

H. D. BOWMAN.  
PROCESS OF FILLING FUSE CONTAINERS FOR POWDER BAGS.  
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1,298,167.

Patented Mar. 25, 1919.

Fig. 1.

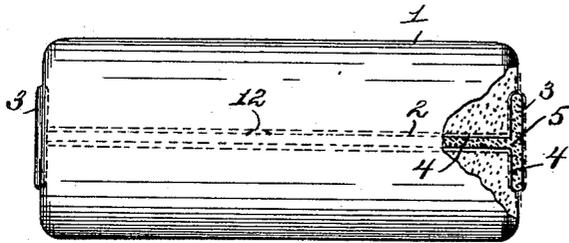


Fig. 2.

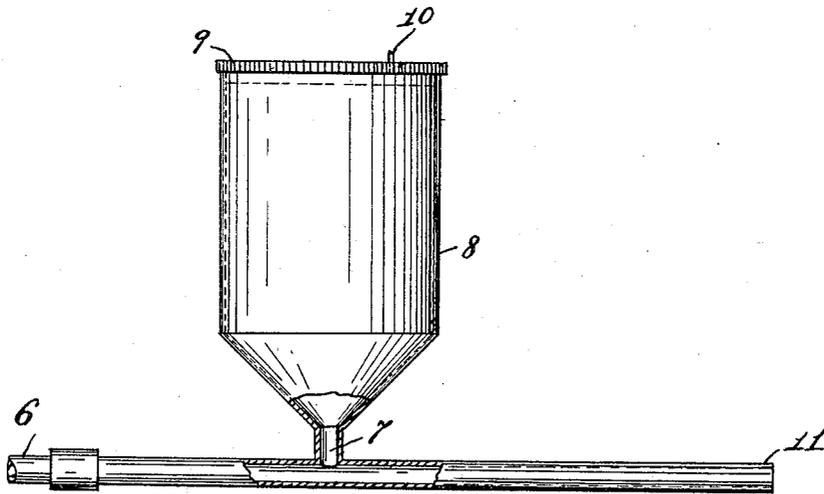
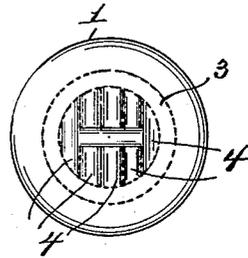


Fig. 3.

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# UNITED STATES PATENT OFFICE.

HARRY D. BOWMAN, OF EAST ORANGE, NEW JERSEY.

PROCESS OF FILLING FUSE-CONTAINERS FOR POWDER-BAGS.

1,298,167.

Specification of Letters Patent. Patented Mar. 25, 1919.

Application filed February 13, 1918. Serial No. 216,993.

*To all whom it may concern:*

Be it known that I, HARRY D. BOWMAN, a citizen of the United States, residing in the city of East Orange, county of Essex, and State of New Jersey, have invented a new and useful Improvement in Processes of Filling Fuse-Containers for Powder-Bags, of which the following is a full, clear, and exact description, such as will enable others skilled in the art to which it pertains to use the same, reference being had to the accompanying drawings, and to characters of reference marked thereon, forming a part of this specification.

The invention has relation to a process of filling the fabric fuse containers of powder bags with an explosive compound. The container comprises a central and end members which are made from porous material so constructed as to provide powder receiving pockets or elements designed to receive the black powder which when ignited sets fire to the smokeless powder contained in the powder bag of which the central and end members of the fuse container forms a part.

Hitherto it has been customary to fill the said containers by hand, preferably employing a stick or the like to force the powder into the powder receiving pockets or elements thereof, the operation being a tedious and unsatisfactory one.

The distinctive novelty of the process consists in forcing air under pressure into the powder receiving pockets or elements of the fuse container thereby distending the same and simultaneously introducing an explosive compound, such as black powder, into said current of air whereby the explosive compound is forced into said powder receiving pockets or elements of the container while the air is permitted to escape through the fabric of the powder pockets of the said container.

The process I perform in the preferred embodiments of my invention, which I have illustrated in the accompanying drawings, having it understood that I am not limited to the specific details of construction shown and described, as it is manifest that these may be modified and changed without departing from the spirit or scope of the invention.

In the accompanying drawings,

Figure 1 represents a side elevation, partly

in section, of a powder bag provided with a fuse container.

Fig. 2 represents an end elevation, and

Fig. 3 represents a side elevation partly in section of the mechanical appliances employed for filling the fuse containers.

Similar characters of reference refer to like parts throughout the specification and drawings.

In describing the process of my invention, I will simultaneously describe the mechanical appliances employed, so that those skilled in the art to which it pertains, may gain a full knowledge of the appliance as well as the process.

In the drawing, 1 represents a powder bag of ordinary construction, filled with smokeless powder and having centrally located therein the central member 2 of the fuse container which has attached thereto, what are known as, end or detonating members 3—3 which members constitute a part of each end of the powder bag and which are secured thereto by means of stitching. The central member 2 and end or detonating members 3—3 are made of porous material and are provided with powder receiving pockets or elements 4 for the reception of the black powder or other explosive compound 5 and which may be of any desired form or configuration. The powder receiving elements or pockets are formed by stitching the layers of the porous fabric of which the fuse container is made together.

The mechanical appliance employed for filling the fuse container consists of a suitable source of air supply derived from the air supply pipe 6, which pipe communicates with the open or discharge end 7 of the powder chamber or container 8, as clearly indicated in the drawings. The powder container 8 is provided with a closed end consisting of a screw cap 9 having a vent 10. The operation of the device and the process of filling the fuse container is as follows:

The end of the pipe 6 at 11 is inserted in an opening 12 formed in the central member 2 of the fuse container and preferably the said central member is pulled over the pipe 6 until the end member 3 of the fuse container is in close proximity to the end 11 of the pipe 6. By any suitable means (not shown) air under pressure is forced through the pipe 6 which distends the fabric of the powder receiving pockets of the fuse con-

tainer and simultaneously introduces the granular explosive compound which is contained in the powder chamber or container 8 into said pockets in such a manner that 5 the explosive compound is arrested by the meshes of the fabric of the powder pockets while the air is permitted to escape through the meshes of said fabric. When the pockets of the end member are solidly filled with the granular explosive, the central member of 10 the container is then gradually withdrawn from the tube until the pocket in the central member is solidly filled up to the opening in the tube and then the other half of the fuse container is filled in like manner. 15

It will thus be seen that by my improved process I am enabled to efficiently and solidly fill the fuse container of a powder bag in the most satisfactory and rapid 20 manner.

Experience has demonstrated that the organization above described is a highly efficient one, and while I have shown the preferred embodiment of my present invention, 25 I do not wish to be limited to the exact details of construction shown and described, as obvious modifications thereof, not involving the exercise of invention, may be made by any skilled mechanic, and such departures from what is herein set forth, I consider within the scope and terms of my 30 claims.

I claim:

1. The process of filling the powder re-

ceiving pockets of fuse containers of powder 35 bags which consists of pneumatically distending said pockets and simultaneously filling the same with an explosive compound.

2. The process of filling a fabric fuse container which consists of forcing air under 40 pressure into the container and introducing a granular explosive compound into said current of air whereby the explosive compound is arrested by the meshes of the fabric 45 of said fuse container while the air is permitted to escape through the meshes of said fabric.

3. The process of filling a porous fuse container for powder bags, said fuse container comprising a central powder receiving pocket terminating in a plurality of end powder receiving pockets, which consists 50 in forcing air under pressure into the powder receiving pockets of said container and introducing an explosive compound into said 55 current of air whereby the explosive compound is forced into said powder receiving pockets while the air is permitted to escape through the pores of the pockets of said 60 container.

This specification signed and witnessed this 12th day of February, 1918.

HARRY D. BOWMAN.

Witnesses:

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."