J. E. TYLER.

Cartridge.

No. 213,958. Patented April 1, 1879.

Fig. 1.

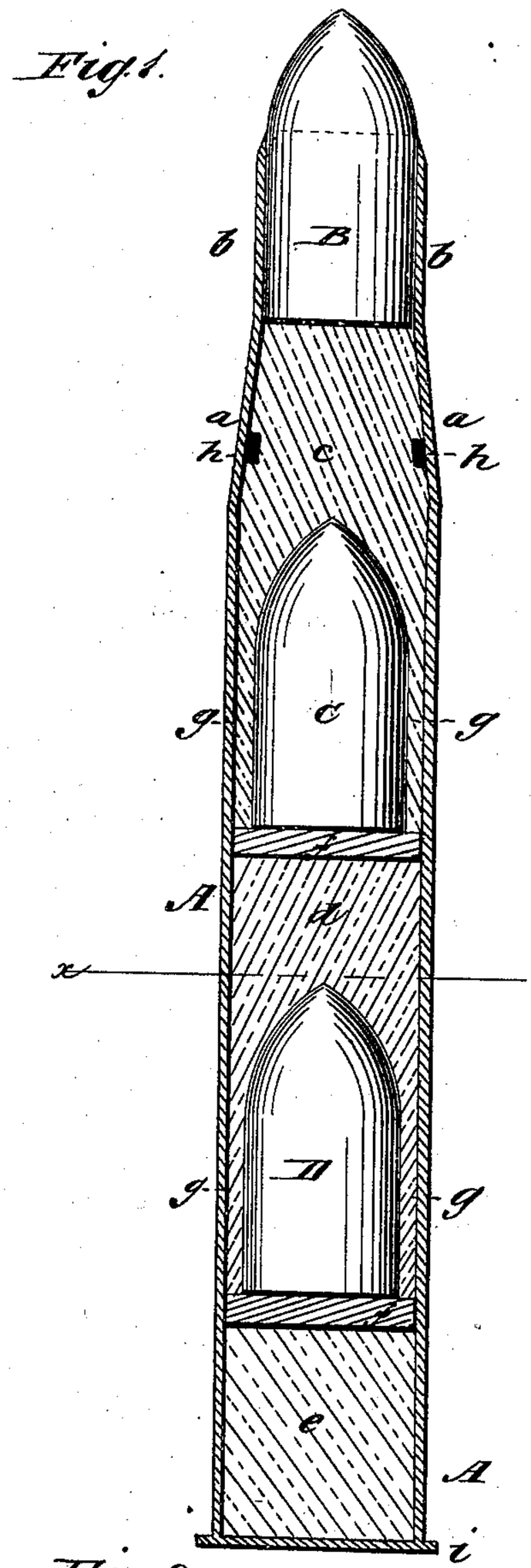
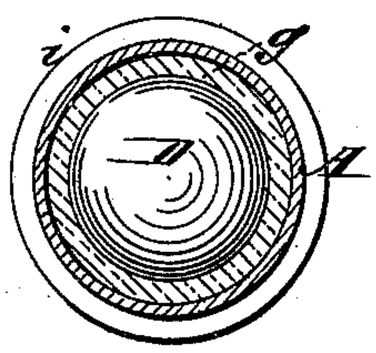


Fig. 2.



WITNESSES:

Francis McArdle

C. Sedgwick

INVENTOR:

J. E. Tyler

BY Munn & Co

ATTORNEYS.

UNITED STATES PATENT OFFICE.

JOHN E. TYLER, OF ROXOBEL, NORTH CAROLINA.

IMPROVEMENT IN CARTRIDGES.

Specification forming part of Letters Patent No. **213,958**, dated April 1, 1879; application filed January 30, 1879.

To all whom it may concern:

Be it known that I, JOHN E. TYLER, of Roxobel, in the county of Bertie and State of North Carolina, have invented a new and useful Improvement in Cartridges, of which the following is a specification:

The object of this invention is to furnish a cartridge for muskets, rifles, &c., adapted to receive a number of charges to be fired successively, and thus do away with the necessity of reloading the piece after every discharge.

It consists in making the cartridges with a shell capable of taking in a number of balls, each supplied with a separate charge of powder, separated by an easily-combustible wad, and so arranged that the charge at the front end of the cartridge is first exploded, and the powder setting fire to the wad that separates the next charge, it is burned through, and thus explodes the second charge, and so on successively until the cartridge is emptied.

In the accompanying drawings, Figure 1 is a longitudinal section of my improved cartridge; and Fig. 2 is a transverse section on line *x x*, Fig. 1.

Similar letters of reference indicate corresponding parts.

Referring to the drawings, A represents the shell of the cartridge, made of metal, of a diameter slightly in excess of the caliber of the balls employed, except near its front end, where its diameter is reduced by giving it a slight coniformity for a short distance, as at *a*, and then reducing it to a cylindrical form, as at *b*, of a diameter internally equal to the caliber of the ball, and into this portion the front ball, B, is placed, so that its point projects from the shell. This shell is adapted to receive three balls, B C D, each having a separate charge of powder, (represented by *c d e*,) and these charges are separated by a wad, *f*, placed at the base of all but the first ball, B, and resting on the top of the charge belonging to the ball with which it is in contact. The powder for one ball fills the space between it and the ball below, and also the space between this ball and the walls of the shell, as at *g*, and thus it rests on the separating-wad, as clearly shown in Fig. 1.

A ring of fulminating-powder (represented by the letter *h*) is placed in the walls of the shell, just below or back of the front ball, B, and in contact with the charge *c*, which expels the ball B. This fulminate is exploded by the hammer of the gun, and is placed in a ring, so that on whatever side of the shell the hammer strikes an explosion will follow. This charge under the first ball, B, is the only one exploded by the hammer, the others below being fired by the wadding separating the charges being burned through by the powder. The lower end of the cartridge-shell is closed by a flanged bottom, *i*.

In loading the cartridge, the last charge to be exploded (indicated by the letter *e*) is first put in the shell; then a wad, *f*, is placed in the shell so as to cover this charge; next, the ball D is inserted, its base resting on the wad, and placed so as to leave a space, *g*, all around it; the powder of the next charge, *d*, is then placed in, filling the space *g* from the wad up and over the ball; then another wad, *f*, is placed over this charge and another ball placed in the shell, and so on till all but the front ball, B, is inserted. This is placed in contact with its charge *c* without an intervening wad, and is held in the reduced cylindrical part *b*.

The cartridge is employed as follows: It is placed in the gun so that the ring, *h*, of fulminate will fall under the hammer. When the piece is fired the hammer strikes the outside of the shell adjacent to the fulminate, exploding it, and thence the charge *c*, which expels the ball B. The part of the powder at *g*, surrounding the next ball, when fired, sets fire to the separating-wad *f*, which, burning through, explodes the next charge, *d*, and this, in like manner, explodes charge *e*, and so on until the shell is emptied.

In this way it will be seen that the arm need not be reloaded every time it is fired, as when the ordinary cartridge is used, as it can be discharged as many times as there are charges in the cartridge with only the one loading. Thus the firing is greatly expedited and the manual of the arm very much simplified.

While but three charges are shown in the drawings, a greater number may be employed, if desired.

The combustible wads are mainly intended

to delay the explosion of the succeeding charge until the one exploded before leaves the muzzle of the gun, so as to avoid the explosion of two charges in the gun. For this reason the wads must be adjusted to prevent the too early explosion of the charges over which they are placed.

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

1. As an improvement in cartridges for firearms, the cartridge described, composed of a shell loaded with a number of charges separated by combustible wads, and adapted to be exploded successively by the burning through of the wad after the first charge is exploded by the hammer striking the fulminate, which is located in the front part of the shell, and in contact with the first charge of powder, substantially as described.

2. As an improvement in cartridges, the shell A, having a greater diameter than the caliber of the ball employed, a coniform portion, *a*, and a reduced cylindrical portion, *b*, adapted to receive and retain the front ball, B, of the cartridge, in combination with a succession of charges, separated by a combustible wad, *f*, substantially as described.

JOHN EDWARD TYLER.

Witnesses:

JOHN LANCASTER ANDREWS,
ASA THOMAS LIVERMORE.