

R. G. BALDWIN.

Apparatus for Charging Drill Holes.

No. 166,840.

Patented Aug. 17, 1875.

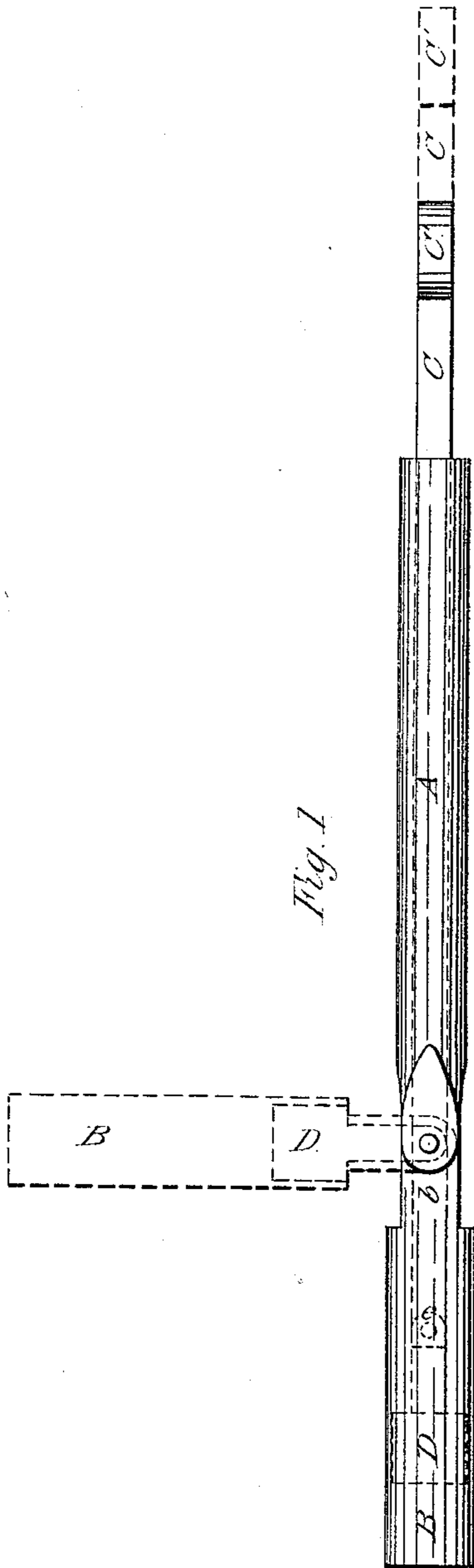


Fig. 1

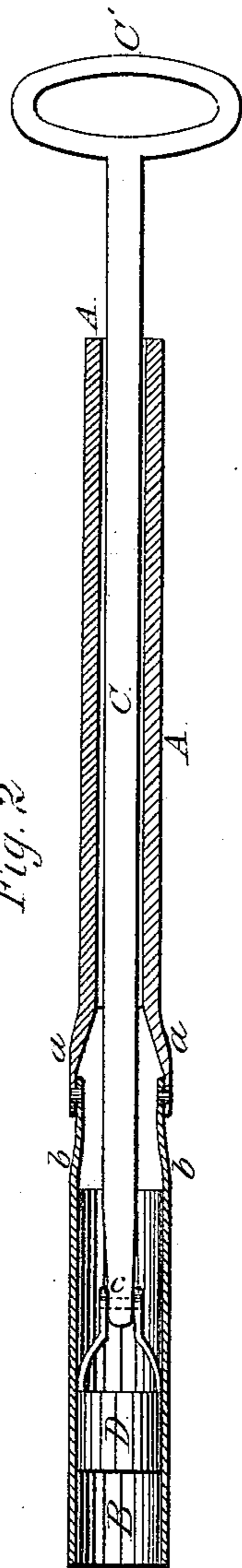


Fig. 2

Attest:  
Chas. Jacobsen  
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Ransom G. Baldwin,  
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# UNITED STATES PATENT OFFICE.

RANSON G. BALDWIN, OF LEIGHTON, IOWA.

## IMPROVEMENT IN APPARATUS FOR CHARGING DRILL-HOLES.

Specification forming part of Letters Patent No. **166,840**, dated August 17, 1875; application filed July 28, 1875.

*To all whom it may concern:*

Be it known that I, RANSON G. BALDWIN, of Leighton, in the county of Mahaska and State of Iowa, have invented certain new and useful Improvements in Blasting-Chargers for Mining and Quarrying; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawing, and to the letters of reference marked thereon, which form a part of this specification, and in which—

Figure 1 is a side view, and Fig. 2 is a longitudinal section.

Similar letters of reference indicate corresponding parts in both the figures.

This invention relates to that class of devices that are used for charging blast-holes in rocks or coal-mines with powder or similar explosive material; and its object is to provide a charger that may be used with absolute safety, and with equal facility in low and high mines.

A is a hollow tube, from five to seven feet long, which terminates in two branches, *a a*. Onto these is pivoted the charging-tube B, made of copper, and having two arms, *b b*, pivoted to the branches *a a*, as shown. Within the tube A slides a rod, C, having a handle, C', and having a button, D, which slides within the charging-tube B, pivoted to its lower end at *e*.

The object of this construction is to enable the charging-tube B, with its button D, to be turned at right angles to the rod A, when it is to be charged with powder. If the charging-tube were rigidly attached to the tube A, the

whole apparatus would have to be placed in a vertical position in order to charge it, which would render its use objectionable and often impossible in low mines. The position of this apparatus for charging is indicated by the dotted lines in Fig. 1.

From the foregoing description, the manner of using my improved charging apparatus will be readily understood. After the tube B is filled with powder, it is carefully inserted into the blasting-hole, previously drilled, and carried home to the bottom thereof by the long rod A. The charge contained in the tube B is then inserted into the blast-hole by pushing the rod C, by its handle C', through the tube A. The charging-tube B, being made of copper, prevents sparks by its coming in contact with the sides of the blast-hole, while the hollow tube A prevents friction between the sliding rod C and the sides of the blast-hole when it is driven home.

Having thus described my invention, I claim and desire to secure by Letters Patent of the United States—

The improved blasting-charger herein described, consisting of the tube A, having the charge tube or cylinder B pivoted thereto, and sliding rod C, having the button D pivoted thereto, combined and operating substantially in the manner and for the purpose hereinbefore set forth.

In testimony that I claim the foregoing as my own I have hereunto affixed my signature in presence of two witnesses.

RANSON G. BALDWIN.

Witnesses:

M. E. BENNETT,  
M. T. WILLIAMS.