T. G. HITT.

FIRE CRACKER.

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1,253,596.

Patented Jan. 15, 1918.

Fig. 1

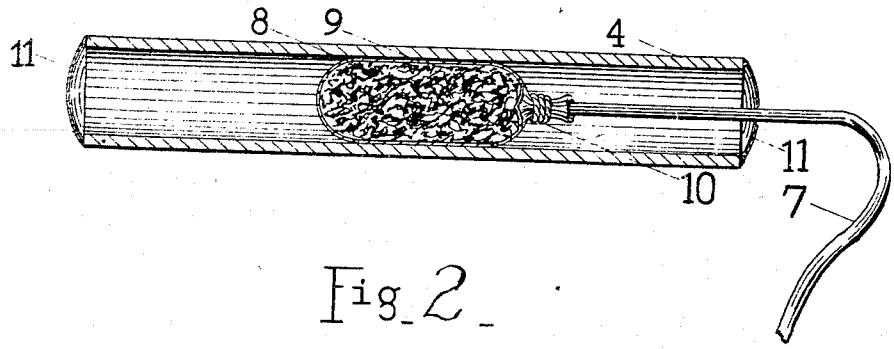
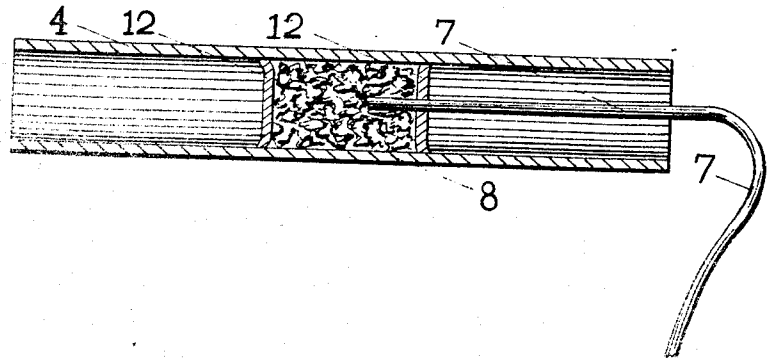


Fig. 2



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FIRE-CRACKER.

1,253,596. Specification of Letters Patent. **Patented Jan. 15, 1918.**

Application filed August 2, 1917. Serial No. 184,151.

To all whom it may concern:

Be it known that I, THOMAS G. HITT, a citizen of the United States, residing at Seattle, in the county of King and State of Washington, have invented certain new and useful Improvements in Fire-Crackers, of which the following is a specification.

This invention relates to fire-crackers, and its object is to lessen the danger to children and inexperienced persons who fire them.

Heretofore it has been the common practice to close the ends of fire-crackers with clay that dries hard; with wooden plugs, and other materials that are driven away in solid form by the explosion, rendering the crackers to some extent dangerous.

The object of this invention is to entirely dispense with end plugs, and the invention consists in the construction and combination of parts forming a fire-cracker, hereinafter more fully described, and particularly stated in the claims, reference being had to the accompanying drawings in which,

Figure 1 is a longitudinal section of a fire-cracker according to my invention, and

Fig. 2 is a longitudinal section of a modification of the same.

Numeral 4 represents the shell or body of the cracker, made in tubular form, of pasteboard, in the American style, or of many wrappings of thin paper in the Chinese style.

In the old style both ends are closed by plugs, through one of which the fuse enters. These plugs are usually made of some material that is liable to be driven away in whole, or in substantial parts, involving some danger to the operator.

In the preferable form of my invention, shown in Fig. 1, the powder 8, is inclosed in a bag 9, of thin strong paper; the fuse 7, enters the mouth of the bag which is then closed upon it and secured by a string 10, wound around the bag. This prevents the fuse being accidentally pulled out. The explosive, thus secured, is located midway the length of the body 4, where it may be secured by a little paste on the bag to adhere to the shell. For the sake of appearance a covering of any desired colored paper 11, may extend over the ends, but this is only for finish, and the cracker is complete for service without this end finish.

In the modification shown in Fig. 2, the powder 8, is secured in the middle of the body 4, by means of soft wads 12, of such material as paper that will, with the shell, be blown into soft fragments by the explosion. At each end of the explosive charge 8, there is a considerable length of open or unfilled tube of the shell 4, so that a considerable amount of air will be displaced by the explosion, causing a loud report without the aid of dangerously hard plugs.

Any suitable explosive material may be used. Crackers of this style are comparatively inexpensive, safe, and effective in producing the loud report desired.

I claim;

1. A fire-cracker in tubular form; a charge of explosive matter secured within it midway its length, leaving a material length of unfilled tube at each end of the charge, and a fuse leading from one end to the said charge.

2. A fire-cracker comprising a tubular body; a charge of explosive matter inclosed in a bag and secured midway in the tube, and a fuse leading to the explosive matter.

3. A fire-cracker comprising a tubular body; a bag of explosive matter secured midway in the tube; a fuse entering the bag and secured thereto; the ends of the tube being unplugged.

In testimony whereof I affix my signature in presence of two witnesses.

THOMAS G. HITT.

Witnesses:

HELM VON HEIN,

EUGENE A. MCINNIS.