

No. 840,432.

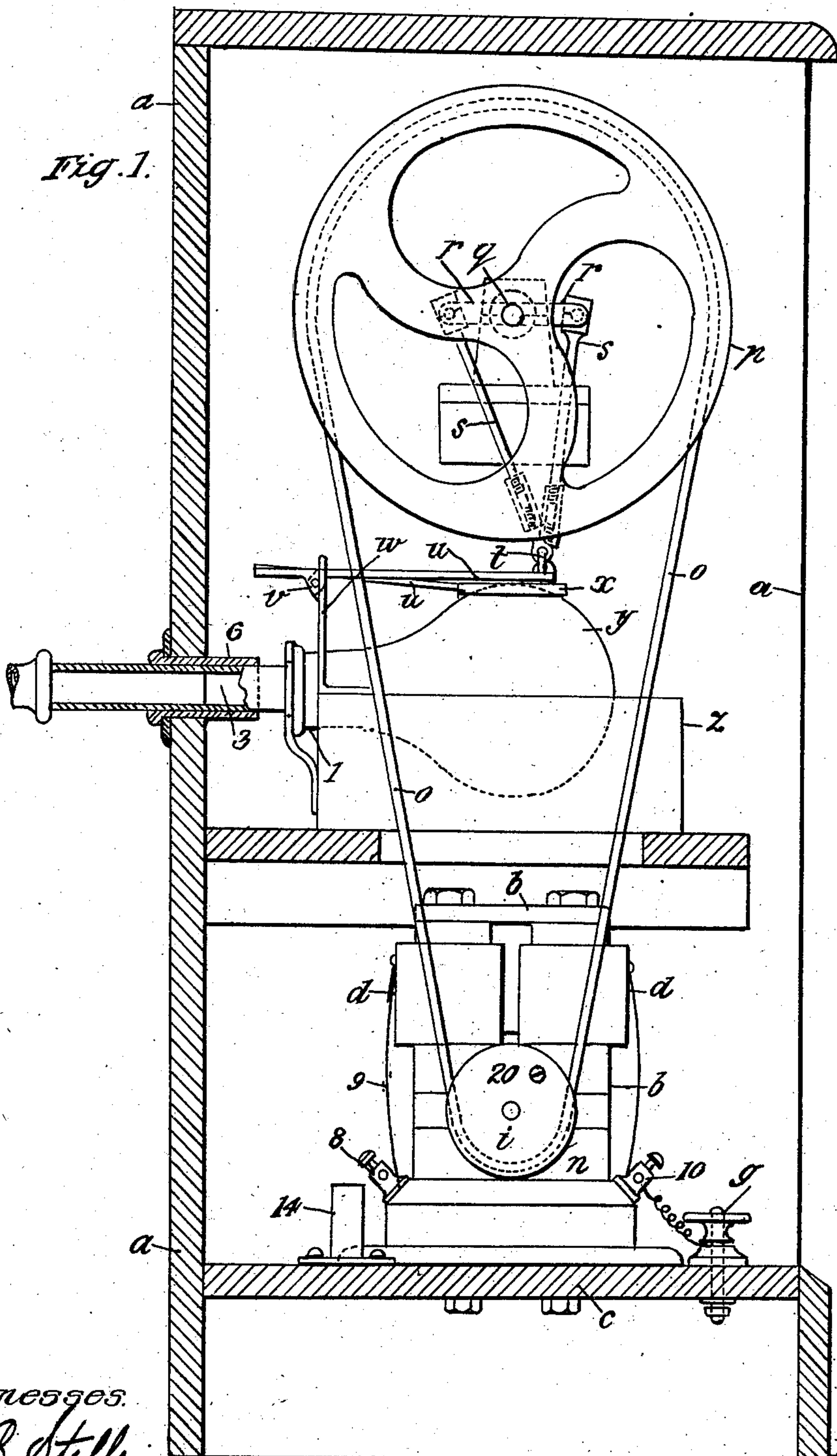
PATENTED JAN. 1, 1907.

J. CARTER.

APPARATUS FOR AUTOMATICALLY GIVING ALARM IN CASE OF BURGLARY, &c.

APPLICATION FILED JAN. 2, 1906.

4 SHEETS—SHEET 1.



Witnesses.

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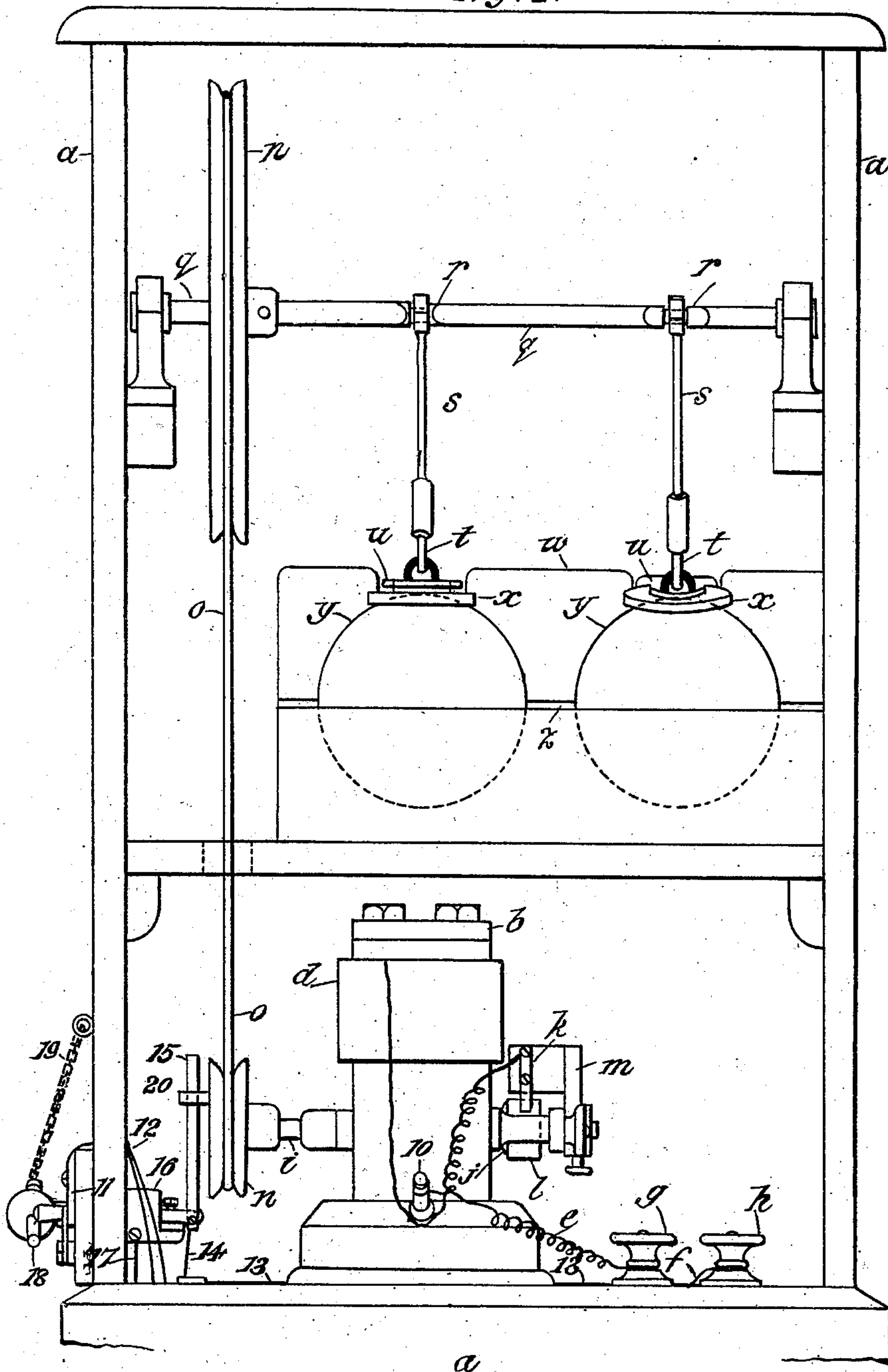
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4 SHEETS—SHEET 2.

Fig. 2.



Witnesses

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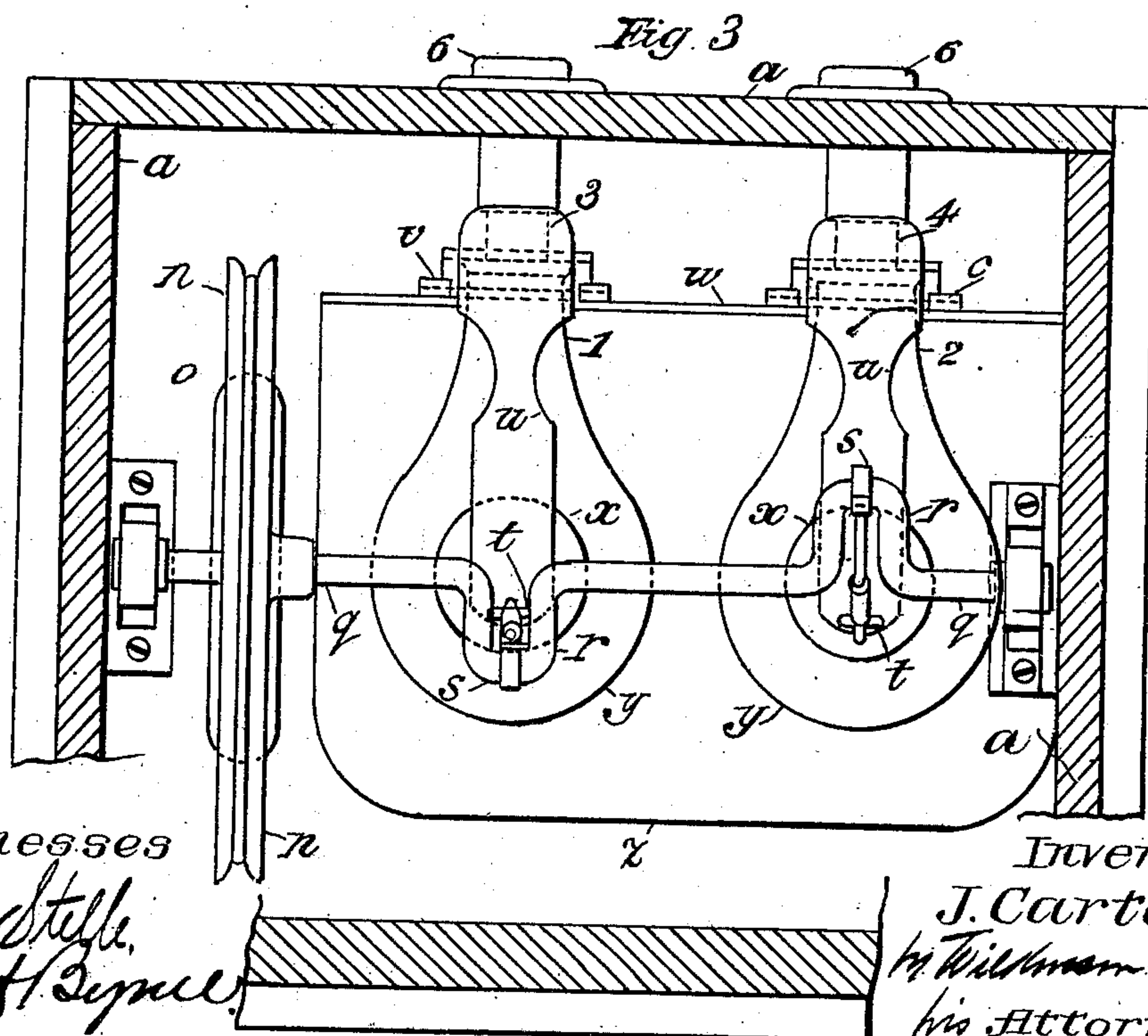
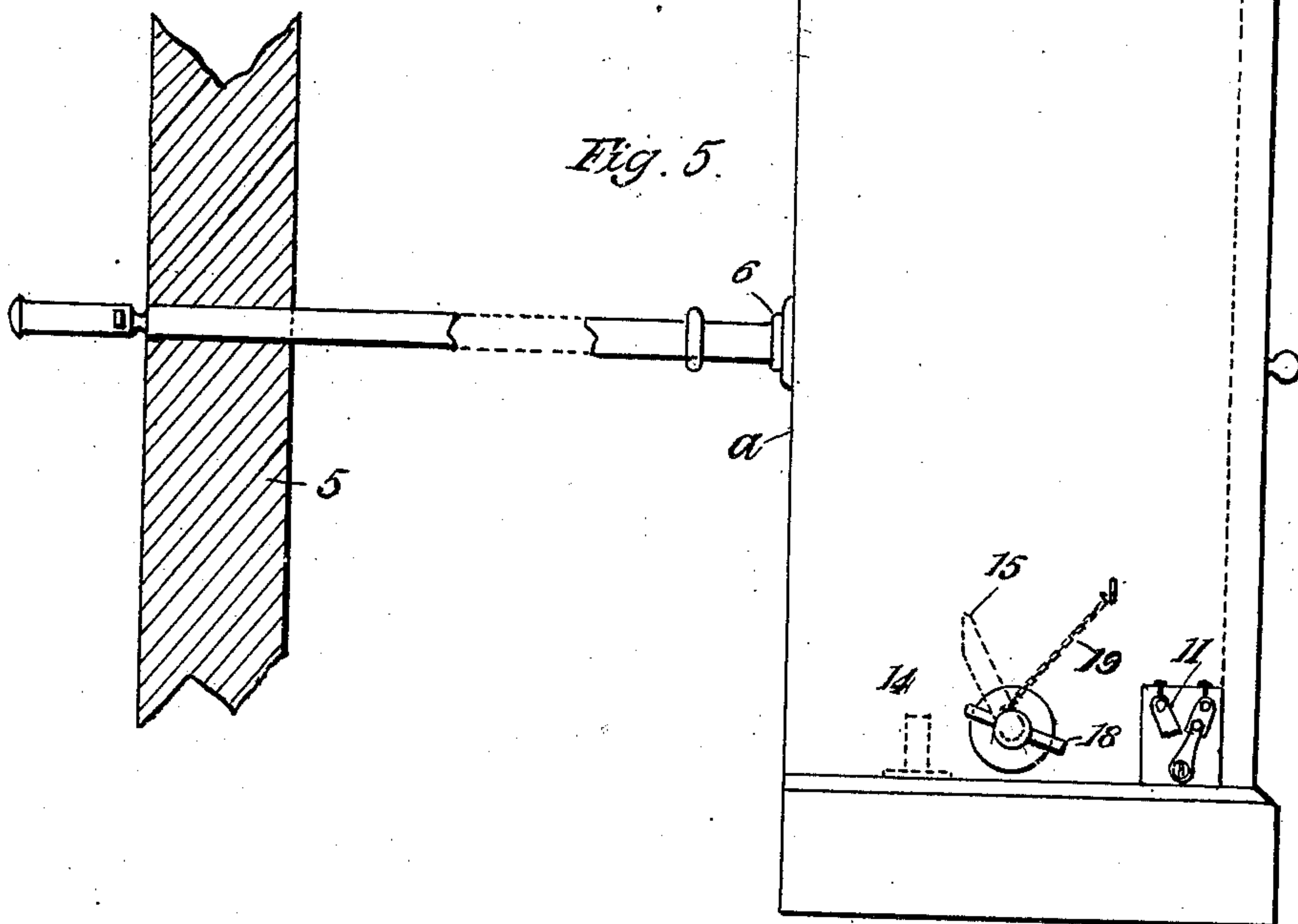
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4 SHEETS—SHEET 3.



Witnesses

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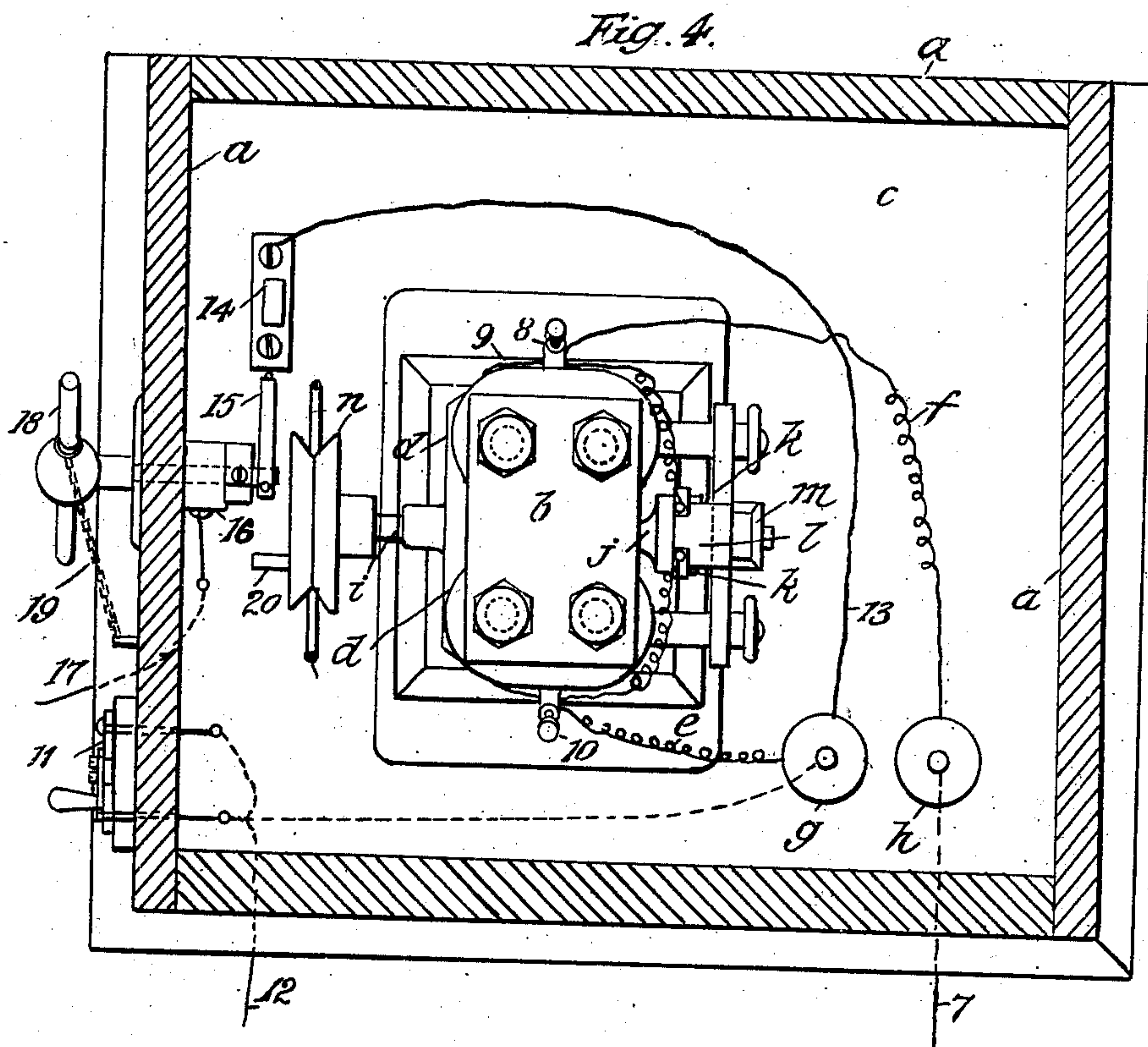
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4 SHEETS—SHEET 4.



Witnesses:

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UNITED STATES PATENT OFFICE.

JAMES CARTER, OF LEYTONSTONE, ENGLAND.

APPARATUS FOR AUTOMATICALLY GIVING ALARM IN CASE OF BURGLARY, &c.

No. 840,432.

Specification of Letters Patent.

Patented Jan. 1, 1907.

Application filed January 2, 1906. Serial No. 294,303.

To all whom it may concern:

Be it known that I, JAMES CARTER, a subject of the King of Great Britain, of 498 High road, Leytonstone, in the county of Essex, England, have invented a new and useful Apparatus for Automatically Giving Alarm in Case of Burglary or the Like, of which the following is a specification.

My invention has for its object apparatus by which an electric conducting-wire is arranged in connection with a window, door, or other place where burglary or illicit entrance is likely to be attempted in such manner that if such attempt takes place an electric circuit is automatically completed and an audible signal, such as a loud whistle, is given at any determined place, so that a distinct and unmistakable alarm is heard and, if desired, can be made to continue until taken out of action by the person to whom the alarm is given.

In order to put my invention in operation, I use an electric battery of any suitable kind situated, preferably, in some place not easily accessible, and I connect with it conducting-wires arranged so as not to be readily seen, an easily-operated electric contact being connected with one of the wires in such manner that the electric circuit normally remains open, but is instantly completed in the well-known way by means of the release of a light contact-spring or its equivalent, if any attempt is made to tamper with the window, door, or other place to be guarded. The conducting-wires (properly insulated) are led away from the contact-piece described to a box or case situated in any convenient place—for instance, in the bed-room of the person to whom the alarm is to be given.

In the box or case I arrange and fix a small electromotor of any suitable kind which can be actuated by the electric current from the battery, the circuit of which is completed by the contact-piece above described, the motor then setting in revolution in the usual way a spindle turning freely in bearings and carrying the armature and commutator of the motor.

Upon the spindle I fix a small pulley which by means of an endless belt or cord sets in slower revolution a larger pulley upon a parallel spindle turning freely in bearings in the upper part of the box, and upon this spindle I make two cranks of suitable throw arranged opposite to each other and provided with light connecting-rods, the lower ends of

which are pivoted to the outer ends of two horizontal levers, the other ends of which are pivoted to brackets suitably attached to the inside of the box. Below the outer end of each lever is fixed a flat plate, and these plates rest upon the top surface of two elastic hollow balls, preferably of india-rubber, which are carried upon supports in a stay or board fixed across the inside of the box, and upon each of the balls is formed a socket, into which is fitted a tube extending out through the back of the box to a sufficient distance and provided at its outer end with a powerful whistle or other like sound-producing instrument actuated by the pressure of air.

It is evident that if the electromotor is set in revolution by the completion of the electric circuit produced by the illicit tampering with the door, window, or other place the upper spindle and cranks will also be set in revolution, and the alternately-compressed elastic balls will operate the whistles alternately and continuously until stopped, giving a loud alarm.

I prefer to arrange a separate contact breaker in the box in such manner that, if desired, it can also be used to operate the motor through a separate conducting-wire independent of the first, so that if the latter be cut and prevented from operating the second will continue in operation, driving the motor and sounding the whistle until stopped.

The accompanying drawings are in illustration of my invention.

Figure 1 is an end view, partly in section, of the apparatus. Fig. 2 is a front view. Fig. 3 is a plan from above, showing the cranks, connecting-rods, and elastic balls. Fig. 4 is a plan showing the top of the electromotor and the connections. Fig. 5 is a view of one end of the box or case.

Similar characters of reference refer to similar parts throughout the several views.

a is a box or case containing the apparatus.

b is an electromotor of any suitable kind firmly fixed to the bottom *c* of the case.

d d are the coils round the field-magnet of the motor, these coils being connected by insulated wires *e f* and terminals *g h* with an electric battery. (Not shown in the figures.)

i is the spindle of the armature *j* of the motor, and *k k* are conducting-brushes pressing against the commutators *l* of the armature *j*. A pivoted bracket *m* carries the brushes *k* and can be adjusted and fixed in any re-

quired position in relation to the commutator, so as to enable the speed of revolution to be varied. A small pulley *n* is fixed upon the spindle *i* and drives by an endless cord *o* the larger pulley *p* upon the parallel spindle *q* above.

The spindle *q* has formed upon it two opposite cranks *r r*, actuating connecting-rods *s s*, pivoted at their lower ends at *t* to levers *u u*, the ends of which are pivoted at *v* to a bracket *w*. Below the other ends of the levers *u* are fixed plates *x x*, which press upon hollow elastic india-rubber balls *y y*, which are carried in the support *z*, and are provided with nozzles 1 2, to which are fitted the ends of pipes 3 4, having whistles at their outer ends, which pipes may be extended to any distance and are shown in Fig. 5, passing through a wall 5.

As shown in Fig. 1, the point at *t*, to which the lower ends of the connecting-rods *s s* are pivoted, is preferably arranged somewhat beyond the center line of the spindle *q*, so that the cranks have a more direct action in their downward stroke. The connection of the pipes 3 or 4 to the socket of the elastic ball is shown in Fig. 1, made by a sliding tube 6, by removing which endwise the pipes 3 4 can be easily separated and removed.

The current from the battery passes by the conducting-wires 7 and *f* to the terminal 8 and thence by the wire 9 round the coils *d d* of the field-magnet, from which it passes to the terminal 10 and to the switch 11, through which it returns by the wire 12 to the battery. The current can be cut off when desired by the switch. A part of the current passes by the conducting-wire 13 to a contact-piece 14, fixed in the bottom of the box near the end of the armature-spindle *i*, and 15 is a brass lever upon a spindle, pivoted in a conducting-socket 16, fixed in the end of the box *a*, which is connected by a separate insulated return-wire 17 with the negative pole of the battery. It is evident that if the brass lever 15 is resting in contact with the contact-piece 14 the armature-spindle will continue to revolve and to actuate the whistles, even if the wire 12 be cut. The brass lever 15 is ordinarily retained out of contact with the contact-piece 14 by means of a transverse pin 18 in the spindle, carrying the brass lever 15 and a chain 19, one end of which is fixed to the side of the box *a*, while if the chain be removed from the pin the brass lever will fall upon the contact-piece 14, its fall being insured by a pin 20 upon the pulley *n*, which strikes it.

The details of construction and arrangement may be varied more or less, as may be found advisable.

Having fully described my invention, what I desire to claim and secure by Letters Patent is—

1. Apparatus for automatically giving

alarm in case of burglary or the like, consisting of an electric battery and conducting-wires, one of which is normally interrupted but has its circuit completed by any attempt at burglary or illicit entrance through a door, window, or other place, the conducting-wires passing to a small electromotor which is set in revolution when the circuit through the wires is completed, and sets in revolution a spindle provided with two opposite cranks, having connecting-rods actuating two levers which as they rise and fall alternately compress and release two elastic balls, communicating with whistles or sound-producing devices when the electromotor is working, and a switch by which the current can be cut off and the working stopped when desired, substantially as described.

2. In apparatus of the kind described in claim 1, the combination of an electric battery, conducting-wires *e, f* the circuit through which is automatically completed by any attempt to break open a window, door, or other place which is to be guarded, an electromotor *b*, a pulley *n* upon the spindle of the armature of the motor, a pulley *p* upon a parallel spindle *q*, a cord *o* connecting the pulleys, opposite cranks *r, r*, upon the spindle *q*, connecting-rods *s, s*, pivoted levers *u, u*, plates *x, x*, pressing upon hollow elastic balls *y, y*, having nozzles 1, 2, connected to pipes 3, 4, provided at their outer ends with whistles, and a switch 11, all substantially as described and illustrated.

3. In a device of the character described, a battery, a main circuit normally open and adapted to be closed by an attempt at entrance through the door or window, a motor arranged in said circuit with said battery and operated upon the closing of the said circuit, a pair of whistles, and means for alternately sounding said whistles upon the closing of the said circuit, substantially as described.

4. In an automatic burglar-alarm, a battery, a motor arranged in circuit therewith, said circuit being normally open and adapted to be closed by an attempt at burglary, alarm-sounding whistles, and means arranged in conjunction with said motor for alternately sounding said whistles, substantially as described.

5. In an automatic burglar-alarm, a battery, a main circuit normally open and adapted to be closed by an attempt at burglary, a motor arranged in said circuit with said battery, an emergency-circuit arranged between said battery and said motor, a pair of whistles, and means for alternately sounding said whistles, substantially as described.

6. In an automatic burglar-alarm, the combination with the alarm-sounding whistles and mechanism for alternately operating the same, of the electrical means for actuating the said whistles comprising a battery, a main circuit normally open and adapted to

be closed upon an attempt at burglary, a motor arranged in said main circuit with said battery, and an emergency-circuit arranged between said battery and said motor and
5 adapted to actuate the said motor upon a failure of the main circuit, substantially as described.

In witness whereof I have hereunto set my hand in the presence of two witnesses.

JAMES CARTER.

Witnesses:

ARTHUR E. EDWARDS,
ALEX. N. FAREWEK.