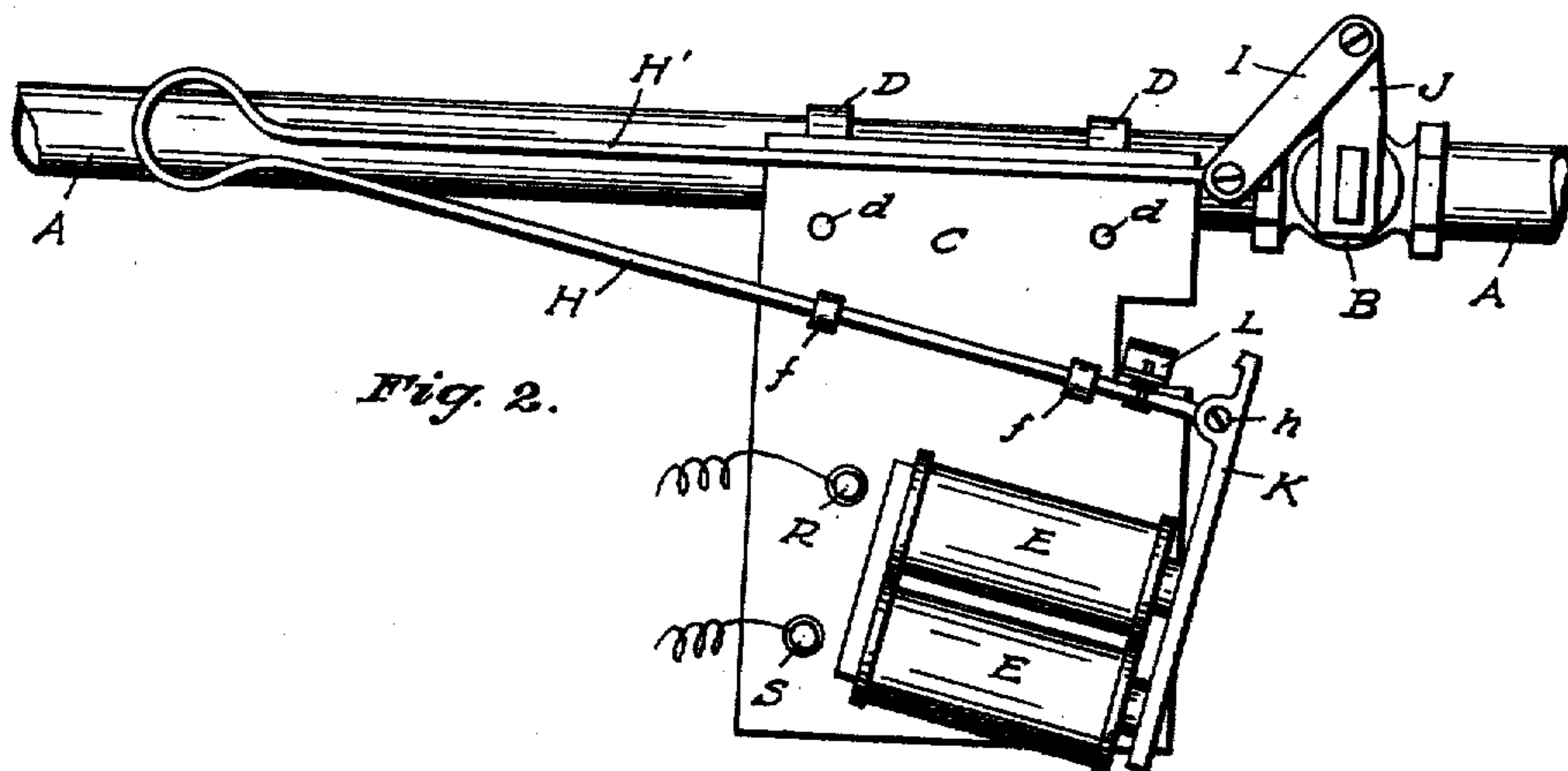
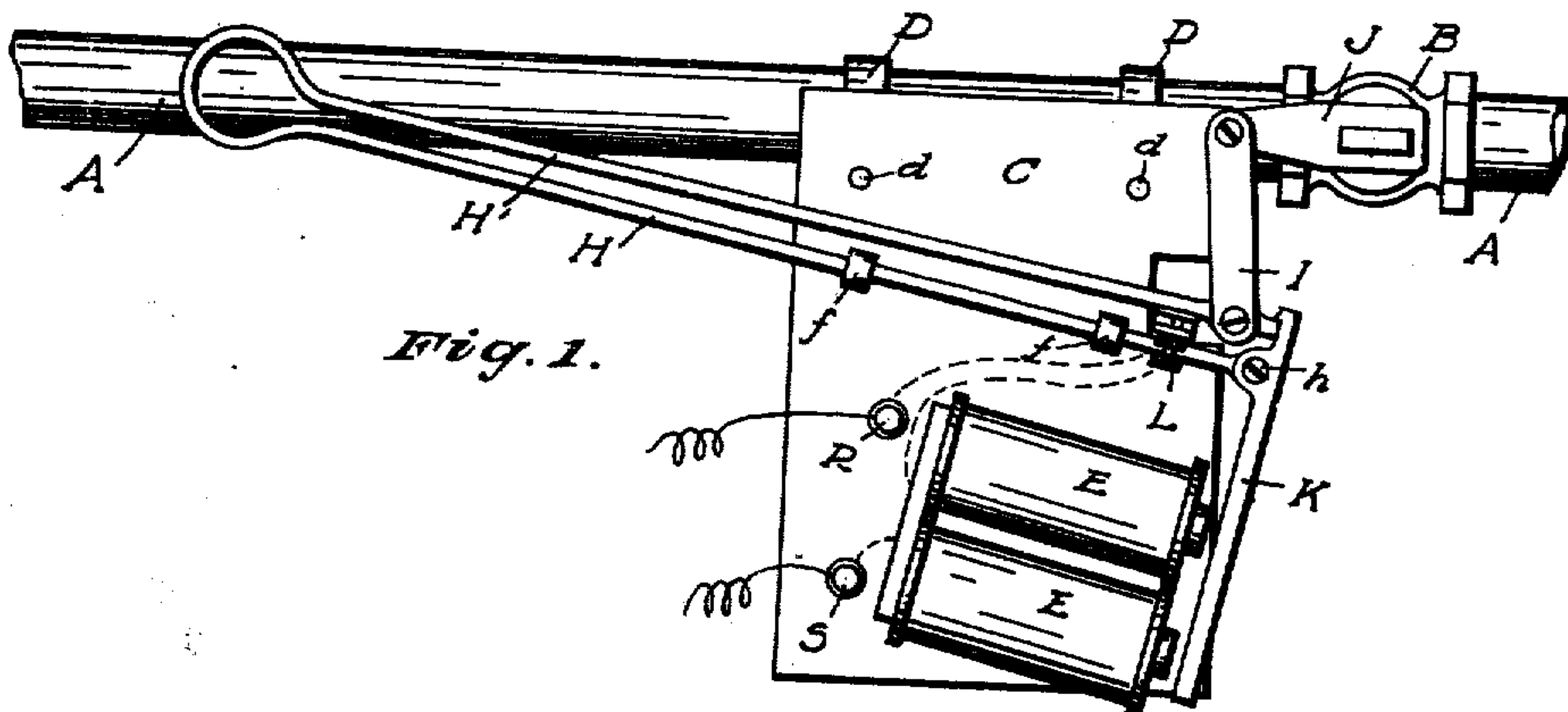
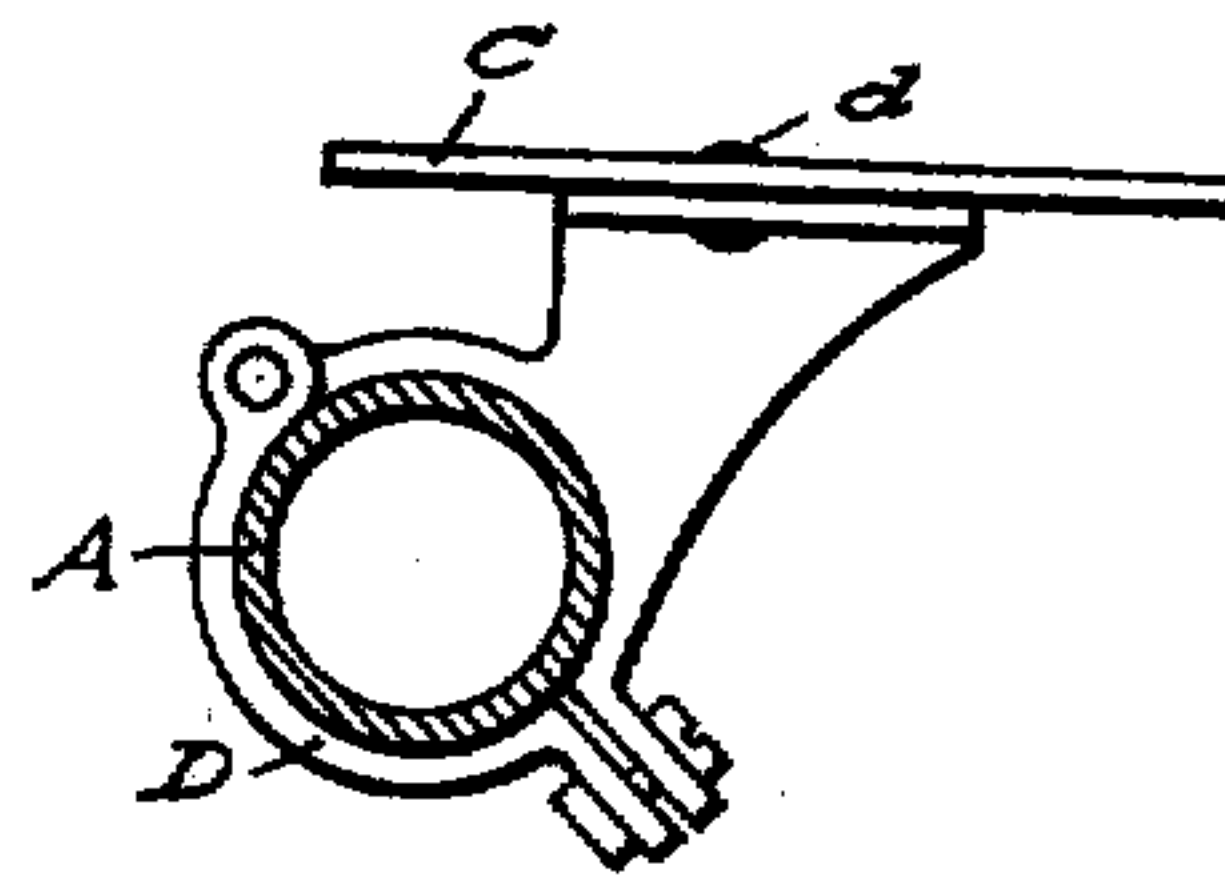
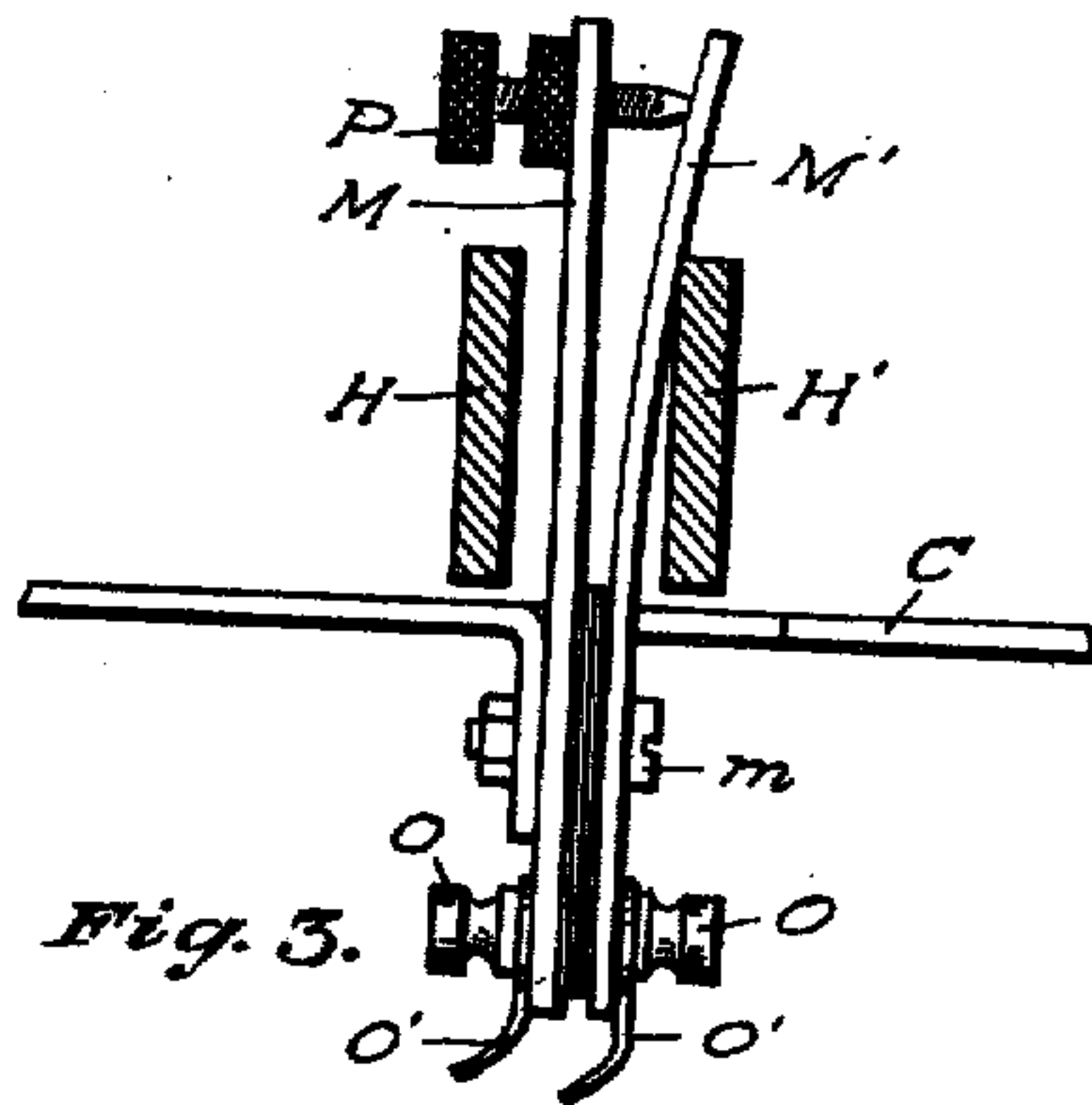


W. E. APT & E. L. SCHOTT.
 AUTOMATIC GAS SHUT-OFF.
 APPLICATION FILED JAN. 28, 1909.

924,954.

Patented June 15, 1909.



WITNESSES:

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WILLIAM E. APT AND EDMUND L. SCHOTT, OF ST. JOSEPH, MISSOURI.

AUTOMATIC GAS SHUT-OFF.

No. 924,954.

Specification of Letters Patent.

Patented June 15, 1909.

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To all whom it may concern:

Be it known that we, WILLIAM E. APT and EDMUND L. SCHOTT, citizens of the United States, residing at St. Joseph, in the county of Buchanan and State of Missouri, have invented new and useful Improvements in an Automatic Gas Shut-Off; and we do declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings and figures, and the letters thereon, forming a part thereof.

The object of our invention is to provide a device that will automatically shut off a gas main. It can be used for shutting off the supply of gas wherever desired by means of a push button, but it is especially adapted to be used in connection with a gas stoppage alarm device on which we filed an application for Letters Patent in the United States Patent Office on the 30th day of November, 1908, and which application is pending under Serial Number 465,271. In that device by means of outer and inner cylinders with a liquid and a float within the inner cylinder and electrical connection which furnishes means for closing the circuit when the gas pressure has ceased or is dangerously low an alarm is sounded calling attention to the fact; by the device upon which we hereby seek a patent when the gas ceases or is dangerously low the gas supply pipe is instantly automatically closed.

We accomplish our object by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a top view of the device showing the parts in normal position allowing for the flow of gas; Fig. 2 is a similar top view showing the parts in position with the valve closed; Fig. 3 is a sectional elevation of the circuit breaker showing the circuit closed, and Fig. 4 is a sectional elevation of the pipe and fastening clamps.

Similar letters refer to similar parts in the views.

In the drawings A is a gas supply pipe leading from the meter (not shown) and B is a cock to shut off the supply of gas.

C is a plate composed of brass or other metal attached to gas pipe A by means of two metal clamps D D as shown in Fig. 4 clamped around pipe A and fastened to plate C by rivets *d d*. Two small electro magnets E E are rigidly attached on plate C. A spring-lever is attached on plate C by means of two bolts *f f*. Said spring-lever consists

of a steel rod bent in V shape as shown in Fig. 2, one arm H rigidly attached to plate C; to the end of the other arm H' is attached a link I which link I engages with a small lever J.

J is rigidly attached to the head of gas cock B.

K is a combination armature and trigger fastened to the end of lever H by means of a screw *h*; L is an automatic circuit breaker; as shown in Fig. 3, said circuit breaker consists of two small metal bars M and M' rigidly attached to the base of plate C by means of a screw or bolt *m*. To the lower ends of said metal bars two oppositely placed set screws O O are attached for the purpose of attaching wires O' O' to the apparatus as shown by dotted lines in Fig. 1.

P is a set screw attached to said bar M. Bar M' is flexible so that it can be forced against the point of set screw when the apparatus is set for normal flow of gas. Poles R and S supply the currents.

To set the device in the position required when the flow of gas is normal lever H' is drawn back under the edge of a combined trigger armature K, thus opening gas cock B and closing circuit breaker, as clearly shown in Fig. 3. When the current enters at pole R it is carried to circuit breaker L and thence back to the electro magnets thus magnetizing the same. When the magnets are thus charged they draw said armature, the trigger releasing spring-lever H' which in turn springs to its normal position as shown in Fig. 2, thus closing the gas cock, shutting off the gas supply, releasing the tension on metal bars M and M' as shown in Fig. 3 and automatically breaking the circuit, thus preserving the batteries and allowing the armature to be drawn from the electro magnet so that the device can be re-set and the gas turned on.

What we claim and desire to secure by Letters Patent, is,

1. In an automatic gas pipe shut-off, the combination with a gas supply pipe and cock, of a metal plate and clamps rigidly connecting said metal plate with said gas pipe, a combination spring-lever attached to said plate, a link pivotally attached to the end of one arm thereof, a small lever pivotally attached to the outer end of said link and to the head of said gas cock, a pair of electro magnets attached on said plate, a combined trigger and armature lever pivotally at-

tached at the end of the other arm of said spring-lever to hold and automatically release the arm of the spring-lever which operates the gas cock, a circuit breaker between the arms of said spring-lever which is automatically closed when said spring-lever is engaged by said combined armature and trigger lever and which is automatically broken when said combined armature and trigger lever releases said spring-lever, a set screw to regulate the point of contact between the two metal bars of said circuit breaker for the purpose of closing circuit, and two small set screws at the lower end of said metal bars for the purpose of attaching the wires thereon, substantially as shown and described.

2. In an automatic gas shut-off the combination with a supply pipe and cock, of a metal plate having rigid connection with said supply pipe, a combined spring-lever having two arms and attached to said plate, a link pivotally attached at the end of one of said arms, a small lever pivotally attached to the outer end of said link and to the head of said cock, a circuit breaker between the arms of

said spring-lever which is automatically closed when said spring-lever is engaged by said combined armature and trigger lever and automatically broken when said combined armature and trigger lever releases said spring-lever, substantially as shown and set forth.

3. In an automatic gas pipe shut-off the combination with a metal plate and a combined spring-lever having two arms and attached to said plate, and a combined armature and trigger lever, of a circuit breaker between said arms which is automatically closed when one arm of said spring-lever is engaged by said combined armature and trigger lever and automatically broken when said combined armature and trigger lever releases said spring-lever, substantially as shown and set forth.

In testimony whereof we affix our signatures in presence of two witnesses.

WILLIAM E. APT.

EDMUND L. SCHOTT.

Witnesses:

W. A. CRANDALL,

S. S. FRANK.