

E. H. GRAHAM.

Revolver.

No. 15,734.

Patented Sept. 16, 1856.

Fig 1

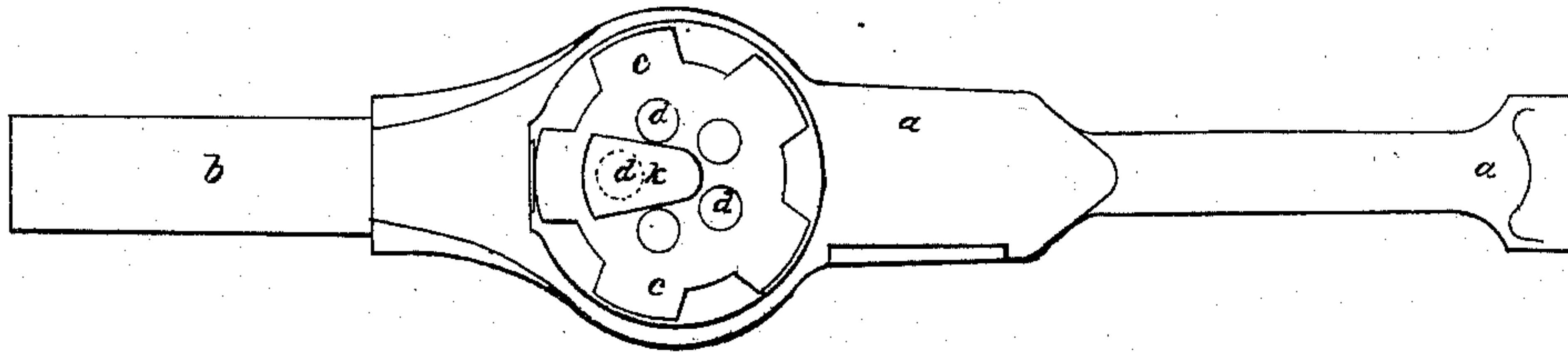


Fig 2

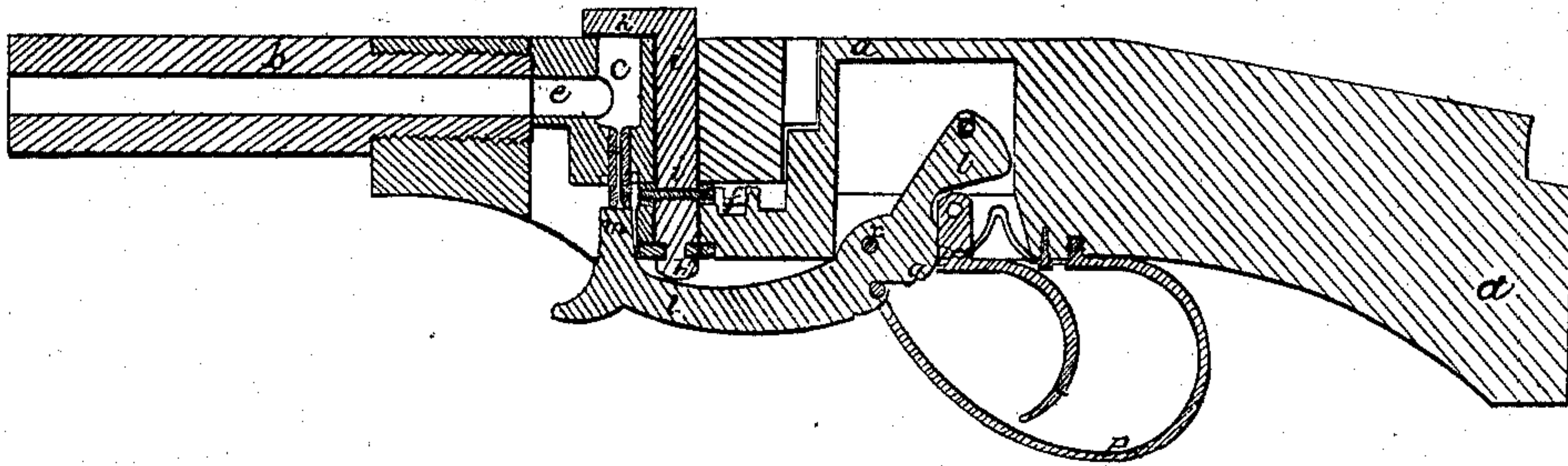


Fig 3

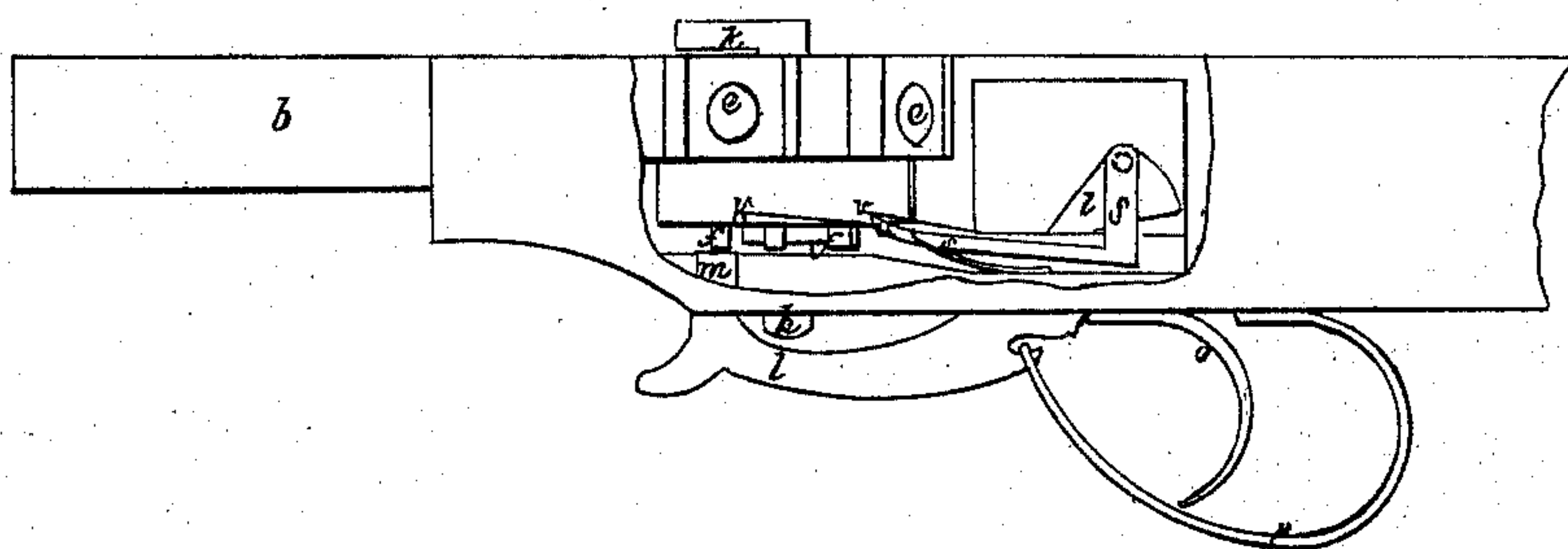


Fig 4



Witnesses.

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E. H. GRAHAM, OF MANCHESTER, NEW HAMPSHIRE.

IMPROVEMENT IN FIRE-ARMS.

Specification forming part of Letters Patent No. 15,734, dated September 16, 1856.

To all whom it may concern:

Be it known that I, EDMUND H. GRAHAM, of Manchester, in the county of Hillsborough and State of New Hampshire, have invented certain new and useful Improvements in Revolving Fire-Arms; and I do hereby declare that the following description, taken in connection with the accompanying drawings, hereinafter referred to, forms a full and exact specification of the same, wherein I have set forth the nature and principles of my said improvements, by which my invention may be distinguished from others of a similar class, together with such parts as I claim and desire to have secured to me by Letters Patent.

The figures of the accompanying plate of drawings represent my improvements.

Figure 1 is a plan or top view of my improved gun. Fig. 2 is a longitudinal central vertical section of the same. Fig. 3 is a side view, showing some of the parts in detail, to be hereinafter referred to. Fig. 4 is a detail view, to be hereinafter referred to.

The principal difficulty experienced in the use of many-chambered fire-arms arises from the danger of some one or all of the charges becoming ignited by the discharge of the gun, as the chambers are necessarily arranged very close to each other.

The present invention consists in a novel mode of constructing the chambers in which the charges are placed, the ball being placed in a chamber arranged at right angles to the chamber in which the powder is placed, each powder-chamber at the time of the discharge being covered by a plate, while the remaining powder-chambers are uncovered. By this arrangement the charge to be exploded is completely isolated from the others, and if by any possibility any of the charges should become ignited no discharge would take place, as the powder, not being confined and having no surface to react upon, would be consumed in its chamber without expelling the ball.

a a in the drawings represents the breech of a gun, and *b* the barrel. *c c* is the cylinder or magazine in which the charges are placed. The powder is placed in the vertical chambers *d d*, &c., placed at right angles to and communicating with the horizontal chambers *e e*, &c., in which the balls are placed. The caps

are placed upon nipples *f f*, &c., attached to the bottom of the powder-chambers, as shown in Fig. 2.

The cylinder or magazine *c c* is secured in the gun by means of a slotted sliding bolt, *g*, Figs. 3 and 4, which fits over a shoulder, *h*, on the bottom of a vertical shaft, *i i*, that extends through the cylinder *c c*. A metallic plate, *k*, is attached to the top of the vertical shaft *i i*.

The cylinder *c c* can be taken out of the gun in order to insert the charges by sliding the bolt *g* until the large part of its slot, Fig. 4, comes opposite the shoulder *h* of the vertical shaft *i i*, when the magazine can be taken out, as will readily be understood.

l l is the lock to which the hammer *m* is attached, turning on a fulcrum at *n*. The lock is held cocked by the trigger *o*, a shoulder, *p*, on which engages with a slot, *q*, in the lock *l l*. On pulling the trigger the hammer of the lock will be forced against the cap by means of a bent spring, *r*, as will be understood by inspection of Fig. 3. At the time of the discharge the plate *k* of the vertical shaft *i i* is directly over the powder chamber and forms a resisting-surface for the powder to act against, and so completely covers the chamber to be discharged as to prevent the ignition of any of the other charges. After one charge has been fired the cylinder *c c* is reversed sufficiently to bring the next ball-chamber in succession in a line with the barrel *b b* and the next powder-chamber under the protecting-plate *k* by the operation of cocking the gun. This is effected by means of a bent arm, *s s*, Fig. 3, attached to the lock *l l* by a pivot.

On the end of the arm *s s* is a pawl, *u*, that engages with ratchet-teeth *v v* formed on the bottom of the cylinder *c c*. Thus the movement of the lock *l l* in cocking will move the bent arm *s s* sufficiently to turn the cylinder *c c* one tooth of the ratchet and bring the next powder-chamber under the plate *k*.

From the foregoing description it will be seen that by arranging the chambers in which the powder and balls are placed at right angles to each other and covering the one to be discharged by a protecting-plate there is very little danger of the others being discharged, and if by any chance the powder in any of the other chambers should become ignited it would

be consumed without expelling the ball from the cylinder, and no damage to the gun would ensue.

Having thus described my improvements, what I claim as my invention, and desire to have secured to me by Letters Patent, is—

1. Arranging the chambers in which the powder is placed and the chambers in which the balls are placed at right angles to each other, or nearly so, and so as to communicate

with each other, as described, and for the purpose specified.

2. Covering each powder-chamber at the time of the discharge with a protecting cap or plate, as described.

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Witnesses:

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