

(No Model.)

C. W. LOVE.  
DIVIDER SHOE.

No. 397,809.

Patented Feb. 12, 1889.

Fig. 1.

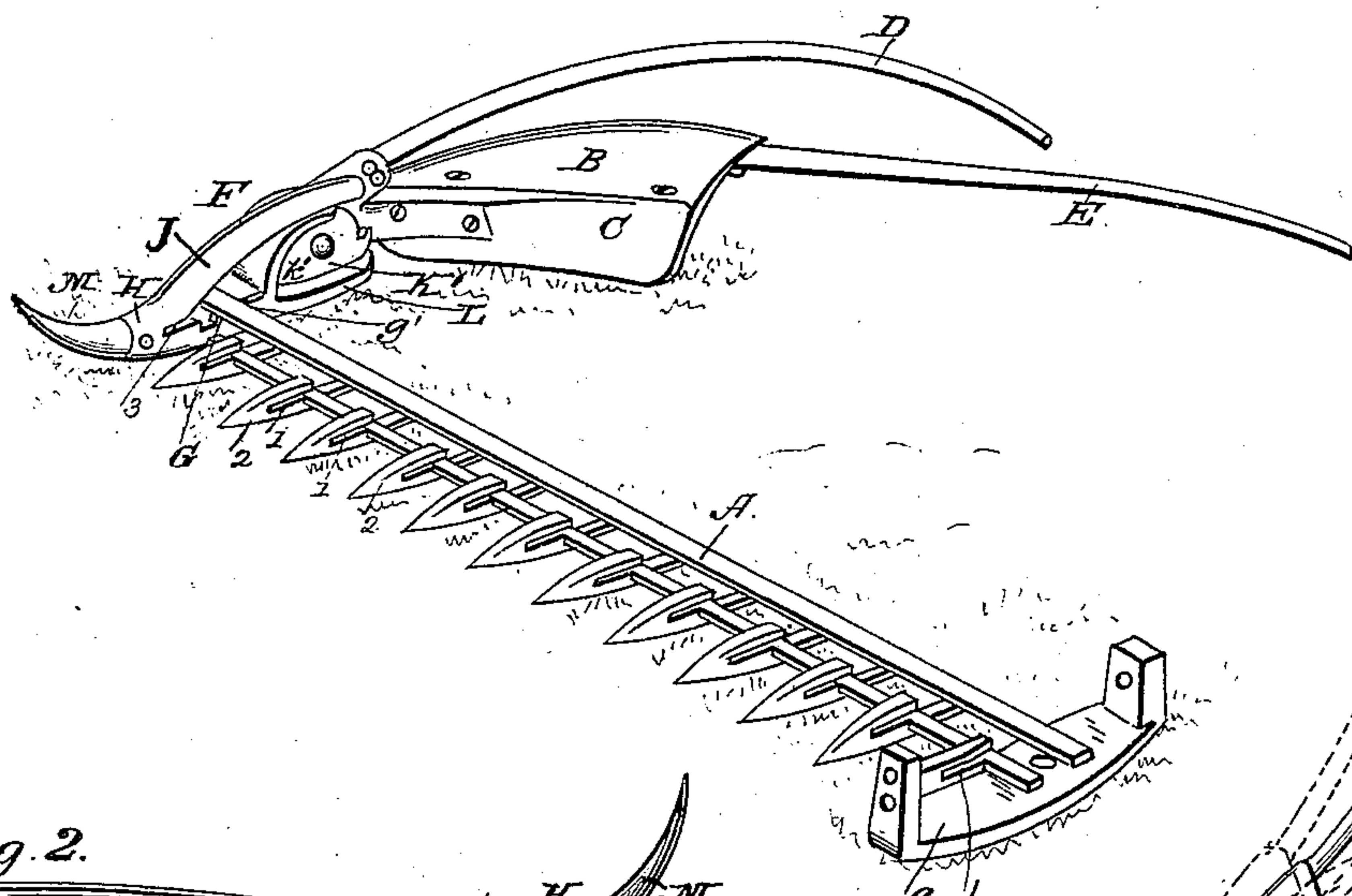


Fig. 2.

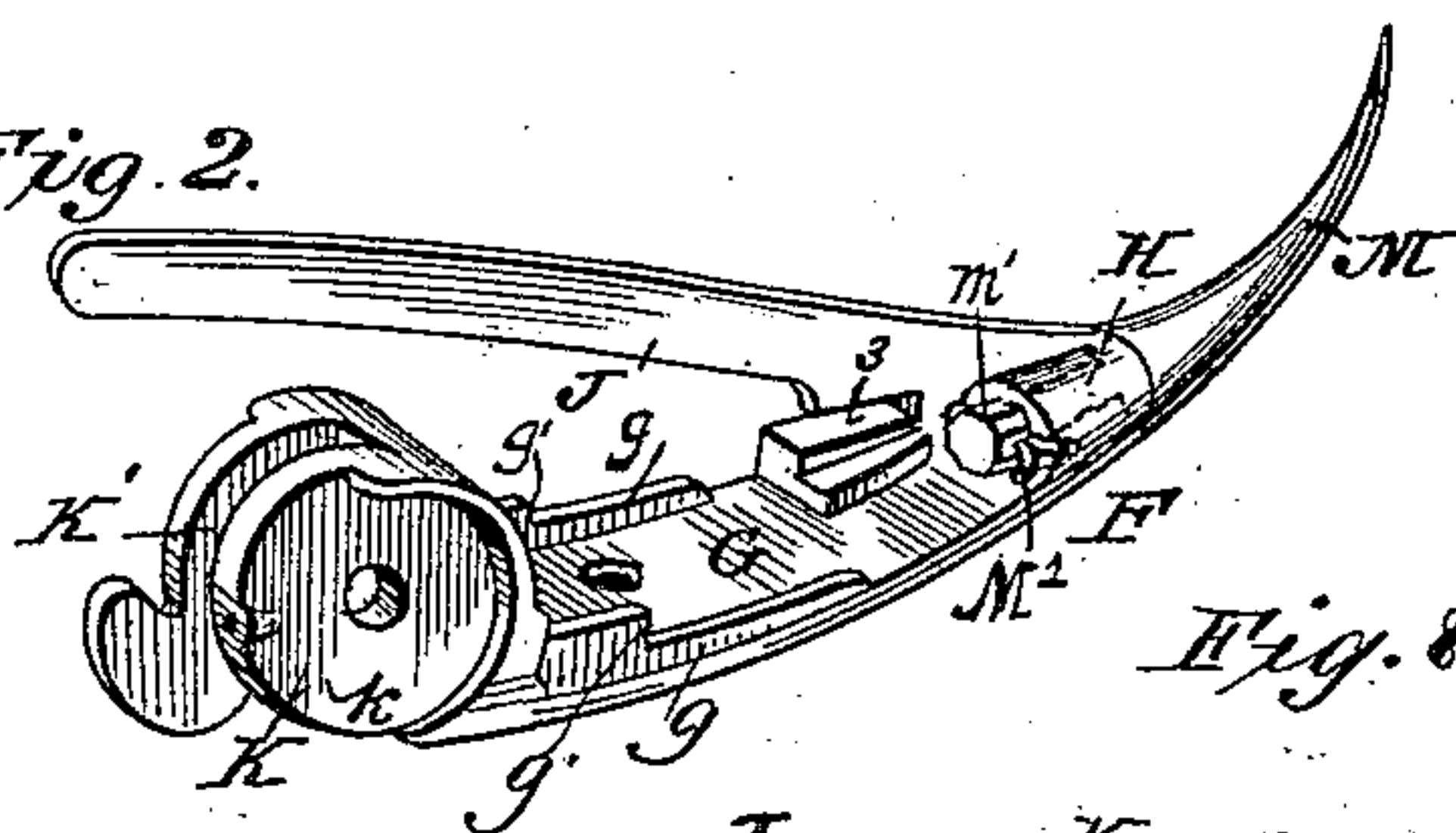


Fig. 3.

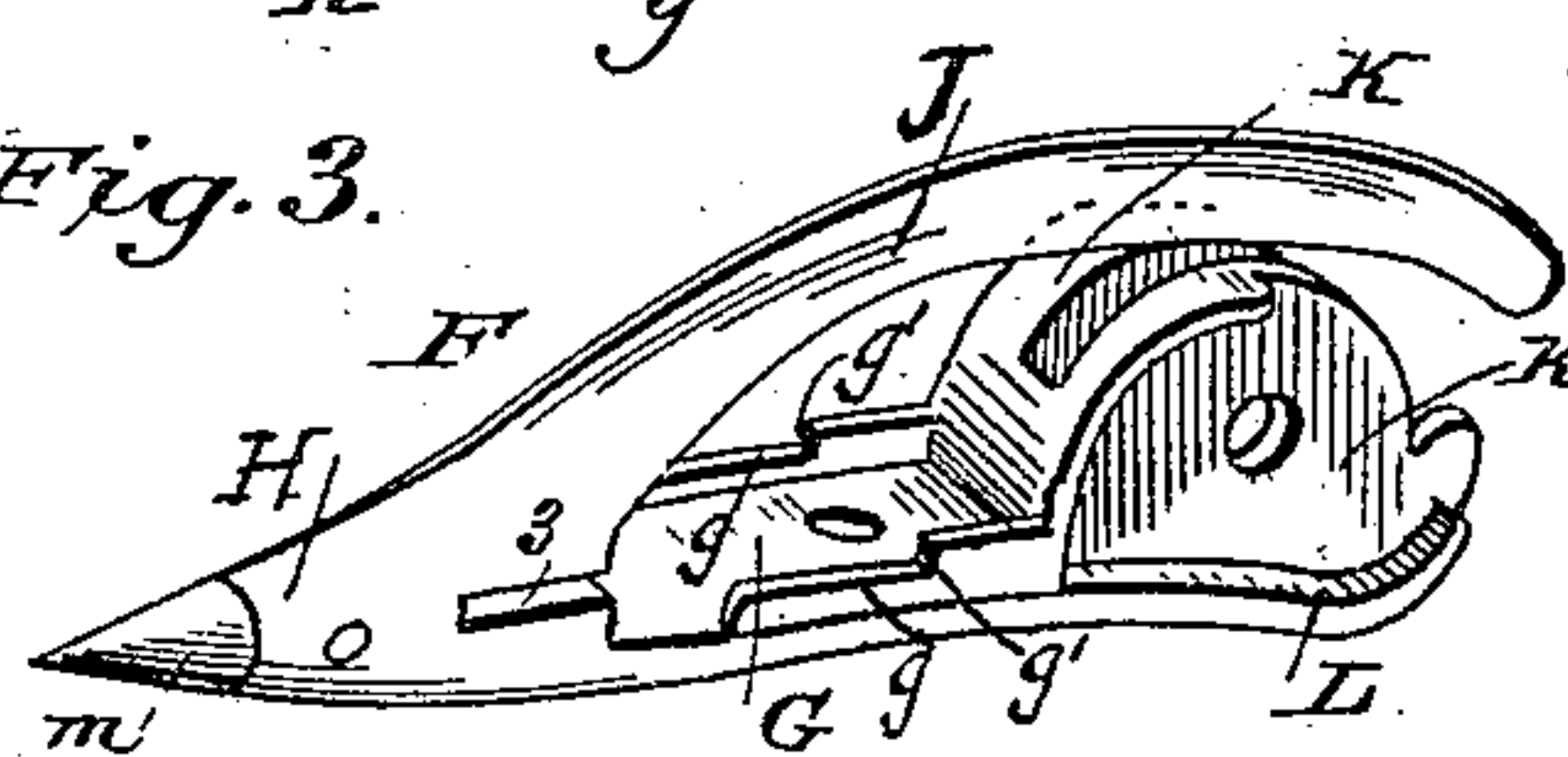


Fig. 8.

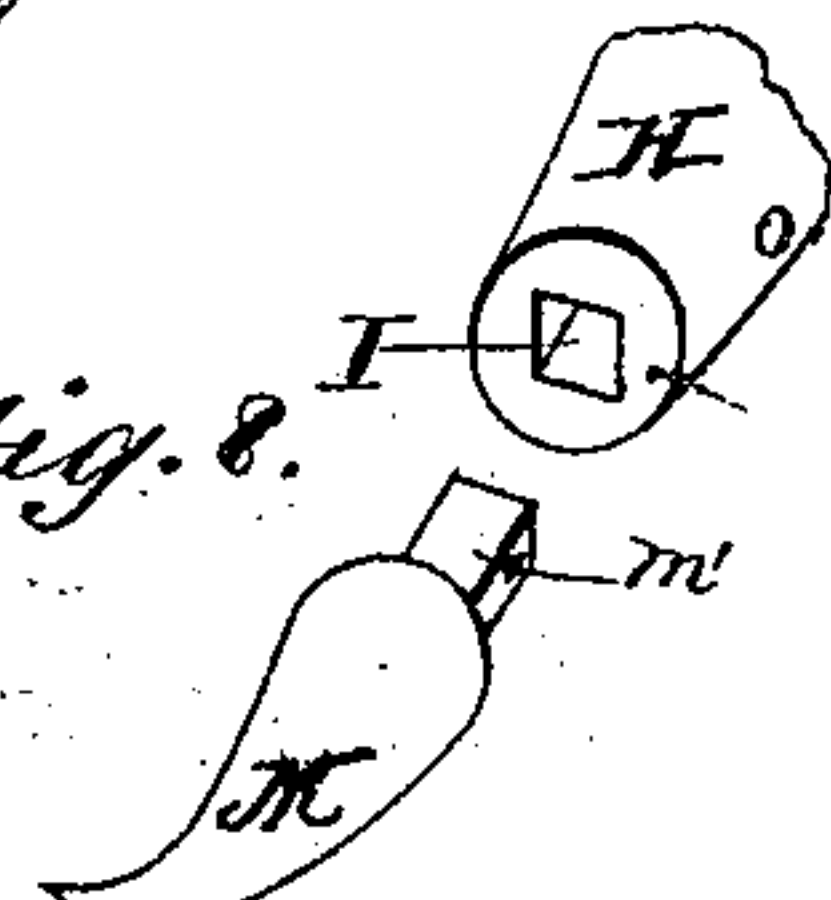


Fig. 7.



Fig. 5.

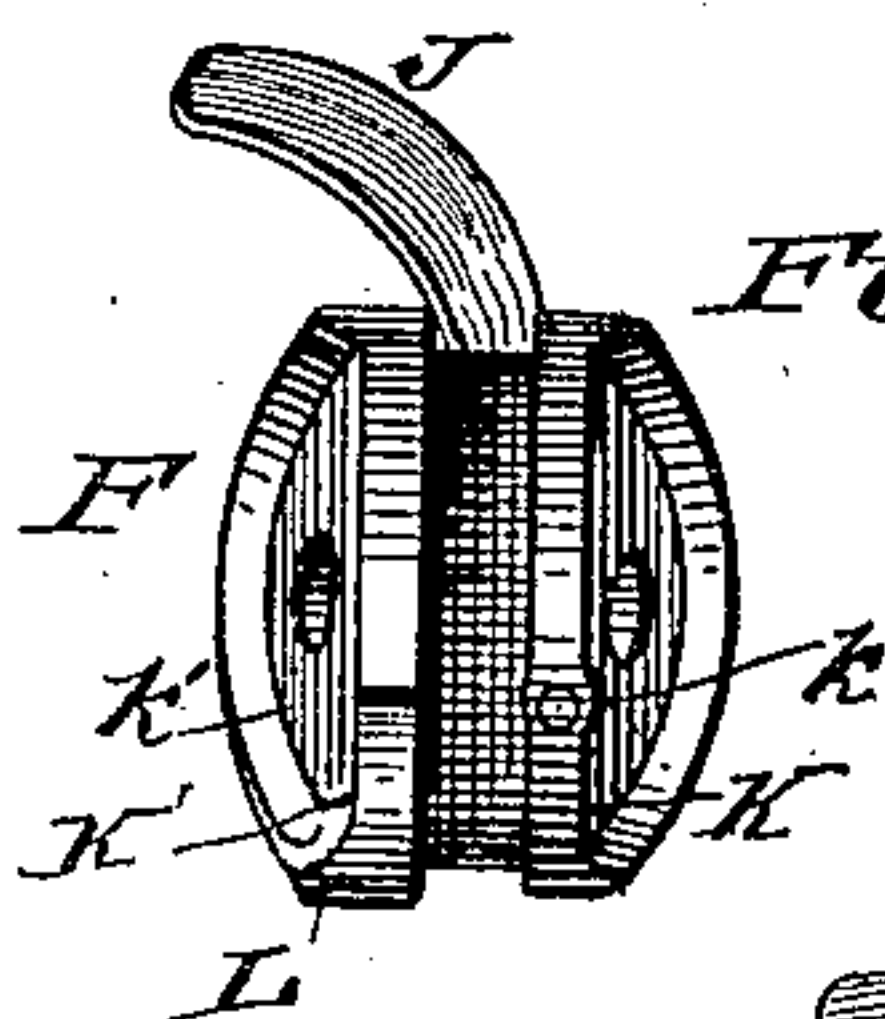


Fig. 6.

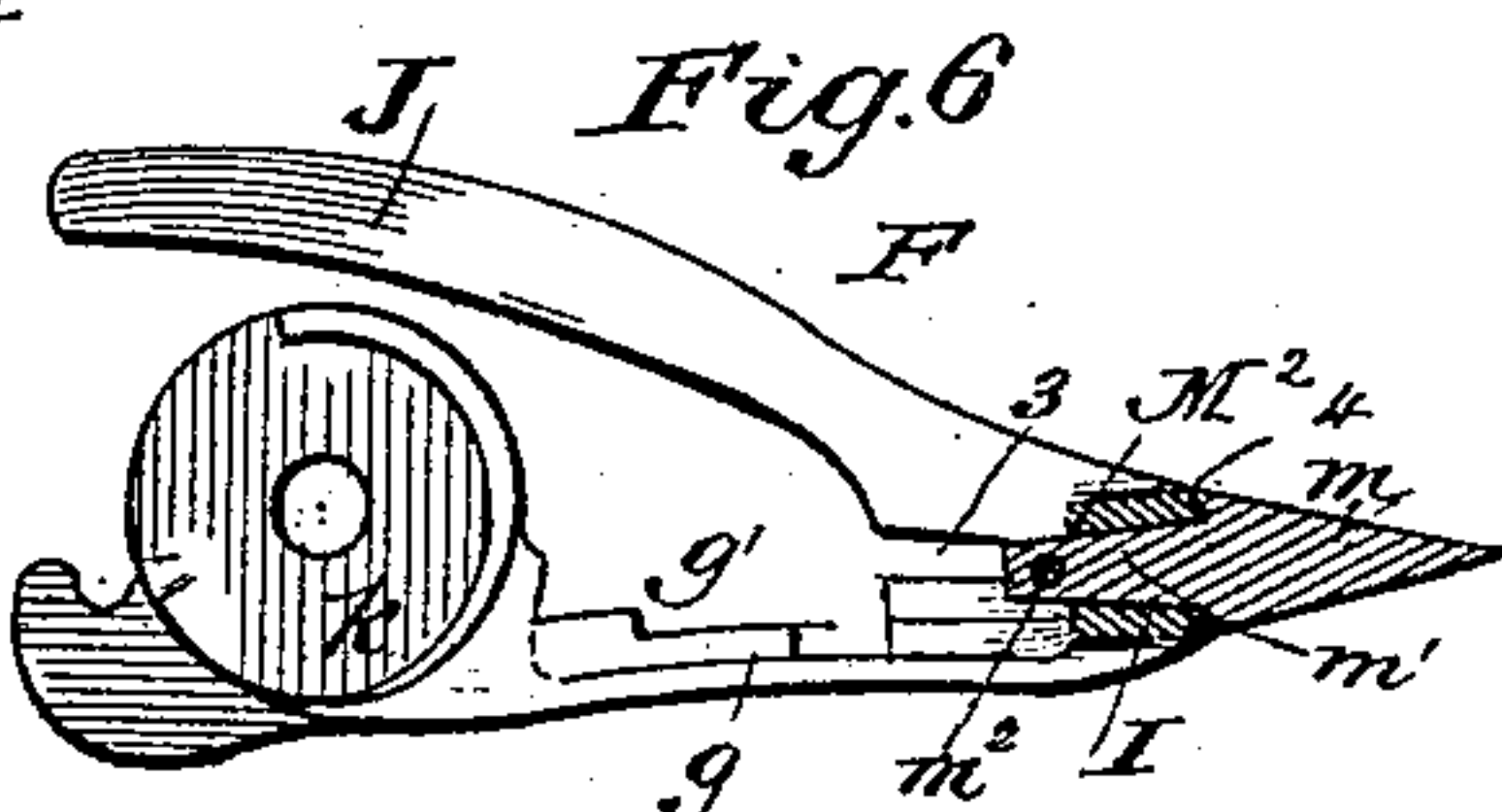


Fig. 9.

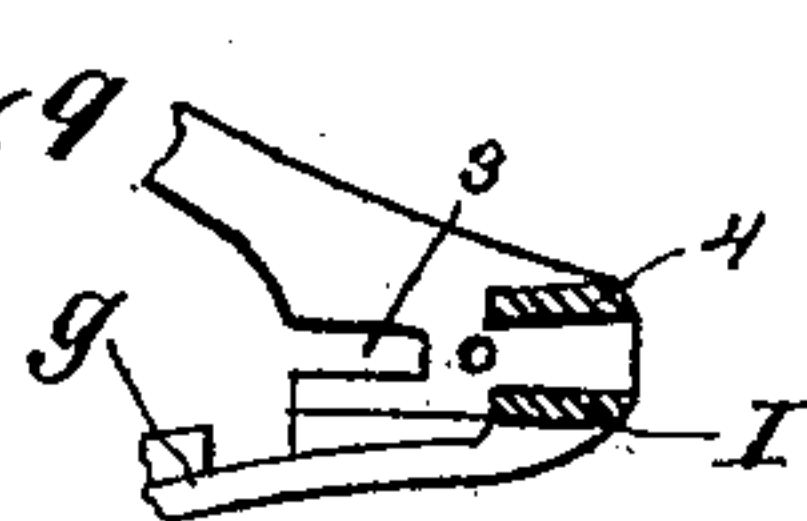
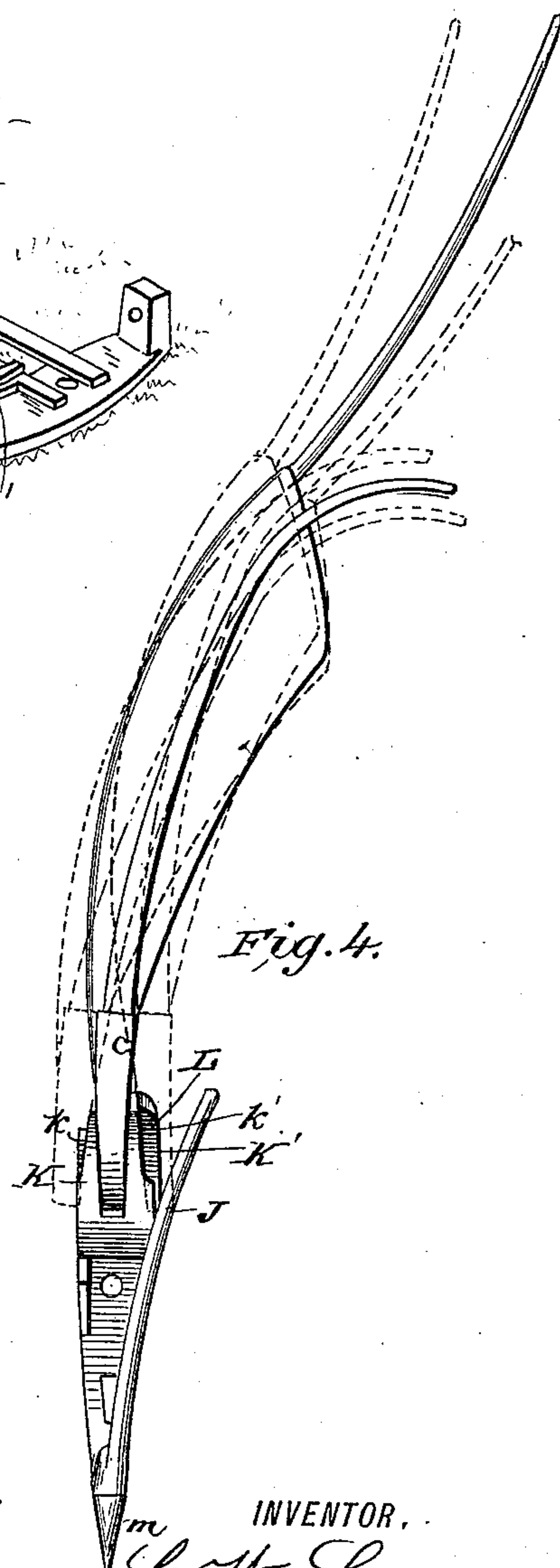


Fig. 4.



WITNESSES:

Fred G. Dieterich  
R. B. Turpin.

INVENTOR.

C. W. Love

BY

Munn & Co

ATTORNEYS.



# UNITED STATES PATENT OFFICE.

CHARLES W. LOVE, OF FAIRPOINT, OHIO.

## DIVIDER-SHOE.

SPECIFICATION forming part of Letters Patent No. 397,809, dated February 12, 1889.

Application filed May 3, 1888. Serial No. 272,721. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES WHITE LOVE, of Fairpoint, in the county of Belmont and State of Ohio, have invented a new and useful  
5 Improvement in Outer Divider-Shoes, of which the following is a specification.

My invention is an improvement in outer divider-shoes for the cutters of mowers and reapers.

10 The invention seeks, together with other improvements, to so construct the seat for the finger-bar that such seat may be readily trimmed out to fit any of the ordinary finger-bars now in use.

15 The invention also has for an object to provide the shoe with a number of faces arranged at different angles and adapted to have the divider board, point, or lug secured to any one of such faces, so the said board may be  
20 adjusted to different angles, as may be desired.

The invention has for further objects other improvements; and it consists in certain novel constructions and combinations of parts, as  
25 will be hereinafter described and claimed.

In the drawings, Figure 1 is a perspective view of my improvement in place on a finger-bar. Fig. 2 is a detail perspective view of the shoe from its outer side, the high point  
30 or snout being in place. Fig. 3 is a detail view of the shoe from its inner side, the low point being in place. Fig. 4 is a top plan view, and Fig. 5 a rear elevation, of the shoe. Fig. 6 is a side view of the body of the shoe, being partly sectioned to show the socket for  
35 the point-stem. Fig. 7 is a front elevation. Fig. 8 is a detail view showing the point and a portion of the body or main portion detached; and Fig. 9 is a side view, part in section, of the front part of the main or body  
40 portion of the shoe.

The finger-bar A, as well as the inner shoe, a, may be of ordinary construction, while the boards B C and rods D E are covered in my  
45 patent, No. 260,581, granted July 4, 1882, and need no detailed description in this application. The shoe F has its body or main portion cast usually in a single piece with the intermediate portion, having seat G for the  
50 finger-bar, the forward portion, H, having

socket I for the stem of the point and provided with the rearwardly-extending and curved shield J, and the rear portion having lugs K K' for the attachment of the divider-boards and the rest L.

The seat G is provided at its opposite sides with narrow ribs or lugs g, projected upward and preferably stepped at g'. 55

It is well known that the finger-bars of different machines differ materially in form, 60 and the seats of the shoes made for use with each of said bars are fitted only for application to their particular bars and can be used on no other. In making my shoe I have sought to form the seat for the cutter-bar so 65 that it can be quickly filed or chipped out with a chisel to properly fit any finger-bar. This is attained in the present instance by forming the seat with narrow upwardly-projected ribs g, which can be easily cut away to the desired 70 extent to permit the finger-bar to be set sufficiently low to bring the way 1 in the fingers 2 in proper horizontal register with the way 3 in the shoe. These ways 1 3, it will be understood, are for the knife of the cutter. 75 The stepped construction at g' forms a forwardly-facing shoulder, against which the back of the finger-bar rests, and by filing away the upper step of the lugs from the front edge thereof the finger-bar may be set 80 back to any desired degree to secure the proper register of the ways 1 and 3, as is desired. This feature of the shoe is very important, inasmuch as it enables the shoe to be put on the market and conveniently applied 85 to any ordinary finger-bar.

At its rear end the shoe has the rest or heel L, which forms a fulcrum and bears on the ground as the finger-bar is turned or tilted and enables the cutter or knives to be set 90 higher or lower, as desired. The shoe also has the lugs K K' at its said rear end, between which or against the outer faces of which the connecting-lug of the clearer-board may be secured. I form the bearing between 95 the lugs and the bearing-faces on the outer sides, k k', of the outer and inner lugs, K K', at different angles, so the clearer-board may be held at the different angles by securing it between the lugs, or to the outer face of 100



one or the other thereof. In its forward end the main portion of the shoe has the socket I, which is made non-circular in cross-section, preferably octagonal and tapering toward its rear end, as shown. The high point M and low point *m* have tenons or stems *m'* fitted to said sockets, and are provided near their rear ends with transverse openings *m*<sup>2</sup> to receive the fastening key-pin M<sup>2</sup>. The said key is preferred, and it is also preferred to make it a split key, so that by driving it in and spreading its arms there will be a tendency to secure the stem of the point more tightly in its socket. The walls of this socket at its forward end are beveled rearwardly at 4, and the rear end of the point, at its juncture with its stem, is undercut to fit the bevel 4, as shown.

The low and high points may be conveniently substituted one for the other when desired. The low point is intended for use in short or straight grass—that is to say, grass not tangled together—while the high point, which curves upward to a height considerably above the cutting-blades, is intended for use in high tangled grass, and operates in the manner more fully described hereinafter.

In some kinds or conditions of grass—as, for instance, long red or mammoth clover which, from its long slender stock growing three to four feet high and heavy top and blossom, the grass is unable to support itself in an upright position and falls on the adjacent grasses or stalks, and the latter upon others, and so on—the tops, after becoming bent in striving to resume the upright position, will grow up through the fallen stalks until the whole meadow will present the appearance of a mass of low running vines woven and interwoven. The height of this matted portion may vary from four to twelve inches above the ground.

It is absolutely necessary that there be a clear and distinct separation between the cut and uncut grass, in order that the driver of the machine may see where to drive at the next round, thereby preventing choking and dragging of loose grass, caused by its accumulation on the heel-guard of the finger-bar. Such separation is also desirable to avoid side draft of the machine, caused by the swath-board being obliged to pull and tear the cut from the uncut grass. When it is required to pull and tear the cut from uncut grass by the swath-board, such grass is dragged off and left in large bunches which will not properly dry or cure until shaken out to the sun.

In order to prevent this difficulty, it is necessary not only to cut the grass off close to the ground, as is usual in mowers, but also that a distinct separation of the tangled and matted portion of the grass be made at the outer end of the cutter-bar. This is effected by making the point of the shoe to extend high enough to ride down the tangled portion of the grass and force it in contact with the knife of the cutter-bar between the outer di-

vider-shoe and the guard-finger next thereto, when a complete separation will be made by the knife. This pressing of the tangled portion of the grass down by the point of the shoe is shown in Fig. 7, in which *x* represents the lower portions of the grass, *y* the tangled or matted portion, and *z* the stems and blossoms above said matted part. The point, as will be seen in said Fig. 7, will run above the matted part and press same down, so it will be cut off close to the inner side of the shoe, thus relieving the swath-board of the strain of dragging and tearing the cut grass from the uncut, and leaving the cut grass properly spread out, as described.

It will be understood that when the point of the ordinary shoe becomes broken or defaced by contact with stones and other like obstacles, as is common, it is necessary to purchase and apply an entire new shoe at a cost of several dollars, whereas by the use of my invention the point when broken can be conveniently replaced at a cost of a few cents and without the trouble and delay incident to obtaining and applying a new shoe.

It will be understood that should the upwardly-extending snout be cast integral with the main or body portion of the shoe the body and point of the shoe would necessarily be so wide at the base of the snout or point that in some grasses—such as blue-grass, white clover, small timothy, and the like—there would not be sufficient stiffness in the grass to cause same to stand up and be pressed or divided laterally, but such grass would be pushed flat down in front of the shoe. Hence in such grass the shoe with the wide base would not be desirable, as it would push down and run over and leave uncut the small grass, instead of spreading or dividing such grass and directing the inner portion thereof to the cutters; but by making the point separate or forming it of wrought-iron or steel, as preferred, I secure sufficient strength without widening the shoe at the base of the point, as would be necessary if the shoe were cast in a single piece, as in such case the point, to have the necessary strength, would need to be much wider than when made of wrought-iron, steel, or similar metal.

Having now described my invention, what I claim, and desire to secure by Letters Patent, is—

1. As an improved article of manufacture, an outer divider-shoe having a detachable point, and a seat, G, for the finger-bar, narrow upwardly-projected lugs or ribs at the opposite sides of the seat, and provided at its rear end with a lug or lugs for supporting the divider-board, substantially as set forth.

2. An outer divider-shoe having a seat for the finger-bar, narrow upwardly-projected ribs or lugs, whereby by the partial cutting away of such ribs the shoe may be conveniently fitted to different-sized bars, substantially as and for the purpose specified.

3. An outer divider-shoe having a seat, G,



and narrow upwardly-projected ribs or lugs  $g$  on the said seat, stepped at  $g'$ , substantially as and for the purposes specified.

4. An outer divider-shoe having a lug or  
5 lugs at its rear end, said lugs having a plurality of bearing-faces against which the forward end of the divider-board may be secured, such faces being formed at different angles to the line of draft, substantially as described, where-  
10 by the divider-boards may be set at different angles relative to the shoe, substantially as set forth.

5. An outer divider-shoe having at its rear end vertical lugs  $K K'$ , separated from each  
15 other, forming a bearing between them for the front portion or lug of the divider-board, the outer faces of lugs  $K K'$  and the inner

faces or bearing between said lugs being formed at different angles to the line of draft or travel, substantially as set forth. 20

6. The improved outer divider-shoe herein described, consisting of the main body portion provided with a socket at its forward end, and having lugs  $K K'$ , separate from each other, and heel or rest  $L$  at its rear end, and 25 having its seat  $G$  formed with lugs  $g g$ , stepped at  $g' g'$ , and the detachable point having its stem fitted to the socket of the body portion, all substantially as and for the purposes specified.

CHARLES W. LOVE.

Witnesses:

WILBER BOGGS,  
GEORGE BUMGARNER.