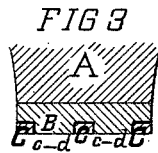
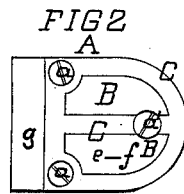
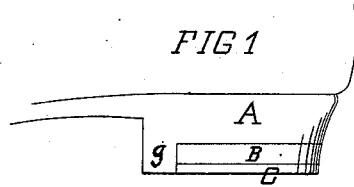


T. C. MUSGROVE.
Boot and Shoe Heel.

No. 168,341.

Patented Oct. 5, 1875.



WITNESSES

John J. Margadon
John J. Margadon

INVENTOR

Thomas C. Musgrove
By Francis D. Castorius
Atty.

UNITED STATES PATENT OFFICE.

THOMAS C. MUSGROVE, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN BOOT AND SHOE HEELS.

Specification forming part of Letters Patent No. **168,341**, dated October 5, 1875; application filed April 12, 1875.

To all whom it may concern:

Be it known that I, THOMAS C. MUSGROVE, of Philadelphia, Pennsylvania, have invented a Shock-Reliever for Boot and Shoe Heels, of which the following is a specification:

The invention consists in the combination of a rubber cushion and a metallic retaining-piece with a recessed boot or shoe heel.

Figure 1 is an elevation. Fig. 2 is a plan view. Fig. 3 is a sectioned elevation.

A is the heel of a boot or shoe. B is a rubber cushion of a suitable thickness to impart the required elasticity. C is a metallic plate which fits over the cushion. It is held in place by screws *a*, which pass through countersunk openings *b*, and through the rubber into the leather of the heel. The rubber has projections *c d*, which extend into similar openings *e f* in the plate, flush with its tread surface. The rear screw *a'* is arranged relatively to the yielding motion of the plate, to permit it to give freely to pressure. To keep the rubber cushion and the plate from being forced out of place by the repeated striking of the heel on the pavement, the rear of the

heel is recessed to a depth equal to the thickness of the cushion and plate, by which an offset or shoulder, *g*, is formed, against which the rubber and plate butt, and are thus prevented from moving forward.

I am aware that Letters Patent No. 56,921 were granted, July 27, 1866, to Samuel T. Fowler for heel-guards, and Letters Patent No. 157,985 were granted, December 22, 1874, to Levi W. Buxton for improvement in boot and shoe heels.

I claim as my invention—

The combination of the heel A, having an offset or shoulder, *g*, the recessed rubber B, and the yielding skeleton-plate C, substantially as and for the purpose shown and described.

In testimony whereof I hereunto sign my name in presence of two subscribing witnesses.

THOMAS C. MUSGROVE.

Witnesses:

JAMES B. LAW,
FRANCIS D. PASTORIUS.