G. W. TURNER.
Explosive Shell.

No. 229,499. Patented June 29, 1880.

Fig. 1

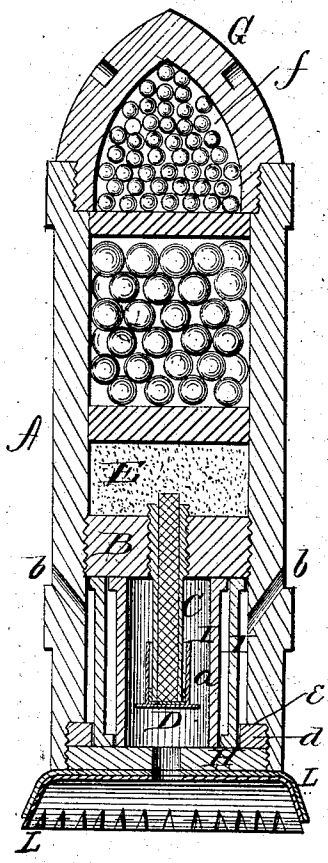


Fig. 2.

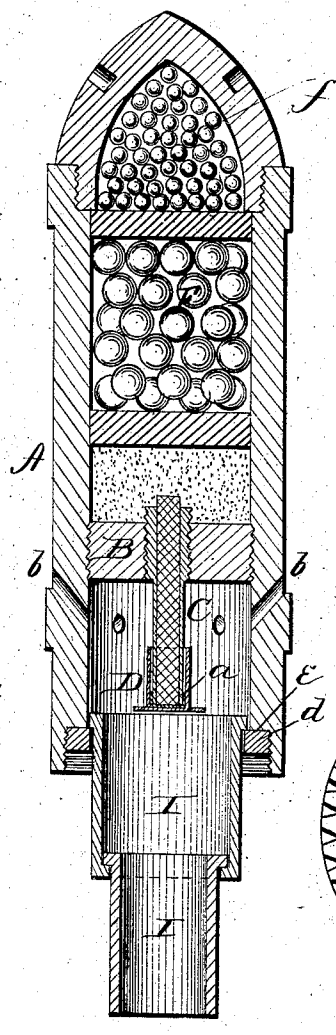


Fig. 3.

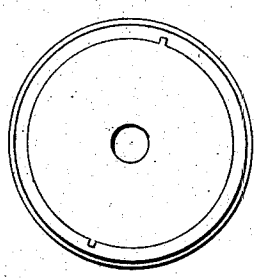
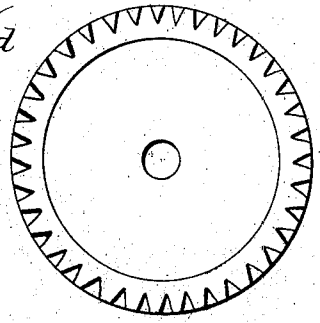


Fig. 4.



Witnesses:
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Inventor:
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Atty.

UNITED STATES PATENT OFFICE.

GEORGE W. TURNER, OF BOONEVILLE, MISSISSIPPI.

EXPLOSIVE SHELL.

SPECIFICATION forming part of Letters Patent No. 229,499, dated June 29, 1880.

Application filed January 20, 1880.

To all whom it may concern:

Be it known that I, GEORGE W. TURNER, of Booneville, in the county of Prentiss, and in the State of Mississippi, have invented certain new and useful Improvements in Explosive Shells; and I 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, making a part of this specification.

My invention relates to explosive shells; and it consists in the combination of the body of the shell, having inclined air-inlets, and a telescopic tube arranged within the rear end of the shell, to be extended as a caudal appendage by the force of the air after the shell leaves the mouth of the gun, as will be hereinafter more fully set forth.

In the drawings, Figure 1 is a longitudinal section of my shell with the caudal appendage closed. Fig. 2 is a similar view, showing the caudal appendage extended. Figs. 3 and 4 are detailed views.

A represents the body of the shell, made in cylindrical form, of the best laminated steel or iron.

B is the breech or breech-pin, fitting the size of the shell, with heavy screw-threads to prevent explosion in the rear, and in the center of the breech is screwed or otherwise fastened a metallic tube, C, for incasing the fuse. A percussion-cap, *a*, is placed on the rear end of the tube C, and a flanged cap, D, covers the same, as shown.

In front of the breech B is the powder-chamber E, and in front of this again a chamber for the missiles F, which latter should accord in size with the caliber of the gun and the purposes for which they are intended.

In the front end of the shell is inserted the cap or point G, made in the usual form for elongated shells, and having a neck which fits the muzzle of the shell with small screw-threads.

In the rear of the breech B is formed a chamber for containing the caudal appendage, which consists of two or more telescopic tubular sections, I I, held in the shell by means of an annular ring, *d*, fastened on the shoulder *e* in the extreme rear end of the shell. These tubes or tubular sections are to be made of galvanized iron, zinc, or other non-corrosive metal or material. A sabot, H, is then fitted to close the rear end of the shell.

Directly in rear of the breech B are inclined holes or air-passages *b*, through which the air enters as soon as the projectile leaves the muzzle of the gun, and, acting against the circumferential flange of the cap D, removes the same from the end of the tube C. It also throws out the sabot H and causes the telescopic caudal appendage to be extended, which, acting as a feather to an arrow, prevents the shell from turning in the air, or, in other words, keeps the point of the shell directly in front.

The point G is hollowed out, as shown, forming a chamber, *f*, which is to be filled with buckshot, adding largely to the destructive qualities of the projectile.

For rifle-guns the caudal appendage may be dispensed with and a wooden plug put in, with a center hole to accommodate the fuse-plug.

At the rear end of the shell are attached two sheet-metal cups, L L, each of which is struck up of a single piece and has its edges notched. The two cups are placed together, so as to have the metal between the notches overlapping. These portions of metal or teeth will spread when the gun is fired and take into the rifling, so as to give the rotary or twisting motion to the shell.

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

In an elongated shell, the combination of the body A, having inclined air-inlets *b*, and the telescopic tube I, arranged within the rear end of the shell, to be extended as a caudal appendage by the force of the air after the shell leaves the mouth of the gun, substantially as herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 16th day of January, 1880.

G. W. TURNER.

Witnesses:

H. AUBREY TOULMIN,

H. J. ENNIS.