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PATENTED JULY 24, 1906.

H. ABRAHAMS.

ALARM FOR USE IN CONNECTION WITH BAGS AND THE LIKE.

APPLICATION FILED AUG. 15, 1905.

Fig. 1.

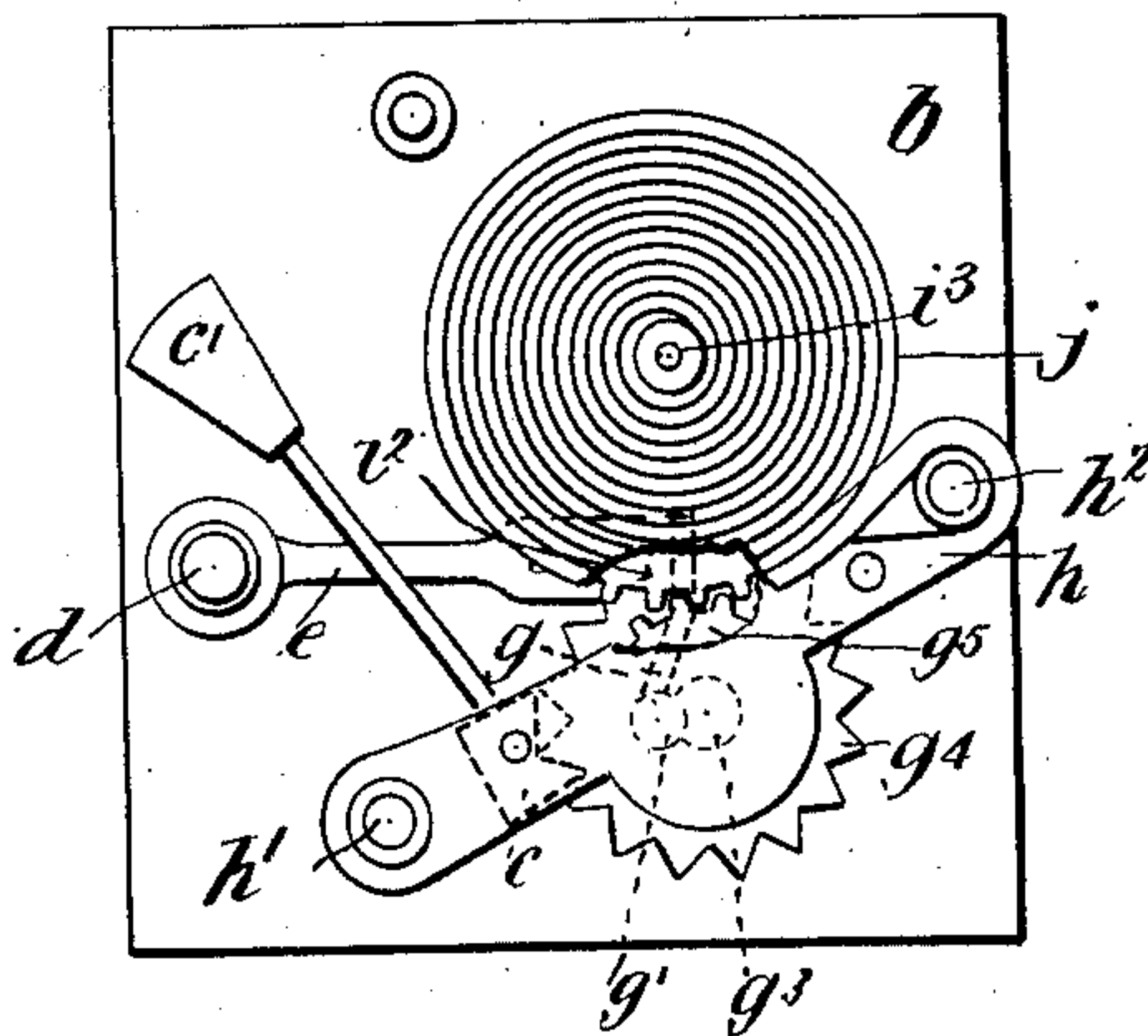


Fig. 5.

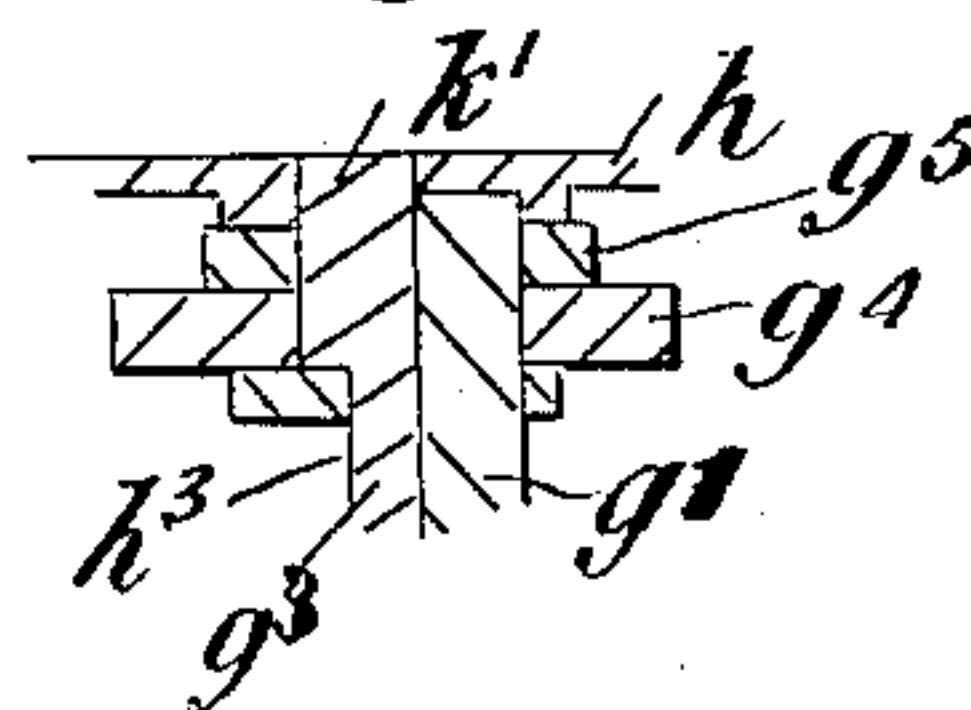


Fig. 6.

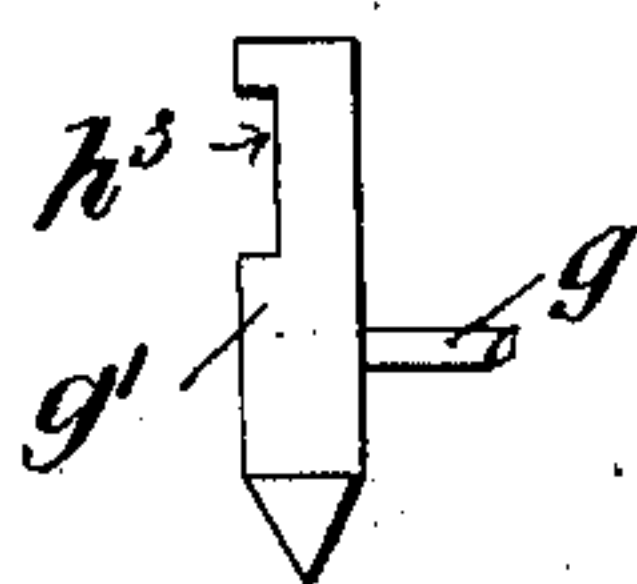


Fig. 3.

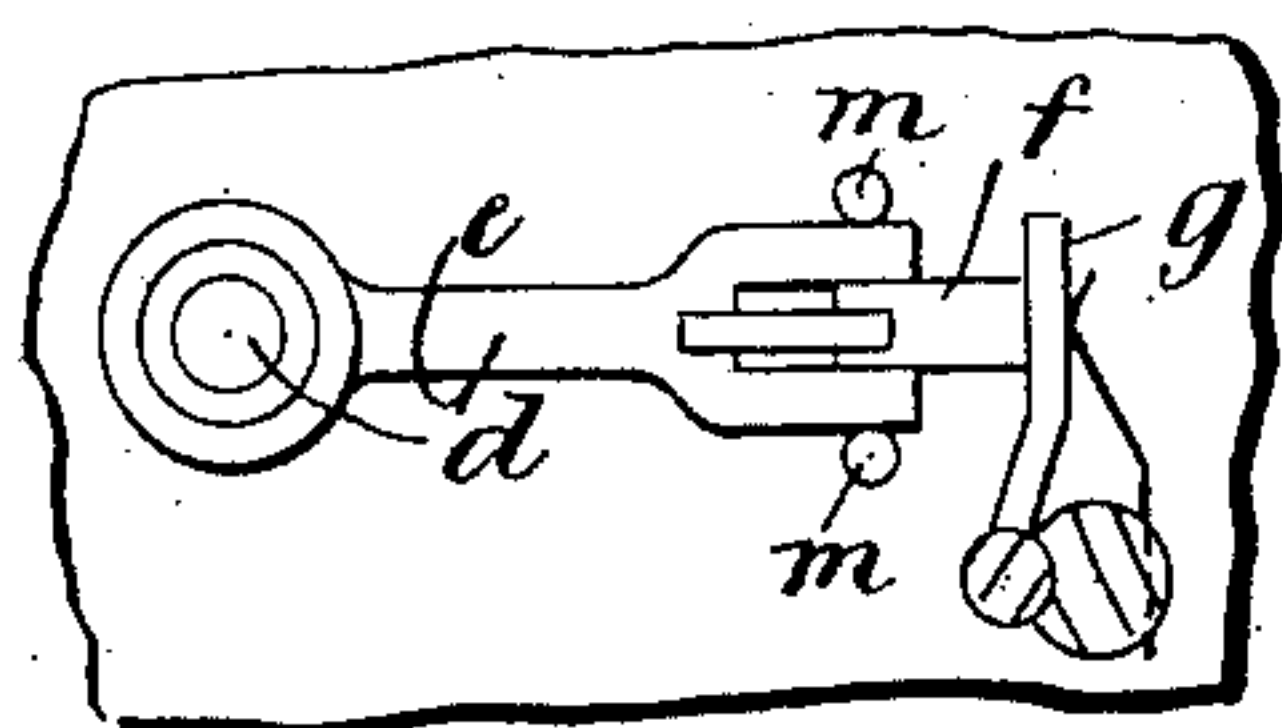


Fig. 2.

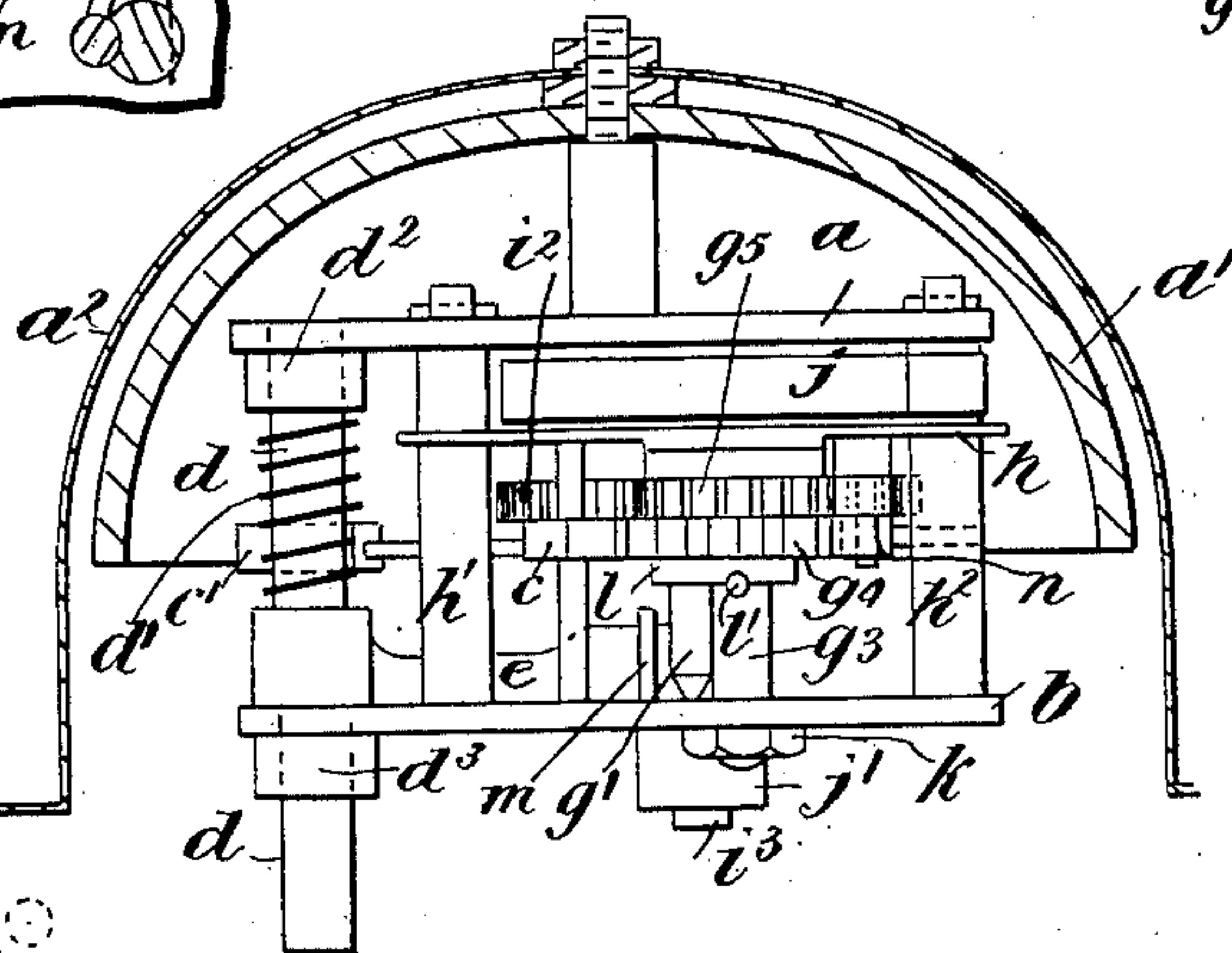


Fig. 4.

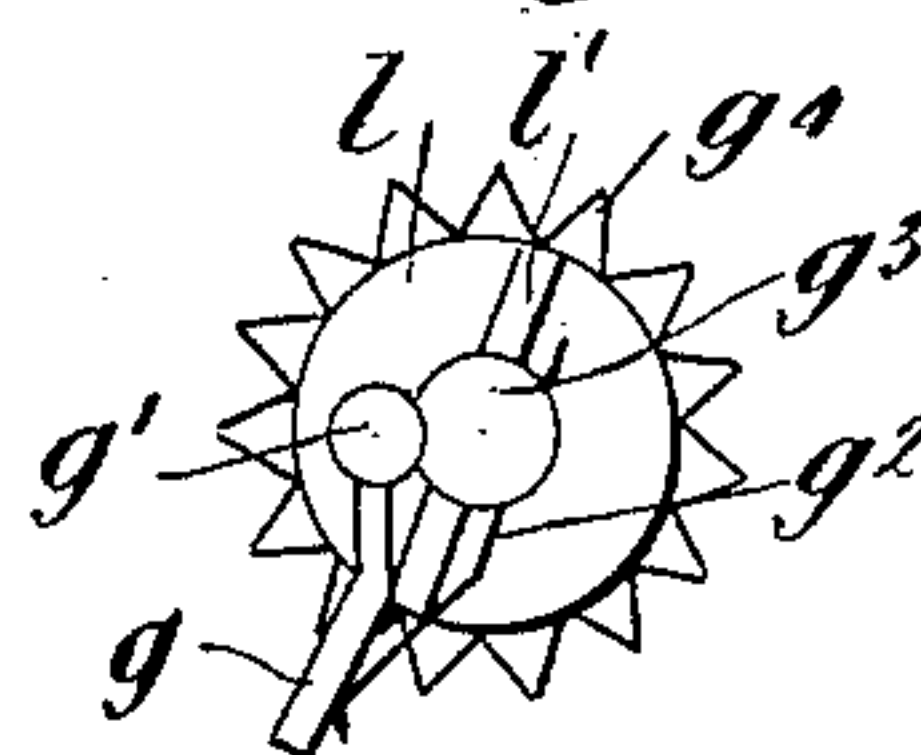


Fig. 7.

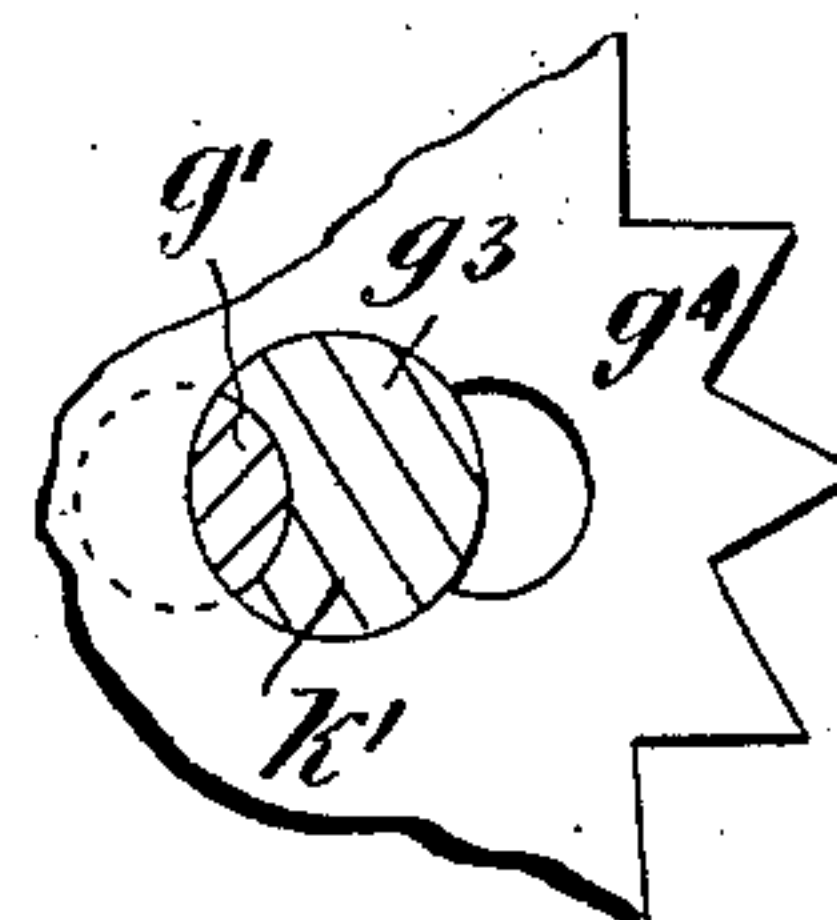


Fig. 8.

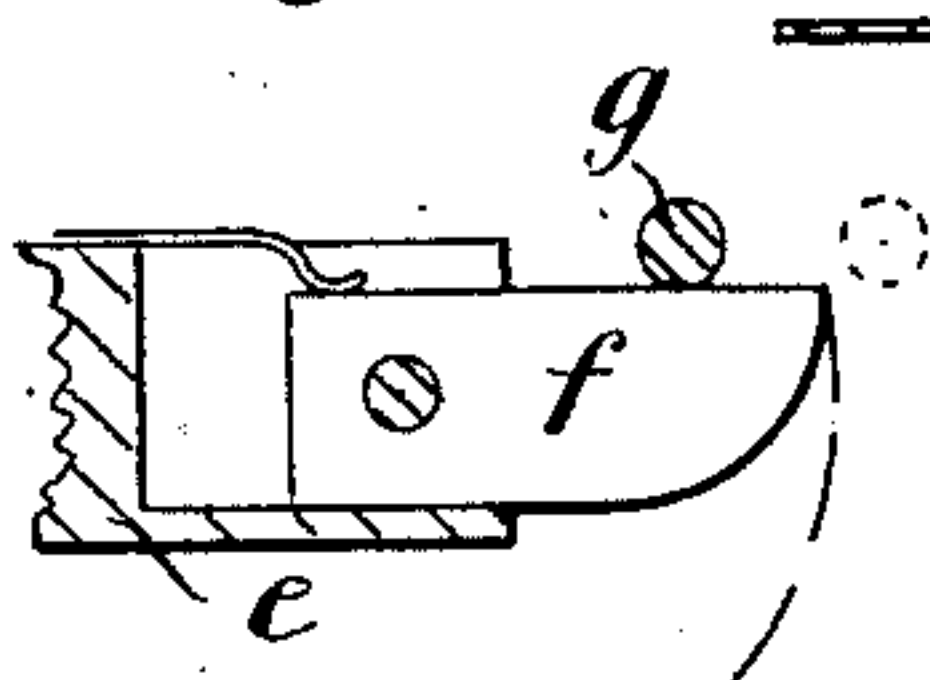
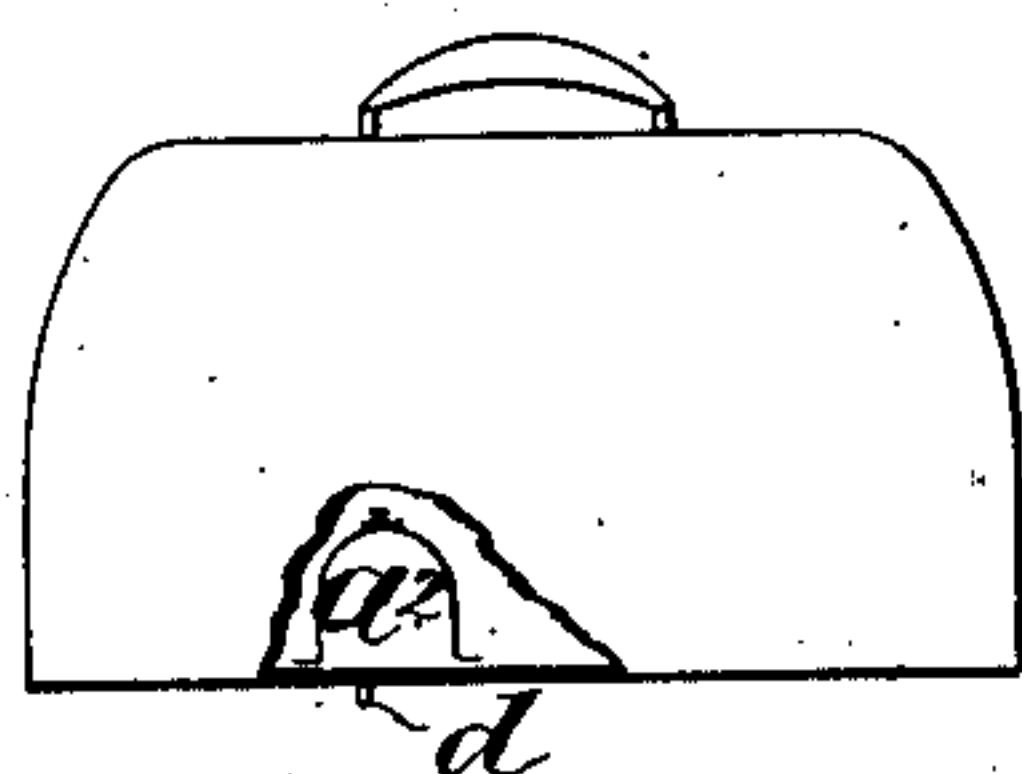


Fig. 9.



Witnesses.

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UNITED STATES PATENT OFFICE.

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ALARM FOR USE IN CONNECTION WITH BAGS AND THE LIKE.

No. 826,644.

Specification of Letters Patent.

Patented July 24, 1906.

Application filed August 15, 1905. Serial No. 274,349.

To all whom it may concern:

Be it known that I, HARRIS ABRAHAM, a subject of the King of Great Britain, residing at 69 Victoria Park road, London, England, have invented certain new and useful Improvements in Improved Alarms for Use in Connection with Bags and the Like, of which the following is a specification.

This invention relates to an improved alarm for use in connection with bags and the like; and it has for its object to provide a simple and effective means whereby audible warning may be given of the unauthorized moving of the bag or the like to which the said device is applied.

I am aware that previous attempts have been made to produce a device for the purpose above specified, and I therefore make no broad claim to the combination of an alarm with a bag or the like, and there are objectionable characteristics in such devices—for example, the continuous ringing of the alarm when the bag is moved and the means whereby the said alarm is thrown out of action when so desired. The present invention provides an alarm in which the ringing of the bell is intermittent, the said bell ringing only for a comparatively short period when the bag or the like is moved.

The invention comprehends a spring and escapement of any well-known form for sounding the bell and a rod projecting through bottom of the bag, the movement downward of which as the bag is raised effects the release of operating mechanism for the bell-alarm.

An embodiment of the invention is illustrated in the drawings hereto.

An arm upon the spindle permits of its being rotated, the rotation being effected by means of a spring-pawl upon the end of an arm secured to the rod passing through the bottom of the bag. The pawl is so arranged that as the rod is moved upward it yields and the arm is not moved. On the downward movement of the arm the pawl is rigid and pushes the arm to one side. The arm lies in a plane above that of the pawl when in its lowest position. The pin-carrying the escapement-wheel and pinion is enlarged at its upper end, being channeled to receive the spindle. A semicircular recess is formed in the bore of the escapement and pinion, the two apertures being in alinement, the spindle passing therethrough. It is evident so long as the curved outer surface of the spindle en-

gages the recess that the motion of the parts is checked. The partial rotation of the spindle removes the curved surface from the recess when the parts are free to rotate under the action of the driving-spring, the motion continuing until the circular surface of the spindle again under the action of its spring engages the recess. By this means the alarm is intermittently actuated for a short period each time the bag or the like is raised.

In order that the invention may be the better understood, drawings are appended, in which—

Figure 1 is a plan of the top of the device with the upper plate, bell, and coverer removed. Fig. 2 is a side elevation. Fig. 3 is a sectional plan showing the arrangement of the parts for effecting the release of the escapement. Fig. 4 is a plan of the under side of the escapement-wheel and releasing-spindle. Fig. 5 is a longitudinal section of the parts shown in Fig. 4. Fig. 6 is a side view of the releasing-spindle. Fig. 7 is an enlarged horizontal section of the escape-wheel, showing approximately the position of the parts during its rotation. Fig. 8 is an enlarged sectional view of the end of the arm for effecting the release of the escape-wheel. Fig. 9 is a sectional view of a bag to which the invention has been applied.

Referring to the accompanying drawings, *a* and *b* indicate, respectively, the top and bottom plate of the movement, to the upper of which is secured the gong *a'* and outer case *a*², (shown in dotted lines in Fig. 2,) and by means of which case the device may be secured to the bottom of the bag. The operating mechanism comprises a spring-driven escapement of any convenient form, the pallet of which, *c*, is secured to the hammer *c'* for the gong *a'*.

d indicates a vertical rod under the influence of a spring *d'*, and for which rod guides *d*² *d*³ are provided upon the upper and lower plates *a* and *b*. The rod passes through and projects beyond the bottom of the bag when the said bag is being carried, and when in this position an arm *e* secured thereto rests upon the upper surface of the lower plate *b*. The arm *e* at its outer end is forked, as shown in Figs. 3 and 8, and carries a spring-pawl *f*, which pawl upon the upward movement of the arm comes into contact with a second arm *g*, hereinafter more fully described. The pawl *f* will yield to the resistance offered by arm *g* during its upward movement. Upon the

downward movement of arm *e* the rounded under surface of pawl *f* comes into contact with the arm *g*, and the pawl being rigid to pressure applied in an upward direction the said arm *g* is moved to one side, as shown in Fig. 8. The arm *g* is secured to a vertical spindle *g'*, and against which arm bears a spring *g²*, secured to the pin *g³*, carrying the escapement-wheel *g⁴* and pinion *g⁵*. The upper end of the pin *g³* is rigidly secured to the plate *h*, carried by the distance-pins *h'* *h²*. The spindle *g'* is cut away, as shown at *h³*, Fig. 6, the length of the opening thus formed being somewhat in excess of the combined thickness of the escapement-wheel *g⁴* and the pinion *g⁵* secured thereto, and which pinion is operated by the spring-driven wheel *i²*, secured to the spindle *i³*, upon the lower end of which is provided a square for winding-spring *j*. A sleeve *j'* is formed upon the lower plate, which sleeve projects through the bottom of the bag or the like and within which is disposed the squared lower end of spindle *i³*. The lower end of the pin *g³* passes through the lower plate and is secured by means of a nut *k*. The upper end of the pin *g³* is enlarged in diameter, as shown at *k'*, Figs. 5 and 7, and upon this enlarged portion are freely mounted the wheels *g⁴* *g⁵*. The side of the pin is channeled to receive the spindle *g'*, which passes through a semicircular aperture formed in the bore of the wheels. The wheels are secured in position by means of a washer *l* and pin *l'* upon pin *g³*.

By means of the arrangement above described it will be seen that so long as the bag or the like is resting upon the ground and the rod *d* is held in its raised position the pawl *f*, as aforesaid, passes freely over the arm *g* during the upward movement of the rod *d*. The action of the apparatus is as follows: When the bag or the like is raised from the ground, as shown in Fig. 9, the rod *d* under the action of its spring descends and the pawl *f* pushes the arm *g* to one side against the action of the spring *g²*, rotating the spindle and causing the circular portion thereof in engagement with the semicircular apertures of the escapement-wheel and pinion to be withdrawn therefrom, the opening in said spindle permitting the free rotation of the wheels aforesaid. The movement of the wheels continues until the recesses therein again reach the spindle *g'*, when the actuating-spring therefor rotates same and causes it to engage the said recesses, checking any fur-

ther movement until the bag has been again placed on the ground and raised.

To prevent the displacement of the arm *e*, guide-pins *m* are provided. A click *n* is provided to prevent the backward movement of the escapement-wheel.

It will be understood from the foregoing description that the escapement-wheel *g⁴* in rotating under the driving force of the spring oscillates the pallet *c*, which in turn operates the bell-hammer to sound the alarm.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In an alarm for bags or the like, the combination with a bag, of a spring-driven escapement, an alarm operated by said escapement, a vertical spring-governed rod projecting through the bottom of the bag, an arm carried by the rod, a spring-pawl carried by the arm and adapted to yield to pressure in one direction only, a locking device operated by the downward movement of the pawl, said locking device operating to free the escapement and sound the alarm.

2. In an alarm for the purpose specified, comprising a spring-driven alarm, a vertical rod, a spring for governing said rod, an arm upon said rod carrying a spring-pawl, a spindle, a bell-hammer, a pinion and escapement wheel operating the bell-hammer, the pinion being provided with a recess in its bore, said spindle being provided with a surface adapted to engage the recess, a spring-governed arm upon said spindle designed to be engaged by the pawl and rotate the spindle to withdraw the engaged surface from its recess in the bore of the pinion.

3. In an alarm for the purpose specified, the combination with a driven pinion having a recess therein, of a train of gearing, a bell-hammer operated by said train of gearing, a vertical spindle provided with a surface engaging said recess, an escape-wheel, an arm mounted upon said spindle and a spring operating on said arm, a rod, a spring governing said rod, and a pawl carried by said rod, the engagement of which with the arm causes the spindle to rotate and free the escapement.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

HARRIS ABRAHAMAS.

Witnesses:

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LESLIE ROBERTS.