## L. O. DION.

RIVET.

No. 357,118.

Patented Feb. 1, 1887.

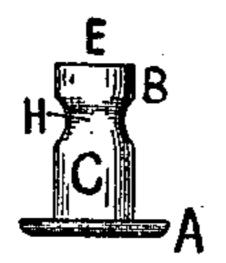


Fig. 1.

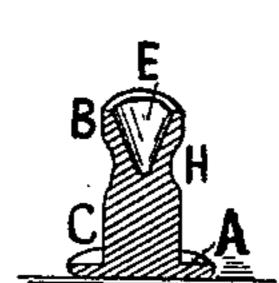
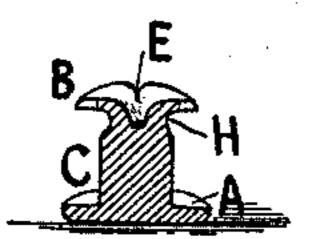
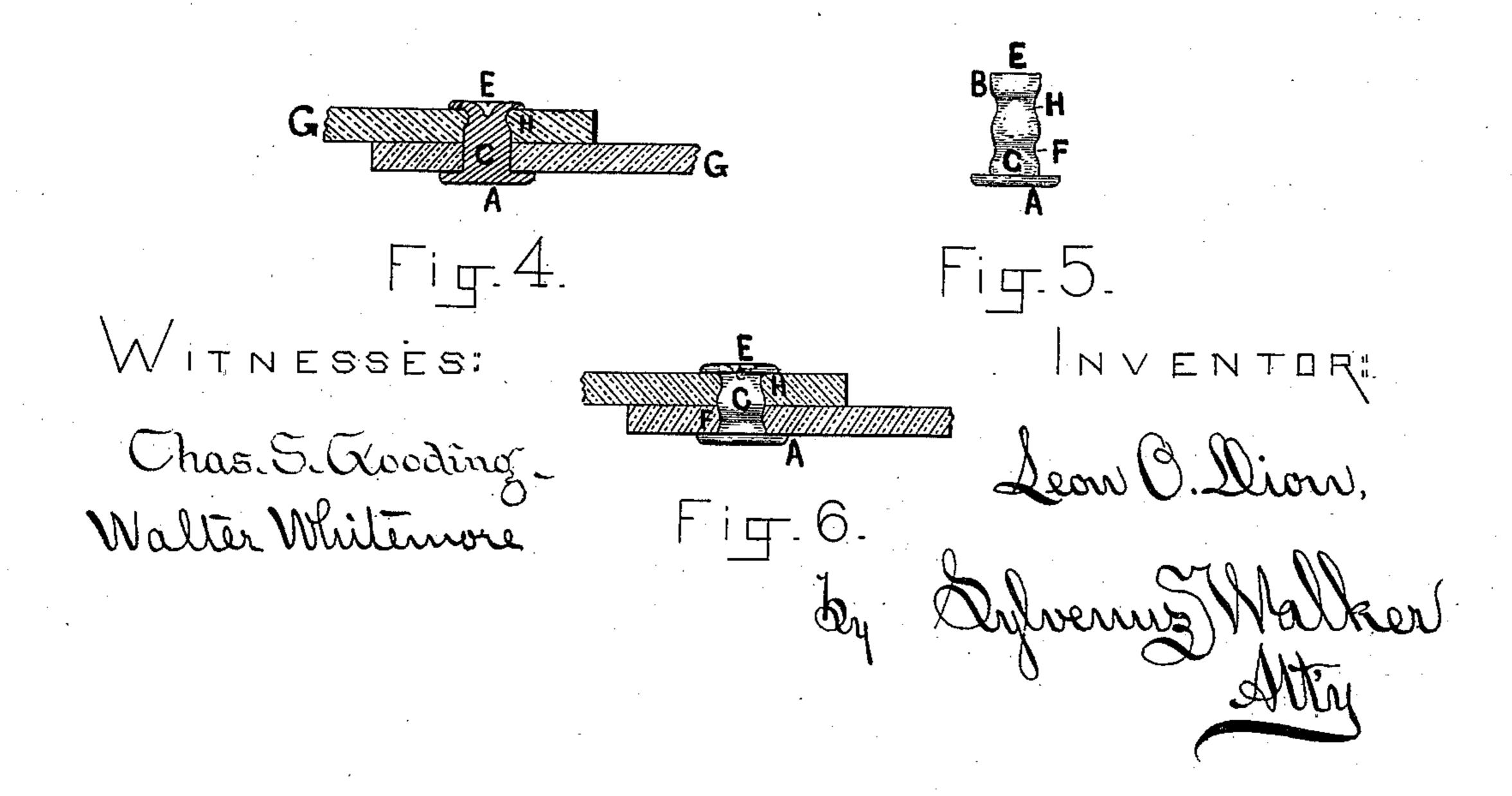


Fig. 2.



Figs



## United States Patent Office.

LÉON O. DION, OF NATICK, MASSACHUSETTS.

## RIVET.

SPECIFICATION forming part of Letters Patent No. 357,118, dated February 1, 1887.

Application filed December 14, 1885. Renewed November 29, 1886. Serial No. 220,220. (No model.)

To all whom it may concern:

Be it known that I, Léon O. Dion, of Natick, in the county of Middlesex and State of Massachusetts, have invented an Improvement in Rivets, of which the following is a specification.

The object of my invention is to provide a rivet which may be inserted through two pieces of leather or other material, and the projecting end spread outwardly and turned down upon the material, so as to secure the parts or pieces firmly together without the aid of a washer; and it consists in the peculiar and novel construction of the rivet, as hereinafter more fully described, and specifically set forth in the claim.

Figure 1 represents a side elevation of a rivet constructed according to my invention. Fig. 2 represents a sectional perspective of the same. Fig. 3 represents a similar view thereof when riveted. Fig. 4 represents a sectional view of the same passed through two pieces of material and headed or turned outwardly thereon and riveted. Fig. 5 represents a side elevation showing a modification of the same. Fig. 6 represents a similar view, showing the same passed through two pieces of material and riveted.

A represents the head proper of the rivet formed on the solid body portion C, the point30 end portion B of which is provided with a longitudinal conical hole, E, and an external circumferential groove, H, at or near the terminal point of the said internal hole or cavity, E, whereby the shell sides of the said hole or cavity are left of nearly uniform thickness throughout the said point-end portion B, as shown. Now it will be seen and understood that the said rivet being passed through the two pieces G of material and the projecting

end portion, B, spread outwardly by a blow 40 or pressure of a suitable instrument, the said shell sides forming the end portion, B, of the rivet are thus turned over upon the surface of the surrounding material and form a large bearing-contact on the same when riveted, as 45 shown in Figs. 4 and 6, whereby the pieces of material are more firmly united or held together without the aid of a washer than by means of any similar device heretofore employed for the purpose. It will be seen that 50 by means of the said conical hole E and circular or curved groove H all abrupt corners or shoulders and short bends or angles are obviated, and the metal is brought into such shape and position as to adapt it to be turned 55 over and riveted without liability of any cracks or breaks being formed in bending such shell-end portion, whereby greater strength and durability are secured and a better finish produced. By means of the secondary exter- 60 nal groove, F, formed around the body portion C near the head A of the rivet, the said body portion may be more readily or easily. upset when too long, and the lower piece of material is retained in position thereby or the 65 rivet is retained in position before the same is riveted by means of such groove F.

Having thus described my invention, what I claim is—

A solid and headed rivet having an annular 70 groove formed in the body portion thereof, and the point end provided with a conical hole, as set forth.

LEON O. DION.

Witnesses:

SYLVENUS WALKER, WALTER WHITEMORE.