Feb. 6, 1940. J. SPENGLER 2,189,498

METAL CARTRIDGE FOR SHOTGUNS

Filed Nov. 18, 1938

FIG. 1

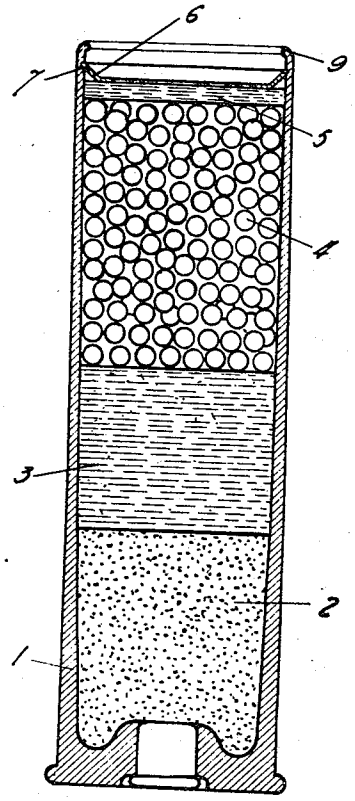
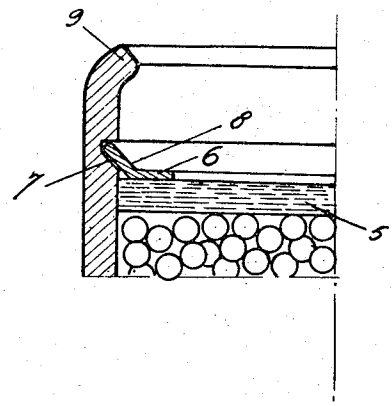


FIG. 2



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METAL CARTRIDGE FOR SHOTGUNS

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Application November 18, 1938, Serial No. 241,264
In France April 15, 1938

4 Claims. (Cl. 102—15)

My invention relates to cartridges for shotguns and chiefly to cartridges made of light metal, more particularly of the type disclosed in my co-pending application Serial Number 152,780, filed July 9, 1937, now Patent Number 2,144,232 of January 17, 1939.

It has been proposed already to use for closing such cartridges a retaining part constituted by a yielding metal disk engaging one or more grooves provided inside the metal casing. But such disks show the drawback of screening the charge.

My invention has for its object to remove this drawback by using for closing the cartridge, a retaining ring of yielding metal the outer diameter of which is larger than the inner diameter of the casing, said ring retaining through its periphery a disk of known type made of a material which becomes disintegrated when the shot is fired. Agglomerated cork has been found to be of particular interest to this effect.

Preferably the outer edge of the ring is raised to allow its easy introduction inside the casing and eventually to provide a bearing for it against a slope provided to this end inside the groove.

Moreover it has been found that it is of advantage to slightly restrict after charging, the upper opening of the cartridge. This restricted opening has in particular two advantages: firstly the diameter of the upper part of the cartridge is slightly reduced by means of a smooth outline, which renders its introduction into the chamber of the gun easier; secondly there is a ballistic advantage inasmuch as this restriction gives a greater speed to the charge.

I have described hereinbelow by way of example and shown in the accompanying drawing a form of execution of my invention.

Fig. 1 is an axial cross-section of the whole cartridge.

Fig. 2 is a detail partly sectional view at a larger scale.

The metal casing 1 of aluminium or duralumin, contains as usual the charge of powder 2, the wad 3, the shot 4. This shot is held down by the disk 5 which is preferably of agglomerated cork so that it may be easily disintegrated when the shot is fired. The disk is retained by a ring 6 of yielding metal, such as brass, which projects inwardly just enough to retain the disk 5. The disk 5 engages a groove 7 provided in the wall of the casing and which has preferably a sloping surface.

The outer edge 8 of the ring is preferably raised after the manner of a dish and may bear outwardly against the sloping surface of the groove.

The ring is set in place very easily by forcing the ring, the outer diameter of which is larger than the inner diameter of the casing, into said casing. When the ring has reached the level of the groove 7, it expands and its edge engages the groove 2.

Furthermore after charging, the upper end of the cartridge is submitted to a slight restriction as shown at 9.

What I claim is:

1. A cartridge for shotguns, comprising a cylindrical metal casing provided with at least one internal annular groove near its outer end, a resilient metal ring, the external diameter of said ring being greater than the internal diameter of said casing and fitting resiliently in said annular groove, and a closing disc of a material adapted to be disintegrated at the firing, said closing disc being retained by said metal ring and retaining a shot and powder charge within said casing.

2. A cartridge for shotguns, comprising a cylindrical metal casing provided with at least one internal annular groove near its outer end, a resilient metal ring having a frustoconical section, the external diameter of said ring being greater than the internal diameter of said casing and fitting resiliently in said annular groove, and a closing disc of a material adapted to be disintegrated at the firing, said closing disc being retained by said metal ring and retaining a shot and powder charge within said casing.

3. A cartridge for shotguns, comprising a cylindrical metal casing the outer end of which has a portion gradually and slightly reduced in diameter, said casing being provided near said outer end with at least one internal annular groove, a resilient metal ring, the external diameter of said ring being greater than the internal diameter of said casing and fitting resiliently in said annular groove, and a closing disc of a material adapted to be disintegrated at the firing, said closing disc being retained by said metal ring and retaining a shot and powder charge within said casing.

4. A cartridge according to claim 1, wherein an inwardly turned flange is provided at the outer end of said casing.

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