

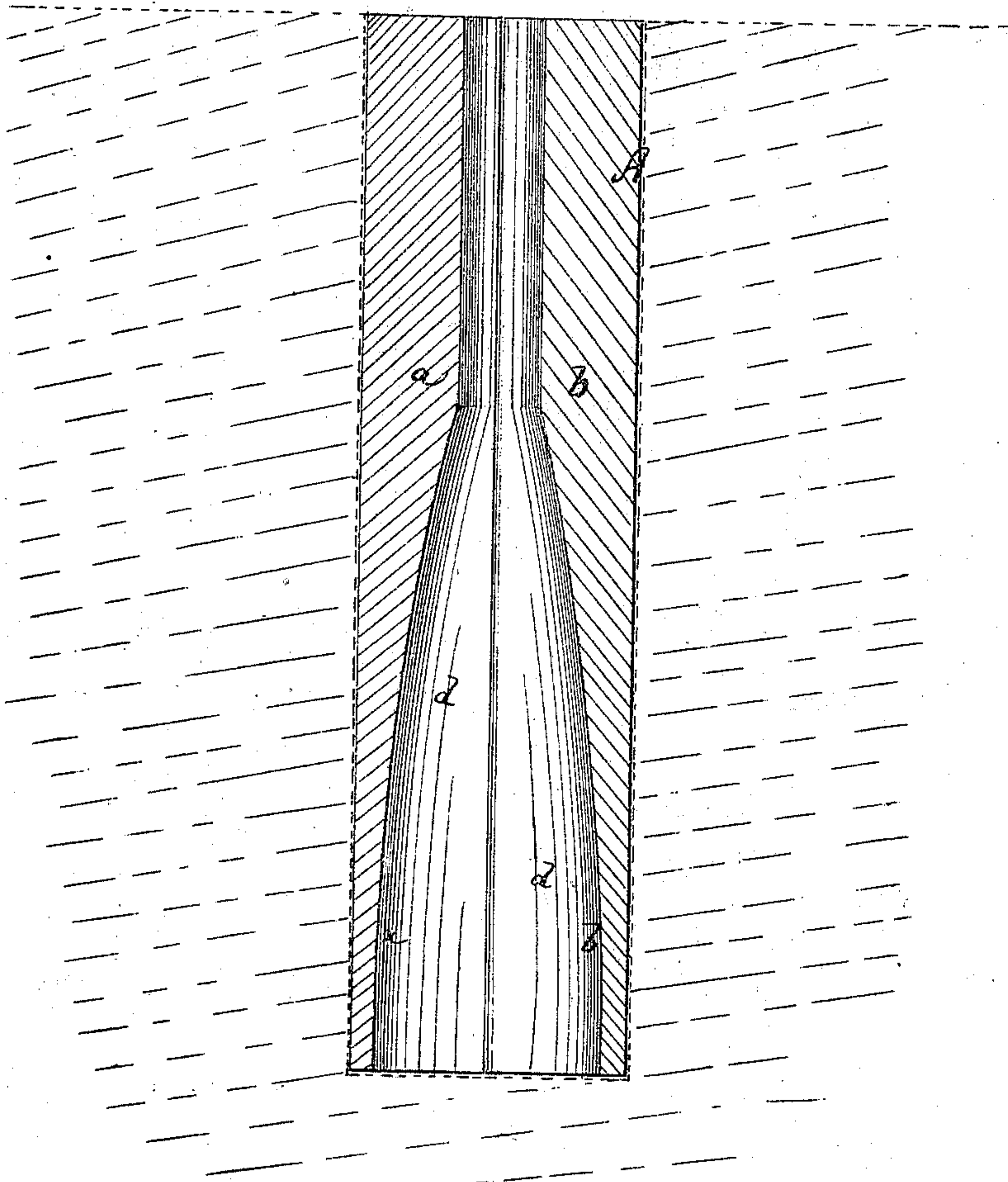
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Improvement in Blasting Plugs.

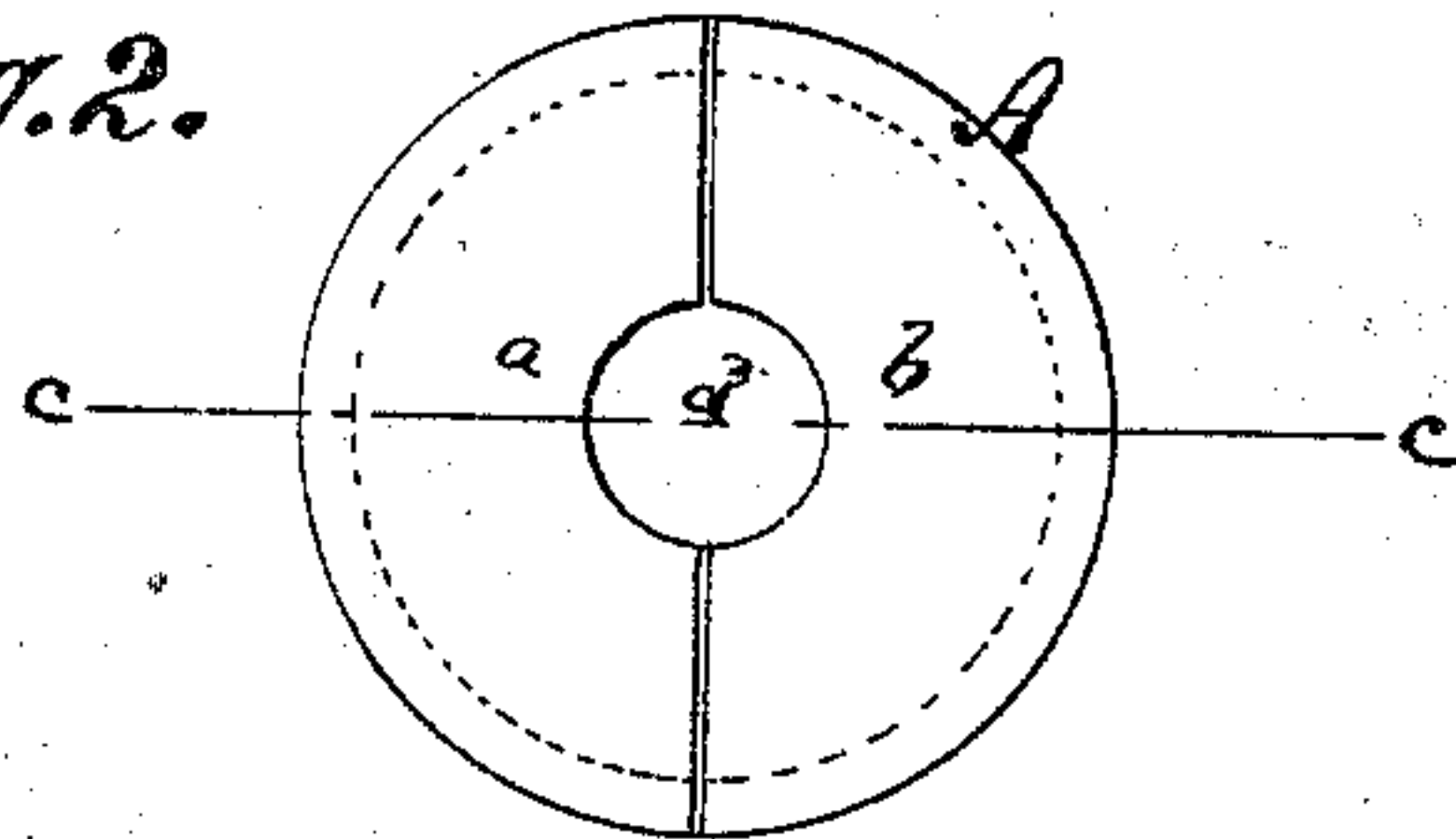
No. 120,438.

Patented Oct. 31, 1871.

*Fig. 1.*



*Fig. 2.*



Witnesses:

*Pl. Dietrich.*  
*Francis Mc Ardle.*

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# UNITED STATES PATENT OFFICE.

JULIUS HOPKINS HOLSEY, OF BUTLER, GEORGIA.

## IMPROVEMENT IN BLASTING-PLUGS.

Specification forming part of Letters Patent No. 120,438, dated October 31, 1871.

*To all whom it may concern:*

Be it known that I, JULIUS HOPKINS HOLSEY, of Butler, in the county of Taylor and State of Georgia, have invented a certain Improved Safety-Blaster, of which the following is a specification:

Figure 1 represents a longitudinal section of my improved safety-blaster, the line *c c*, Fig. 2, indicating the plane of section. Fig. 2 is an end or top view of the same.

Similar letters of reference indicate corresponding parts.

This invention relates to a new implement, which is to be inserted previous to blasting in the holes drilled into wood or rock, and is to receive the explosive charge, all with the object of insuring greater safety in the preparation of the charge and more perfect results of blasting, without danger to the attendants. The invention consists in the use of a hollow pin made in two sections. The same is to receive the charge and control its force.

A in the drawing represents a cylindrical pin, of suitable size, made of wood, metal, or other material. It is longitudinally divided into two sections, *a* and *b*, of suitable size and shape. The pin is made hollow, its bore, *d*, being contracted on top to form a small vent, while the lower part constitutes an enlarged chamber, as shown in Fig. 1.

The rock, tree, or other thing to be blasted is first provided with a hole of sufficient depth and as large in diameter as the pin A. The latter is then put into such hole until it strikes bottom,

and is then, with the aid of a tube or funnel, filled with the powder or other charge. Friction is thus produced before putting in the powder, none after, and all danger from accident while preparing the charge is thereby obviated. The small vent on top is not large enough to prevent a full effect of the charge against the sides of the chamber *d*.

For blasting trees the pin should be inserted in such manner as to have the split between its halves in line with the grain of the wood. Thus the pieces *a b* will, when the explosion takes place, fall aside, together with the pieces of rock or wood. Accidents from a wanton spreading of the exploded pieces are thus also avoided. As a further reason that the pieces *a b* will not be thrown up by the explosion, it will be noticed that there is greatly more surface exposed on the sides of chamber I than on the end of chamber I, and therefore when the explosion takes place the pressure caused thereby will be much greater on the sides than on the end, and the pieces *a b* will therefore fly to the sides and not upward, as experiment has demonstrated.

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

As a new article of manufacture, the hollow blasting-pin A, made in two sections, *a b*, substantially as and for the purpose herein shown and described.

JULIUS H. HOLSEY.

Witnesses:

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