

C. D. KUBACH.

Fire Alarm.

No. 55,957.

Patented June 26, 1866.

Fig. 1

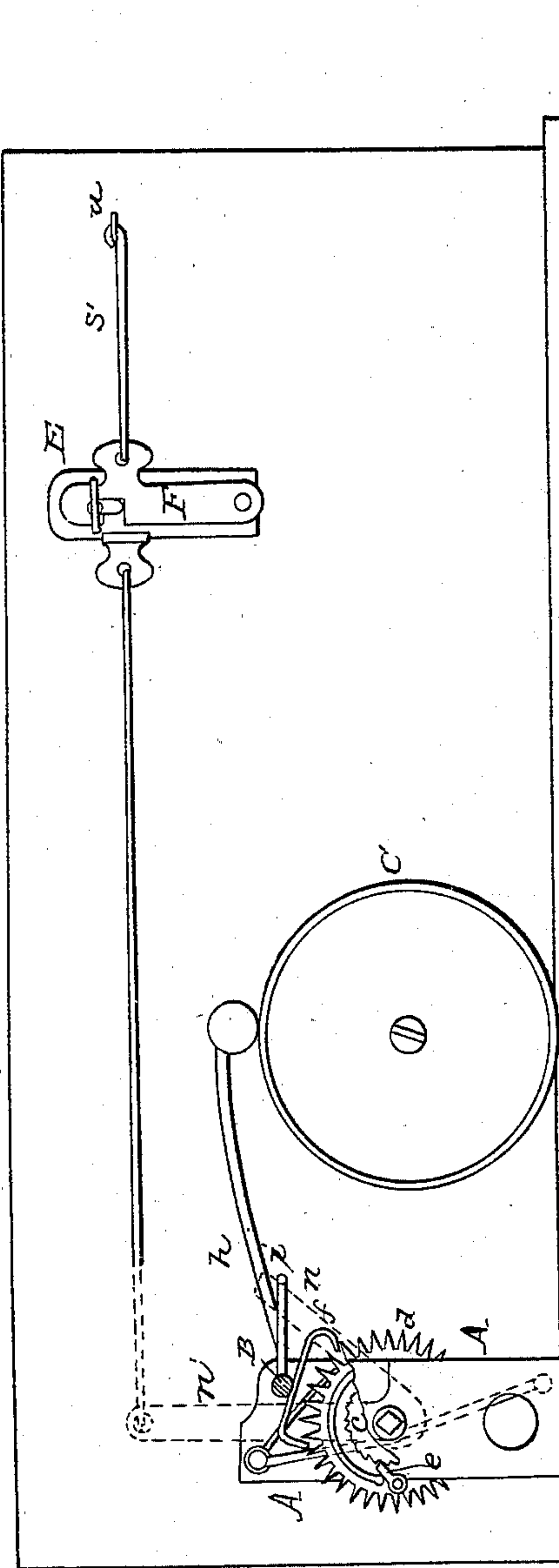


Fig. 2

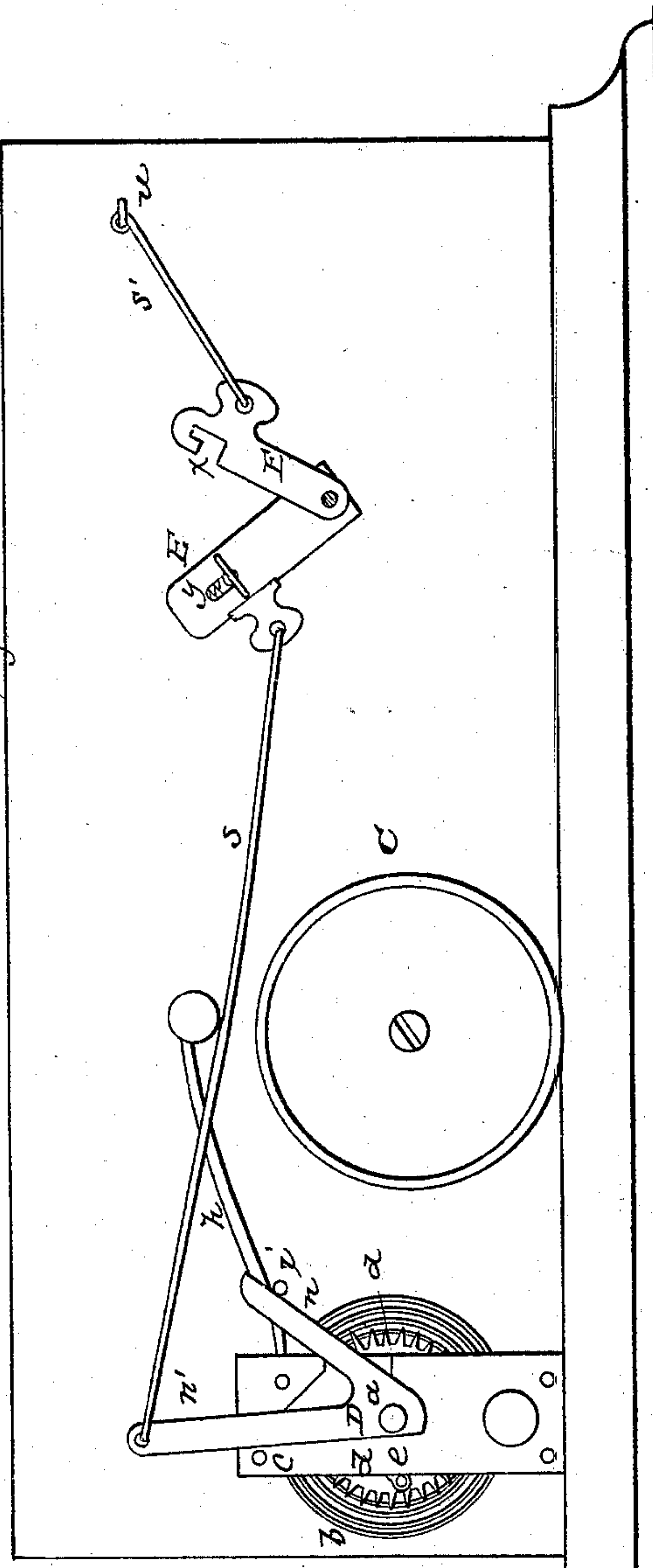
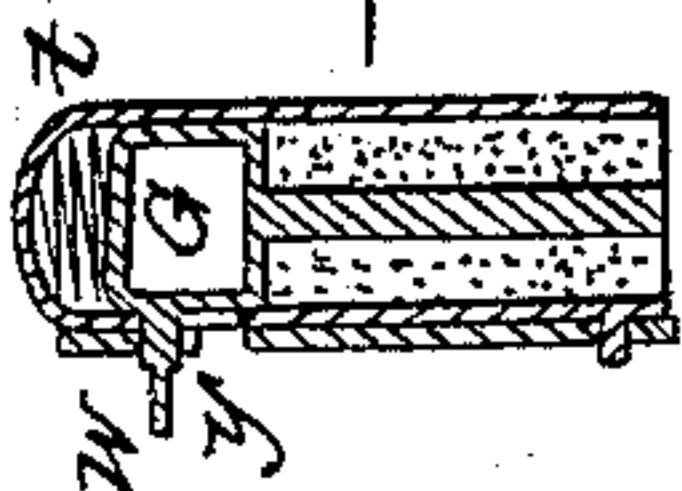


Fig. 3



WITNESSES
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UNITED STATES PATENT OFFICE.

C. D. KUBACH, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO HIMSELF
AND W. W. CLAY, OF SAME PLACE.

IMPROVED FIRE-ALARM.

Specification forming part of Letters Patent No. 55,957, dated June 26, 1866.

To all whom it may concern:

Be it known that I, C. D. KUBACH, of Philadelphia, Pennsylvania, have invented an Improvement in Fire-Alarms; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

My invention consists in the combination of a casing containing tallow or equivalent material, any suitable alarm mechanism, and certain devices, fully described hereinafter, the whole being constructed and arranged so that when the heat from a fire melts the tallow in the casing the alarm mechanism shall be caused to operate, the noise thus produced informing those within hearing of the danger.

In order to enable others skilled in the art to make and use my invention, I will now proceed to describe its construction and operation.

On reference to the accompanying drawings, which form a part of this specification, Figure 1 is a side elevation of my improved fire-alarm; Fig. 2, the same, showing the parts in different positions, and Fig. 3 a detached sectional view of part of the apparatus.

Similar letters refer to similar parts throughout the several views.

A and A' are the side pieces of a frame, in which turns a shaft, *a*, and to the latter is secured a ratchet-wheel, *c*, and also one end of a coiled spring, *b*, the opposite end of which is attached to a cross-bar, *c'*, connecting the upper ends of the side plates. On the shaft turns loosely an escapement-wheel, *d*, a spring-pawl, *e*, on which engages with the teeth of the ratchet *c*, and to the teeth of the escapement-wheel are adapted the pallets on a lever, *f*, which is secured to a shaft, B. To the shaft B are also secured two arms, *h* and *i*, and on the outer end of the former, which projects over a bell, C, is a ball, *m*.

As the devices above referred to are similar to those of an ordinary alarm, it will not be necessary to describe the same more particularly.

To the outer end of the shaft *a* is hung loosely a plate, D, from which project two arms, *n* and *n'*, the former bearing on the end of the arm *i*, and to the upper end of the latter is connected one end of a wire, *s*, the opposite end of which

is attached to a cylindrical case, E. The case E is open at the lower end, and to one side of the same is hung a plate, F, which is connected by a wire, *s'*, to a pin, *u*, and in the upper end of this plate is a slot or recess, *x*.

In the case E is a piston, G, which has a limited sliding motion in the case, a spring, *t*, situated between the top of the case and the piston, forcing the latter downward, and at one side of the piston is a pin, *w*, which projects through a slot, *y*, in the side of the case.

The wires *s* *s'* are of such a length that when the plate F is brought parallel to the case E the arm *n* of the plate D will bear on the arm *i*, and the rod *h* and ball *m* will be depressed until the latter rests on the bell C, as shown in Fig. 1.

The alarm mechanism is secured to the wall of a room near the ceiling, and the pin *u* is driven into the wall at any required distance from the alarm. The plate F is then brought parallel to the case E, and the piston is raised until the pin *w* projects into the slot *x*, as shown in Fig. 1.

The lower portion of the casing is then filled with wax, tallow, or other suitable material, which is sufficiently solid to remain in the casing and prevent the piston from descending, the plate F being thus maintained in the position to which it has been adjusted.

Should a fire occur in the room in which the alarm is placed the heat will melt the wax or tallow in the casing, so that it will no longer obstruct the movement of the piston, which will be forced down by the spring *t*.

As the piston descends the pin *w* will be moved out of the slot *x*, and the plate F will fall back to the position shown in Fig. 2, the strain being thus removed from the wire *s*, so that the arm *n* is no longer caused to bear with any considerable force on the arm *i*.

As soon as the arm *i* is released the action of the escapement-wheel on the pallets will impart a reciprocating motion to the shaft B and cause the arm *h* to vibrate, bringing the ball *m* repeatedly against the bell, the sound thus produced giving notice of the danger to those within hearing.

It will be apparent that this apparatus may be placed in any desired position, and that many different wires may be connected to one

case or to one alarm. It will also be apparent that an alarm apparatus of any desired character may be used.

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

The casing, E, with its piston G, pin *w*, and spring *t*, in combination with the slotted plate F and the within-described alarm mechanism or its equivalent, the whole being constructed

and operating substantially as and for the purpose described.

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

CHAS. D. KUBACH.

Witnesses:

CHARLES E. FOSTER,
W. J. R. DELANY.