Feb. 28, 1933. T. F. KNIGHT ET AL 1,899,095

APPARATUS FOR LOADING PROJECTILES

Filed March 18, 1932

Fig. 1.

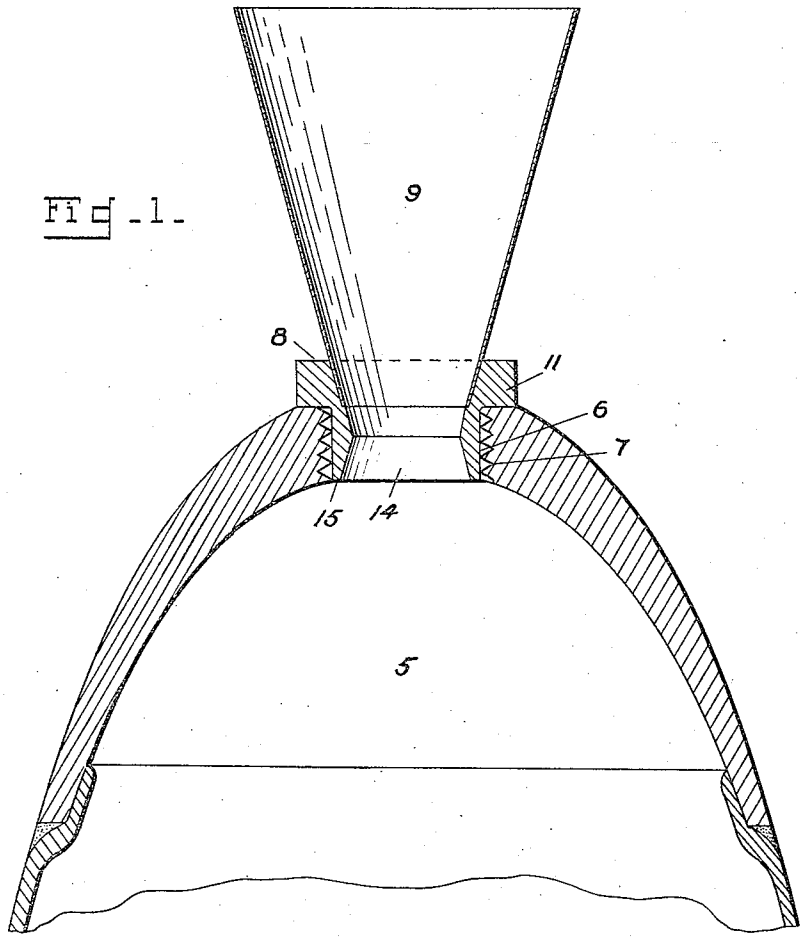


Fig. 2.

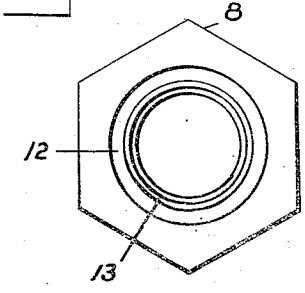
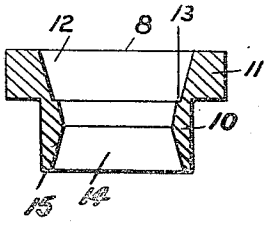


Fig. 3.



Inventors
Thomas F. Knight
Henry K. Williams, Jr.
By W. N. Road
Attorney

Patented Feb. 28, 1933 1,899,095

UNITED STATES PATENT OFFICE

THOMAS F. KNIGHT, OF LYNDHURST, NEW JERSEY, AND HENRY K. WILLIAMS, JR., OF DUNKIRK, NEW YORK

APPARATUS FOR LOADING PROJECTILES

Application filed March 18, 1932. Serial No. 599,750.

(GRANTED UNDER THE ACT OF MARCH 3, 1883, AS AMENDED APRIL 30, 1928; 370 O. G. 757)

The invention described herein may be manufactured and used by or for the Government for governmental purposes, without the payment to us of any royalty thereon.

This invention relates to apparatus for loading projectiles.

Bombs and shells are provided with a threaded aperture for receiving an adapter booster or a fuse. In loading the projectiles with molten explosive it is the usual practice to employ a funnel to pour the explosive and in order to prevent the explosive from entering the spaces between the threads the funnel is seated in an adapter that is threaded into the aperture.

We have discovered that it is not necessary to screw the adapter into the aperture in order to protect the threads and the present invention is directed to a loading apparatus which is merely placed in the loading aperture without attachment thereto.

Fig. 1 is a longitudinal sectional view of the improved apparatus.

Fig. 2 is a plan view of the adapter.

Fig. 3 is a detail sectional view thereof.

Referring to the drawing by characters of reference, the projectile to be loaded with explosive is in the form of a container 5 having an aperture 6 provided with screw-threads 7 for the attachment of an adapter booster or fuse (not shown).

The loading or pouring apparatus consists of an adapter 8 and a funnel 9. The adapter includes an externally cylindrical, smooth-surfaced body 10 adapted to be inserted in the threaded aperture 6 and an enlarged head 11 adapted to seat on the container and support the unit in place. The bore of the adapter is double-tapered, the outer portion 12 being counterbored to provide a shoulder 13 for seating the funnel 9, and the inner portion 14 providing a thin edge 15 to prevent the formation of air pockets when the level of the molten explosive rises through the adapter.

As clearly shown in Fig. 1, when the adapter is inserted in the aperture 6 it blocks off the interspaces between the threads and effectively prevents the admission of the explosive thereto. The practice in loading a container is to pour the explosive until the level rises into the funnel. The impurities in the explosive rise to the surface and will be contained in the portion in the funnel. When the explosive has solidified the adapter and funnel are removed, the portion of the cast contained therein being broken off.

We claim:

1. In an apparatus for loading molten explosive into a container, an adapter having an enlarged supporting head and an externally cylindrical smooth-surfaced body, a double-tapered bore in the adapter, a counterbore in the outer tapered bore, and a funnel seated in the counterbore.

2. In an apparatus for loading molten explosive into a container, an adapter having an enlarged supporting head and an externally cylindrical smooth-surfaced body, a double-tapered bore in the adapter, and a funnel seated in the outer portion of the tapered bore.

HENRY K. WILLIAMS, JR.
THOMAS F. KNIGHT.