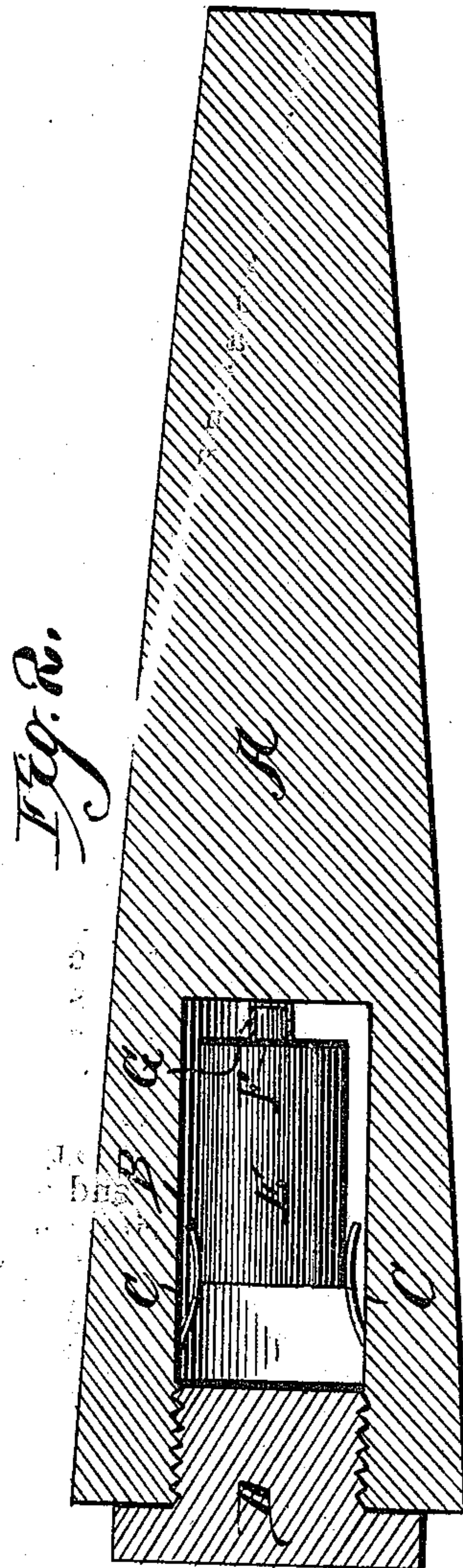
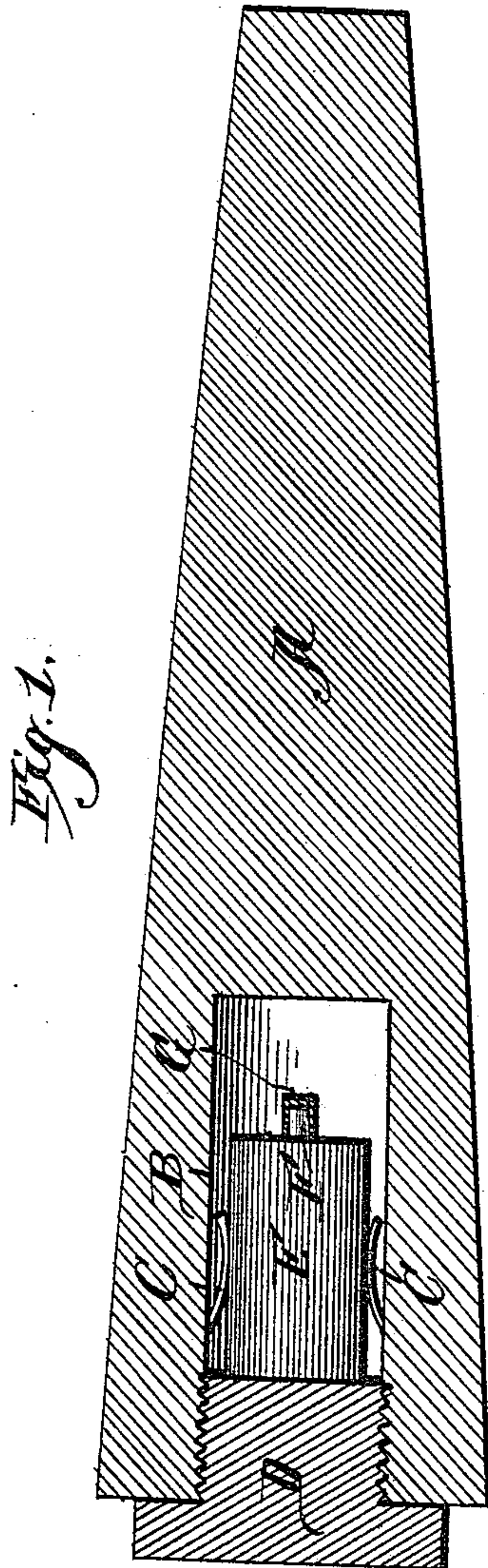


(No Model.)

J. J. MOORE.  
SHELL.

No. 412,856.

Patented Oct. 15, 1889.



Witnesses  
*Henry J. Dieterich*  
*L. J. J. J.*

*Inventor*  
*James J. Moore*  
*By his Attorneys*  
*C. J. Snow & Co.*



# UNITED STATES PATENT OFFICE.

JAMES JACKSON MOORE, OF MERRYVILLE, LOUISIANA.

## SHELL.

SPECIFICATION forming part of Letters Patent No. 412,856, dated October 15, 1889.

Application filed April 6, 1889. Serial No. 306,211. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES JACKSON MOORE, a citizen of the United States, residing at Merryville, in the parish of Calcasieu and State of Louisiana, have invented a new and useful Explosive Projectile for Ordnance, of which the following is a specification.

My invention relates to an improvement in explosive projectiles for ordnance; and it consists in the peculiar construction and combination of devices which will be more fully set forth hereinafter, and particularly pointed out in the claim.

In the drawings, Figure 1 is a longitudinal sectional view of an explosive projectile embodying my improvements, showing the cartridge in the base thereof in position during the flight of the projectile. Fig. 2 is a similar view showing the position assumed by the cartridge when the projectile strikes an object and at the instant when the cartridge explodes.

The projectile A is of the elongated variety and tapers from a point near its base toward its front end. The head or front of the projectile is solid, thereby rendering the projectile sufficiently heavy and strong to penetrate armor, breastworks, and other defensive obstructions, and in the rear end of the projectile is an elongated bore B. In the sides of the same, at a suitable distance from the base or rear end of the projectile, are secured a pair of curved springs C, which project a suitable distance into the bore from opposite sides of the same, as shown. The rear end of the bore is provided with screw-threads, and a breech-pin D is adapted to be screwed into the said threaded end of the bore to close the same.

The cartridge E is of slightly-less diameter than the bore, and is of somewhat less length than the latter, and thereby the said cartridge is adapted to travel in a longitudinal direction in the said bore. The said cartridge, when inserted in the bore, which may be done by first removing the breech-pin, is pressed on opposite sides by the springs C, and is held so firmly that under ordinary cir-

cumstances the cartridge will not move in the bore, and therefore the projectile may be handled without danger of a premature explosion, and may be safely loaded into a gun and discharged therefrom. At the front end of the cartridge is a nipple F, on which is placed a percussion-cap G of suitable construction. The cartridge is loaded with gunpowder or other suitable destructive explosive.

The operation of my invention is as follows: When the projectile is fired from a gun or piece of ordnance, the initial shock imparted to the projectile by the explosive gases from the charge exploded in the gun causes the cartridge to move rearward in the bore of the projectile and to rest against the front end of the breech-pin while the projectile is in flight. When the projectile strikes a vessel or other object, it penetrates the same, and the shock of the concussion causes the cartridge to be thrown violently toward the solid head of the projectile, the percussion-cap on the cartridge strikes the said solid head and is instantly exploded, thereby causing the charge in the cartridge to explode and blow the projectile or shell to pieces with great destructive energy.

Having thus described my invention, I claim—

In a projectile, the combination of a shell having a longitudinal bore or chamber at its rear end, a breech pin or plug at the rear end of the same, a longitudinally-movable cartridge arranged in said bore or chamber, curved springs secured in the sides of the latter and impinging against the sides of the cartridge, thereby retaining the latter in position by frictional contact with said springs, and a percussion-cartridge mounted upon a nipple at the front end of said cartridge, substantially as set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

JAMES JACKSON MOORE.

Witnesses:

J. W. CONWAY,  
J. H. CANNON.