

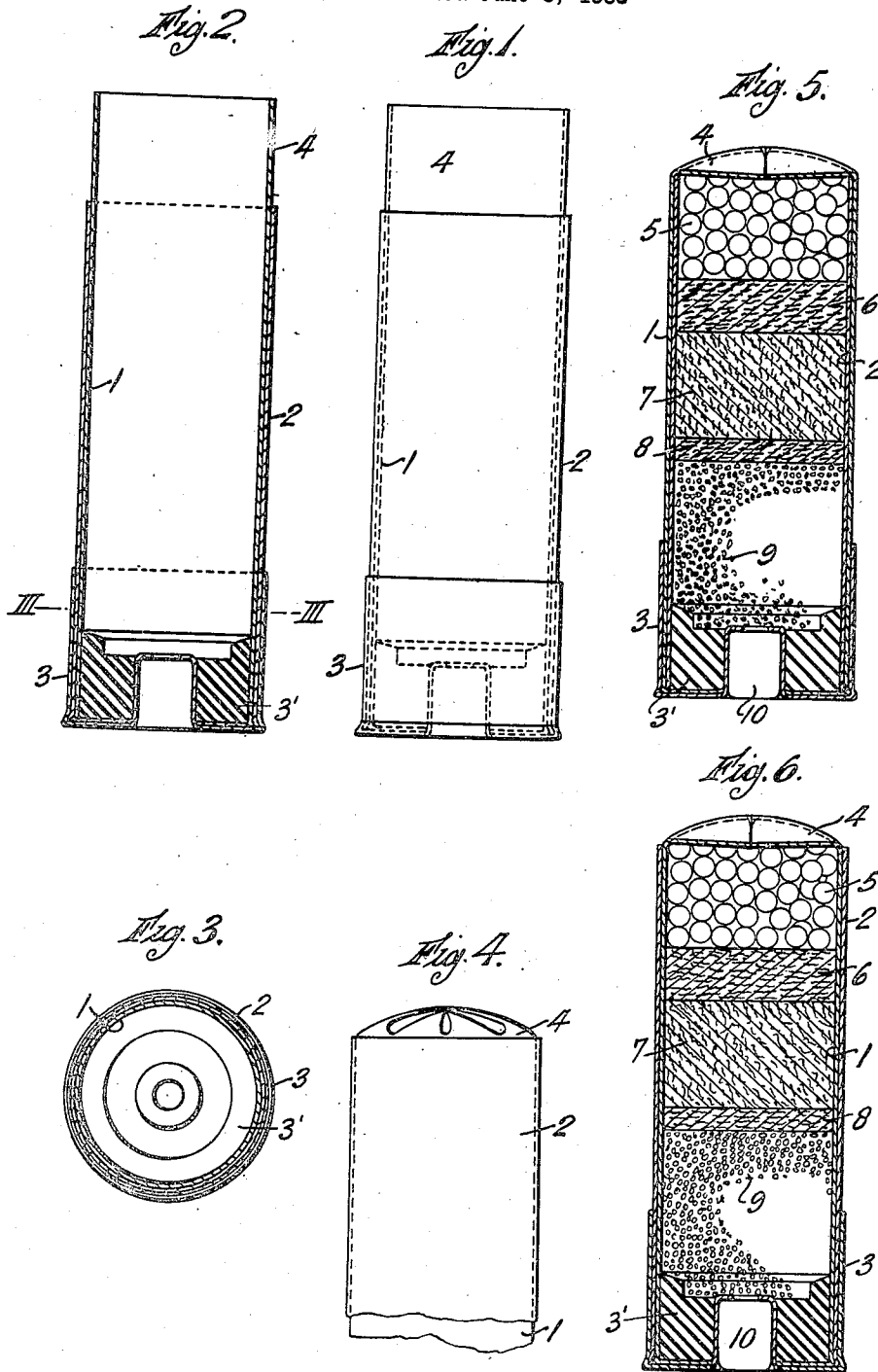
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SHOTGUN CARTRIDGE

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SHOTGUN CARTRIDGE

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6 Claims. (Cl. 102—15)

This invention relates to shotgun cartridges of the kind in which pellets are retained in the cartridge, without the use of overshot wads, as by crimping over the open end of the case itself, the resistance to opening of the crimped mouth when the cartridge is fired, determining the pressure available for propelling the pellets through the mouth. When the case is formed of paper, difficulty is experienced due to weather conditions which so act on the paper as to cause irregular or insufficient resistance to be created for the proper propulsion pressure for the charge. On the other hand, when a metal case is employed it has to be made sufficiently stiff to withstand carriage and ill-usage and to fulfil these conditions the metal has to be so stiff that when it is crimped over to close the mouth the resistance to opening may be too great resulting in the propulsion pressure being too great.

The principal object of the invention is to provide a cartridge, the propelling power of which shall not be affected by the weather and which shall provide a calculated or predetermined resistance to opening and shall also be readily handled.

According to the present invention, a shotgun cartridge is composed of a base and a tube secured thereto, a tube within and forming a liner for the first tube, a charge within the liner including a base wad, said liner partly extending alongside of and being secured in place by the base wad, one of said tubes being of metal turned over at its end remote from the base to close the cartridge and being of such thickness as to create a predetermined resistance to opening when the cartridge is fired, and the other tube stiffening the cartridge for handling purposes. The tube which is formed of metal may constitute the liner inside the other tube or the metal tube may be outside the other tube.

As the tube which closes the cartridge is of metal it is little affected by weather, and since the reinforcing tube can in itself be made sufficiently strong to withstand carriage and ill-usage of the cartridge, the metal tube can be only of such thickness and ductility as will create a predetermined resistance to opening at the mouth and so will create a calculated propelling pressure.

The invention is illustrated in the accompanying drawing in which Figure 1 is an elevation, Figure 2 a longitudinal section, Figure 3 a section on the line III—III Figure 2 and Figure 4 a view showing the metal liner of Figures 1-3 turned over to close the cartridge case. Figure

5 is a longitudinal section of a modified form of cartridge and Figure 6 a longitudinal section of a loaded cartridge of the form shown in Figures 1-4.

In the drawing and referring especially to Figures 1-4, 1 indicates a seamless metal tube constituting a liner in a reinforcing or stiffening tube 2 secured with the tube 1 to the base 3 of the cartridge by a base wad 3', the two tubes extending along the base wad and the inner end of the tube 1 being terminally deflected inwardly to lie under the base wad. The length of the tube 1 is such that its end remote from the base projects beyond the tube 2 as indicated at 4 and this projecting part 4 is after the case has been loaded, turned over or crimped as seen in Figure 4 to close the cartridge so as to retain the usual pellets therein, the end of the liner when turned over being more or less flush with the end of the tube 2.

In Figure 6 a closed cartridge is shown, the pellets being indicated at 5 these pellets being backed by a card wad 6 followed by a felt wad 7 another card wad 8 which is followed by the powder 9, the usual cap and anvil being within a cap 10 secured to the base 3 of the cartridge.

In the modification shown in Figure 5 the metal tube 1 is located outside the tube 2 the metal tube extending as before beyond the end of the tube 2 and being turned over to retain the pellets and the metal tube 1 being again terminally deflected to come under the base wad 3'.

The tube 2 can be made of any desired material, e. g. metal, a plastic material or paper and it will be observed that the tube 1 not only provides a predetermined propelling pressure but also provides a waterproof cover for the charge within it, this feature being of particular value when the tube 2 is of paper.

It will also be seen that the turned-in end of the tube 1 projects so slightly beyond the tube 2 as to be protected from injury in transit.

What is claimed is:

1. A shotgun cartridge comprising a base and a tube secured thereto, a tube within and forming a liner for the first tube, a charge within the liner including a base wad, said liner partly extending alongside of and being secured in place by the base wad, one of said tubes being of metal turned over at its end remote from the base to close the cartridge and being of such thickness as to create a predetermined resistance to opening when the cartridge is fired and the other tube stiffening the cartridge for handling purposes.

2. A shotgun cartridge comprising a base and

5 a tube secured thereto, a tube within and forming a liner for the first tube, a charge within the liner including a base wad, said liner at its inner end overlapping the base wad and being terminally deflected inwardly and secured in place by said base wad, one of said tubes being seamless and of metal turned over at its end remote from the base to close the cartridge and being of such thickness as to create a predetermined resistance to opening when the cartridge is fired and the other tube stiffening the cartridge for handling purposes.

10 3. A shotgun cartridge comprising a base and a tube secured thereto, a tube within and forming a liner for the first tube, a charge within the liner including a base wad, one of said tubes at its inner end overlapping the base wad and being terminally deflected inwardly and secured in

place by said base wad, said overlapping tube being seamless and of a metal turned over at its end remote from the base to close the cartridge and being of such thickness as to create a predetermined resistance to opening when the cartridge is fired and the other tube stiffening the cartridge for handling purposes. 5

4. A shotgun cartridge according to claim 1 wherein the metal tube is outside of the stiffening tube. 10

5. A shotgun cartridge according to claim 1 wherein the metal tube is the liner within the stiffening tube.

6. A shotgun cartridge according to claim 2 wherein the metal tube is the liner within the stiffening tube. 15

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