March 16, 1937. M. R. COURT 2,073,609

WAD FOR FOWLING PIECES

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Fig. 1.

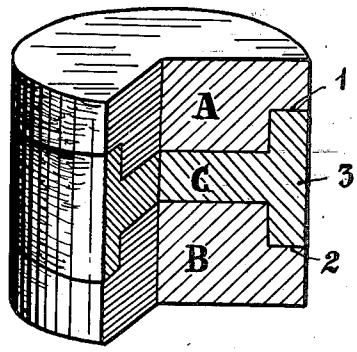

Fig. 2.

Fig. 3.

Fig. 4.

Fig. 5.

Fig. 6.

Fig. 11.

Fig. 7.

Fig. 8.

Fig. 9.

Fig. 10.

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WAD FOR FOWLING-PIECES

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In France September 17, 1934

3 Claims. (Cl. 102—42)

The invention relates to wads for the cartridges of sporting guns, and has for its object an improved wad, with a view to obtaining a gas-tight fit of the wad within a gun barrel, and it is further possible to modify the firing characteristics, by changing the form and the proportions of the parts of which the wad is composed.

Wads comprising two cork discs, with a felt disc impregnated with grease interposed between them, and having these discs held together by a suitable agglutinant, such as paraffin, are well known. It is also known to make wads of this kind by means of two end discs of cork, with a disc of much smaller diameter, also of cork, interposed between them, and around which is wound a band of felt or other plastic material impregnated with grease.

The wad forming the object of the present invention comprises the same elements as the wads of the kind indicated. It comprises two end discs of cork or other material having the same properties, and a disc of felt, impregnated with grease, of the same diameter as the end discs interposed between these two discs.

The present wad has the inner surface of the end discs contoured or non-planar, in such a way as to present raised parts, or recessed parts, or both at the same time. The middle disc of felt or elastic compressible material is made in the form of a cylinder, the end surfaces of which are planar, and when it is introduced into a mould where it is pressed between the two end discs, its material is forced into the contoured parts formed in the inner surface of the end discs.

The middle disc may also be made with its end surfaces having contours which fit more easily in the inner surface of the end discs.

The advantage of this arrangement is that the two end discs, under the influence, on the one hand, of the pressure produced by the deflagration of the powder, and on the other hand, of the resistance of the projectile, drive the material of the disc outwards. The wad thus acts in the fashion of a wedge and the tightness of the fit against a gun-barrel is increased. This arrangement has the further advantage over known wads of better utilizing the material of the middle disc without increasing its thickness and consequently the total height of the wad.

It will be further noted that the contours formed on the inner surface of the end discs produce an assemblage of three discs, which gives a very compact wad that is easy to make and does not cause waste in manufacture.

The wad according to the invention may be made very cheaply, owing to the fact that the end discs or caps, between which is the disc of plastic material, may be made by pressing, since the wad may be made in moulds according to known methods. Experiments have shown that by varying the forms given to the raised or recessed parts of the internal surfaces of the end discs, and by reason of a corresponding from of the two surfaces of the middle disc, the characteristics of the shooting may be modified.

The following description with reference to the annexed drawing shows, by way of example, how the invention may be carried into practice.

Figure 1 is a perspective view, partly in elevation and partly in section of a wad constructed in accordance with the invention.

Figure 2 is a section in elevation of a wad in which the inner surface of the end discs are enlarged.

Figure 3 is a modification of the profile shown on the Figure 2.

Figure 4 is a section in elevation of a wad in which the inner surfaces of the end discs are recessed, and

Figure 5 is a section in elevation of a wad in which the internal surfaces of the end discs comprise annular ribs.

Figures 6 to 11 are sections in elevation of other forms which the wad may take.

In Figure 1, A and B represent the two end discs or caps, and C the disc of plastic material situated between the discs A and B. The discs A and B are provided on their inner faces with annular recesses 1 and 2, and the disc C is provided at the exterior with a beading or enlarged part 3, which is engaged in the recesses 1 and 2 of the discs A and B. Under the action of gas pressure, the enlarged part 3 of the disc C is pressed against the bore of the gun-barrel. On the other hand, the pressure exerted upon the surface of contact between the enlarged part 3 and the barrel is increased, thus assuring an increased gas-tight effect.

Figures 2 to 5 show different modifications which may be given to the disc C and also to the discs A and B.

In Figures 2 and 3, the inner surfaces of the end discs are enlarged in various profiles. In Figure 4, the internal surfaces of the end discs, instead of having enlargements, are recessed, and in Figure 5, these same surfaces comprise ribs, the edges of which form a serrated surface. The felt disc in all cases may be of the same diameter as the cork discs.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is:—

1. An improvement in wads for fowling-pieces comprising a three-ply laminated wad, the upper and lower plies being formed of cork, the intermediate ply being formed of a resilient material, the thickness of said upper and lower plies being smaller near the edge and larger near the center thereof, said intermediate ply shaped to fit snugly between said upper and lower plies so that pressure exerted on the outer faces of said upper and lower plies will cause said intermediate ply to expand without change of position.

2. An improvement in wads for fowling-pieces, comprising a three-ply laminated wad, the upper and lower plies being formed of cork, the intermediate ply being formed of a resilient material and having substantially an H-shaped cross section, and said upper and lower plies being shaped to snugly receive the intermediate ply for preventing any side movement of the different plies in regard to one another.

3. An improvement in wads for fowling-pieces, comprising a three-ply laminated wad, the upper and lower plies being formed of cork, the inner face of said upper and lower plies being convex, the intermediate ply being formed of a resilient material and biconcave in shape to fit snugly between said convex plies so that pressure exerted on the outer face of said convex plies will cause said biconcave ply to expand without change of position.

MARIE ROSE COURT.