

No. 679,661.

Patented July 30, 1901.

W. H. WYTHER.
DETONATING TOY.

(Application filed Feb. 4, 1901.)

(No Model.)

Fig. 1.

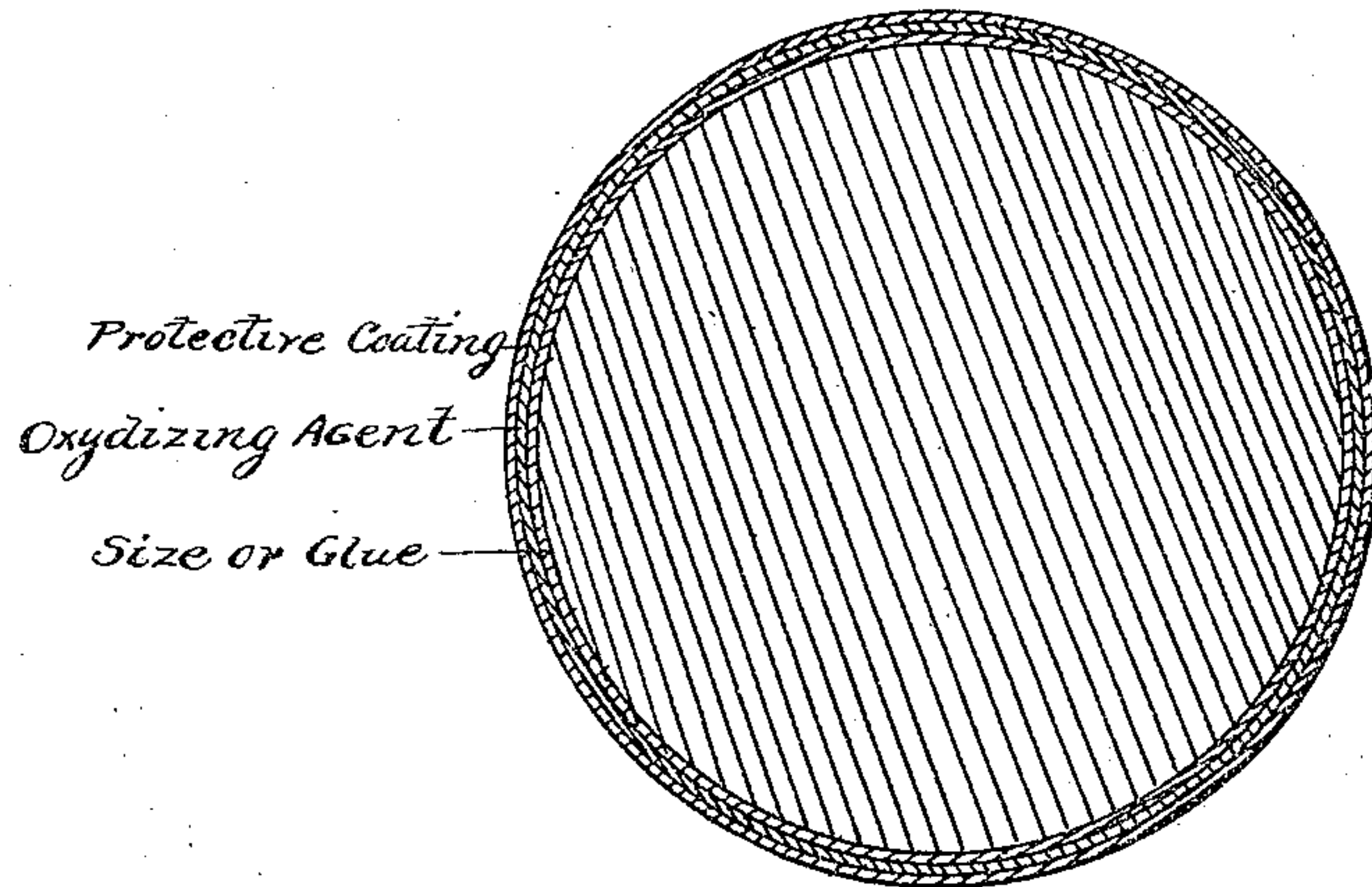
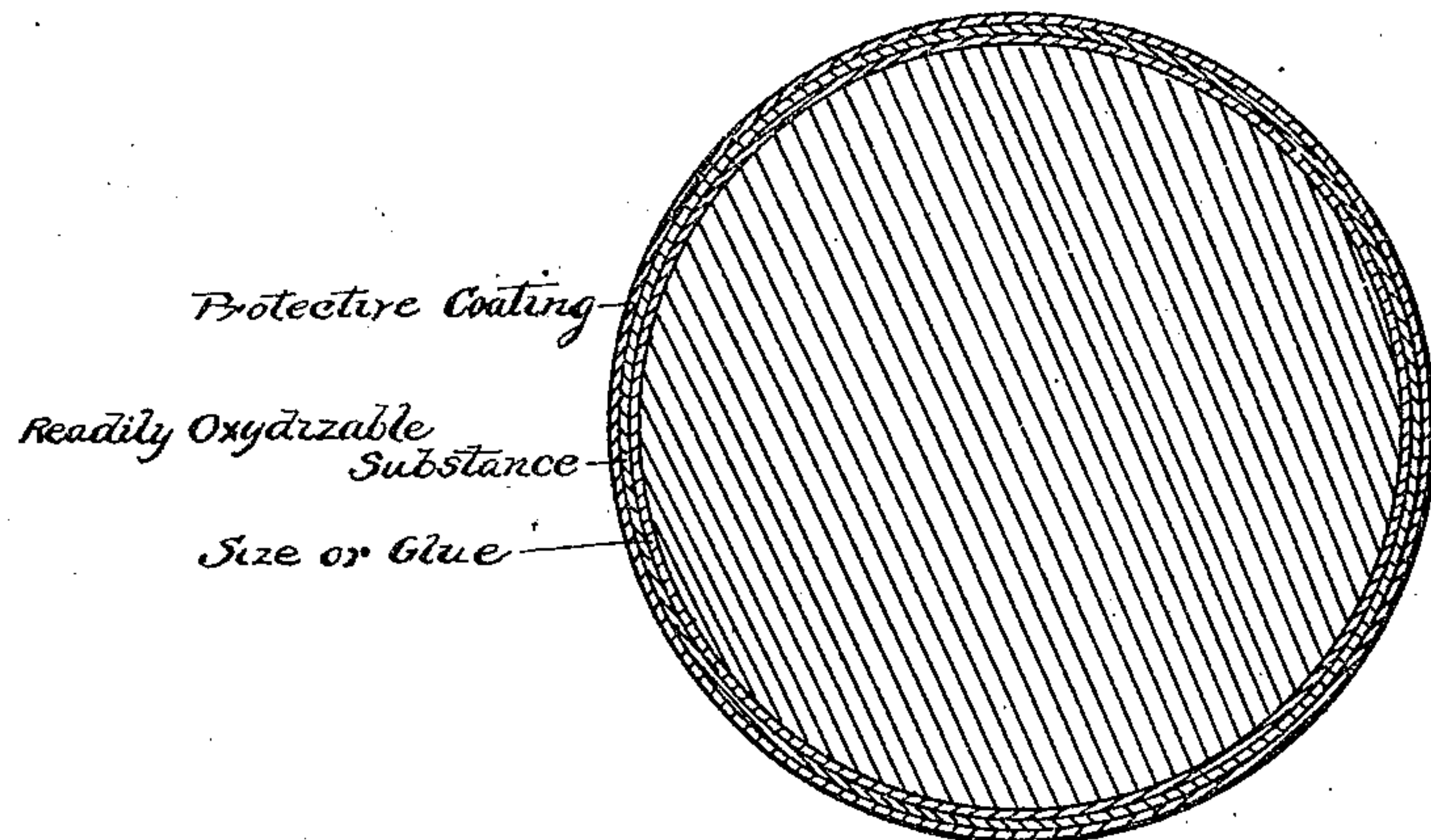


Fig. 2.



Witnesses

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UNITED STATES PATENT OFFICE.

WILLIAM H. WYTHE, OF BLOOMFIELD, NEW JERSEY.

DETONATING TOY.

SPECIFICATION forming part of Letters Patent No. 679,661, dated July 30, 1901.

Application filed February 4, 1901. Serial No. 46,014. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. WYTHE, a citizen of the United States, residing at Bloomfield, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Detonating Toys, as set forth in the following specification.

My invention relates to improvements in detonating toys in which two hard bodies coated, respectively, with an oxidizing substance and an easily-oxidizable substance are employed and also to the manner in which the said bodies are constructed; and the objects of my improvement are to provide a detonating toy capable of repeated detonations or reports and of convenient and pleasing form, and, further, that said toy shall be capable of operation in the hands with perfect safety and without danger of fire or other detrimental consequences, and also of convenient form and condition for shipment without danger or hazard. I obtain these objects in the device described, as follows.

I provide two comparatively hard bodies, preferably of incombustible material and of globular form. An ordinary marble may be used for this purpose. One of said bodies I provide with a thin coating of chlorate of potash or other oxidizing agent, applying the same to the body by means of an adhesive size or glue incapable of maintaining combustion. The other of said bodies I provide with a thin coating of an easily-oxidizable substance, such as amorphous phosphorus, ordinary phosphorus, sulfur, sulfid of antimony, or various other substances having the necessary qualities, and I apply the same in similar manner with a size or glue as in the first-mentioned instance. The bodies may be of any form; but I prefer that both or one of them shall be globular, thereby presenting more surface to be struck and being more accessible for striking. A detonation or report is produced by bringing the bodies sharply together, due to the combination of the chemical substances upon the bodies at the point of contact, and the layers upon the bodies consisting of the material thereon and the size or glue being incapable of maintaining combustion the explosion and consequent combustion of the materials will be confined to the point of contact alone. It will be seen

that repeated detonations may be had upon different parts of the surface of the bodies being brought together until the entire coatings or the entire coating of one body has been used.

It is essential that the material of the bodies be comparatively hard—that is, shall provide little or no cushioning effect on being brought together. It is not necessary that both bodies shall be of the same material nor of the same shape.

This device forms a very pleasing toy, which may be operated by holding one of the bodies in the hand and allowing the other body to fall upon the first, whereby a loud report is produced without injury or inconvenience to the operator.

A protective coating of any non-combustion-maintaining substance may be provided as an exterior precautionary measure to prevent moisture rendering the device inoperative and to protect the coating in handling and packing. This protective coating may be a very thin film of sodium or other silicate.

I find it desirable to use for the outer protective coating sodium silicate or "water-glass," which may be applied by dipping or otherwise without the application of heat, which would be detrimental in many cases and require greater trouble and expense in manufacture. I find this material amply suitable for the purpose of protecting the surface, and although it is soluble in water it will resist the action of moisture to all practical purposes to the extent required in the case of these articles.

Having now described my invention and the mode of operation thereof, what I claim is—

1. As an article of manufacture, a detonating toy consisting of two bodies, each provided with a non-combustion-maintaining coating of one of the two components of a detonating compound, substantially as described.

2. As an article of manufacture, a detonating toy consisting of two bodies, one of which bodies is globular in form, each provided with a non-combustion-maintaining coating of one of the two components of a detonating compound, substantially as described.

3. As an article of manufacture, a detonat-

ing toy consisting of two bodies of globular form, each provided with a non-combustion-maintaining coating of one of the two components of a detonating compound, substantially as described.

4. As an article of manufacture, a detonating toy consisting of two bodies, adhesive coatings of non-combustion-maintaining size or glue for said bodies and each of said bodies provided with a thin layer of one of the two components of a detonating compound upon said size or glue, substantially as described.

5. As an article of manufacture, a detonating toy consisting of two bodies, one of said bodies provided with a non-combustion-maintaining coating of an oxidizing agent and the other with a similar coating of a readily-oxidizable substance, substantially as described.

6. As an article of manufacture, a detonating toy consisting of two bodies, one of said bodies provided with a non-combustion-maintaining coating of chlorate of potash and the other with a similar coating of amorphous phosphorus, substantially as described.

7. As an article of manufacture, a detonating toy consisting of two bodies, adhesive coating of non-combustion-maintaining size

or glue for said bodies, one of said bodies provided with a thin layer of an oxidizing agent upon said size or glue and the other with a similar layer of a readily-oxidizable substance upon said size or glue, substantially as described.

8. As an article of manufacture, a detonating toy consisting of two bodies, adhesive coatings of non-combustion-maintaining size or glue for said bodies, one of said bodies provided with a thin layer of chlorate of potash upon said size or glue and the other with a similar layer of amorphous phosphorus upon said size or glue, substantially as described.

9. As an article of manufacture, a detonating toy consisting of two bodies, each provided with a non-combustion-maintaining coating of one of the two components of a detonating compound, and an outer protective coating of non-combustion-maintaining material, substantially as described.

In testimony whereof I hereunto set my hand this 26th day of January, 1901.

WILLIAM H. WYTHE.

In presence of—

ARTHUR RUSSELL,
EVAN WYTHE.