

(Model.)

W. Y. CRUIKSHANK.  
BURGLAR ALARM FOR SAFES.

No. 300,310.

Patented June 10, 1884.

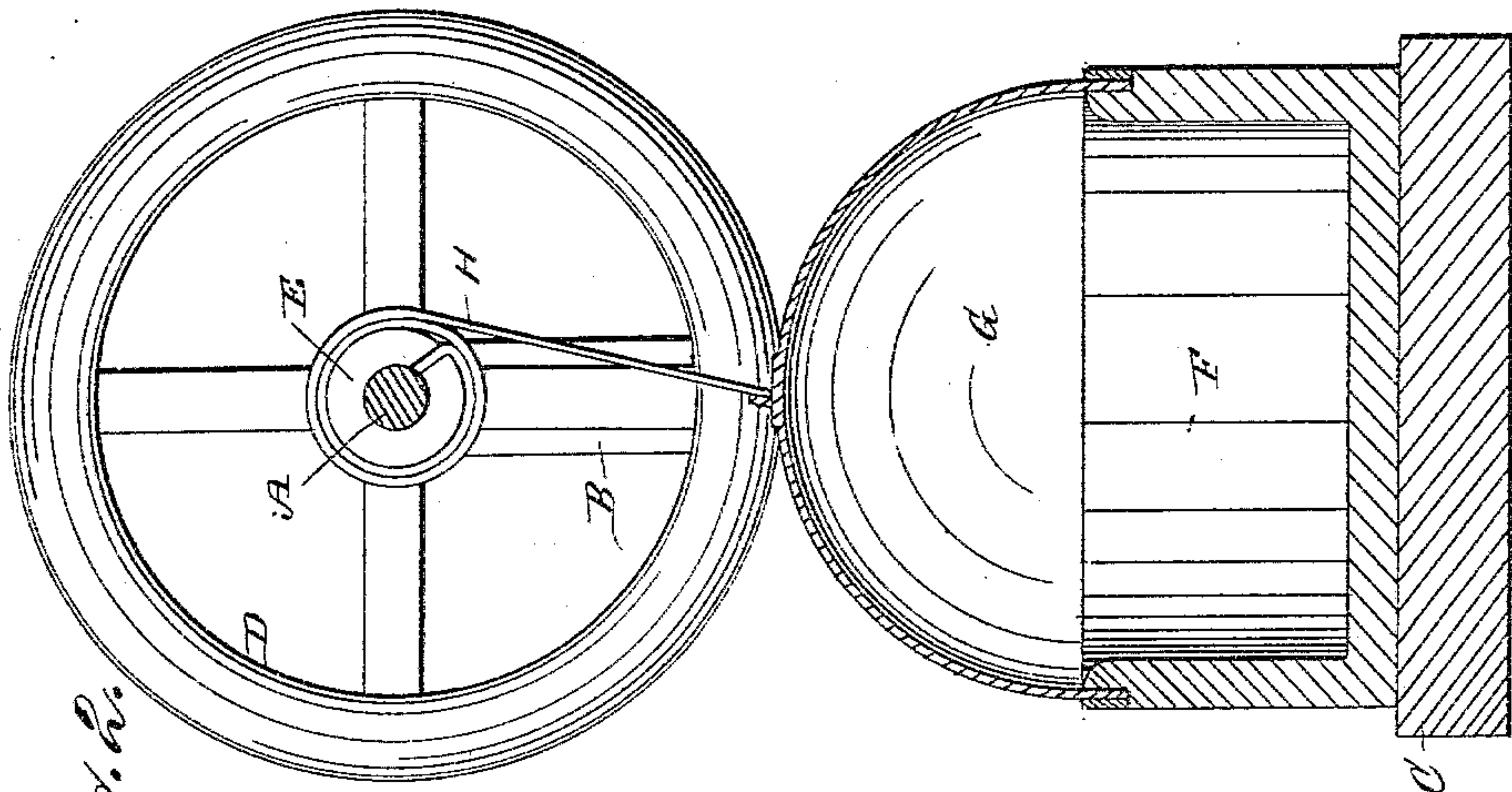


Fig. 2.

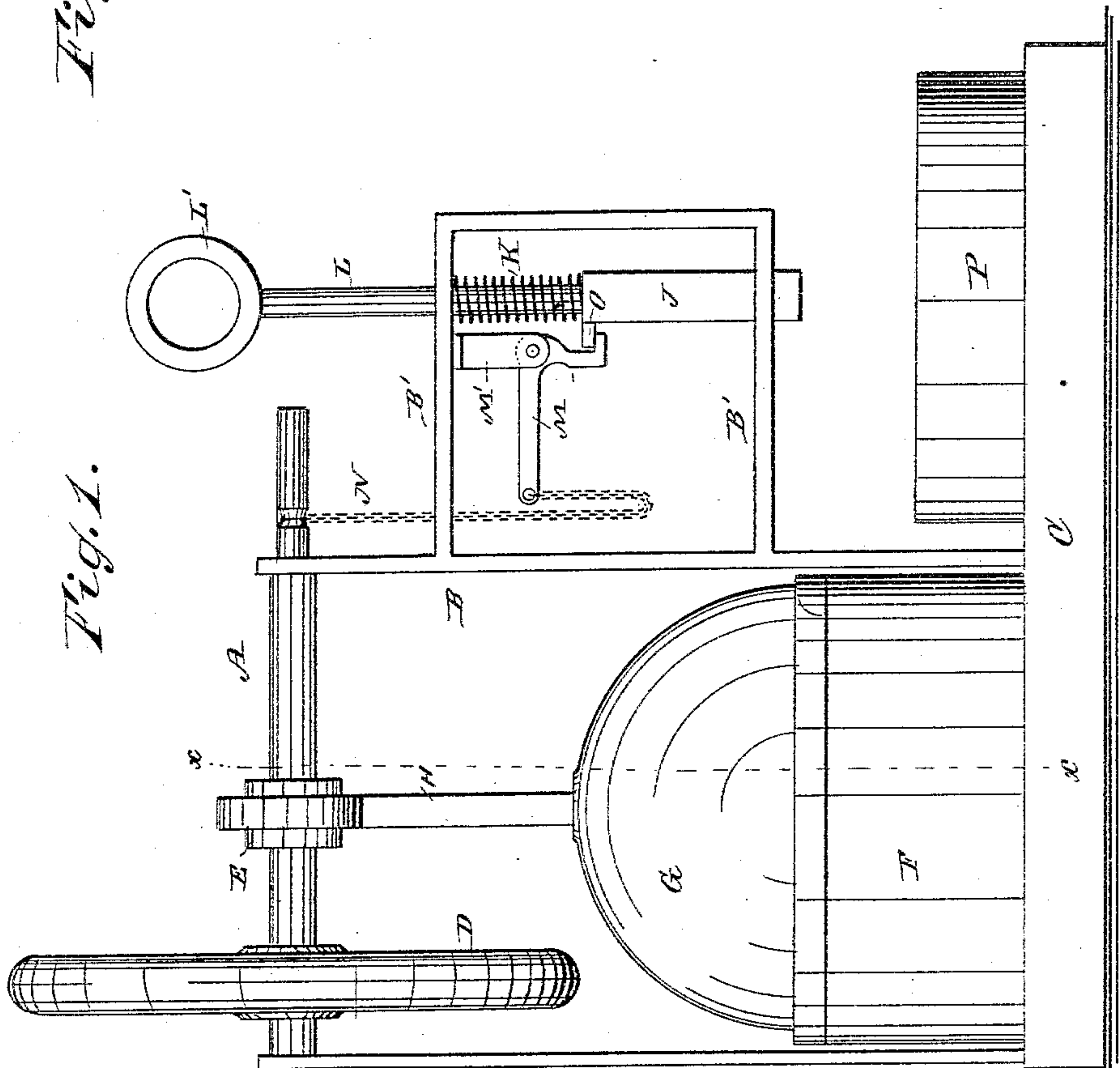


Fig. 1.

WITNESSES:

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# UNITED STATES PATENT OFFICE.

WILLIAM Y. CRUIKSHANK, OF DANVILLE, PENNSYLVANIA.

## BURGLAR-ALARM FOR SAFES.

SPECIFICATION forming part of Letters Patent No. 300,310, dated June 10, 1884.

Application filed February 20, 1884. (Model.)

*To all whom it may concern:*

Be it known that I, WILLIAM Y. CRUIKSHANK, of Danville, in the county of Montour and State of Pennsylvania, have invented a new and Improved Burglar-Alarm for Safes, of which the following is a full, clear, and exact description.

The object of my invention is to provide a new and improved device for automatically exploding an explosive cap or cartridge, and thus sounding an alarm if a safe is blown open.

The invention consists in the combination, with a spring-hammer, of a trigger-lever for holding it raised, and of a shaft connected with the trigger, and with a device for revolving the shaft by means of the compressed air created by the explosion in the safe, and whereby the trigger will be drawn to release the hammer which is forced down and explodes a cartridge or explosive cap held below it.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in both the figures.

Figure 1 is a side view of my improved burglar-alarm. Fig. 2 is a cross-sectional elevation of the same on the line *xx*, Fig. 1.

A shaft, A, is journaled in standards B on a base, C, and on the said shaft are rigidly mounted a fly-wheel, D, and a pulley, E. Below the shaft a cylindrical chamber, F, is located, on the upper edge of which the edge of a hollow semi-spherical rubber cup, G, is secured, the chamber F and its cap being airtight. A rubber band, H, or other strap, is secured to the cap G at the middle of its upper surface, and has its opposite end secured to the pulley E, the belt or band being wound one or more times around the said pulley. Two horizontal arms, B', project from one of the standards B, and in the outer ends of the same a vertically-sliding hammer, J, is guided, which hammer is surrounded by a spiral spring, K, for forcing it down. The hammer-rod L is provided at its upper end with a ring or loop, L', for inserting a finger to lift the hammer. A rectangularly-bent trigger-lever, M, pivoted on jaws M', projecting downward from the upper arm, B', has the end of

its horizontal arm connected by a chain, N, with the shaft A. The lower end of the vertical shank of the trigger-lever is adapted to engage with a tooth or projection, O, of the hammer L. A rubber pad or block, P, is held on the base C and below the hammer J.

The operation is as follows: The hammer J is raised and its projection O is engaged with the trigger M, for the purpose of keeping the trigger raised. The shaft A is turned to wind the band H on the pulley E and draw the band H taut, the chain N being slack, as shown. A cartridge or explosive cap is placed on the pad or block P. If the safe in which the above-described apparatus is placed is blown open, the air in the safe will be compressed, and will force the soft-rubber cap G downward into the chamber F, thereby unwinding the band H from the pulley E and revolving the shaft A. The fly-wheel D thereby receives an impetus which causes the shaft to revolve after the band H has been unwound. The chain N is wound around the shaft A, is drawn taut, and pulls on the trigger-lever M, whereby the hammer is disengaged and forced down by its spring K, thereby exploding the cap or cartridge on the block or pad P. As the explosion causes the trigger-lever to release the hammer, a short time expires between the blowing open of the safe and the explosion of the cap or cartridge by the hammer J. The explosion of the cap or cartridge can be heard distinctly, as the safe will be open by this time.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination of a spring-hammer and a trigger therefor with a cylinder provided with a collapsible cover or cap, and suitable connections between the said cap and the trigger, whereby when an attempt is made to enter a safe provided with the above alarm, by the use of explosives the air within the safe will be compressed, thereby causing the cover or cap to collapse and through its connection withdraw the trigger from contact with the hammer, substantially as set forth.

2. In a burglar-alarm for safes, the combination, with the spring-hammer J, of the trig-



ger-lever M, the shaft connected by a chain with the trigger M, the chamber F, the rubber cap G on the same, and the band H, connecting the cap G with the shaft A, substantially as herein shown and described.

3. In a burglar-alarm for safes, the combination, with the shaft A, of the fly-wheel D, the pulley E, the chamber F, the rubber cap G, the band H, secured to the cap and to the pulley E, the spring-hammer J, the trigger M, and the chain N, connecting the trigger M with the shaft A, substantially as herein shown and described.

4. In a burglar-alarm for safes, the combination, with the shaft A, of the wheel D, the pulley E, the chamber F, the rubber cap G, the band H, secured to the pulley E and to the cap G, the hammer J, having projection O, the spring K, the ring L', the trigger M, and the chain N, connecting the shaft A with the trigger M, substantially as herein shown and described.

WM. Y. CRUIKSHANK.

Witnesses:

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JENNIE CRUIKSHANK.