H. J. STAMBAUGH AND G. M. McCANN.

GUN STRUCTURE.

APPLICATION FILED AUG. 14, 1919. RENEWED JULY 7, 1920.

1,358,343. **Patented Nov. 9, 1920.**

Fig. 1.

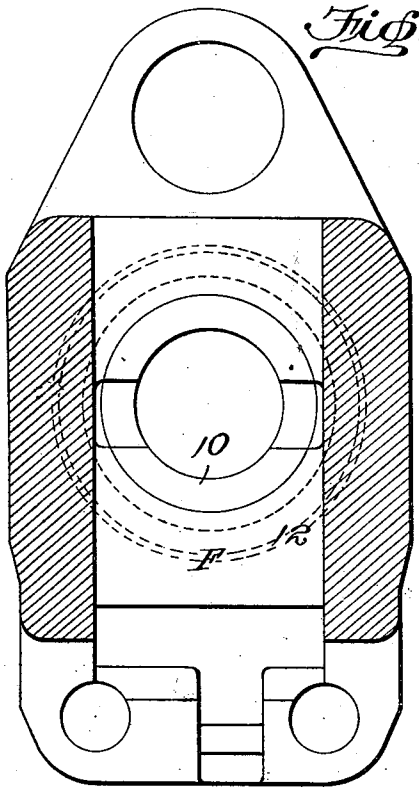


Fig. 2.

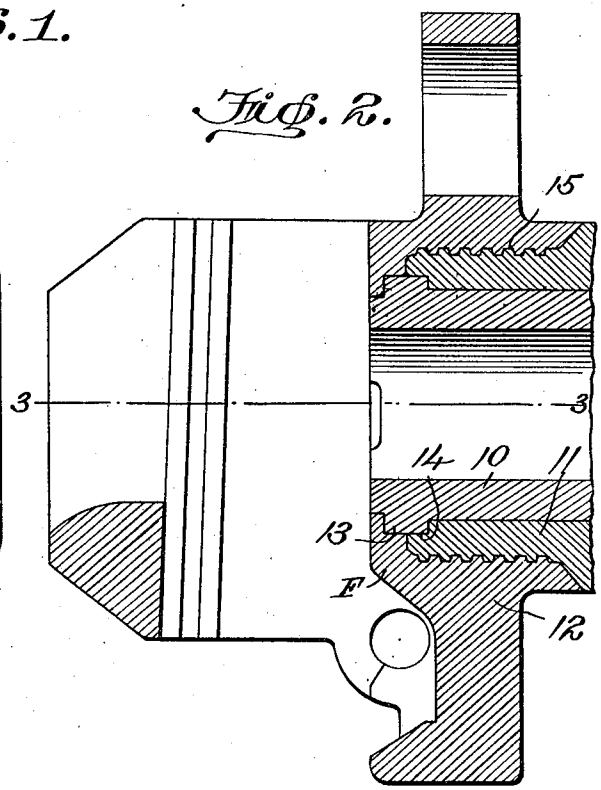
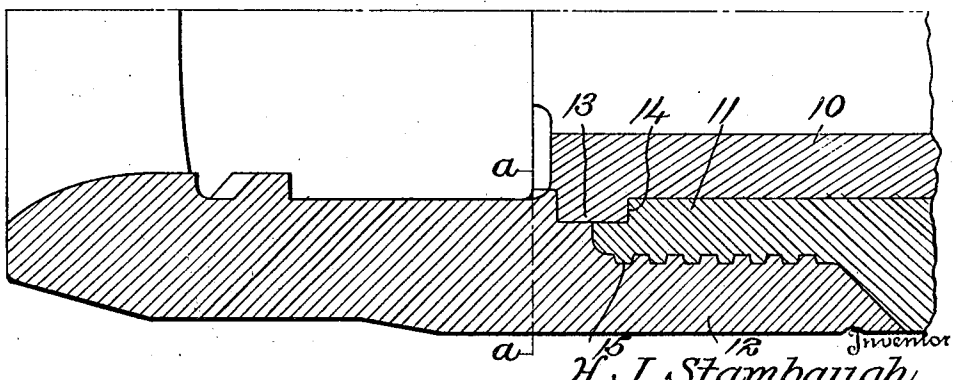


Fig. 3.



Inventor

H. J. Stambaugh,
G. M. McCann,

By Henry T. Bright

Attorney

UNITED STATES PATENT OFFICE.

HENRY J. STAMBAUGH AND GEORGE M. McCANN, OF WASHINGTON, DISTRICT OF COLUMBIA, ASSIGNORS TO UNITED STATES ORDNANCE COMPANY, OF WASHINGTON, DISTRICT OF COLUMBIA, A CORPORATION OF VIRGINIA.

GUN STRUCTURE.

1,358,343. Specification of Letters Patent. Patented Nov. 9, 1920.

Application filed August 14, 1919, Serial No. 317,576. Renewed July 7, 1920. Serial No. 394,472.

To all whom it may concern:

Be it known that we, HENRY J. STAMBAUGH and GEORGE M. McCANN, citizens of the United States, residing at Washington, in the District of Columbia, have invented certain new and useful Improvements in Gun Structures, of which the following is a specification.

For expediency in the manufacturing of ordnance it is necessary to construct and assemble the gun body from three separate pieces; namely, the tube, the jacket and the breech ring. In such a construction the desired strength of the body throughout must be maintained and this has always presented a troublesome problem in manufacture. Furthermore, the construction and assembly of these parts has been such heretofore that the strain and stresses in firing have caused displacement of the breech ring and jacket rearwardly relatively to the tube so that the firing mechanism is correspondingly displaced and misfires result.

It is therefore the purpose of our present invention to construct and assemble the tube, jacket and breech ring in a novel manner which will maintain the desired strength of the body throughout and which will prevent any displacement of the ring and jacket rearwardly relative to the tube under the influence of the stresses and strains incident to firing.

With these purposes in view our invention consists in the details of construction and in the arrangement and combination of parts to be hereinafter more fully described and particularly pointed out in the claims.

In describing the invention in detail reference will be had to the accompanying drawings wherein like characters of reference denote corresponding parts in the several views, and in which—

Figure 1 is a rear view of the gun body partly in section;

Fig. 2, a vertical longitudinal section of the breech end of the gun body constructed in accordance with our invention;

Fig. 3, a partial section on the line 3—3 of Fig. 2.

Referring particularly to the drawing 10 indicates the tube, 11 the jacket and 12 the breech ring. The tube 10 is provided near its rear end with a circumscribing flange 13 which is partially received in a recess 14 formed in the jacket 11 at the rear end of the latter, it being noted that the rear end of the jacket 11 is disposed a considerable distance forward of the rear end of the tube 10. By the provision of the flange 13 and the recess 14 it will be observed that we provide an interlocking engagement between the tube and jacket which positively prevents any movement of the jacket rearwardly relative to the tube. The breech ring 12 is threaded on the jacket 11 and the metal thereof is extended into the space left by disposing the rear end of the jacket forward of the rear end of the tube. By so disposing the rear end of the jacket a considerable cut of metal from breech ring is avoided and the original thickness of the walls of the breech recess housing is retained and the tendency of the housing to separate under stress and strain on line *a*—*a* in Fig. 3 is removed and such stresses are distributed gradually to the main structure of the breech ring. It will be further observed that by locating the rear end of the jacket forward of the rear end of the tube a continuous wall of metal is provided in surrounding relation to the tube at the forward end of the breech housing and this wall of metal serves to tie the breech housing to the main structure of the breech ring across the entire width of the breech recess, thereby distributing the stresses throughout the metal wall indicated at F in Fig. 2. This will result in a continuous tie of metal not only where the housing is joined to the main structure of the breech ring but also throughout the whole width of the breech recess.

The breech ring 12 is interlocked with the jacket 11 by a thread connection 15 and as the jacket is locked against movement rearwardly relative to the tube it will be apparent that the jacket also serves to lock the breech ring and the associated housing against movement rearwardly relative to the tube. This construction avoids the possibility of such rearward displacement of the breech housing as would produce a misfire as previously referred to.

We claim:

1. In a gun structure, a tube having a circumscribing collar located at a distance from its rear end, a jacket surrounding the tube and having its rear end disposed between the front and rear ends of the collar, and a

breech ring surrounding the tube and jacket in engaging relation with the outer surface of revolution of the tube between the collar and rear end of said tube, and interlocked with the jacket.

2. In a gun structure, a tube having a circumscribing collar, a jacket surrounding the tube and having a portion abutting the forward face of the collar, and a breech ring surrounding the jacket and tube with a portion abutting the rear face of the collar, said ring interlocking with the jacket.

In testimony whereof we affix our signatures in the presence of two witnesses.

HENRY J. STAMBAUGH.
GEORGE M. McCANN.

Witnesses:
HENRY T. BRIGHT,
CARROLL BAILEY.