

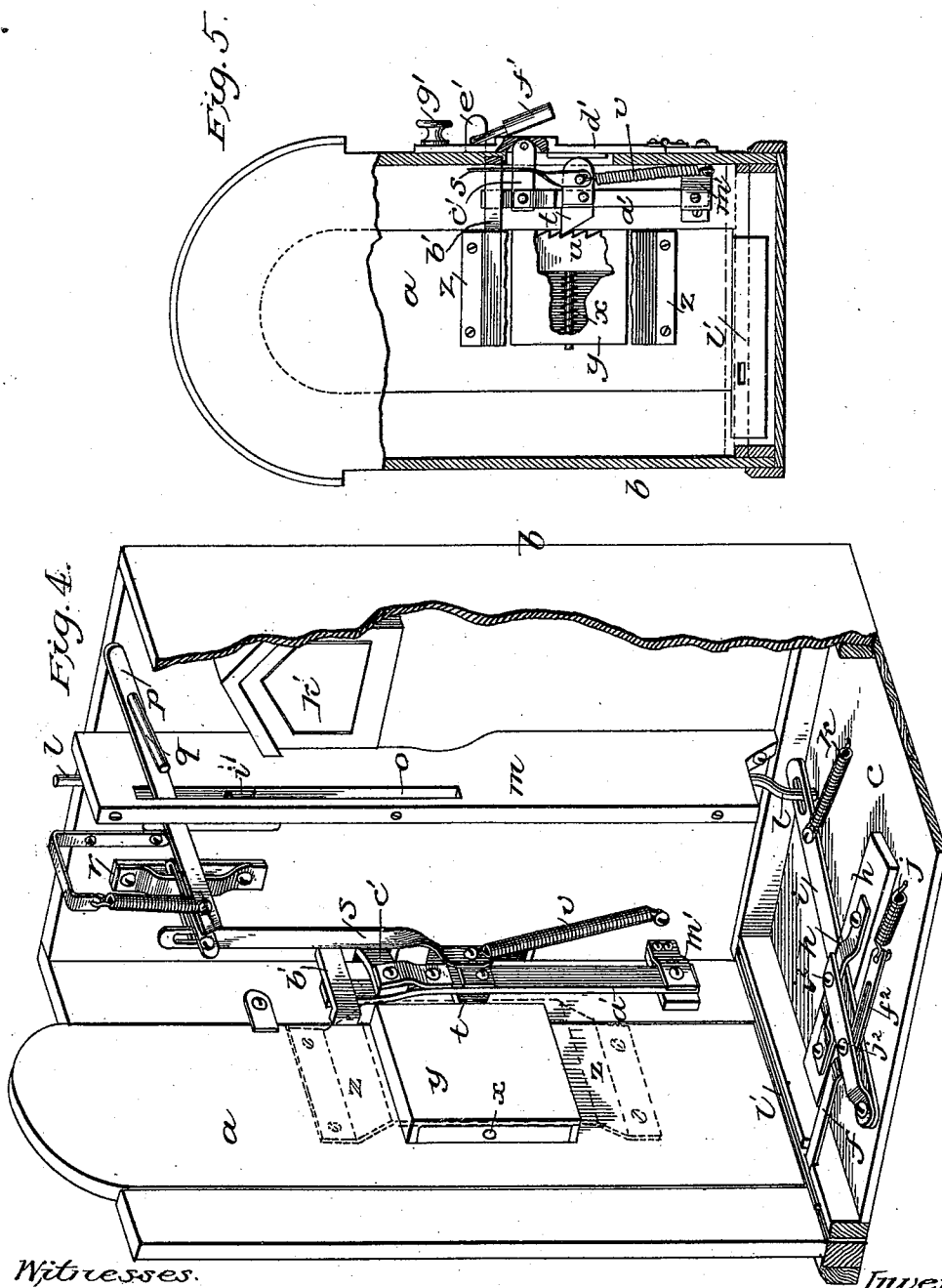
(No Model.)

2 Sheets—Sheet 2.

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FIRE ALARM HUT.

No. 530,808.

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Witnesses.

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HENRI TRUDEL, OF MONTREAL, CANADA.

FIRE-ALARM HUT.

SPECIFICATION forming part of Letters Patent No. 530,808, dated December 11, 1894.

Application filed September 17, 1894. Serial No. 523,242. (No model.)

To all whom it may concern:

Be it known that I, HENRI TRUDEL, mechanical engineer, a citizen of Canada, residing in the city of Montreal, Province of Quebec, Canada, have invented a new and useful Fire-Alarm Hut, whereby whoever rings an electric fire-alarm remains closed up in the hut; the object of said invention being to reduce the number of false alarms, said alarm-hut being composed of a hut or cell of suitable form kept closed through a mechanical combination of elements, of which the following is a specification.

My invention relates to a hut or cell provided with a peculiar mechanism to retain the door thereof closed against any person therein who would ring a fire alarm, until somebody possessing a proper key releases the locking device and opens the door to ascertain from said person where the fire is located.

My invention will first be described in connection with the accompanying drawings and then be pointed out in the claims.

In said drawings Figure 1 represents an external elevation of a hut containing my invention. Fig. 2 is a transverse vertical section of the same showing one of the sides of the hut and parts of the mechanism of said invention. Fig. 3 is a side elevation of a vertical bracket attached to the hut and in which the main lever which operates the mechanism of said invention is permitted to move up and down. Fig. 4 is a perspective view of the interior of the hut showing the mechanism of the invention. Fig. 5 is an internal view of the front part of the hut showing a lock partly broken away on the inner face of the door, and a portion of the mechanism placed on that side of the hut. Fig. 6 is an external elevation of a portion of one of the sides of the hut showing a metal plate with a hinge at the bottom, and a staple and padlock at the top to secure the fastening latch of the door of the hut. Fig. 7 is a perspective view of an angular stop-bolt and its operating spring, to arrest the motion of the operating lever.

The mechanism which is shown at the bottom of the hut is covered with a floor or double bottom; the mechanism on the left hand wall

of the hut is covered by a partition, and the lock which contains the cogged plate on the inside face of the door of the hut is equally protected by a cover in order to exclude all access to the movable parts of said mechanism.

In said drawings *a* represents the door of the hut, and *b* are the sides of the same.

c represents the bottom of the hut upon which the first portion of the mechanism is mounted.

d is a floor or double bottom upon which the operator is admitted when it is wanted to set the mechanism of the fire alarm hut in motion, but the electrical portion of said mechanism is not shown as it forms no part of my invention.

e is the roof of the hut or cell.

f is a horizontal sliding lever which is connected through a pivot with the lower part of the door, and is provided at the opposite end with a spring *j* which has the effect of automatically closing the door of the hut. This lever is connected by means of a bolt *j*² to a horizontal lever *i* placed at a right angle above it, and this bolt *j*² is secured to the lever *i* and is received in a slot *f*² which is cut into the sliding lever *f* to permit the opening and closing of the door, but the end of the slot *f*² striking the bolt *j*² pushes the lever *i* laterally.

h is a supporting block upon which the lever *i* rests. Said lever is retained by a pivot *i*² to the block *h* upon which it has a lateral reciprocating motion.

j is the spring which, by pulling on the sliding lever *f* has the effect of automatically closing the door of the hut.

k is another spring which has one end secured to the lever *i* and is intended to bring said lever *i* back to its normal position when the door of the hut is being closed.

l is a shaft with a crank end let into a slot in the lever *i* where it can travel a short distance and receive from said lever *i* a semi-rotary lateral motion.

m is a vertical bracket to support the shaft *l* in bearings *n* attached to said bracket and also certain other pieces of the mechanism which will be hereinafter mentioned.

n are the bearings which support the shaft *l*. *o* is a vertical slot in the bracket *m* into

which a lever *p* intended to operate the locking devices, travels. Said lever when brought down into the slot *o*, sets in motion the mechanism of the alarm box *k'* the knob or hook of which it catches when being let down in the slot, and sets also in motion the other pieces of the mechanism which constitute the properly so called lock.

q is a handle attached to the end of the lever *p* to bring the same down within the slot *o*.

r is a block supporting the lever *p* where said lever is retained by a pivot and is allowed to have a semi-rotary motion.

s is a rod connecting the above described lever *p* with the bolt or latch *t* of the lock. Said bolt or latch is pivoted upon a vertical rod *a'* supported by a pivot at its lower end.

u is a cogged or toothed plate which is contained in a lock case *y* attached to the door, and into which the end of the latch enters into engagement when the lever *p* is lowered in the slot *o*.

v is a spring having one end attached to the rod *s* to bring the latch *t* back into its normal position when the door *a* of the alarm hut is open or free.

x is a spring placed in the lock case at the back of the toothed plate *u* to force it against the latch *t*.

y is the lock case containing the toothed plate *u*.

z is a covering plate placed as a protection over the lock case *y* in order that the pieces which it contains may not be reached.

a' is the rod pivoted at its lower extremity and which moves back and forward in a guide bar *b'* at the upper end. Said bar guides the motion of the upper part of the rod *a'*.

c' is a strap pivoted to the rod *a'* above the latch *t*, and which connects said rod *a'* with a metal plate *d'* placed on the outer face of one of the sides of the fire alarm hut, the object of said plate *d'* being to allow the latch *t* to be set free again and out of the cogs of the toothed plate *u* when it is necessary to open the door *a* of the hut. The above mentioned strap *c'* is jointed at both ends.

d' is a plate placed on the outer face of the cell and contains a mortise which has a cap at the end of the strap *c'* and said plate *d'* is moreover jointed at its lower extremity.

e' is a staple into which the hasp of a padlock is adapted to be received in order to hold the plate *d'* firmly until somebody, by pulling the plate backward, lets free the latch *t* which was in engagement with the cogged plate *u*. The plate *d'* remains locked at all times except when it is desirable to disengage the latch *t* as hereinabove stated.

f is a padlock to fasten the plate *d'* when it is closed, said padlock being removed when it is desirable to let free the latch *t*.

g' is a knob which is placed on the plate *d'* to pull upon the same when it is wanted to disengage the latch *t* from the cogged plate *u*.

h' is a double flat spring placed in a slot cut at the back of the bracket *m* to press for-

ward a stop-bolt *i'*. Said stop-bolt has one of its ends passing horizontally through a mortise in the bracket *m*, the end of which crosses the slot *o* and normally prevents the letting down of the lever *p*.

j' is a cap secured to the walls of the hut over a mortise which receives the rear end of the stop *i*.

k' represents in the form of a simple block, an electric fire alarm box and its position in the cell alongside the mechanism which constitutes the present invention.

l' is a traveling blade alongside of the bottom edge of the door and through which the sliding lever *f* passes, and which follows its lateral motion; the object of this blade being to prevent the introduction under the floor *d* of anything which would obstruct the mechanism placed there and would impede its action.

m' is a guide block to which the lower part of the rod *a'* is attached by a pivot and which allows an oscillating motion of the rod *a'* itself.

n' is a double crook constituting a crank upon the rod *l* which is to push backward the stop *i'* in order to remove its obstructing end from the slot *o* and allow the lever *p* to be brought down when it is necessary to operate the entire locking device.

The object of the hereinabove described invention is to reduce as much as possible the frequency of false fire alarms by detaining in the hut by improved means the party who desires to ring such false alarms, until somebody provided with a key to open the padlock comes to the cell to ascertain by inquiring from the person therein the location of the fire. Until such moment whoever rings an alarm is necessarily detained in the hut and must justify his presence at such place when the policeman or fireman arrives to open the door of the hut.

The operation of the device is as follows: When the door *a* is partly or completely open the stop *i'* is through the action of the double spring *h'* brought forward as indicated in drawings Fig. 3, so as to project in the slot *o* in the path of the lever *p*, thereby preventing the lowering of said lever *p*; but as soon as the door *a* of the hut is completely closed by the action of the sliding lever *f* and its spring *j*, the stop *i'* is pushed backward by the action of the double crank *n* and the slot *o* is thereby free of obstruction. Then by lowering the lever *p*, the rod *s* is made to ascend and the end of the latch *t* is thrown into engagement with the toothed plate *u* which is contained in the lock case *y*. To set the latch *t* free it becomes necessary to remove the padlock *f* from the exterior, and to pull the plate *d'*, which brings with itself, through the agency of the strap *c'* the latch *t*, and the door *a* is now set free and can be pushed open.

Having now fully described my invention, I claim—

1. In a fire alarm hut the combination of its

door having a lock case *y* a plate *u* therein having a toothed edge and forced laterally by a spring, with a pivoted rod *a'*, a latch *t* pivoted to said rod, a connecting rod *s* having its lower end pivoted to the latch and a pivoted lever *q* in engagement with the upper end of said rod substantially as described.

2. In a fire alarm hut the combination of its door and its lock case having therein a plate provided with a toothed edge, a pivoted rod *a'*, a latch pivoted to said rod, a connecting rod *c'* having one end pivoted to said rod, a metal strap *d'* hinged to the outside of the hut and flexibly united to the opposite end of said connecting rod substantially as described.

3. In a fire alarm hut the combination of its door, the lock case having therein a plate provided with a toothed edge, the rod *a'*, a latch pivoted to said rod, the connecting rod *c'* having one end pivoted also to said rod and the other end to a metal plate *d'*, said plate being hinged to the outside of the hut and having a mortise in its upper portion, a staple received in said mortise, and a padlock having its hasp received in said staple substantially as described.

4. In a fire alarm hut the combination of its door, its lock case, the pivoted latch *t* in engagement with said lock case, a rod *s* having one end pivotally secured to said latch, and a

lever *p* having one end pivotally connected to the opposite end of said rod, with a yielding retained lever *i* having one end adapted to arrest the descent of the lever *p* substantially as described.

5. In a fire alarm hut the combination of its door, its lock, a pivoted latch in engagement with said lock, and the pivoted lever *p* connected to said latch, with the horizontal slotted lever *f* having one end pivoted to the bottom of the door of the hut, the pivoted lever *i* having one end connected with the slot of the lever *f* and the opposite end provided with a slot, a crank shaft *l* having one end received in said slot, and the stop bolt *i'* opposite a crank portion of said shaft substantially as described.

6. In a fire alarm hut the combination of its door, the door closing lever *f* and spring *j* having one end attached to said lever, with the blade *l'* alongside of the bottom edge of the door and having the lever *f* passing there-through substantially as described.

Signed by me this 13th day of September, 1894.

HENRI TRUDEL.

Witnesses:

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