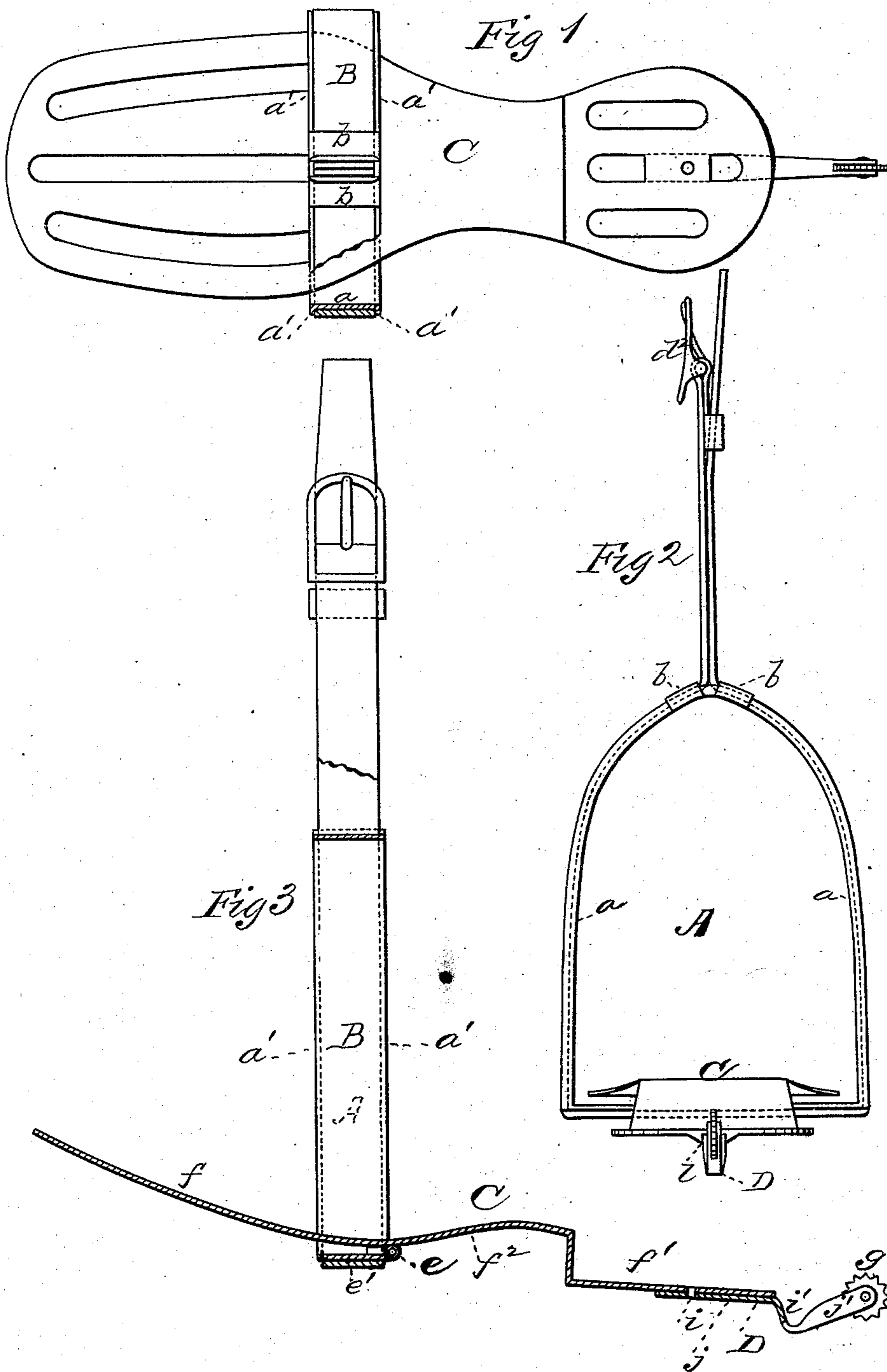


S. J. McDONALD & J. W. BURTON.  
STIRRUPS.

No. 194,609.

Patented Aug. 28, 1877.



WITNESSES

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# UNITED STATES PATENT OFFICE.

SAMUEL J. McDONALD AND JOHN W. BURTON, OF GALLATIN, MISSOURI.

## IMPROVEMENT IN STIRRUPS.

Specification forming part of Letters Patent No. 194,609, dated August 28, 1877; application filed July 21, 1877.

*To all whom it may concern:*

Be it known that we, SAMUEL J. McDONALD and JOHN W. BURTON, of Gallatin, in the county of Daviess and State of Missouri, have invented a new and valuable Improvement in Stirrups; and we do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a top view of our improved stirrup. Fig. 2 is a rear end view thereof; and Fig. 3 is a longitudinal vertical section of the same.

This invention has relation to improvements in stirrups for riding-saddles; and it consists in combining with the stirrup-iron a vibrating foot-plate, having a rest for the ball of the foot, one for the heel, and an arched portion connecting the two for the arch of the instep or hollow of the foot, whereby the ordinary Mamluke stirrup is adapted to fit a modern boot or shoe.

It also consists in combining with an ordinary stirrup, having laterally-flanged side bars and loops at each side of the apex of said iron, a stirrup-leather encircling the said iron fitting in between the flanges of the side bars and extending through the loops aforesaid, whereby the said iron is supported at bottom, sides, and top, and in the event of its casual breaking, the leather is made to afford adequate support to the foot, and the rider is not dependent upon a single stirrup for his support.

It also consists in combining with a stirrup-iron and a foot-plate, a vibrating spur adapted to be vibrated out beyond the heel of said plate in position for use, or to be swung under the same out of said position, whereby the rider is able to use or dispense with the said spur, as may be required, as will be hereinafter more fully set forth.

In the annexed drawings, the letter A designates a stirrup-iron of the usual shape, having upon the edges of its side bars *a* the projecting flanges *a'*, and at each side of its apex a loop, *b*. The stirrup-leather B is extended completely around this iron, its branches *c*

being received between the flanges *a'* aforesaid, and carried through the loops *b*. The longer branch is then passed through a staple in the saddle-tree, and is connected to the shorter branch by means of a buckle, *d*<sup>2</sup>. It is thus made adjustable for lengthening or shortening the stirrup, as may be required. The flanges aforesaid hold the leather to its engagement with the iron.

C represents a metallic foot-plate connected by means of a hinge, *e*, to the tread *e'* of the stirrup-iron, or by means of journals to the side bars thereof. This plate is of the shape of an ordinary modern shoe or boot sole, composed of a rest, *f*, for the ball of the foot, a rest, *f*<sup>1</sup>, for the heel, and an arched portion, *f*<sup>2</sup>, connecting rests *f* and *f*<sup>1</sup>, and arched to correspond to the hollow or under side of the instep. The ball and heel foot-rests *f f*<sup>1</sup> are perforated or longitudinally slotted, preferably, so as to secure the proper degree of lightness without prejudice to strength. By this means the foot-plate, in reference to the stirrup-iron, has a degree of vibration that allows the ankle-joint of the rider to flex naturally, thereby relieving the muscles of the foot of strain, and preventing great and unnecessary weariness.

D represents a spur-shank, carrying in its end the usual rowel *g*, and pivoted in any suitable manner to the under side of the heel-rest *f*<sup>1</sup> at *i*. The two parts *j j'* of this shank are connected by a branch, *j*<sup>1</sup>, at right angles thereto, the whole being formed out of a single piece of springy metal. By vibrating this shank outward upon its pivot *i* its rowel *g* is projected beyond the foot-plate to the rear, and is then in position for use; but by swinging it under the said plate the said rowel is entirely retracted and rendered innoxious, thus adapting the improved stirrup to be used with animals that do not bear the spur.

When the vibrating spur is swung into position for use it engages a notch, *l*, upon the rear end of the heel-plate, and is held to its engagement therewith by the natural springiness of the material of the said shank. We may, however, employ an independent spring for this purpose, if we so elect.

What we claim as new, and desire to secure by Letters Patent, is—

1. The combination, with the flanged stirrup-iron A, of the foot-plate for stirrups, consisting of a ball-rest,  $f$ , pivoted thereto, the heel-rest  $f^1$ , and arched plate  $f^2$ , connecting the same, substantially as specified.

2. The combination, with the flanged stirrup-iron A, of the stirrup-leather B, encircling the same, substantially as specified.

3. The combination, with the stirrup-iron, having flanged side bars and loops at each side of its apex, of the stirrup-leather encir-

cling the said iron passing between the flanges of the side bars and through the said loops, substantially as specified.

In testimony that we claim the above we have hereunto subscribed our names in the presence of two witnesses.

SAMUEL J. McDONALD.

JOHN W. BURTON.

Witnesses:

R. L. TOMLIN,

JAMES HEMRY.