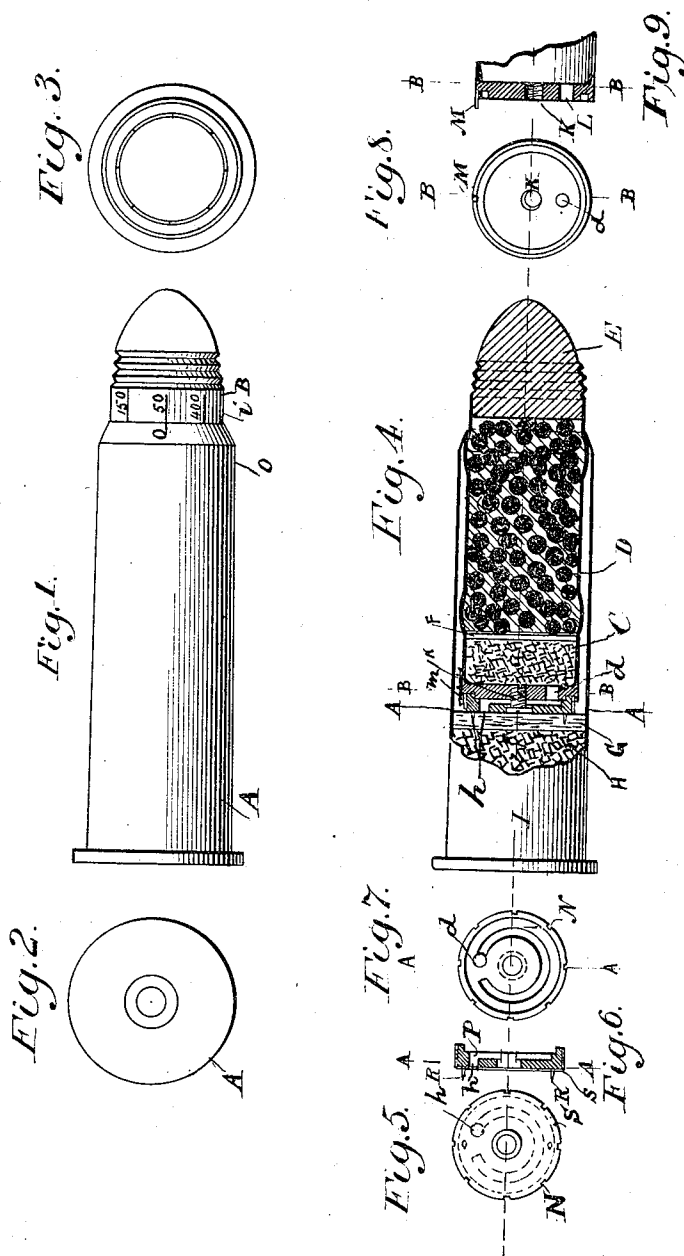


(No Model.)

J. A. JUDGE & J. F. CHAPMAN.
ADJUSTABLE TIME FUSE CARTRIDGE.

No. 537,290.

Patented Apr. 9, 1895.



WITNESSES:

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JAMES A. JUDGE AND JAMES F. CHAPMAN, OF PROVIDENCE, RHODE ISLAND.

ADJUSTABLE TIME-FUSE CARTRIDGE.

SPECIFICATION forming part of Letters Patent No. 537,290, dated April 9, 1895.

Application filed June 6, 1894. Serial No. 513,662. (No model.)

To all whom it may concern:

Be it known that we, JAMES A. JUDGE and JAMES F. CHAPMAN, of Providence, in the county of Providence and State of Rhode Island, have invented certain new and useful Improvements in Adjustable Time-Fuse Cartridges; and we do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to cartridges for fire arms using shot or balls, and its object is to produce a cartridge that shall explode and scatter its contents at the proper time, and capable of instant adjustment for any distance, at the time of using. It is fully illustrated in the accompanying drawings.

Figure 1 shows a side elevation of a complete cartridge, ready for use. Fig. 2 is a rear end view of the same. Fig. 3 is a front end view. Fig. 4 is a longitudinal section through the center of all the cartridge but a small part of the rear end, which is shown in elevation. Figs. 5 to 9 are views showing details of the construction of the adjustable fuse, to be hereinafter explained.

This cartridge is composed of two sections, one of which, the shell A, is in form and construction like the shell of an ordinary ball cartridge, and may have either a center or a rim fire. It is the usual charge of powder held in the rear part of the shell A, and covered by the wad G, pressed down on it. The other section, case B, is made a little smaller in diameter than the shell, so as to enter easily, and of such length that when its rear end rests on the wad G, its other end will project a little way out of the shell A. The outer end of the shell A, is closed in around the case B; but not so close as to prevent the case from being easily turned around by the fingers, in the shell. A pointed block E, is shut into the front end of the case B, having sufficient weight to cause the case with its contents, to go in a straight line, when shot out of the arm. This case B, is filled with shot or balls D, with sufficient powder or other explosive C, either in a part of the case separated by a wad F, or with the shot, to burst the case and scatter the balls when

ignited. A plate S, has a circular groove P, made in it, with a hole *h*, made in one end of it, and a screw K, is put through this plate and screwed into the rear end of the case B. The purpose of the groove is to hold a fuse to fire the powder C, in the case B, through a hole *d*, in the end of the case.

It will be readily seen that if the plate S, is turned so that the hole *h*, in it, is opposite to the hole *d*, in the end of the case, the fire will instantly run through both holes to the inside of the chamber in case B; but if the plate S, is turned so that a portion more or less of the groove P, lies between the holes *h* and *d*, the fire will have to light the fuse in the groove, through the hole *h*, and travel along the groove to the hole *d*, to ignite the powder in the case, and consequently will be a longer time in doing it, so that by turning the plate S, to increase the distance between the holes *d*, *h*, the length of time between the discharge of the powder in the shell and the firing of the powder in the case through the fuse, will be increased, and the explosion of the case will take place farther from the muzzle of the arm, and vice versa.

To enable a person to change the relative positions of the plate S and the end of the case, to time the explosion of the case after the latter has been put into the shell, means are provided to hold the plate S, and turn the case B, on the plate, by its outer end. One or more points R, are made on the outside of the plate S, sharp enough to enter the wad G, when the case is pressed down in the shell, so as to hold the plate S, from turning when the case is turned, and a series of graduated marks *i*, is made around that part of the case B, that projects out of the shell, and a zero mark *o*, is made on the edge of the shell, to set the time distance at which the case shall be exploded and the shot or balls scattered. When the powder in the shell is fired in discharging the gun, it will ignite the fuse through the hole *h*, as explained, and travel along the length of fuse in the groove P, to the hole *d*, in the end of the case B, where it will enter and ignite the powder C, and explode the case. A series of notches N, is made in the periphery of the plate S, (see Fig. 5) agreeing with the division marks *i*, on the end of the case B, and a

small spring *m*, attached to the case B, has one end resting on the edge of the plate, so as to fall into the notches as the case is turned, and indicate by a click to the ear when the eye is otherwise engaged, how far the case has been turned from the zero point *o*, on the shell. The groove may be made in the end of the case B, instead of the plate S, and it will operate in substantially the same way as described.

Having thus described our improved cartridge, we claim as our invention and desire to secure by Letters Patent—

1. A cartridge composed of two sections, one of which sections incloses the main charge of powder and the greater part of the other section, which carries shot or balls and a small charge of powder, in combination with a plate having a circular groove made in it, with a hole at one end of said groove, and a fuse located in the groove and fitted to be revolvably attached by means of a screw to the rear end of the inner case, said inner section having a hole in its rear end corresponding with the groove in the plate, and means for preventing said plate from turning when the inner section is turned, substantially as described.

2. A cartridge composed of two sections, one of which sections incloses the main charge of powder and the greater part of the other section, which carries shot or balls and a small charge of powder, the inner section having graduated division marks made on the portion of it that projects from the outer section, a zero mark made on said outer section, and a plate with a circular groove containing a fuse substantially as specified.

3. A cartridge composed of two sections, one of which sections incloses the main charge of

powder and the greater part of the other section, which carries shot or balls and a small charge of powder, in combination with a plate having a circular groove made in it with a hole at one end of said groove, and a fuse located in the groove and fitted to be revolvably attached by means of a screw to the rear end of the inner case, said inner section having a hole in its rear end corresponding with the groove in the plate, said plate being provided with points on its outer side to enter the wad covering the powder in the outer section and prevent said plate from turning when the inner section is turned, substantially as described.

4. A cartridge composed of two sections, one of which sections incloses the main charge of powder and the greater part of the other section, which carries shot or balls and a small charge of powder, in combination with a plate having a circular groove made in it, with a hole at one end of said groove, and a fuse located in the groove and fitted to be revolvably attached by means of a screw to the rear end of the inner case, said inner section having a hole in its rear end corresponding with the groove in the plate, and means for preventing said plate from turning when the inner section is turned, and said plate having a series of notches made in its periphery, agreeing with the graduated marks on the inner section, and a detent spring attached to said inner section to catch in said notches, substantially as described.

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Witnesses:

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