

L. Evans, Packing Iron Balls.

N^o 30,533.

Patented Oct. 30, 1860.

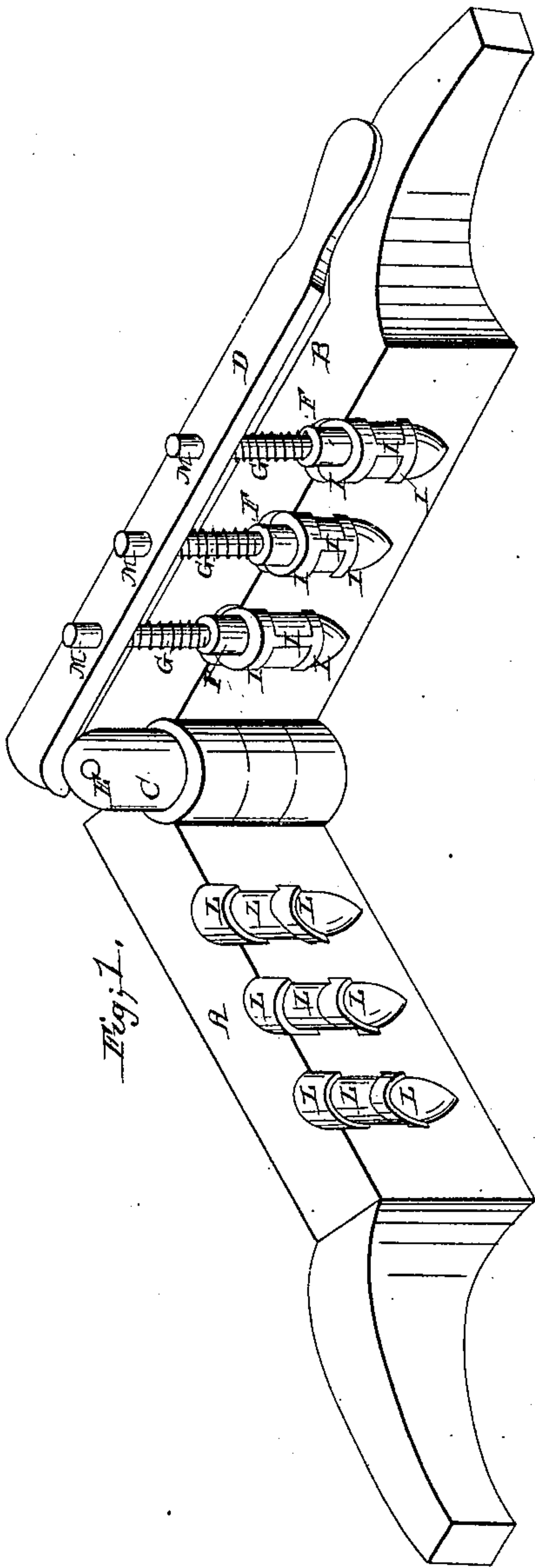
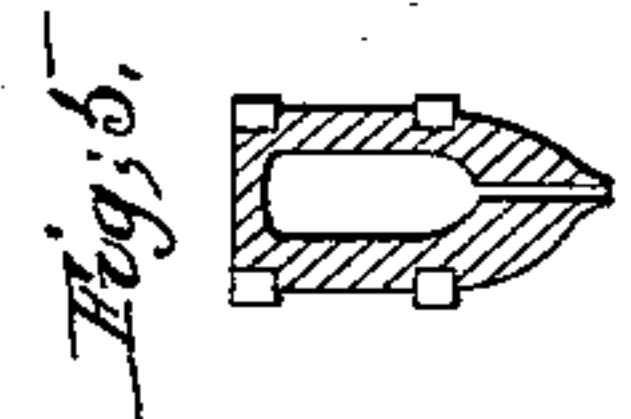
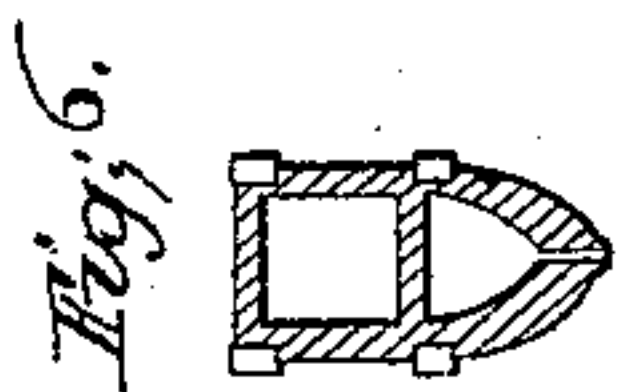
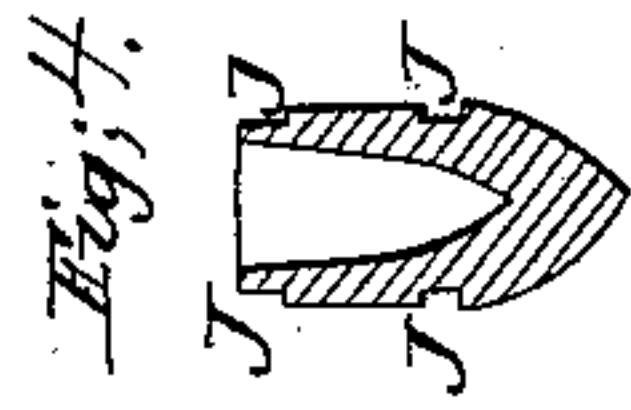
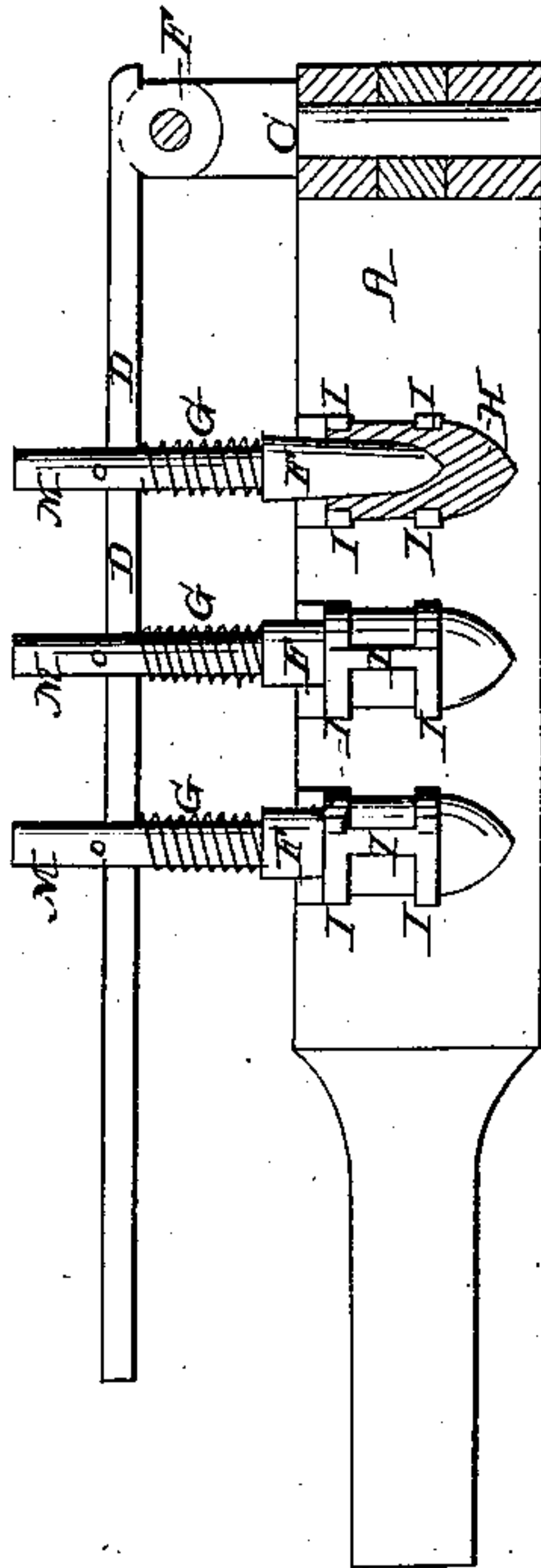


Fig. 2.



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UNITED STATES PATENT OFFICE.

LEWIS EVANS, OF MORGANTOWN, VIRGINIA.

IMPROVED FLASK FOR CASTING PACKING AROUND CANNON-BALLS.

Specification forming part of Letters Patent No. **30,533**, dated October 30, 1860.

To all whom it may concern:

Be it known that I, L. EVANS, of Morgantown, in the county of Monongalia and State of Virginia, have invented a new and useful Improvement in Packing Cast-Iron Balls with Soft Metal; and I hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 represents a perspective view of the implement; Fig. 2, a vertical longitudinal section; Fig. 3, a side view, and Figs. 4, 5, and 6 sections of projectiles of different shapes.

Similar letters of reference represent corresponding parts in each of the several figures.

The nature of my invention consists in the means, hereinafter described, whereby two or more rings of soft-metal packing are introduced into circumferential and longitudinal grooves of cast-iron projectiles.

The mold consists of two flasks, A B, connected by a vertical hinge or pivot, C. A horizontal bar, D, is hinged to the upper end of pin C, when the flasks are closed and the projectiles, made of iron or other hard metal, and shaped as seen in Figs. 2, 3, and 4, placed in the molds, as seen Fig. 2. The bar D is swung forward into the position represented in Fig. 2, so that the pins F, inserted through holes in the bar D, and secured to the bar by cross-pins M, enter and fill up the center hole in each of the projectiles. The spiral springs G around the shanks of the pins F allow the latter to accommodate themselves to the center holes of the projectiles independent of each other. The projectiles are made with recesses extending all around them, and communicating with each other, as seen at J J J,

Figs. 3 and 4, and the molds are made with similar recesses, L L L. (See Fig. 1.) Thus when the projectiles are placed in the molds a continuous channel is formed around each projectile, which may be filled with molten lead or other soft metal, so that afterward, on opening the flasks and removing the projectiles from the molds, the projectiles are surrounded with projections I I I of soft metal, which serve to pack and swage the projectile in the barrel, whether rifled or not, for the purpose of preventing windage. Projectiles of various shapes, such as represented in Figs. 5 and 6, may be thus surrounded with projections of soft metal, in the manner and for the purpose above described. Of course, if the projectiles are not made with holes in their bases, as seen in Figs. 5 and 6, the bar D and pins F are not used, the pins merely serving to stop up such holes in the bases of the projectiles for the purpose of preventing said holes from being filled up with soft metal while the latter is poured into the molds to form the projections around the projectiles.

What I claim as my invention, and desire to secure by Letters Patent, is—

The use of the flasks A B, connected together by a vertical hinge, and having semi-cylindric shouldered recesses L L formed on their inner faces, in combination with cast-iron projectiles which have circumferential and longitudinal grooves J J J formed in them, and with or without the bar D and pins F F, all substantially as and for the purposes set forth.

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Witnesses:

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