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V. DESCHIENS

SPORTING GUN CARTRIDGE PLUG

Filed Dec. 10, 1924

Fig.1.

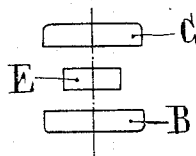


Fig.2.

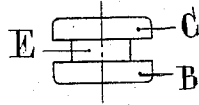


Fig.3.

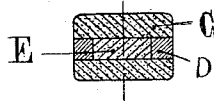
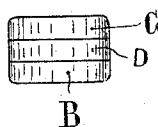


Fig.4.



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SPORTING-GUN CARTRIDGE PLUG.

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The present invention relates to wadding for cartridges for shot-guns and the like; and it contemplates certain improvements in cartridges of the character specified, and more particularly in wadding of the so-called "Iris" type, which comprises a cork spool- or bobbin-shaped member having its intermediate portion fitted with a band of paraffined felt.

According to my invention, I construct the two end portions or disks and the intermediate portion or core of separate pieces of cork or similar material, and I fit the core with a band of felt or other suitable substance which is impregnated with an agglutinant such as paraffin that will soften and fuse under the heat of the gas of explosion when the cartridge is fired. Preferably, the three parts specified are fastened together by means of the paraffin for convenience in loading the cartridge; but such attachment, however, will be terminated by the melting of the paraffin, as above explained, and the parts will separate on leaving the barrel. This detachment will enable the parts to respond more effectively to the impulse to which they are subjected, while at the same time preventing any danger of the wadding sticking in the barrel; and it also serves to reduce the weight of the wadding which is opposed to the spread of the shot, so that the ballistics are improved. The core itself, for the same reason, constitutes an effective gas check, since it expands in consequence of the pressure imposed upon it and, in turn, causes its felt strip to bear against the wall of the barrel, thus preserving to the full extent the velocity, penetrating force and carry of the charge.

The construction of the improved wadding can be carried out in various ways, according to one of which, the first cork disk is placed in a metal mold of the proper caliber which rests on a plate also made of metal. The intermediate disk or core, which is itself of appreciably smaller diameter than the first disk, but which is rendered of equal diameter therewith by the addition of its peripheral band or strip of felt, is then placed on the first disk and a suitable agglutinant, preferably paraffin, is poured into the mold, whereafter the third or top disk is positioned on top of the intermediate disk before the agglutinant has completely cooled

and hardened, thus binding the three disks together. Removal of the wadding from the mold may be effected by the chuck or mandrel of an automatic or pedal-operated gauge.

In place of the method just described, the resilient cores, previously fitted with their felt strips, may be introduced into suitable molds and then paraffined in the manner above explained, after which they are carefully removed and boxed say by the hundred or two hundred; double the number of end disks then being packed in a separate compartment in the same box. At the moment of loading, it is sufficient merely to interpose a core between two of the larger end disks; this operation occasioning no confusion and being much simpler and easier in fact than the ordinary operations of assembling and loading multiple-part waddings which frequently embody from six to eight different component members, some of which are difficult to distinguish.

In order to enable a more complete understanding of the invention to be obtained, the accompanying drawing shows one embodiment thereof, and in which:

Figure 1 represents the three component parts of the improved wadding separated from one another;

Fig. 2 represents the parts assembled, but without the felt strip on the intermediate part or core;

Fig. 3 is a vertical section through the finished wadding; and

Fig. 4 is a side elevation thereof.

In said figures, B and C indicate the two end disks of the wadding, and E the intermediate disk or core which is of appreciably smaller diameter than the first two disks, all three disks being made of cork or other suitable resilient fibrous material. These parts may be of any desired shape and size (one of them may be frusto-conical) according to the results to be obtained, and the end disks may be recessed or apertured in order to facilitate the introduction and seating of the core, while the latter may be perforated for the purpose of increasing both the propulsion and the checking effect by the action of compressed air.

The core E is encircled by the band or strip D of felt or the like which is subsequently impregnated with paraffin or other suitable agglutinant, as explained above.

It will be apparent from the foregoing that a substantial saving in cork is obtained by the use of disks, the cost of which is much less than that of a similar-shaped wadding constructed in one piece from a bottle cork. Furthermore, additional savings are obtained by the decrease in labor necessary for the construction of the waddings and by the almost entire omission of the use of motive power.

I claim as my invention:—

1. Wadding for shot-gun and similar cartridges, consisting essentially of two end disks of equal diameter, and an intermediate disk or core of much smaller diameter; all three disks being made of cork and separably attached together by an adhesive which is fusible under the heat of the gases of explosion when the cartridge is fired; and a strip of elastic, non-metallic material wrapped around the periphery of the intermediate disk, the combined diameter of said disk and strip being equal to the diameter of the end disks.

2. Wadding for shot-gun and similar cartridges, consisting essentially of two end disks of equal diameter, and an intermediate disk or core of much smaller diameter; all three disks being made of compressible fibrous material and attached together by paraffin; and a strip of paraffin-impregnated felt-wrapped around the periphery of

the intermediate disk, the combined diameter of said disk and strip being equal to the diameter of the end disks.

3. Wadding for shot-gun and similar cartridges, consisting essentially of two end disks of equal diameter, and an intermediate disk or core of much smaller diameter; all three disks being made of cork and connected together by paraffin so as to become detached from one another when the paraffin melts under the heat of the gases of explosion when the cartridge is fired; and a strip of paraffin-impregnated, fibrous material wrapped around the periphery of the intermediate disk, the combined diameter of said disk and strip being equal to the diameter of the end disks.

4. Wadding for shot-gun and similar cartridges, consisting essentially of two end disks, and an intermediate disk of much smaller diameter interposed between and directly contacting with said end disks, all three disks being made of cork and structurally separate from one another; and a strip of fibrous material wrapped around the periphery of the intermediate disk and impregnated with an agglutinant which is fusible under the heat of the gases of explosion when the cartridge is fired.

In testimony whereof I affix my signature.

VICTOR DESCHIENS.