R. L. BRAINARD.

SOLDERING GUN-BARRELS.

No. 175,850. Patented April 11, 1876.

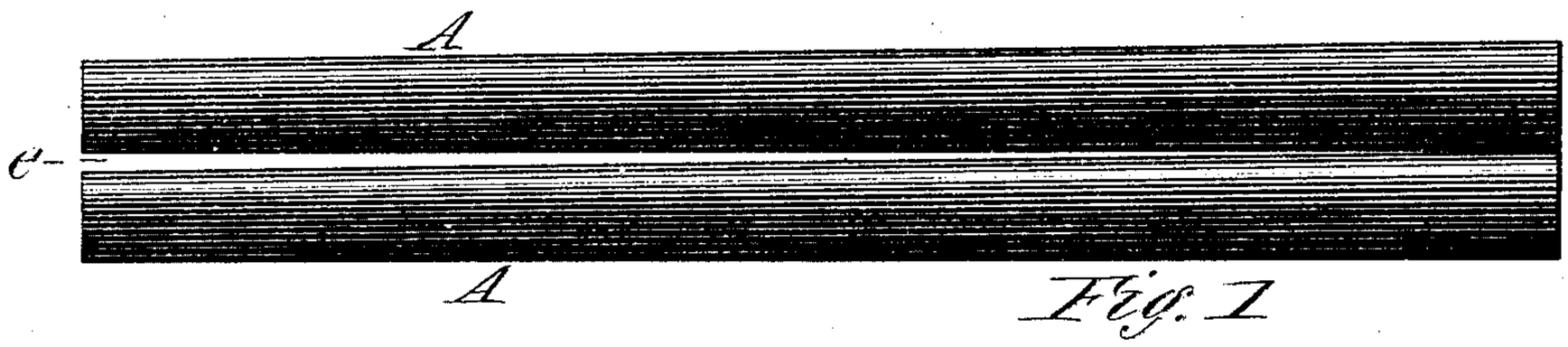

Fig. I

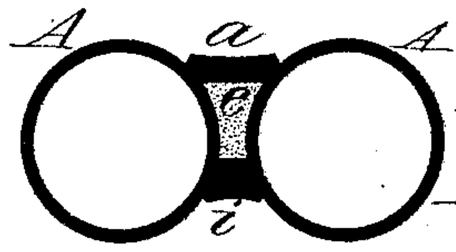

Fig. II

Witnesses,

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UNITED STATES PATENT OFFICE.

ROBERT L. BRAINARD, OF MERIDEN, CONNECTICUT.

IMPROVEMENT IN SOLDERING GUN-BARRELS.

Specification forming part of Letters Patent No. **175,850**, dated April 11, 1876; application filed October 9, 1875.

To all whom it may concern:

Be it known that I, ROBERT L. BRAINARD, of Meriden, in the State of Connecticut, have invented a new and useful Process in Securing Ribs and Bolsters to Double Barrels of Guns; and that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing making a part of this specification and description.

The object of my invention is, to secure the two barrels of a gun in a firm position with reference to each other, after they have been once adjusted, while the operation of securing the rib and bolster to the barrels is being performed; and to this end my invention consists of a packing, of some plastic material which will "set" or harden quickly, placed between the barrels after they are properly adjusted side by side ready for the attachment of the rib and bolster, so that after the plastic material is set or hardened the barrels may be secured firmly together, without injury, and the rib and bolster be brazed or soldered in.

Figure I is a plan view of a pair of gun-barrels, as adjusted, with reference to each other, preparatory to having the rib and bolster attached, and Fig. II is an end view of the same.

In the drawing A A represent the barrels, which, in all guns of this class are somewhat thicker near and at the breech-chamber than at any other point nearer the muzzle, to guard against bursting, or fracture at the explosion, as that part of the barrel is subjected to the greatest strain, which greater thickness increases the outside diameter of each barrel at the breech; and, as the remaining portion of each barrel is tapered smaller toward the muzzle, when placed side by side and adjusted to have the rib and bolster attached, the barrels touch each other at the breech end, and are held a little distance apart for the rest of their length, as shown clearly in Fig I.

As ordinarily practiced, the barrels are held apart by inserting pieces of metal between the barrels, and then they are secured in that position by wire wound around both barrels; but by this process the barrels are forced against these pieces of metal which are wedged between them, to such a degree, that, when the barrels are made somewhat light and thin, as many of the best barrels are made, the operation of adjusting them with such pieces of metal between is one of extreme delicacy, and is accomplished with much difficulty, owing to the liability of the barrels being indented at the points where the pieces of metal are placed.

My invention is intended to obviate this difficulty, as, when the two barrels are laid side by side, and their proper adjustment is completed, I mix a sufficient quantity of some plastic material that will set or harden quickly, preferably, plaster of Paris and water, and introduce it carefully between the barrels, until the space *e* is filled, so that both barrels have a firm bearing against it their entire length, except where they touch each other at the breech. As soon as the plastic material sets or becomes hard, the barrels are secured firmly together, without the least liability of becoming indented or injured by contact with each other, or with the material between them, (as they have the same firm bearing at all points,) and the rib *a* and bolster *i* are then both secured by brazing or soldering, and if the plaster be allowed to remain in after the rib and bolster are secured, it will rather strengthen the gun than otherwise.

Having thus described my invention, what I claim as new is—

The process herein described in brazing or soldering in the rib and bolster of double-barrel guns, by packing the space between the barrels with plastic material, which afterward hardens, to furnish a firm bearing to both barrels when secured together after being adjusted, preparatory to boring, substantially as described.

ROBERT L. BRAINARD.

Witnesses:

JOSEPH H. BECKETT,

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