

(No Model.)

C. NELSON.
FIRE CRACKER.

No. 511,644.

Patented Dec. 26, 1893.

Fig. 1.

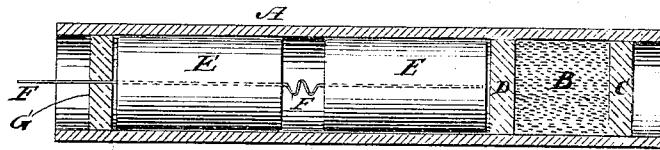


Fig. 2.

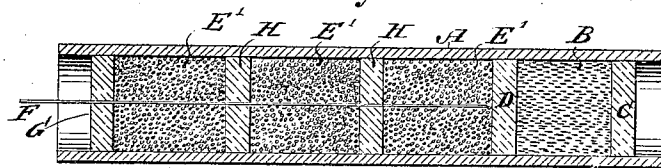
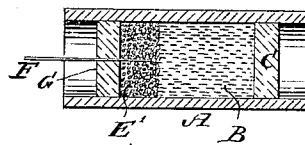


Fig. 3.



WITNESSES:

E. Hoff.
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INVENTOR:

Charles Nelson.

BY

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UNITED STATES PATENT OFFICE.

CHARLES NELSON, OF BROOKLYN, NEW YORK.

FIRE-CRACKER.

SPECIFICATION forming part of Letters Patent No. 511,644, dated December 26, 1893.

Application filed July 13, 1893. Serial No. 480,373. (No specimens.)

To all whom it may concern:

Be it known that I, CHARLES NELSON, a citizen of the United States, residing at Brooklyn, in the county of Kings and State of New York, have invented new and useful Improvements in Fire-Crackers, of which the following is a specification.

This invention has for its object to provide a new and improved fire cracker which can be safely held in the hand during its explosion.

To accomplish this object, the invention consists in a fire cracker having the explosive made to partly fill its shell, the rear portion of said shell being provided with harmless or inexplusive filling composed of vegetable or pulverulent material to form a handle portion.

The invention also consists in certain other features which will be hereinafter described and claimed, reference being made to the accompanying drawings, in which—

Figure 1 is a longitudinal section of the fire cracker. Fig. 2 is a longitudinal section of a modification. Fig. 3 is a longitudinal section of another modification.

In the drawings the letter A indicates the shell of the fire cracker and the explosive is made to partly fill the shell, the rear portion of the shell being provided with a harmless or inexplusive filling B composed of vegetable pulverulent material, such as saw-dust, in order to give a solid appearance to the cracker and at the same time form a handle portion at which the cracker can be grasped and held during explosion without danger. The vegetable pulverulent material such as saw-dust is readily secured in place by plugs or clay fillings C D rammed into place in the well known way.

By making the inexplusive filling B of such material as saw-dust which is not only comminuted but light, the weight of the cracker is not excessively increased, and at the same time when the cracker explodes this light pulverulent filling if driven out will not fly a great distance, and, by reason of its lightness,

said filling will not cause injury in case it should strike a person.

The explosive can be variously secured in the shell. I have found a convenient way to be to inclose the explosive charge in a casing E made separate from the shell and which is adapted to partly fill the interior of the shell. This casing when glued or secured in the shell is held against dislocation. A number of separate casings or charges E severally secured in the shell and connected by a common fuse F will give a series of explosions so as to produce a startling effect. The mouth or front of the shell can be closed by a clay plug G if desired, the fuse F extending through this plug G to the interior of the shell.

In place of the explosive casings E, the charge in one or several sections as E' can be placed in the shell, the several sections of explosive being separated by clay plugs H through which the fuse F extends to ignite the several charges.

In Fig. 3 one charge E' is shown and if desired the partition D between the harmless filling B and the explosive E' may be omitted as seen in Fig. 3.

What I claim as new, and desire to secure by Letters Patent, is—

1. A fire cracker having the explosive made to partly fill its shell, the rear portion of said shell being provided with harmless or inexplusive filling composed of vegetable pulverulent material to form a solid handle portion substantially as described.

2. A fire cracker consisting of a shell containing in its rear end portion a filling of saw-dust to form a handle portion, and an explosive inclosed in a separate casing which partly fills the interior of the shell, substantially as described.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

CHARLES NELSON.

Witnesses:

WM. C. HAUFF,
E. F. KASTENHUBER.