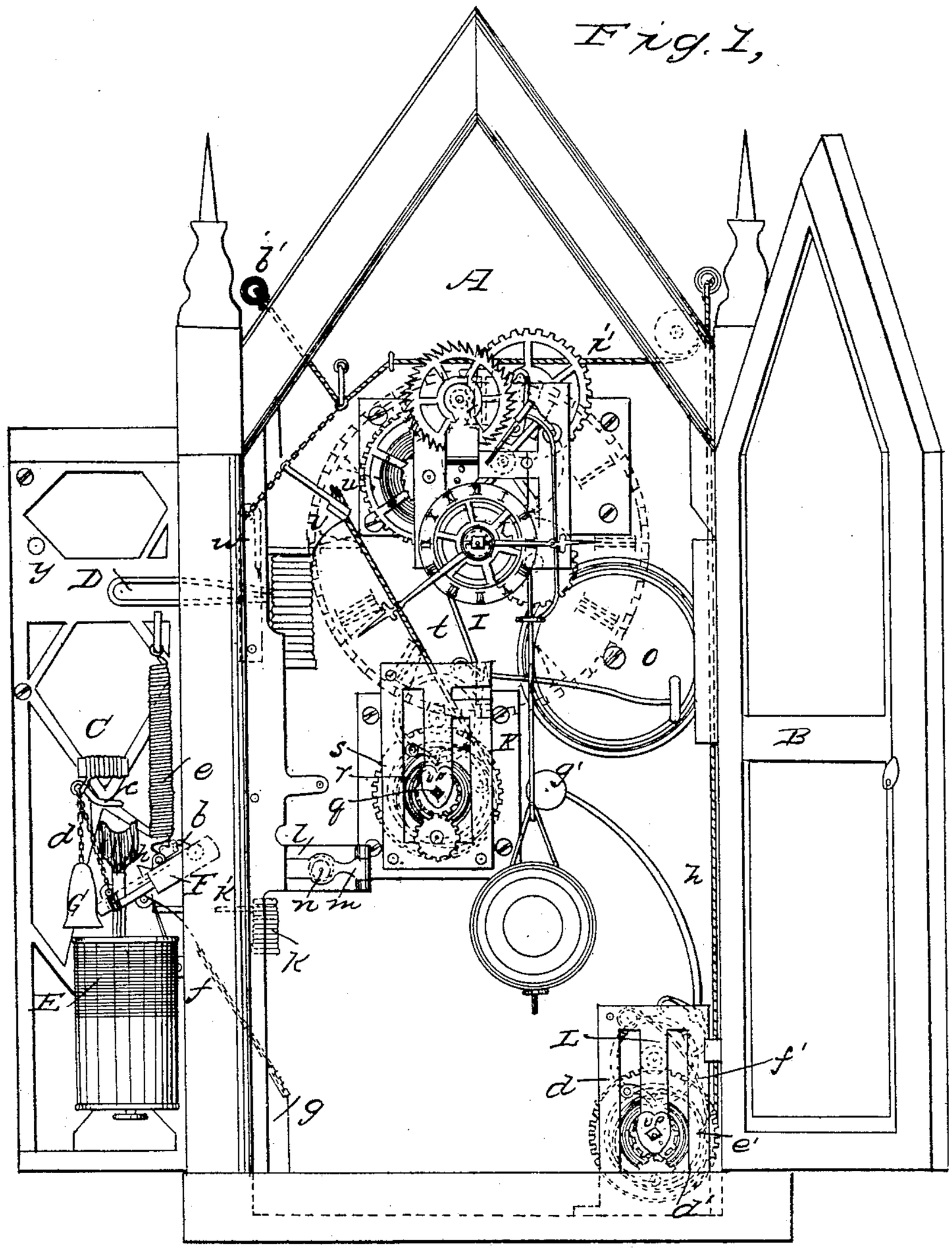
2 Sheets—Sheet 1.

G. D. SARGENT.

Time Alarm.

No. 20,852. Patented July 6, 1858.

Fig. 1,



2 Sheets—Sheet 2.

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Time Alarm.

No. 20,852. Patented July 6, 1858.

Fig. 3,

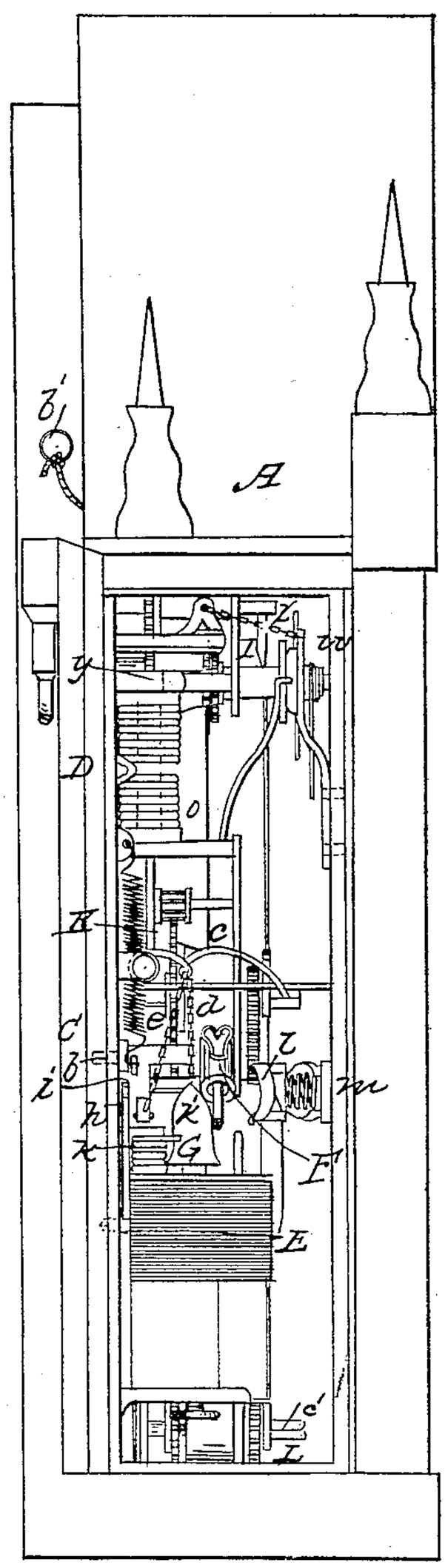

Fig. 2,

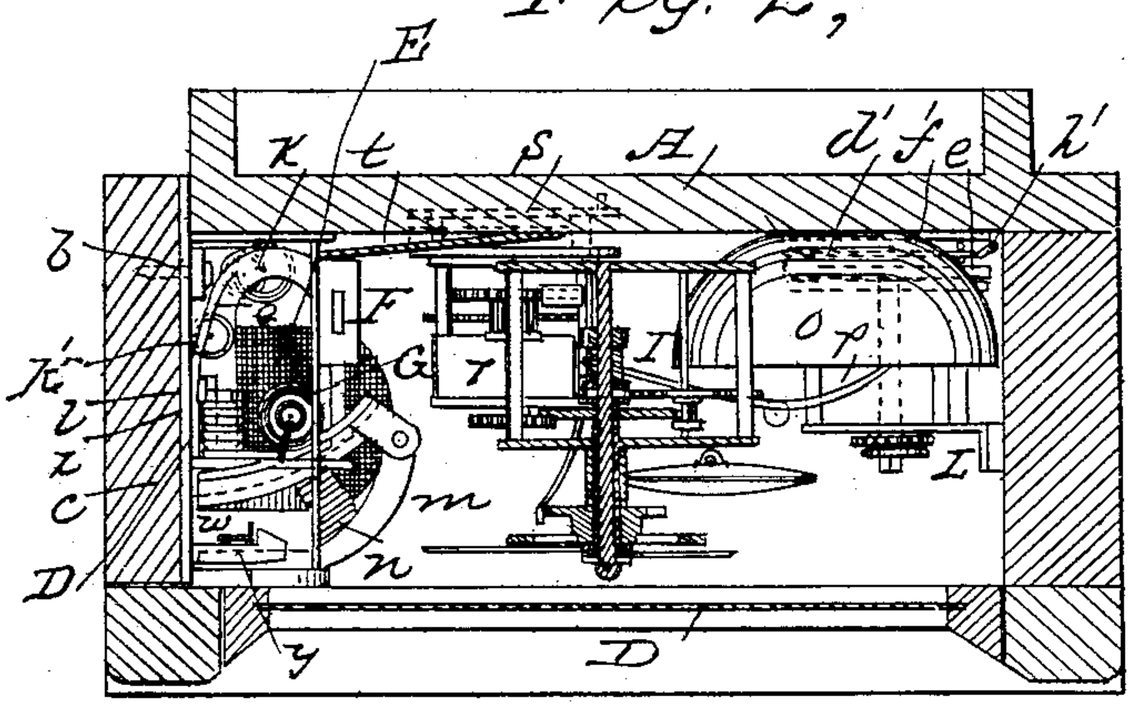

Fig. 4,

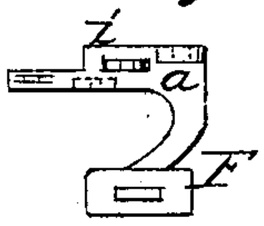

Fig. 5.

UNITED STATES PATENT OFFICE.

G. D. SARGENT, OF BOSTON, MASSACHUSETTS, ASSIGNOR TO HIMSELF, AND THOMAS R. ABBOTT, OF MALDEN, MASSACHUSETTS.

BURGLAR-ALARM CLOCK.

Specification of Letters Patent No. 20,852, dated July 6, 1858.

To all whom it may concern:

Be it known that I, GEORGE D. SARGENT, of Boston, in the county of Suffolk and State of Massachusetts, have invented a new and useful Illuminating Alarm or Alarm-Clock; and I do hereby declare that the same is fully described and represented in the following specification and the accompanying drawings, of which—

Figure 1, denotes a front elevation of an alarm clock furnished with my invention the front and end doors of its case being thrown open in order to exhibit the apparatus contained within the said case. Fig. 2, is a horizontal section of the same such section being taken through the main or winding shaft of the clock alarm and made to exhibit the mechanism which is below the plane of section. Fig. 3, is an end elevation representing the end door as opened.

In such drawings, A, denotes the case of the clock or alarm as furnished with two doors B, C, each being hinged to the case so as to be capable of being either opened or closed. One door (B) is on the front and the other (C) at the end of the case the latter having a spring D, applied to it and the case so as to throw the door open smartly immediately on its being unlatched. To the said end door C, a lamp E, is fastened. A match holder E is also carried by the door. In this instance it is shown as projecting from a lever *a*, which turns up and down at one end on a fulcrum *b*, and at its other end is connected with a spring lifter, *c*, which consists of a spring attached to the door C, and projecting over the lamp, E, as shown in the drawings. From this spring lifter, *c*, an extinguisher, G, is suspended by a chain, *d*. The lever, *a*, is drawn upward by a spring, *e*, and has a chain *f*, connecting it with a stud, *g*, projecting from the inner part of the case, A, and arranged thereon as shown in Figs. 1, and 2. Furthermore, a spring catch or latch, *h*, is applied to the door, *c*, and so as to hook on a projection, *i*, of the lever, *a*, (see Fig. 4, which is a top view of the lever,) and hold the lever down under the retractive power of its lifting spring.

Besides the above, a detacher, *k*, or contrivance for forcing the catch, *h*, off the projection of the lever *a*, during the act of closing the door, C, is employed. It consists, simply of a spring or spring arm arranged as shown at *k'*, in Figs. 1 and 2. A greater or curved arm *l*, is hinged to a projection *m*, extending from the case A, there being a spring *n*, affixed to the said projection *m*, and made to bear against the friction grater *l*. This grater has its inner surface made rough in order that when a friction match carried by the match holder is moved smartly against such surface, such match may be inflamed. Furthermore, the extinguisher, G, is constructed bell shaped or in the form as shown in the drawing and the grater *l*, is arranged in such manner as to bear against the outer surface of the extinguisher and maintain the said extinguisher in place on the wick tube of the lamp, while the door C, is closed and the lever *a*, unlatched. As soon however, while the door is being thrown open, the extinguisher is carried beyond the grater, *l*, the lifter *c*, will be free to operate so as to spring up suddenly and to lift the extinguisher entirely off the wick tube. The lever *a*, and the chain connecting it with the case and the lifter may be termed the depressor as the object of the same is to depress the lifter and cause the catch *h*, to latch upon the lever while the door, C, is being thrown backward or open such serving to prepare the lifter to elevate the extinguisher from the wick tube as described.

The drawings exhibit at, I, the work of a common alarm clock, the alarm apparatus of which is shown at K. Of this alarm apparatus, *o*, denotes the bill and *p* the striker or hammer, while, *q*, is the winding shaft of the main spring, *r*, of such alarm apparatus. The alarm is to be constructed like those in common use and should carry on the rear end of its shaft *q*, a crank wheel, *s*, (see Fig. 2,) from which or a pin projecting from the side of the same a cord *t*, should extend upward and be fastened to one arm of a bent lever *u*, arranged within the case as shown in Figs. 1, and 3, said lever turns on a fulcrum *v*, and has its other arm connected with a spring latch *w*, by a chain, *x*, such spring latch being affixed to the case A, or arranged therein as shown in Figs. 1, and 3. A catch, *y*, formed in top view as shown in Fig. 5, is affixed to the door, C, as represented in Figs. 1, and 3. When the door, C, is closed, the spring latch, *w*, latches upon the catch *y*, and serves to maintain the door in a closed position.

As the winding shaft, g, is put in revolution as soon as the alarm is sounded and is kept in rotation while the alarm is being given it will turn the crank wheel, s, so as to draw on the cord, t, and cause the lever, u, to pull the spring latch, w, away from the catch y, so as to allow the door, C, to be thrown open smartly by its spring. When this takes place, the match in the match holder will be inflamed, the extinguisher thrown off the wick tube, and the lifter, c, set or prepared for the next operation of lifting the extinguisher off the wick tube. The lamp will also be exposed to view and its wick will be inflamed.

By attaching a cord, a' to the chain x, conveying it through the case and attaching it to a ring b', we have the means of unlatching the latch w, at any time so as to enable the door C, to be opened independently of the alarm apparatus. The drawings also represent a mode of connecting the illuminating apparatus with an ordinary alarm apparatus not actuated or set off by clock work. In this case, the winding shaft c', of the alarm apparatus, shown at L, should have a wheel d', fixed upon its rear end, the same being exhibited by dotted lines in Fig. 1. This wheel is made with a recess e' in its periphery. With such a spring, pawl f' operates. Now, if we suppose g' to be the hammer of the alarm apparatus L, and such hammer to be arranged so as to strike the bell of the clock alarm or any other bell, and furthermore, if we suppose a cord or line h', to lead upward from the pawl f', and through the case, A, and to have connected with it another cord, i', leading from it to the chain x, if both cords h', and i', are simultaneously pulled upon, the alarm apparatus L, will not only be set in action, but the door C, will be thrown open so as to cause the match to be enflamed, the extinguisher to be thrown off the wick, the wick lighted, and the lifter set as hereinbefore described.

From the above it will be perceived that in case the cords h', and i', are fastened together and extended around a pulley or pulleys and are connected to a door of a room, the apparatus on such door being opened may be applied to give an alarm and to light the lamp. So provided the cords h', i', be attached to a wire leading to a bell pull arranged outside of the entrance door of a building, notice might be given to a person or persons within any part of the building and the lamp lighted whenever any person should draw the bell pull.

I have thus explained the different modes in which my illuminating apparatus can be applied to an alarm apparatus and its case whether such alarm apparatus be set in action by clock mechanism or other means as described.

I claim—

1. The combination of the lamp and its lighting apparatus with an alarm apparatus, its case, and the door thereof, so as to be operated thereby, or to operate in connection therewith substantially as specified.

2. I also claim arranging the lamp and the match carrier on the door C, of the case A, in combination with applying the match grater to the stationary part or body of the case substantially as specified.

3. I also claim the combination for operating the extinguisher G, the same consisting in the match grater l, the spring lifter c, the depressor, the catch h, and the detacher k, the whole being, applied and made to operate together substantially as specified.

In testimony whereof, I have hereunto set my signature.

GEO. D. SARGENT.

Witnesses:

R. H. EDDY,

F. P. HALE, JR.