

G. S. SNEER.
 DEVICE FOR THAWING EXPLOSIVES.
 APPLICATION FILED OCT. 5, 1909.

965,760.

Patented July 26, 1910.

Fig. 1.

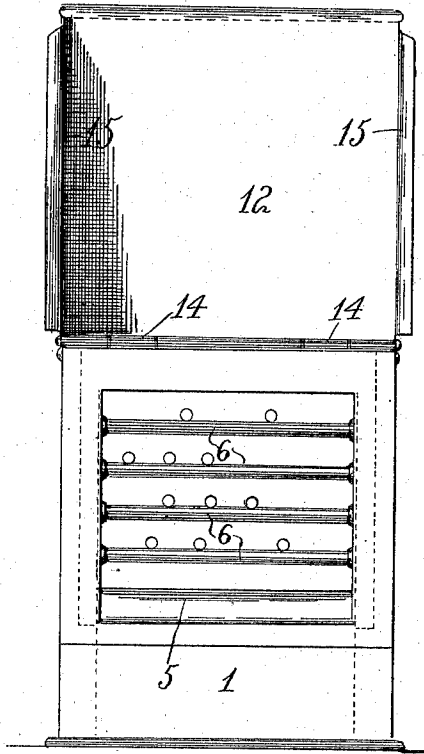


Fig. 2.

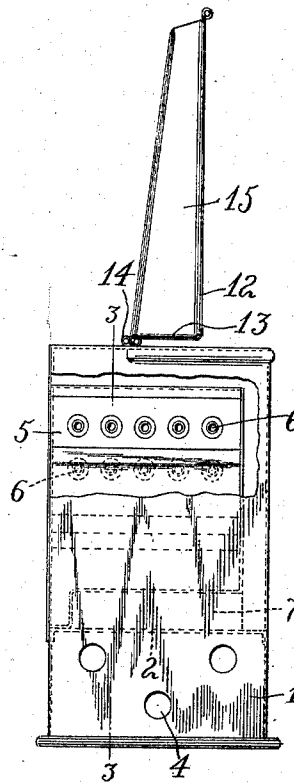
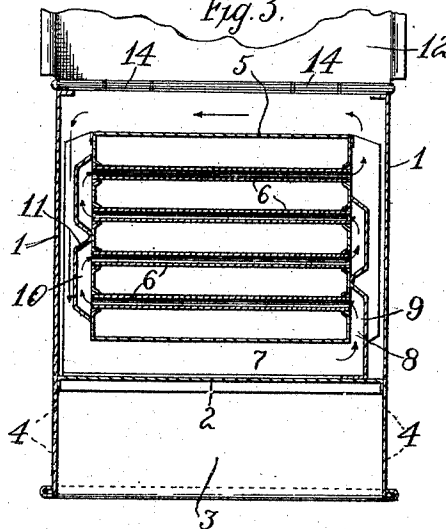


Fig. 3.



ATTEST.

Bent McHale
Edward N. Sarton

INVENTOR.

George S. Sneer

By *J. Spear Middleton Donaldson*
 ATTYS.

UNITED STATES PATENT OFFICE.

GEORGE S. SNEER, OF SILVERTON, COLORADO.

DEVICE FOR THAWING EXPLOSIVES.

965,760.

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To all whom it may concern:

Be it known that I, GEORGE S. SNEER, a citizen of the United States, residing at Silverton, Colorado, have invented certain new and useful Improvements in Devices for Thawing Explosives, of which the following is a specification.

My invention relates to improvements in apparatus for thawing explosives and has, among others, for its objects, to provide a simple, inexpensive and efficient device by which explosives may be quickly and safely thawed, and in which unequal heating of the sticks will be prevented.

The invention includes the novel features of construction and arrangement and combination of parts hereinafter described and particularly set forth in the appended claims.

A device constructed in accordance with my invention is illustrated in the accompanying drawings, in which—

Figure 1 is a front elevation with the door open; Fig. 2 is a side view partly broken away; Fig. 3 is a section on line 3—3 of Fig. 2.

Referring by reference characters to this drawing, the numeral 1 designates the main outer casing or body of the apparatus which may be made of any suitable material, preferably sheet metal. It is provided with an imperforate bottom 2, the walls of the casing extending below the imperforate body so as to provide a space 3 for the heating medium. The heating may, if desired, be effected by candles, and in this event it is only necessary to provide openings 4 in the end walls, these permitting the insertion of the candles and also the entrance of sufficient air to support combustion.

Within the body or case is an inner chamber or casing 5, which is spaced from the outer case at the top, bottom, sides, and back, to provide water spaces, which are in communication with each other as shown. Both the outer case and inner casing are open at the front, and at this point the two casings are connected together to form a water tight joint. Within the inner casing are located a plurality of horizontally disposed tubes 6 arranged in rows to form water heated shelves for the support of the sticks of explosive as shown in Fig. 1. These tubes have their ends connected to the side walls of the inner casing, and I

have found a convenient manner of connecting them to be to punch or otherwise form flanged openings in the walls of the casing, the flanges being flared. Within these flanges are seated the ends of the tubes, being held therein by soldering. The tubes of the lower row are placed in direct communication at one end with the bottom water space 7 by a passage 8 formed by a wall or cap piece 9. In a similar manner the opposite ends of the tubes of the lower row are placed in direct communication with the corresponding ends of the tubes of the row next above by a passage 10 formed by a cap or wall 11. Likewise each succeeding row is connected to the next lower row, so that, as the water is heated, it will circulate through the rows of tubes, warming and thawing the explosive supported thereby. By using rows of tubes as the means for supporting the explosive, provision is made for the circulation of air throughout the entire interior of the inner casing. Thus, in addition to the heating action of the water surrounding the casing at the sides, top and bottom and back, and passing through the tubes, I get a free circulation of air around, among and between the sticks of explosive, and thereby heat them all simultaneously to an equal degree.

The outer case is provided with a door 12 which not only covers and closes the front of the casing, but has a rearwardly extended upper wall or flange 13 hinged at 14 so that, when wide open, it uncovers a cut away portion or space in the top wall to provide for the admission of water. The door 12 is also provided with side flanges 15 which overlap the sides of the case and make a tight joint.

Having thus described my invention what I claim is:—

1. An apparatus for thawing explosives comprising a water jacketed casing having a plurality of horizontal tubes arranged in rows and communicating with said water jackets, said tubes serving as shelves for supporting the explosives and permitting free circulation of air about the same.

2. An apparatus for thawing explosives comprising an outer casing and an inner casing separated from each other to form interposed water spaces at top, bottom, and sides, horizontal tubes arranged in rows and carried by the walls of the inner casing,

and caps secured to the inner casing and forming passages placing successive rows of tubes in communication with each other.

3. An apparatus for thawing explosives
5 comprising an outer and an inner casing, with an interposed water space, both open at the front, said outer casing being open at the top in part, horizontal tubes arranged in rows and communicating with said water
10 space, and a door closing said top and front and having side flanges overlapping the side walls of the outer case.

4. An apparatus for thawing explosives comprising an outer and an inner casing,
15 with an interposed water space, both open

at the front, said outer casing being open at the top in part, horizontal tubes arranged in rows and communicating with said water space, and a door closing said top and front and having side flanges overlapping the side walls of the outer case, said outer case having a depending wall providing a heating chamber, said wall having suitable openings. 20

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

GEO. S. SNEER.

Witnesses:

PETER ORELLA,
JOE ORELLA.