

[54] **DEVICE FOR DEPOSITING MONEY AND VALUABLE OBJECTS**

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[22] Filed: **Aug. 18, 1971**

[21] Appl. No.: **172,712**

[30] **Foreign Application Priority Data**

Aug. 18, 1970 Netherlands 7012148

[52] U.S. Cl. **109/38, 109/66, 232/44**

[51] Int. Cl. **E05g 1/00**

[58] Field of Search 109/38, 55, 66, 58,
109/2; 232/44, 55, 57.5, 43.1, 43.3; 194/1 E,
1 K, 97 R

[56]

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Primary Examiner—Dennis L. Taylor

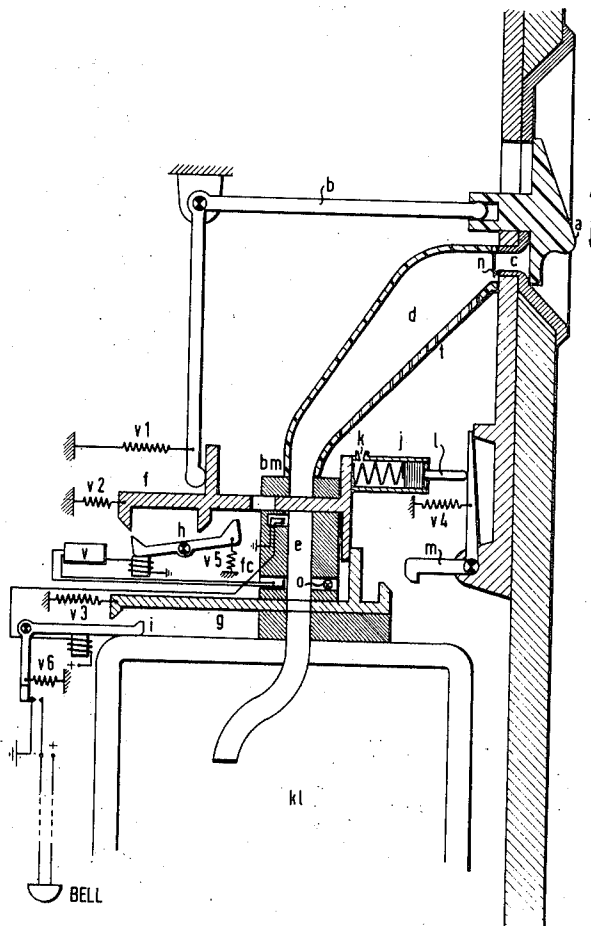
Attorney—Brenner, O'Brien & Guay

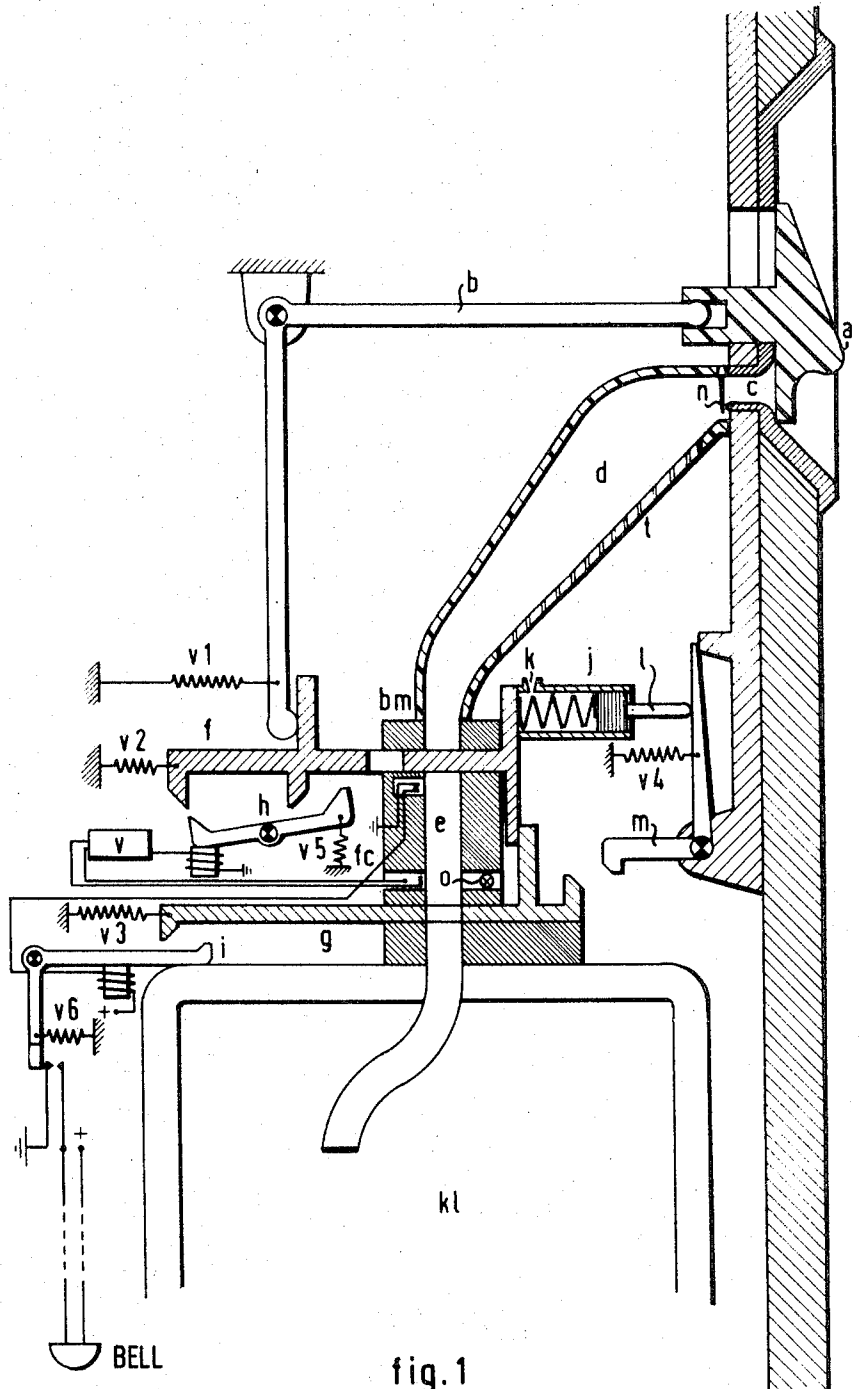
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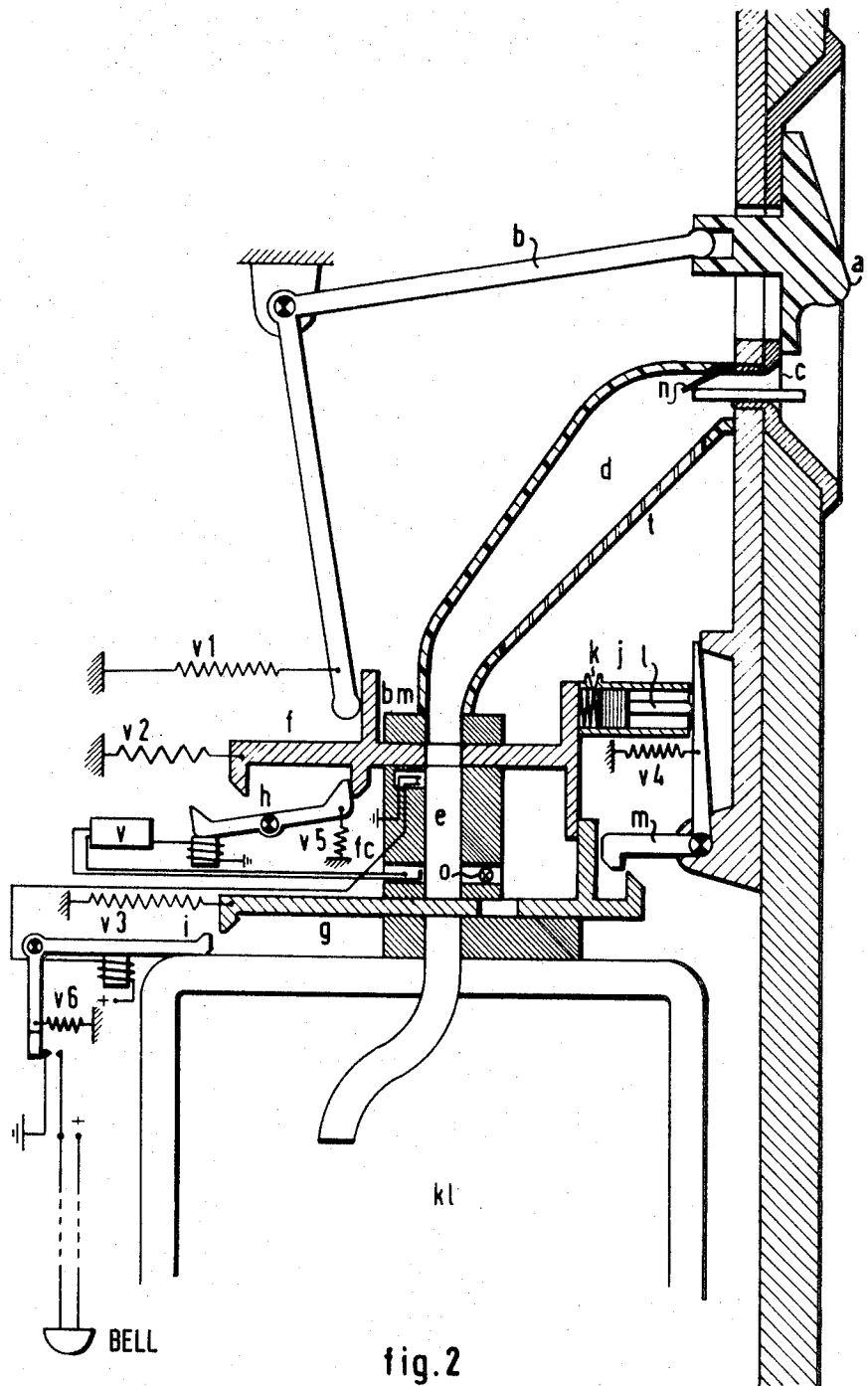
ABSTRACT

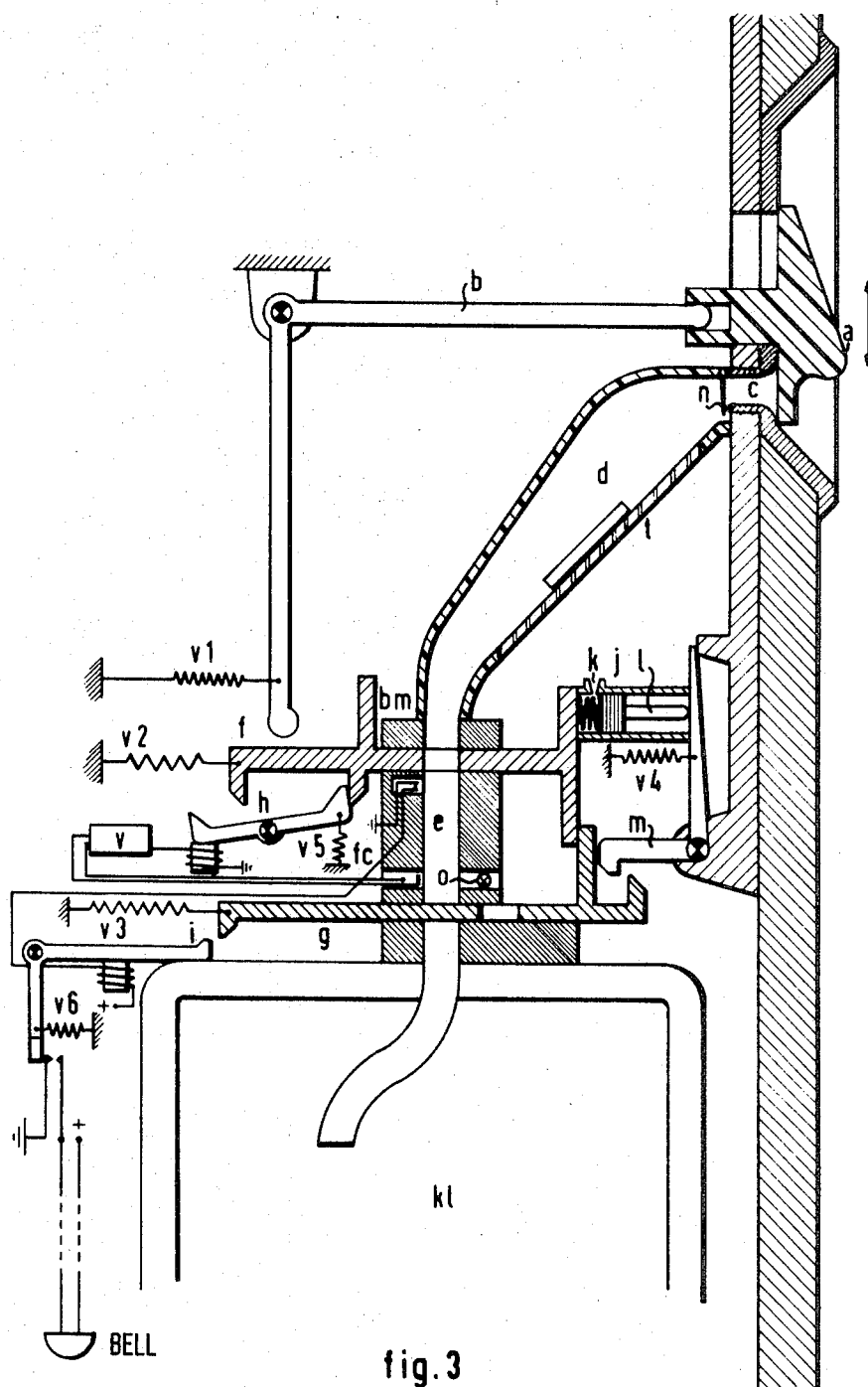
A deposit box, the entrance of which comprises means to ensure that only the desired objects can reach the box in the desired state and that inserted objects that may lead to damage cannot penetrate into the box.

5 Claims, 5 Drawing Figures









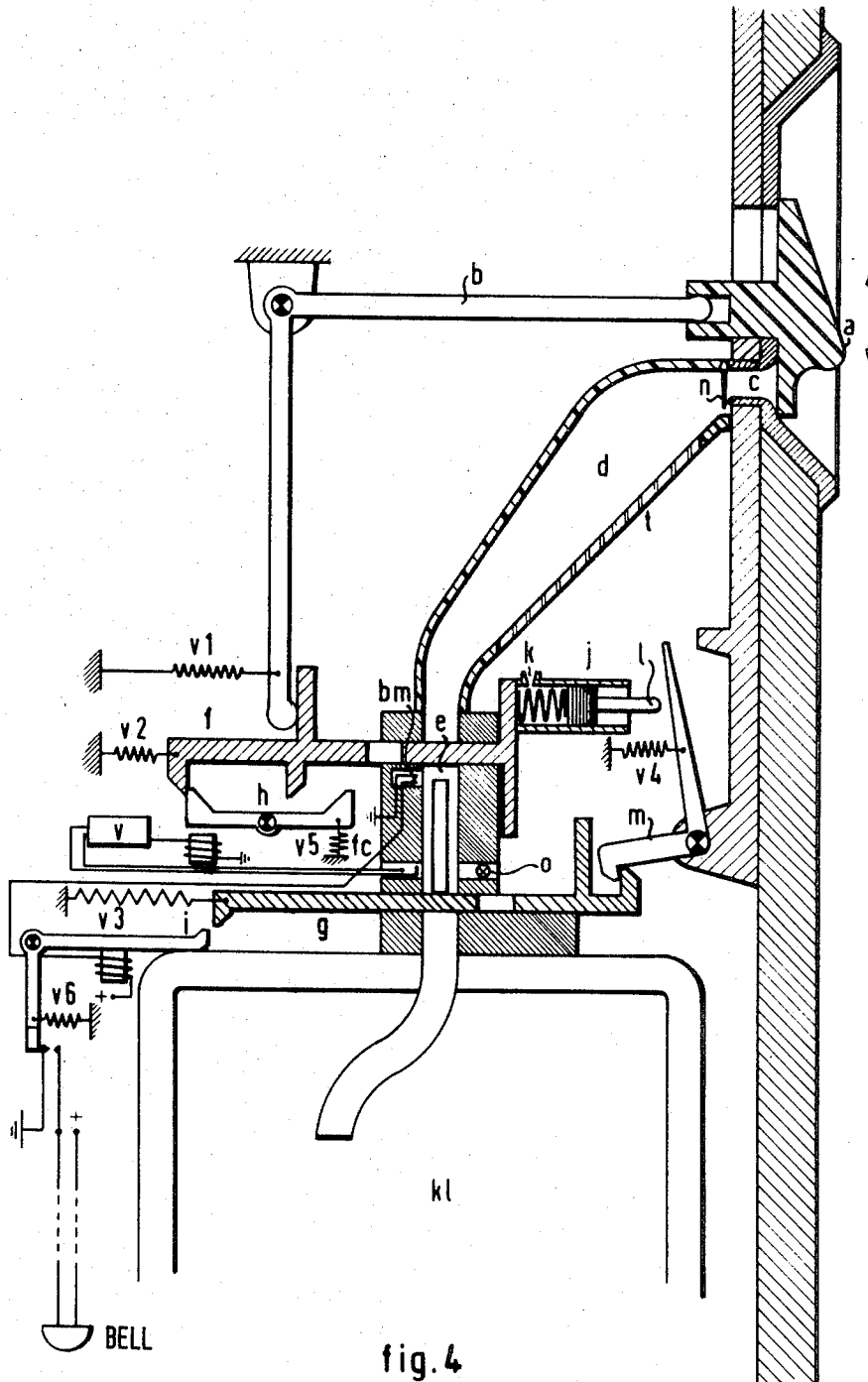
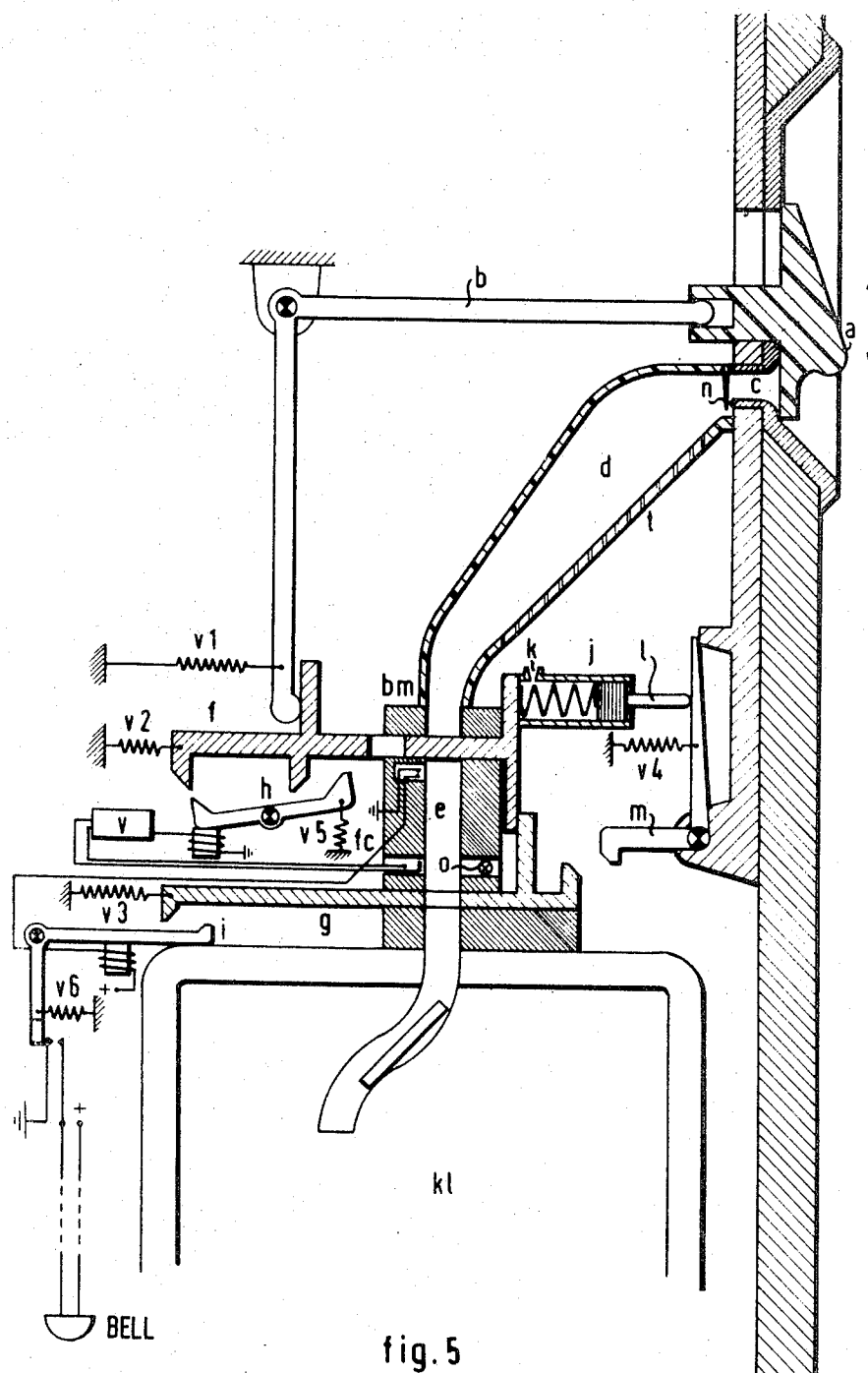


fig. 4



DEVICE FOR DEPOSITING MONEY AND VALUABLE OBJECTS

The invention relates to a device for depositing money or valuable objects and the like into a space, such as a safe, wherein money or other valuable objects can be stored by anybody at any time, so as to safeguard these objects against undesirable use. These safes frequently occur in the form of so-called night safes. In these known, frequently used safes the inserted object is directly dropped into the safe. If for a criminal or wanton reason a liquid or a burning object would be inserted, there is a possibility that the contents of the safe will be destroyed.

The structure according to the invention is such that the entrance to the device comprises means to ensure that only the desired objects can reach this space in the desired state and that inserted objects that may lead to damage cannot penetrate into the space.

Furthermore, the structure according to the invention is such that the means comprise a first feed path to the space, which feed path includes provisions, such as lateral openings or bars, so that undesirable matter, such as liquids or sand and the like, are diverted so as to prevent them from reaching the entrance of the safeguarding space, and that the means comprise a second feed path contiguous to the first one and adapted to be separated therefrom, which second feed path includes provisions for guarding the temperature and for examining the temperature of the objects, which means release the entrance to the safeguarding space when normal temperatures are detected and block the entrance to the space and give an alarm when deviating temperatures are detected, the entrance being released upon restoration of the normal temperature. As stated above, the structure according to the invention ensures that the inserted object will never directly reach the safe but that it is guided through a barred guide chute (first feed path) to an "examination chamber" (second feed path). An inserted substance, such as liquid or sand and the like, however, will not reach this chamber, as the liquid, sand and the like will drain off through the bars before reaching the examination chamber.

This examination chamber is an air-tight space sealed by a cover and a bottom. In order to clear the entrance to the examination chamber as soon as an object is inserted, the cover is removed at that movement. As soon as the inserted object has arrived in the examination chamber, which can be detected by means of a photocell, the cover will seal off the examination chamber. At that moment a time switch with time constant, for instance in the form of a piston with piston tube, is actuated, which permits the bottom of the examination chamber to be slid away after a predetermined, adjustable period of time, as a result of which the contents of the examination chamber drops into the safe.

When the inserted objects burns or is hot, however, the bottom will remain closed. This is ensured by a fire alarm, for instance a bimetal contact, mounted in the walls of the examination chamber, which fire alarm blocks the opening of the bottom of the examination chamber by way of switching means. Only after the means according to the invention have released the path from the examination chamber to the safe and the deposit into the safe has taken place, consequently, the examination chamber is empty, the entrance is released for the insertion of a new object.

The invention will be elucidated hereinafter with reference to the drawings showing the structure in detail: FIGS. 1-5 are elevational sectional views of an embodiment of the invention:

FIG. 1 shows the device in rest position with the examination chamber with closed entrance and open exit;

FIG. 2 shows the device with the entrance of the examination chamber open and its exit closed at insertion of an object.

FIG. 3 shows the device thereafter with the object sliding down the chute.

FIG. 4 shows the device after the object has been received in the examination chamber, its entrance and exit closed.

FIG. 5 shows the device returned to its rest position, the object being delivered to the safe.

FIG. 1: in the rest position a slide *a* is maintained in the lowermost position by means of a spring *v1* and a crank lever *b* so as to seal off the insert opening *c*. The so-called examination chamber *e* is closed at the top by the slide *f* which is pulled to the left by a spring *v2*. As spring *v3* does the same to slide *g*, the exit of the examination chamber to the safe is open.

A lamp *o* with photocell *fc* mounted in the wall of the examination chamber controls an amplifier *v*, as a result of which a yoke *h* remains in the position shown in the drawing. Control means *l* of time switch with time constant *j* has its maximal spring, as a result of which the crank lever *m* is urged in the position shown in the drawing against the spring action of *v4*.

FIG. 2: when an object is to be inserted, the slide *a* is raised so as to clear entrance *c*. A dependent protective flap *n* can be pushed back by the inserted object. When the slide *a* is raised, the crank lever *b* simultaneously moves slide *f* to the right, as a result of which a time switch with time constant *j*, the time of which can be adjusted by a regulator *k*, is fully compressed. Slide *g* is entrained by slide *f*. In this situation the entrance to the examination chamber is open and the exit of this examination chamber is closed. The energized yoke *h* ensures that the entrance of the examination chamber remains open.

FIG. 3: after an object has been inserted and the slide *a* is returned to the closed position by means of *v1* and crank lever *b*, the other members of the safeguarding device remain in the position shown in FIG. 2.

FIG. 4: as soon as the inserted object is detected in the examination chamber *a* by photocell *fc* as the light beam on the photocell is interrupted by the inserted object, *h* is de-energized and is tipped by spring *v5*, as a result of which the slide *f* can be pulled to the left by spring *v2* so as to seal off the entrance of the examination chamber. As yoke *h* blocks slide *f* in this position, no other object can be inserted since also slide *a* is blocked. This blocking takes place also if due to failure of the operating voltage or due to a faulty lamp *o* the release of the entrance to the examination chamber by slide *f* is prevented and the slide *a* is blocked in the closed position.

FIG. 5: in this situation the time constant *j* slowly releases control means *l* to its maximal spring. After the present period of time crank lever *m* will be urged backwards so as to enable spring *v3* to pull slide *g* to the left, as a result of which the exit of examination chamber *e* opens and the inserted object can drop into the safe *k1*. However, this opening of the exit of the examination chamber can yet be prevented as, if a hot object

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has been inserted, a bimetal break contact *bm* is actuated so as to enable crank lever *i* spring biased by *v6* to block the slide *g*. After restoration of the normal temperature of the inserted object, crank lever *i* can yet enable slide *g* to open the exit of the examination chamber to safe *k1*.

I claim

1. A device for depositing money or valuable objects and the like into a space for safeguarding these objects which comprises a first feed path to said space, said first feed path including provisions for diverting undesirable matter, such as liquids or sand and the like, so as to prevent said matter from reaching the entrance of said safeguarding space, a second feed path contiguous to the first one and adapted to be separated therefrom, said second feed path including means for guarding the temperature and for examining the temperature of the objects, said means releasing the entrance to said safeguarding space when normal temperatures are detected and blocking the entrance to said space and giving an alarm when deviating temperatures are detected, said entrance being released again upon restoration of the normal temperature.

2. A device according to claim 1, characterized in that prior to inserting an object a slide (*a*) must be raised against a spring tension (*v1*) so as to clear the insert opening (*c*), with said slide (*a*) being coupled a first slide (*f*) sealing off the entrance to the examination chamber in the rest position and clearing said entrance against a spring tension (*v2*) when said slide (*a*) is raised, and a second slide (*g*) leaving the exit of said examination chamber open in the rest position and sealing off said exit against spring tension (*v3*) when slide (*a*) is raised, a photocell-lamp combination mounted in said examination chamber realizing the energizing of a first yoke (*h*), said yoke cooperating with said first slide (*f*) of said entrance of said examination chamber and blocking said slide in the open position when slide (*a*) is raised, a time switch (*j*) connected to said first slide (*f*) and including a built-in time constant being actuated, said switch retaining a crank lever (*m*) against a spring tension (*v4*), said crank lever cooperating with said second slide (*g*) of the exit of said examination chamber.

3. A device according to claim 2, characterized in that after an object has been inserted the slide (*a*) is re-

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leased to close the opening (*c*) under the influence of the spring pressure (*v1*) and, after the object has arrived in said examination chamber and the light beam on said photocell is interrupted, said yoke (*h*) is de-energized, as a result of which the blocking of said first slide (*f*) in the open position is cancelled and said slide (*f*) seals off the feed opening by the spring tension (*v2*), after which said yoke (*h*) blocks said slide (*f*) in the closed position under the influence of a spring tension (*v5*), in this position said slide (*f*) blocking said slide (*a*) in the closed position, said slide (*f*) entraining said time switch, as a result of which the crank lever (*m*) blocks the slide (*g*) in the closed position under the influence of the spring tension (*v4*), after which the object is examined in the closed examination chamber as to its temperature and in the case of a positive result (normal temperature) a temperature-responsive circuit remains inactivated while said time switch slowly expels a control means (*1*), after expiration of the delay time said switch urging said crank lever (*m*) in the rest position against the spring tension (*v4*) so as to cancel the blocking of said slide (*g*) in the closed position and said slide (*g*) releasing the exit of said examination chamber under the influence of the spring tension (*v3*), after which said object can leave said examination chamber.

4. A device according to claim 3, characterized in that in the case of a negative result of the temperature examination (too high a temperature) a current circuit is opened by means of a temperature-responsive element, as a result of which a second yoke (*i*) is de-energized and said yoke blocks said slide (*g*) in the closed position under the influence of a spring tension (*v6*), after restoration of the normal temperature of the object in said examination chamber, which is closed on both sides, said current circuit being closed again so as to energize said yoke (*i*) and said yoke is withdrawn against the spring tension (*v6*) and the blocking of said slide (*g*) in the closed position is cancelled.

5. A device according to claim 3, characterized in that due to failure of the operating voltage and/or due to failure of the lamp emitting the light beam on said photocell, the release of said entrance to said examination chamber is prevented by slide (*f*) and said slide (*a*) is blocked in the closed position.

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