W. H. BONNEVILLE.

METAL COLLAPSIBLE CASE.

APPLICATION FILED APR. 19, 1913.

**1,111,054.**

Patented Sept. 22, 1914.

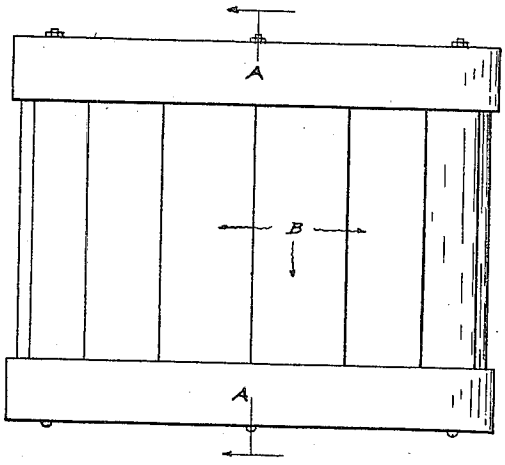



FIG. 1




*Fig. 3.*

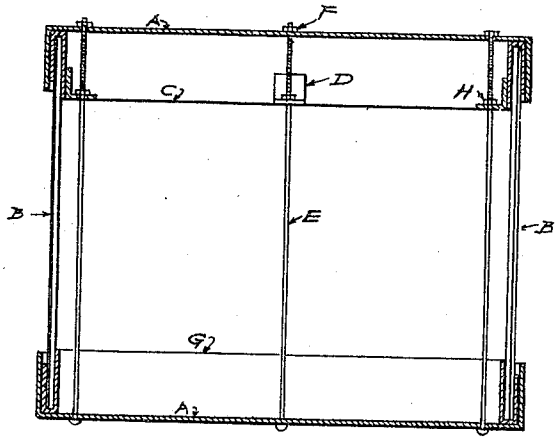



FIG. 2

WITNESSES

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# UNITED STATES PATENT OFFICE.

WILLIAM H. BONNEVILLE, OF PHILADELPHIA, PENNSYLVANIA.

## METAL COLLAPSIBLE CASE.

1,111,054. Specification of Letters Patent. Patented Sept. 22, 1914.

Application filed April 19, 1913. Serial No. 762,303.

*To all whom it may concern:*

Be it known that I, WILLIAM H. BONNEVILLE, a citizen of the United States, residing at No. 9 South Ruby street, Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented a new and useful Metal Collapsible Case, of which the following is a specification.

My invention relates to a metal collapsible shipping case which may be either tubular or rectangular in shape in which the parts forming the case are made of metal and are so constructed and joined that they may readily be put together and taken apart without the aid of tools, and in which new parts may be substituted for any parts damaged. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a general view of the metal collapsible shipping case assembled for use; Fig. 2 is a vertical section through the center of the case showing application of all parts included; Fig. 3 is a sectional plan view of two staves showing the method of interlocking the staves which is by means of a double fold seam.

Similar letters refer to similar parts throughout the several views.

Letter A is a solid, seamless, metal disk or pan two inches deep, forming top or bottom of case, having four holes, to be square in bottom piece to receive shoulder bolts and round in top piece to receive bolts. The holes in top piece may be countersunk so the end of bolts will not protrude.

Letter B are the metal staves, interlocked as shown in Fig. 3, forming sides of case, with the interlocking so constructed as to permit of the staves being taken apart and put together again without the use of any tools or bolts.

Letter C is an endless metal U piece into which the top end of staves "B" are inserted and which holds them in a rigid position.

Letter D is a rolled metal angle section welded to the bottom inside edge of U piece C as shown in Fig. 2, with holes in the lower leg for admission of bolt E. There are four of these angles their purpose is to receive and support bolts E while top A is removed.

Letter E is a round head shouldered bolt used for binding or locking the case together, and passes through hole Z in bottom A, through angle D and top A, with shoulder of bolt at bottom, with rubber gasket around shoulder to make water-tight.

Letter F is metal nut placed on end of bolt E after top or lid A is in position.

Letter G is an endless metal U piece into which the bottom of the staves B are inserted and which holds them in a rigid position.

Letter H is a lock nut which is placed on the bolts E after the bolts have passed through angle D, which when in position holds the case together while being filled or emptied.

I do not claim broadly as my invention the use of metal cap plates as heads, nor the use of endless U pieces as stave seats, nor the interlocking of the staves.

What I do claim as my invention, and desire to secure by Letters Patent, is

1. In a metal collapsible case, the combination of opposite heads comprising a metal cap plate and an endless U piece, or stave seat, metal staves which interlock longitudinally by means of a double fold seam and having each end disposed in the endless U piece, or stave seat, and securing rods extending between said heads on the inside of the case.

2. In a metal collapsible case the combination of metal cap plates forming the outside of the heads with endless metal U pieces, or stave seats, inside the periphery of the cap plates, or heads, into which the stave ends are disposed, with the opposite heads drawn together by round head shouldered bolts passing through holes in the heads, or metal cap plates, and through holes in the lower leg of metal angles welded to the inside edge of the U pieces, or stave seats, said rods being held in position by means of lock nuts.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

W. H. BONNEVILLE.

Witnesses:

HARRY REITINGER,

W. EARLE POWEL.

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