

J. BECKMANN.
SOLID BULLET FOR SHOTGUN SHELLS.
APPLICATION FILED NOV. 16, 1912.

1,063,905.

Patented June 3, 1913.

Fig. 1.

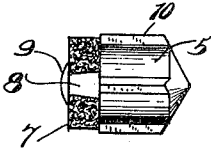
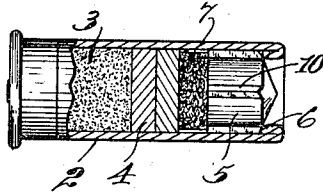


Fig. 2.



Fig. 4.

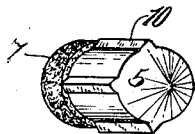


Fig. 3.

WITNESSES:

J. E. Maynard.
Charles Pickles

INVENTOR

John Beckmann,

BY *G. H. Strong.*

ATTORNEY

UNITED STATES PATENT OFFICE.

JOHN BECKMANN, OF OAKLAND, CALIFORNIA.

SOLID BULLET FOR SHOTGUN-SHELLS.

1,063,905.

Specification of Letters Patent.

Patented June 3, 1913.

Application filed November 16, 1912. Serial No. 731,755.

To all whom it may concern:

Be it known that I, JOHN BECKMANN, a subject of the Emperor of Germany, residing at Oakland, in the county of Alameda and State of California, have invented new and useful Improvements in Solid Bullets for Shotgun-Shells, of which the following is a specification.

This invention relates to explosives, and particularly to an improved cartridge bullet.

It is desirable in many localities frequented by hunters that their guns, particularly shot-guns, can be utilized both in the hunting of small game and effectually utilized in case of necessity or ordinary hunting when large game abounds, or is likely to be encountered. To that end I have designed and successfully practised shooting with a solid bullet which is readily insertible in ordinary shot-gun shells, either after the usual shot charge has been removed from the same, or which solid shot may be originally placed in the cartridge when the same is made.

The object of the present invention is to provide a cartridge substantially of the usual shot-gun shell type, and particularly to provide a solid bullet or slug for shot-gun shells.

A further object of the invention is to provide a solid bullet for shot-gun shells which may be readily inserted in shot-gun shells, after a charge of shot has been removed from the cartridge, and which solid bullet is so shaped and proportioned as to protect the shot-gun in which the cartridge may be fired against excessive strains due to the explosion of the cartridge. The bullet is designed to so fit the barrel of the shot-gun that it will be given a line of flight substantially true with the axis of the barrel, so that its trajectory will be considerably greater than that of a charge of shot from cartridges with similar powder charges.

The invention consists in combination with a shot cartridge, a solid bullet insertible in the cartridge, and further consists in the particular construction of the bullet.

Figure 1 is a longitudinal section through

a cartridge loaded with the improved bullet. Fig. 2 is an enlarged view in detail of the bullet. Fig. 3 is a perspective view of the bullet. Fig. 4 is an end view of the bullet.

In the drawings there is represented a shell 2 of the shot-gun cartridge type in which is a charge of powder 3. Against the charge of powder 3 is placed a series of packing wads 4. The outer end of the cartridge shell 2 is in this embodiment shown as provided with a solid bullet 5, which bullet may be placed in the cartridge during original process of manufacture, or may be placed in the cartridge after the original charge of shot, which the bullet is designed to supplant, has been removed. After the solid shot 5 has been adjusted in the cartridge the end of the cartridge shell is crimped over as usual, as shown at 6.

Referring to Fig. 2; in which there is shown in detail a partial section of the solid bullet 5, a follower wad 7 is shown as securely attached to the rear end of the bullet 5; the attaching means in this instance comprising a rearwardly projecting lug or prong 8 over which the follower wad 7 is forced, after which the end of the prong 8 may be headed down, as at 9, to securely fasten the follower wad 7 to the bullet 5. The function of the follower wad 7, attached to the rear of the bullet 5, is to prevent too great an escape of the explosive force around the circumference of the bullet, so that this will be projected from the gun by a large percentage of the explosive force of the cartridge.

In order to protect the thin barrel of the shot-gun in which the cartridge may be used against destructive strains, I preferably form the cylindrical body portion of the bullet 5 of less diameter than the bore of the gun, so that a portion of the explosive force escaping past the packing follower wad 7 can issue in advance of the bullet 5.

In order to give the bullet 5 great carrying capacity and a true line of trajectory from the gun, I form upon the cylindrical surface of the bullet 5 a plurality of longitudinally extending beads or ribs 10, the extreme ridges of which lie in a circumferential line about the cylindrical body of the

bullet 5. The circumferential line is somewhat greater than the bore of the shot-gun, so that after the cartridge has been placed in the cartridge chamber of the gun and exploded, as the bullet 5 is forced into the bore of the gun the extreme edges of the longitudinal ribs 10 will be forced into frictional engagement with the surface of the bore and thus form a sufficiently snug fit so that before the bullet issues from the gun it has been given a definite line of flight.

By reason of the fact that my improved bullet is provided with a substantially solid body portion approximately equal in area to the bore of the gun, and by reason of the employment of the packing follower or wad 7, a very great portion of the explosive force of the powder charge of the cartridge is imparted to the bullet, so that this will carry a much greater distance than would a charge of shot from a cartridge charge with the same grade and quantity of powder. This type of cartridge can be supplied at substantially the same cost as a shot-charged cartridge and enables the use of a double-barreled gun, as a rifle and shot-gun, by loading one of the barrels with a solid bullet cartridge and the other with a shot-loaded cartridge, so that either one or the other of the cartridges may be used as the exigency requires.

In the event that a hunter has only a single-barreled gun, by carrying with him a supply of shot cartridges and bullet-loaded cartridges he may quickly substitute one for the other in the event of necessity. The hunter can then utilize a single gun for the use of large and small game, and in mountainous countries where large and small game exist and abound need carry only a single gun and a supply of either or both types of cartridges.

The ribs act to guide the bullet straight in line of fire and also form slight, shallow, circumferential passages through which sufficient explosive force can escape to protect the barrel against explosion.

Having thus described my invention, what I claim and desire to secure by Letters Patent is—

1. A bullet for shot-gun shells, said bullet having a solid cylindrical body portion of less diameter from end to end than the shell to be fitted, circumferentially spaced projections on the body portion, the inscribing circle of which projections is greater than the barrel-bore for guiding and holding the bullet centrally in the shell, the annular chamber about the bullet allowing an escape of gases while the bullet is escaping the gun barrel, and a follower wad immovably attached to the inner or rear end of the bullet and of greater diameter than the cylindrical body thereof and approximately fitting the barrel-bore for deriving a maximum safe bullet impulse from the shell charge.

2. A bullet for shot-gun shells, said bullet having a solid cylindrical body portion of less diameter from end to end than the shell to be fitted, circumferentially spaced ribs extending the length of the cylinder on the body portion, the inscribing circle of which projections is greater than the barrel-bore for guiding and holding the bullet centrally in the shell, the annular chamber about the bullet allowing an escape of gases while the bullet is escaping the gun barrel, and a follower wad immovably attached to the inner or rear end of the bullet and of greater diameter than the cylindrical body thereof and approximately fitting the barrel-bore for deriving a maximum safe bullet impulse from the shell charge.

3. A bullet for shot-gun shells, said bullet having a solid cylindrical body portion of less diameter from end to end than the shell to be fitted, circumferentially spaced ribs of a length equal, approximately, to the diameter of the cylinder on the body portion, the inscribing circle of which projections is greater than the barrel-bore for guiding and holding the bullet centrally in the shell, the annular chamber about the bullet allowing an escape of gases while the bullet is escaping the gun barrel, and a follower wad immovably attached to the inner or rear end of the bullet and of greater diameter than the cylindrical body thereof and approximately fitting the barrel-bore for deriving a maximum safe bullet impulse from the shell charge.

4. A bullet for shot-gun shells, said bullet having a solid cylindrical body portion of less diameter from end to end than the shell to be fitted, circumferentially spaced ribs of a length equal, approximately, to the diameter of the cylinder on the body portion, the inscribing circle of which projections is greater than the barrel-bore for guiding and holding the bullet centrally in the shell, the annular chamber about the bullet allowing an escape of gases while the bullet is escaping the gun barrel, and a fibrous follower wad immovably attached to the inner or rear end of the bullet and of greater diameter than the cylindrical body thereof and approximately fitting the barrel-bore for deriving a maximum safe bullet impulse from the shell charge.

5. A bullet for shot-gun shells, said bullet having a solid cylindrical body portion of less diameter from end to end than the shell to be fitted, circumferentially spaced projections on the body portion, the inscribing circle of which projections is greater than the barrel-bore for guiding and holding the bullet centrally in the shell, the annular chamber about the bullet allowing an escape of gases while the bullet is escaping the gun barrel, and a fibrous follower wad immovably attached to the inner or rear end of the bullet and of greater diameter than the cylindrical body thereof and approximately fitting the barrel-bore for deriving a maximum safe bullet impulse from the shell charge.

6. A bullet for shot-gun shells, said bullet having a solid cylindrical body portion of less diameter from end to end than the shell to be fitted, circumferentially spaced projections on the body portion, the inscribing circle of which projections is greater than the barrel-bore for guiding and holding the bullet centrally in the shell, the annular chamber about the bullet allowing an escape of gases while the bullet is escaping the gun barrel, and a fibrous follower wad immovably attached to the inner or rear end of the bullet and of greater diameter than the cylindrical body thereof and approximately fitting the barrel-bore for deriving a maximum safe bullet impulse from the shell charge.

the gun barrel, and a follower was attached to the inner or near end of the bullet and of greater diameter than the cylindrical body thereof and approximately fitting the barrel-bore for deriving a maximum safe bullet impulse from the shell charge.

In testimony whereof I have hereunto set

my hand in the presence of two subscribing witnesses.

JOHN BECKMANN.

Witnesses:

W. W. HEALEY,
IRVINE SINNETT.