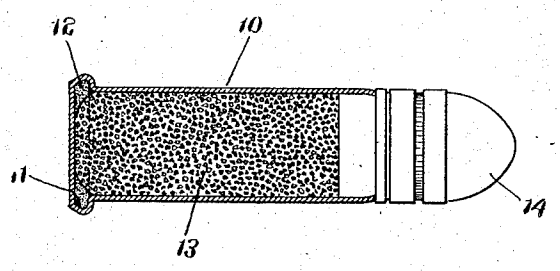
OR 1,107,519

F. O. HOAGLAND.

RIM FIRE CARTRIDGE.

APPLICATION FILED JUNE 18, 1914.

1,107,519. Patented Aug. 18, 1914.



WITNESSES:

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FRANK O. HOAGLAND, OF BRIDGEPORT, CONNECTICUT, ASSIGNOR TO UNION METALLIC CARTRIDGE COMPANY, OF BRIDGEPORT, CONNECTICUT, A CORPORATION OF CONNECTICUT.

RIM-FIRE CARTRIDGE.

1,107,519. Specification of Letters Patent. Patented Aug. 18, 1914.

Application filed June 18, 1914. Serial No. 845,776.

To all whom it may concern:

Be it known that I, FRANK O. HOAGLAND, a citizen of the United States, residing at Bridgeport, county of Fairfield, State of Connecticut, have invented an Improvement in Rim-Fire Cartridges, of which the following is a specification.

This invention has for its object to produce durable and reliable rim fire cartridges with drawn brass shells.

It is of course well understood that shells for rim fire cartridges are of the so-called folded type and are required to be provided with a circular cavity or recess in the head to receive the priming compound. Heretofore, so far as I am aware, mercuric priming compounds, that is, compounds containing more or less fulminate of mercury, have been used in rim fire cartridges, and, owing to the deteriorating effect of fulminate of mercury on brass, it has been necessary to make the shells of nearly pure copper, as alloys of copper containing very small proportions of other metals or impurities therein are liable to be injuriously affected by the mercuric priming compounds in use. I am aware that attempts have been made to overcome this difficulty so as to save the difference in cost between brass and copper, by lining brass shells with copper, with shellac and with various other materials. These attempts have not been successful, however, owing to the fact that the lining used would partly fill the cavity or recess which should be wholly filled with the priming compound, and the result has been defective cartridges.

I have discovered that by the use of a non-mercuric priming compound I am enabled to make shells for rim fire cartridges out of ordinary brass. Numerous experiments have demonstrated that with a non-mercuric priming compound, thoroughly reliable and durable rim fire cartridges can be produced having shells made from brass containing widely varying proportions of zinc, for example, perfectly successful results are attained with alloys containing from approximately fifteen per cent. of zinc to approximately forty per cent. of zinc. Likewise it is wholly immaterial, so far as the present invention is concerned, just what priming compound is used so long as it is absolutely non-mercuric. For example, perfectly satisfactory results with rim fire cartridges having brass shells can be produced by using in lieu of fulminate of mercury in the priming compound certain sulfids, sulfo-cyanids, azids, and acetylids of metals, also phosphorus, nitro compounds, picrates and chlorates.

Briefly then, my invention consists in the broad idea of providing rim fire cartridges having shells made of brass, without lining or internal coating of any kind, and using in connection with said brass shells a non-mercuric priming compound.

In the accompanying drawing forming a part of this specification, I have illustrated, partly in section and partly in elevation, a rim fire cartridge embodying my novel invention.

10 denotes the shell which is made of an alloy of zinc and copper, the proportions of which may vary within the limits above stated. The head of the shell is provided with a circular cavity or recess 11 which receives the non-mercuric priming compound indicated by 12.

13 indicates the powder, and 14 the bullet.

Having thus described my invention I claim:

1. A rim fire cartridge comprising a shell made of brass and having in its head a circular recess, and a non-mercuric priming compound in said recess.

2. A rim fire cartridge comprising a bullet, powder, a shell made from brass and having a head provided with a circular recess and a non-mercuric priming compound in said recess.

In testimony whereof I affix my signature in presence of two witnesses.

FRANK O. HOAGLAND.

Witnesses:

CHARLES H. LINDSAY,

MARY S. BURROUGHS.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."