

W. T. WILSON.
PAPER CONTAINER.
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1,226,293.

Patented May 15, 1917.

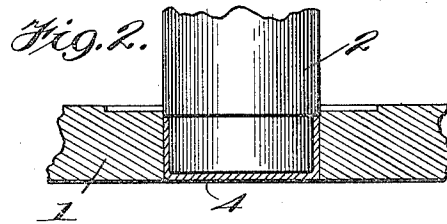
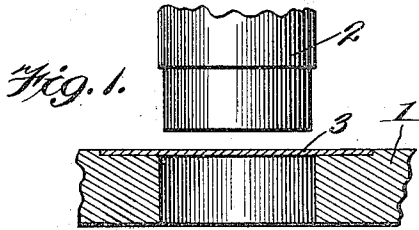


Fig. 3.

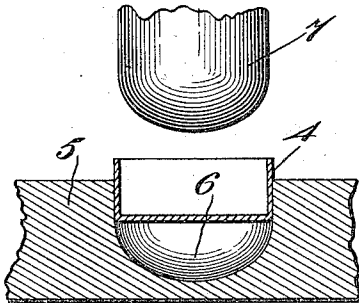


Fig. 4.

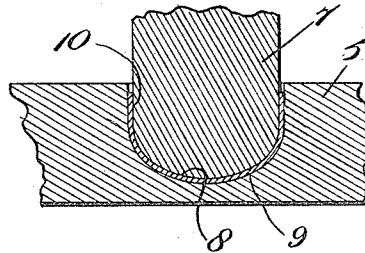


Fig. 5.

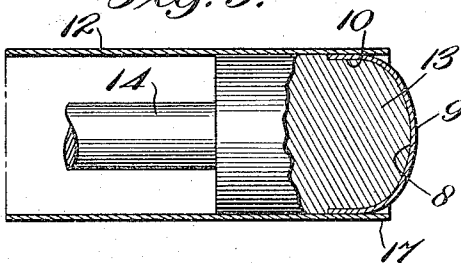


Fig. 6.

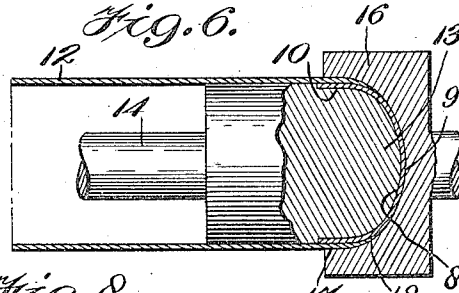


Fig. 7.

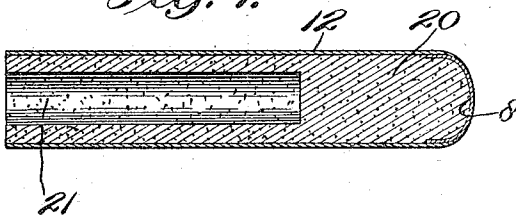
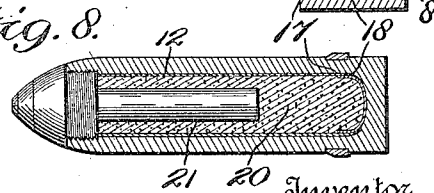


Fig. 8.



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PAPER CONTAINER.

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To all whom it may concern:

Be it known that I, WYLE T. WILSON, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Paper Containers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to paper containers for explosives or any other material and has for one of its objects to provide such containers in a manner more expeditious and less costly than has been heretofore proposed.

With these and other objects in view, the invention consists in the novel details of construction pertaining to the containers, all as will be more fully hereinafter disclosed and particularly pointed out in the claims.

Referring to the accompanying drawing forming a part of this specification, in which like numerals designate like parts in all the views:—

Figures 1 and 2 are diagrammatic sectional views of mechanism adapted to perform different steps in the process of making a partially spherical closure for the container;

Figs. 3 and 4 are views similar to Figs. 1 and 2, illustrating other steps in the making of the closure for the container;

Fig. 5 is a diagrammatic partly sectional partly elevational view illustrating the assemblage of the closure and casing prior to being subjected to a spinning operation;

Fig. 6 is a view similar to Fig. 5 illustrating the spinning action;

Fig. 7 is a sectional view of a container filled with an explosive suitable for insertion into a shell or shrapnel; and

Fig. 8 is a sectional view of shell with the filled container in place.

The manufacture of the containers may be carried out rapidly by mechanism such as is diagrammatically indicated in Figs. 1 to 6, and in which, 1 indicates any suitable female die, 2 any suitable male die coacting therewith, and 3, a paper disk ready to be formed into a cup shaped closure 4 upon the descent of the die 2. 5 indicates any suitable female die having a partly cylindrical, partly spherical cup shaped cavity 6 adapted to receive the closure 4, while 7 indicates a suitable male die coacting with

said cavity 6, to form said closure 4 into the closure 8, shown in Fig. 4, having the spherical portion 9 and the cylindrical portion 10.

The said spherical portion 9 is adapted to form the bottom of the container and the said straight cylindrical portion 10 is adapted to fit the inside of the casing or tubular portion 12, as will be clear from Fig. 5.

In order to insert said closure 8 into said casing 12, I prefer to fit it over the partly spherical end 13 of the plunger 14; to then insert said plunger and closure into one end of the tube or casing 12, and push said closure through said tube until its spherical portion 9 projects beyond the other end of said tube, leaving the cylindrical portion 10 of said closure inside of said tube all as will be clear from Fig. 5.

The parts being in the position shown in Fig. 5, may next be subjected to the action of a rotating spinner 16, which presses together the portions 10 of the closure, the end portions 17 of the casing, and spins out the said portions 17 into the tapered rim 18, while causing the paper stock of the end 17 to flow and to contract around the closure 8, thus producing a partly spherical surface from said end 17 which merges into the surface 9 of the closure. Some or all of the operations may if desired be carried out hot, and it is preferred to employ glue or other adhesive between the parts 10 and 17. If the stock of the casing, or closure, is not sufficiently moist to admit of the above operations without tearing, said stock may be rendered more pliable in the manner well known.

The container being thus completed, it is filled with an explosive 20 or other material as by pouring while liquid, or otherwise, and a cavity indicated at 21 may be suitably formed in the body of said explosive when it is desired to accommodate a detonator or other igniter of the charge 20.

It will be understood that the operations illustrated in Figs. 1 and 2 by which a paper cap having its end wall at say a right angle to its side walls, is struck up from a paper disk, as well as the operations shown in Figs. 3 and 4, by which said cap is subjected to a molding and forging action under pressure to give it a partly spherical form may be carried out successively in the same machine if desired. The assembling and spin-

ning operations may be carried out partly by hand or if desired by suitable automatic machinery.

It will be understood that it is tedious and expensive to pour or fill explosives into the cavities of shell owing to the weight of said shell not permitting their ready handling, and owing to the handling of the explosives calling for great care. On the other hand, by first filling the containers 12, which can be easily handled and then inserting each filled container in its shell cavity, the whole process of loading shell and shrapnel is rendered much safer, less costly and more expeditious, and the charge is made to fit the curved end of the cavity.

It is obvious that those skilled in the art may vary the details of the process as well as of the construction without departing from the spirit of the invention, and there-

fore, I do not wish to be limited to the above disclosure except as may be required by the claims.

What I claim is:—

1. A container having a body portion of paper provided at one end with a tapered rim; and a spherical closure also of paper having a cylindrical extension located inside said rim and fitting the interior of said body portion, substantially as described.

2. In a container the combination of a cylindrical body portion of paper having one of its ends provided with a contracted tapered rim; and a closure of paper spherical in shape having a cylindrical extension fitting the interior of said body portion, substantially as described.

In testimony whereof I affix my signature.

WYLE T. WILSON.

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