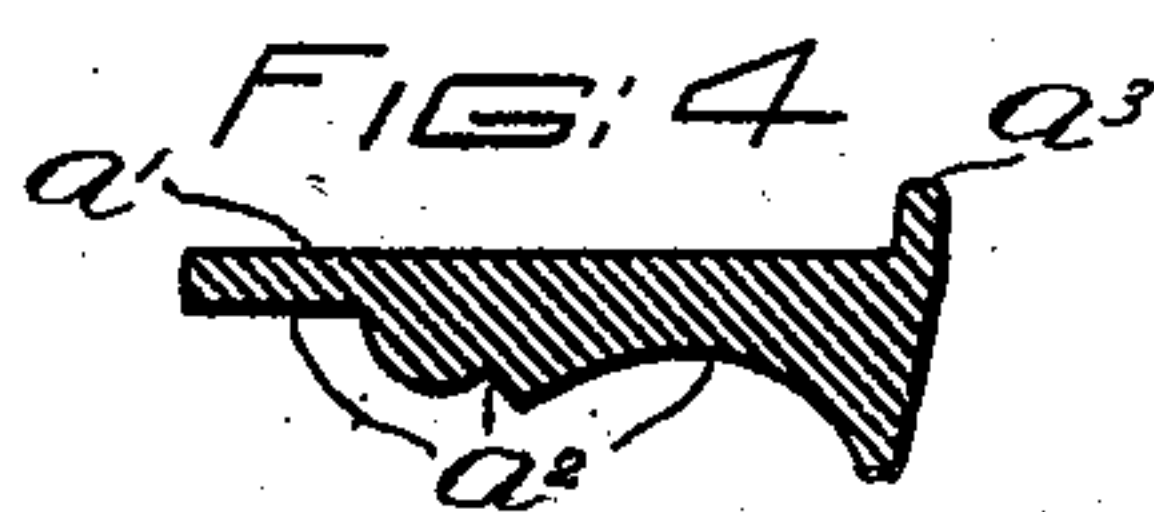
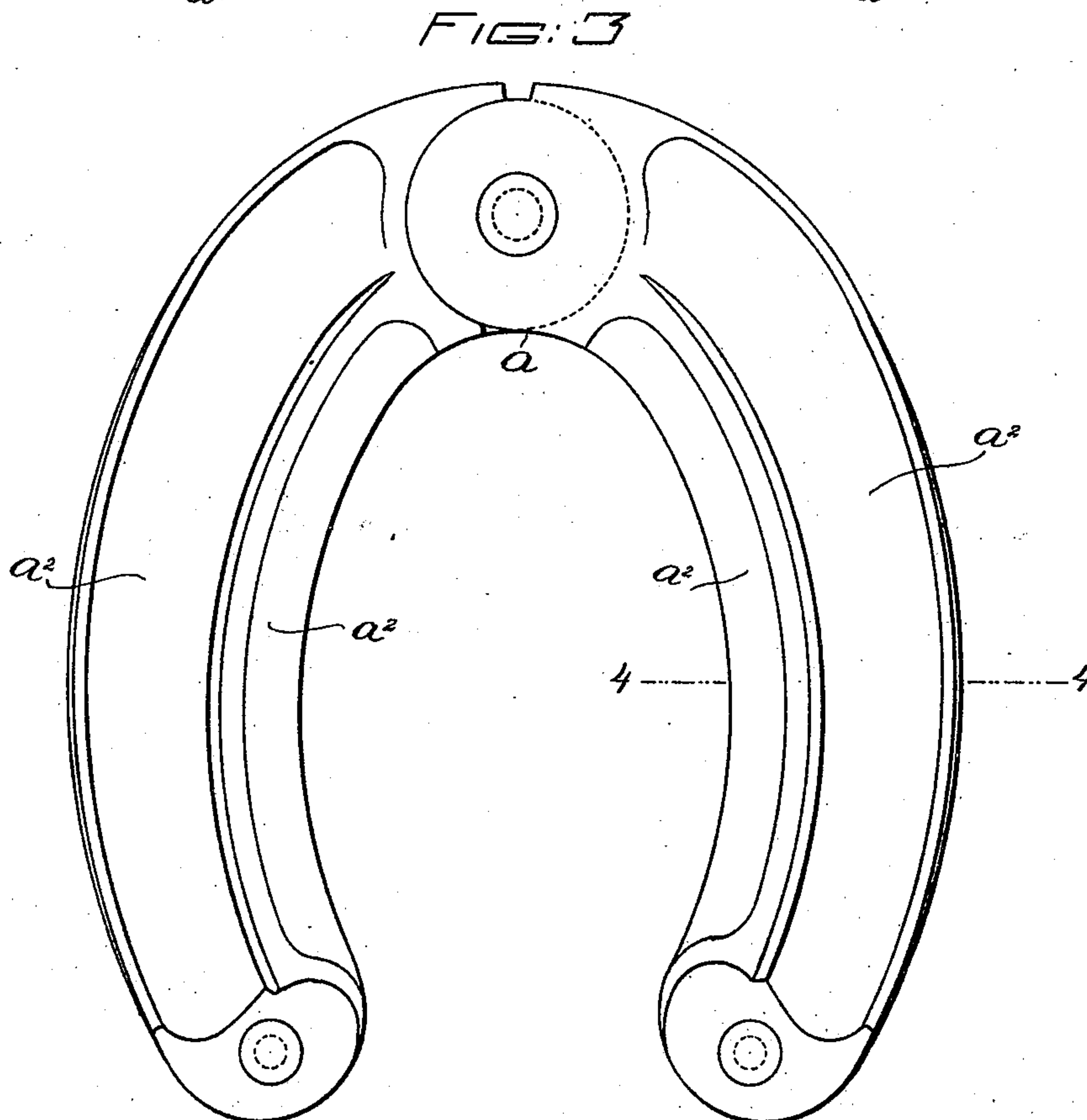
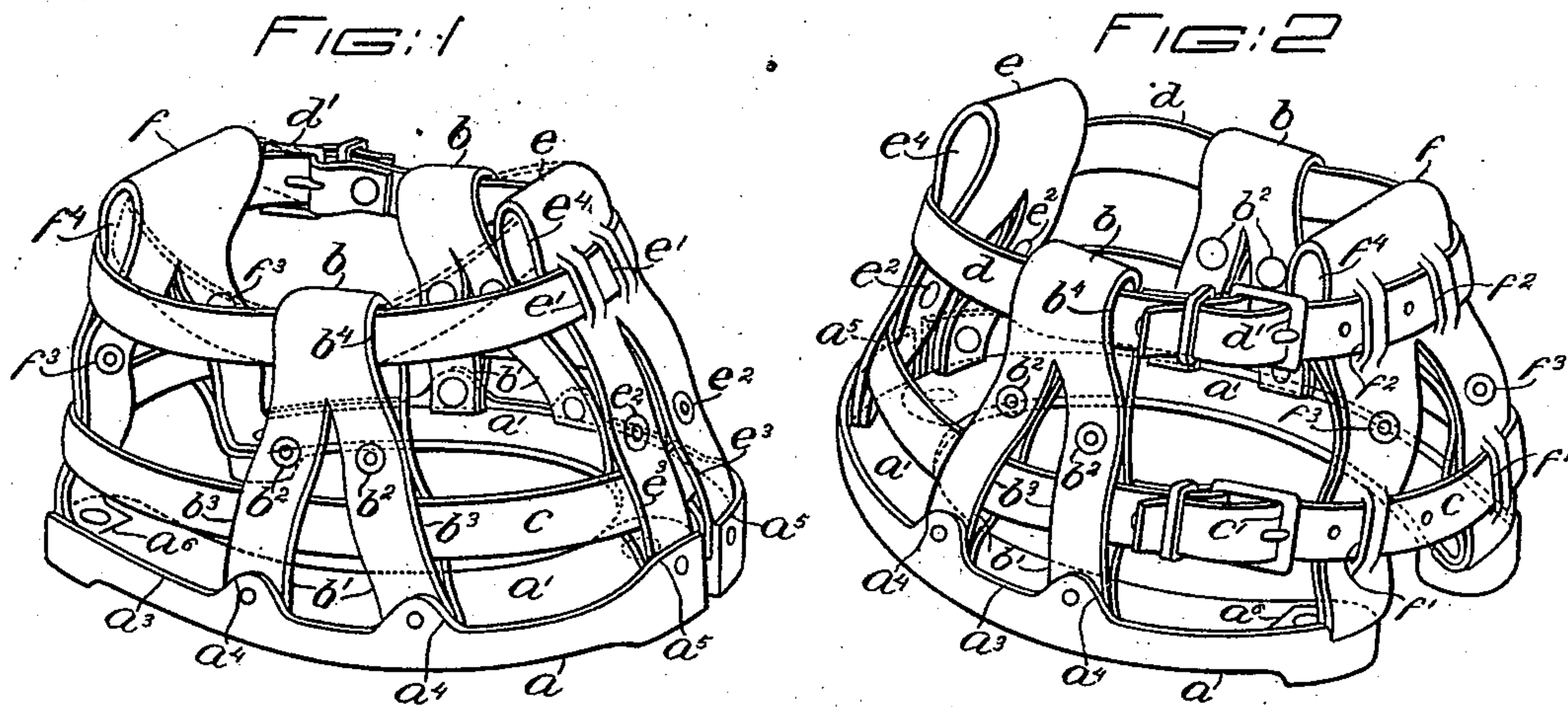


(No Model.)

H. G. HAEDRICH, Jr.
HORSE SANDAL.

No. 501,567.

Patented July 18, 1893.



WITNESSES:

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UNITED STATES PATENT OFFICE.

HENRY G. HAEDRICH, JR., OF PHILADELPHIA, PENNSYLVANIA.

HORSE-SANDAL.

SPECIFICATION forming part of Letters Patent No. 501,567, dated July 18, 1893.

Application filed April 10, 1893. Serial No. 469,657. (No model.)

To all whom it may concern:

Be it known that I, HENRY G. HAEDRICH, Jr., a citizen of the United States, residing at the city of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Horse-Sandals, of which the following is a specification.

My invention has relation to sandals for the feet of animals; and it relates more particularly to the composition of the metallic materials thereof and to the construction and arrangement of the parts of the sandal for the feet of horses, mules and the like.

The principal objects of my invention are, first, to provide an attractive, light, neat, strong and comparatively inexpensive horse sandal adapted to closely hug and efficiently protect a hoof to which it is applied; second, to provide simple, efficient and durable devices for detachably connecting the sandal with the hoof; and, third, to provide convenient means for adjusting the connecting devices of the sandal to accommodate hoofs of different sizes.

My invention consists of a horse-sandal, comprising a two-part hinged metal sole with upwardly projecting front, side and rear tugs having separate sets of loops disposed the one beyond the other and encircling hoof and ankle straps adapted to permit of the attachment of the sole to hoofs of different sizes and heights.

My invention further consists of a horse sandal, comprising a two-part hinged sole composed of aluminium or an alloy thereof and provided with a recessed tread and a marginal vertically projecting recessed flange conforming to the contour of the hoof and forming lugs and with vertically divided toe and side tugs connected with the lugs of the flange, a vertically divided heel tug connected with the sole, a hoof strap engaging loops in said tugs, and an ankle-strap engaging loops in the side tugs and adapted to pass through either of two separate loops near the top of the heel and toe tugs to accommodate the sandal to hoofs of different heights; and my invention further consists of the improvements in sandals for animals, as horses, mules and the like, hereinafter described and claimed.

The nature, characteristic features and

scope of my invention will be more fully understood from the following description taken in connection with the accompanying drawings forming part thereof, and in which—

Figure 1 is a perspective view of the front portion of a sandal embodying features of my invention and showing a divided side tug connected with lugs on the marginal flange of the sole and provided with separate loops for the hoof and ankle straps, and also showing a toe-strap provided with a separate loop for the hoof-strap and with two loops one above the other for the reception of the ankle-strap. Fig. 2, is a similar view of the rear of the sandal, showing a divided heel-tug provided with separate loops for the hoof-strap and with two separate loops for the ankle-strap. Fig. 3, is a view of the under side of the two-part hinged sole, showing the same provided with a recessed or channeled and ribbed tread and with a beveled or tapering periphery or contour; and Fig. 4, is a section taken on the line 4—4, of Fig. 3.

In the drawings *a*, is a two-part hinged sole composed of aluminium or an alloy thereof. In this connection it may be remarked that the composition for the construction of the shoe of the sandal may be made by employing the following alloys, to-wit:—six (6) per cent. of tin, four (4) per cent. of copper and ninety (90) per cent. of aluminium, more or less; or five (5) per cent. of zinc, ten (10) per cent. of copper and eighty-five (85) per cent. of aluminium, more or less. The shoe of the sandal constructed of either of said alloys in about the proportions stated, is strong, light and tough and consequently well suited for such purpose. Excellent results have been attained by the employment of a sole composed of aluminium or an alloy or alloys thereof, because aluminium or its alloys are not affected by atmospheric conditions, saline influences or by ammonia or similar substances; and moreover, such shoes do not corrode or otherwise injuriously affect the leather constituting the fastening and adjusting means of the device. Furthermore, such a sandal is especially adapted for animals having tender feet and for sick animals while standing, being a protection to the hoof without being excessive as to weight, which is desirable in many instances where the animal is afflicted

with some organic limb disease or with a sprained limb. In such cases it is very desirable that as little weight as possible shall be confined to or about the hoofs of the animal.

5 Then again owing to the lightness of such a sandal the hoof is thoroughly protected from chipping or being torn, as is quite a common occurrence with sick animals standing and continually pounding against the flooring of
10 a stall with the shoes removed and upon the loss of a shoe on the road a sandal of the type shown and described owing to its general construction and arrangement can be readily applied with the least possible trouble and time
15 and adapted to the foot of most any sized hoof by simply adjusting the hoof and ankle straps thereof, to be hereinafter more fully explained.

The upper portion or face of the sole of the
20 shoe *a*, is flat as at *a'*, in Figs. 1, 2 and 4, for the reception of the base of the hoof and the tread portion thereof is recessed as at *a''*, Figs. 3 and 4, in order to impart lightness without any appreciable diminution of strength or
25 stability thereto.

a'', is a marginal flange extending vertically from the sole and conforming to the contour of the hoof.

b, are straps folded and bifurcated. The
30 arms *b'*, of these bifurcations are spread apart and riveted or otherwise connected with lugs *a''*, projecting upward from the marginal flange *a''*, and the folded portions of the straps *b*, are riveted together as at *b''*, so that the
35 straps constitute upwardly projecting side tugs having separate loops, as at *b''* and *b''*, for the reception of a hoof-strap *c*, and an ankle-strap *d*.

e, is a bifurcated and folded strap slotted
40 as at *e'*, and having the arms of the bifurcations spread apart and riveted or otherwise connected together as at *e''*, and also riveted or otherwise attached to lugs *a''*, projecting upward from the flange *a''*, on opposite sides
45 of the hinge of the sole, so that the strap *e*, constitutes a toe-tug provided with loops as at *e''*, for the reception of the hoof-strap *c*, and with loops as at *e'* and *e''*, located the one beyond the other and adapted for the recep-
50 tion of the ankle-strap *d*.

f, is a bifurcated and folded strap slotted
as at *f'* and *f''*, and having the arms of the bifurcations riveted or otherwise connected together as at *f''*, and also riveted or other-
55 wise attached to place in recesses *a''*, cut or otherwise formed in the heel portions of the sole, so that the strap *f*, constitutes a heel-tug provided at *f'*, with a loop for the reception of the hoof-strap *c*, and at *f''* and *f''*, with
60 loops, located the one beyond the other and adapted for the reception of the ankle strap *d*.

In use the sole of the shoe *a*, is applied to the hoof with the flat face *a'*, thereof in contact with the sole of the hoof. The hoof strap
65 *c*, is drawn tight around the hoof and secured in such position by means of a buckle *c'*. The ankle-strap *d*, is passed through the loops *f''*

and *e''*, of the heel and toe tugs, as indicated by dotted lines in Fig. 1, or through the loops *f''* and *e'* thereof, as indicated by full lines in
70 Figs. 1 and 2, according as the heel and toe portions of the hoof are high or low. In either case the ankle-strap is drawn tight and secured to place by means of the buckle *d'*.

Having thus described the nature and ob-
75 jects of my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A horse sandal, comprising a two-part hinged metal sole provided with upwardly projecting front, side, and rear bifurcated
80 tugs having separate sets of loops disposed the one beyond the other, and hoof and ankle straps adapted to penetrate said loops to accommodate the sandal to hoofs of different sizes and heights, substantially as and for the
85 purposes set forth.

2. A horse-sandal, comprising a two-part hinged sole composed of aluminium or an alloy thereof and provided with a recessed or
90 channeled and ribbed tread and with marginal vertically projecting flanges conforming to the contour of the hoof and forming lugs having upwardly projecting toe and side tugs connected with the lugs of said flanges,
95 a heel-tug connected with the sole, a hoof-strap engaging loops provided in the tugs and an ankle-strap engaging separate loops in the side tugs and adapted to pass through either
100 of the two separate loops near the top of the heel and toe tugs to accommodate the sandal to hoofs of different heights, substantially as and for the purposes set forth.

3. In a horse sandal, divided or bifurcated heel and toe tugs provided with loops for the
105 reception of a hoof-strap provided with retaining devices and with loops located the one beyond the other for the reception of an ankle-strap provided with retaining devices, substantially as and for the purposes set forth.

4. In a horse sandal, divided heel and toe
110 tugs provided with loops for the reception of a hoof-strap having retaining devices, and with loops located the one beyond the other for the reception of an ankle strap provided with retaining means, and divided side tugs
115 provided with separate loops for the reception of said hoof and said ankle straps, substantially as and for the purposes set forth.

5. A horse-sandal composed of aluminium or an alloy thereof with a flat face and with
120 a channeled and ribbed sole, divided heel, side, and toe tugs, a hoof strap with retaining means, loops for the reception thereof, and an ankle-strap provided with retaining means and separate loops therefor, substantially as
125 and for the purposes set forth.

In testimony whereof I have hereunto set my signature in the presence of two subscribing witnesses.

HENRY G. HAEDRICH, JR.

Witnesses:

THOMAS M. SMITH,

RICHARD C. MAXWELL.