(No Model.) 3 Sheets—Sheet 1.

R. JONES.

PLOW.

No. 589,374. Patented Aug. 31, 1897.

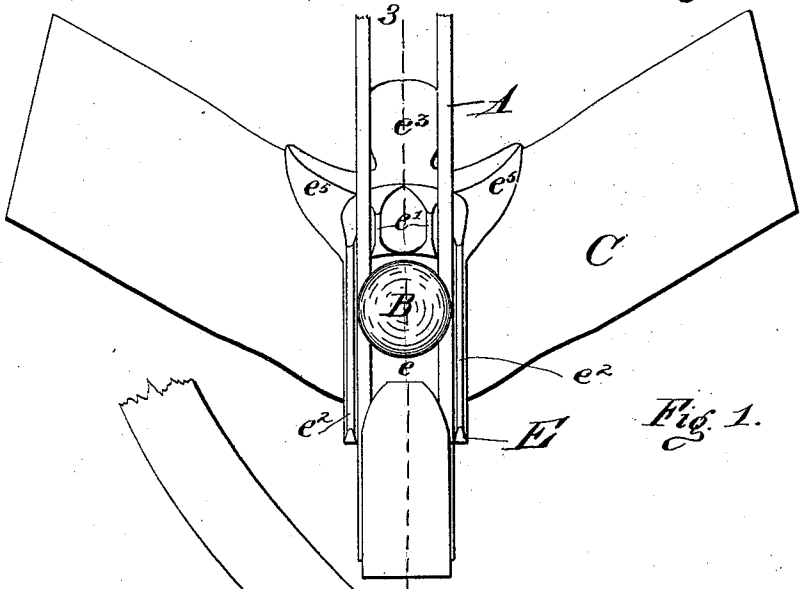


Fig. 1.

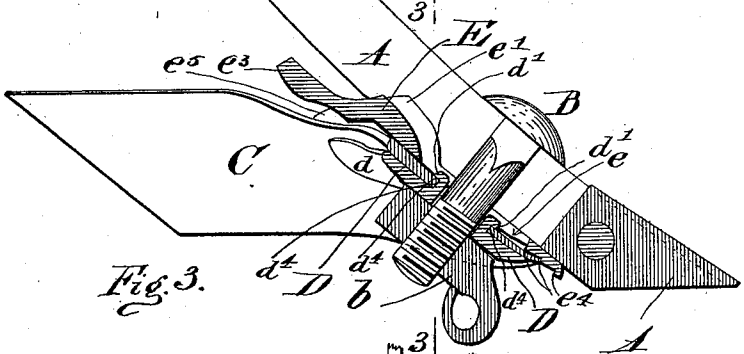


Fig. 3.

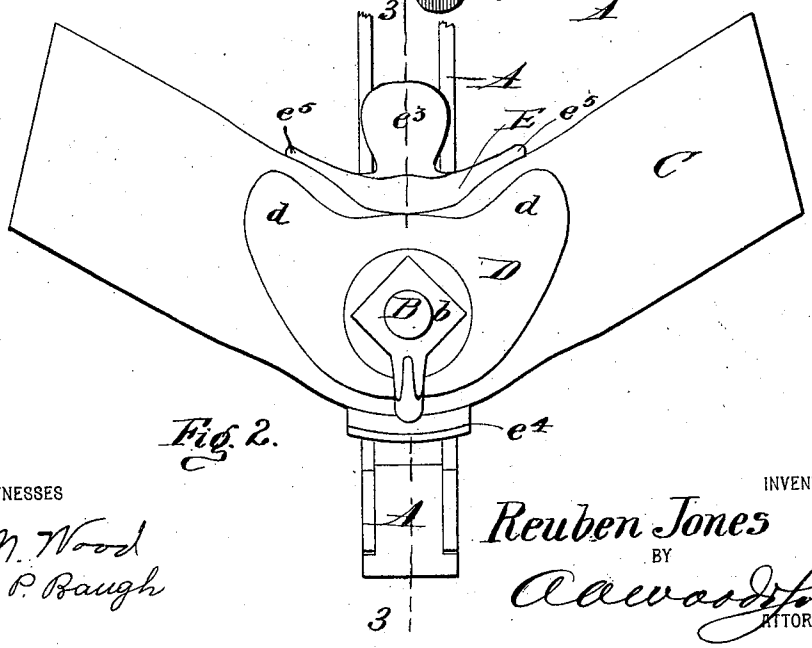


Fig. 2.

WITNESSES

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Giles P. Baugh

INVENTOR

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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

(No Model.) 3 Sheets—Sheet 2.

R. JONES.

PLOW.

No. 589,374. Patented Aug. 31, 1897.

Fig. 6.

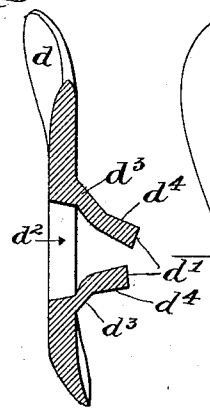


Fig. 4.

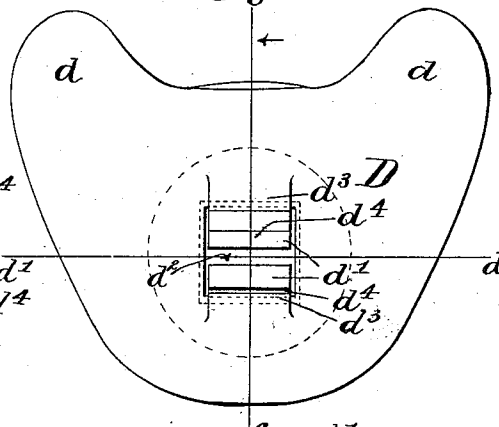
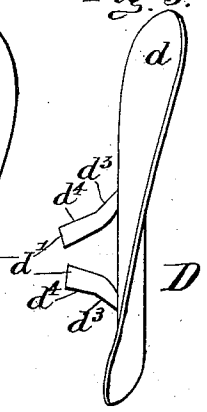


Fig. 5.



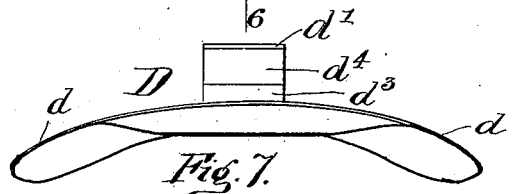


Fig. 7.

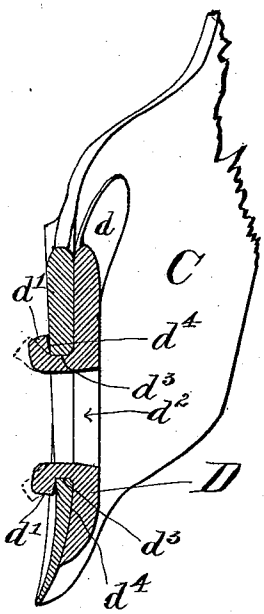


Fig. 9.

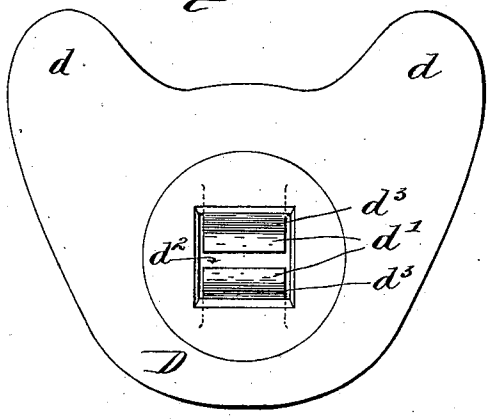


Fig. 8.

WITNESSES

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(No Model.) 3 Sheets—Sheet 3.

R. JONES.

PLOW.

No. 589,374. Patented Aug. 31, 1897.

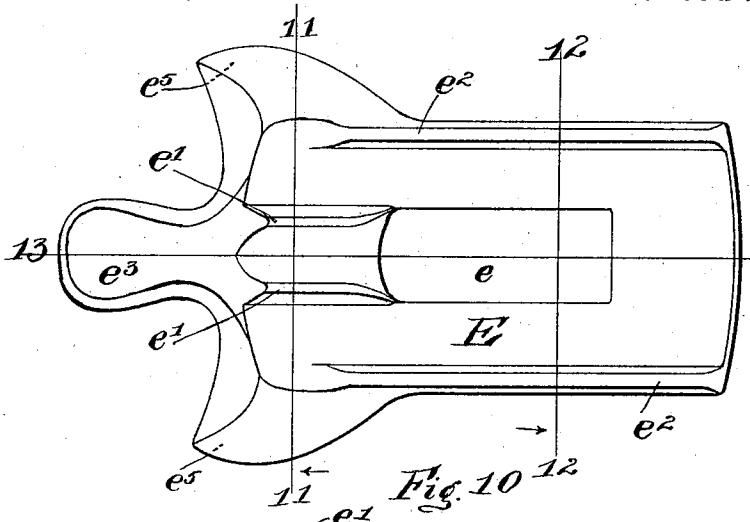


Fig. 10.

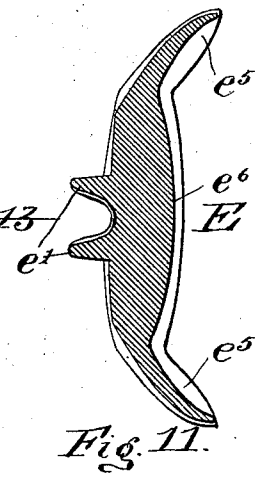


Fig. 11.

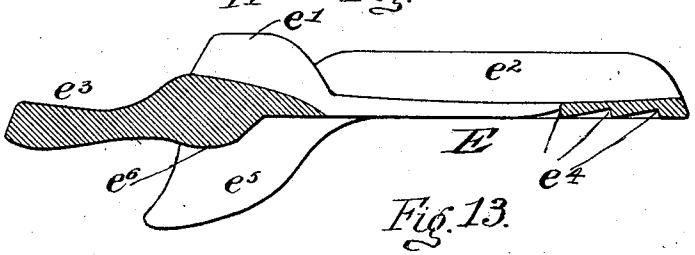


Fig. 13.

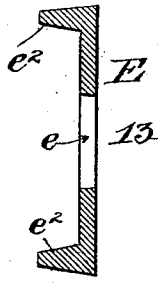


Fig. 12.

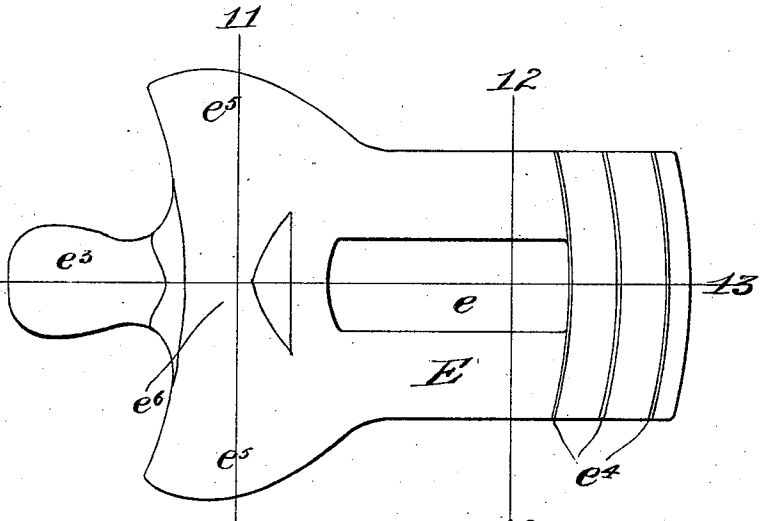


Fig. 14.

WITNESSES

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Giles P. Baugh

INVENTOR.

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BY

A. A. Wood & Son

ATTORNEYS.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

REUBEN JONES, OF KIRKWOOD, GEORGIA.

PLOW.

SPECIFICATION forming part of Letters Patent No. 589,374, dated August 31, 1897.

Application filed October 23, 1896. Serial No. 609,852. (No model.)

To all whom it may concern:

Be it known that I, REUBEN JONES, a citizen of the United States of America, and a resident of Kirkwood, in the county of De Kalb and State of Georgia, have made a certain new and useful Invention in Plows; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters marked thereon, which form a part of this specification.

This invention relates to plows, and more especially to that class of such devices known as "heel-sweeps," the object of the invention being to provide means for the perfection of the attachment of blades to the standard whereby their rigidity may be insured and to provide a stiffener which will prevent the slipping and bending of heel-sweeps, and, further, to provide an adjustment for said sweeps and such other forms of plow-blades as may be capable of use with said form of adjustment whereby their angle may be altered and their operations varied to any practical extent. To these ends the invention consists of the device hereinafter set forth and claimed.

In the accompanying drawings, Figure 1 is a front view of the device. Fig. 2 is a back view thereof; and Fig. 3 is a vertical central section on the line 3 3, Figs. 1 and 2. Fig. 4 is a front view of the stiffener-plate with its peculiarly-formed lips. Fig. 5 is an edge view thereof. Fig. 6 is a section on the line 6 6, Fig. 4, showing the form of the lips. Fig. 7 is a view of the top edge of the plate, and Fig. 8 is a view of the back side of said plate. Fig. 9 is a view in vertical central section, showing the stiffening-plate and a fragment of the heel-sweep, the lips on the frame being bent over and engaging the latter. Fig. 10 is a front view of the wedge or securing and adjusting plate. Fig. 11 is a section on the line 11 11, Figs. 10 and 14. Fig. 12 is a section on the line 12 12, Figs. 10 and 14. Fig. 13 is a longitudinal section on the line 13 13, Figs. 10 and 14. Fig. 14 is a view of the back side of the wedge.

In the figures like reference-characters indicate corresponding elements of construction in all the views.

In the drawings, A is the standard, and B is the heel-bolt, *b* being the usual tail-nut thereon.

C is a heel-sweep, which may obviously be of any construction, but when made, as is now most common, of a single strip of steel, bent into shape, the stiffening-plate D will be used; but in any case the adjusting-wedge E will be ample, as it is capable of adjusting the angle of any heel-sweep which has a lower front corner or its equivalent, as will be plainly seen upon a further perusal of this specification.

The stiffening-plate D, as best shown in Figs. 2 to 9, inclusive, consists of the plate proper so shaped on its face (which face is shown in Fig. 4) as to conform to the back side of the heel-sweep near its middle portion, wherethrough is the hole which receives the heel-bolt B. In order that this plate D may cover as much as possible of the heel-sweep at and near this point, extensions *d* are formed thereon, which lie, as shown in Fig. 2, on and a short distance along the back side of the wings of the heel-sweep. Of course by this extension of each edge of the plate D a greater stiffness of heel-sweep is obtained. On the front side of the plate D—that is, the side which bears against the back side of the heel-sweep—are lips d', which are preferably projected from the body of said plate along the upper and lower edges of the heel d^2 thereon. These lips d' consist each of two sections d^3, being, as the casing is rigidly made, inclined toward each other and projecting so as to partially cover the aperture d^2, while the sections d^4 may also be inclined toward each other, but should be inclined at a less angle than the sections d^3. These should project at an angle closer to a right angle to the face of the plate D than do the sections d^3. The sections d^3 should be about as long as the heel-sweep is thick around the heel-bolt hole therein. This plate D is secured to the heel-sweep by having the lips d' inserted in the heel-bolt hole of the sweep, after which a punch is entered into the hole d^2, bringing the sections d^3 of said lips into about a parallel position at a right angle to the face of the plate D and in contact with the sides of the heel-bolt hole in the sweep C. This will leave the sections d^4 about in the positions shown

by broken lines in Fig. 9, whereby it is plain that the plate D will be held temporarily in proper engagement with the sweep C, so that it will not recede from its position when the sections d^4 of the lips d' are hammered or pressed down into positions shown in Fig. 9, which positions are such as to form a barb closely engaging the said heel-sweep and providing lugs adapted to enter between the side bars of the standard or the slot in the wedge E, as will be presently set forth. When the plate D is used alone—that is, without the wedge E—as might be sometimes the case, these lugs formed by the sections d^4 form means for preventing the heel-sweep from being displaced by partial rotation on the heel-bolt, thereby holding it rigidly in place.

The wedge E, as shown on Sheets 1 and 3 of the drawings, consists of a plate having a central slot e, adapted to receive the heel-bolt, and being provided on its front side with lips e', adapted to enter between the side bars of the standard, as shown in Figs. 1 and 3, and e^2, adapted to engage the said standard by lying along the outer sides of its bars. e^3 is an upward projection forming a handle for use in adjusting this wedge. At the lower end of this wedge are notches e^4, adapted to receive the lower edge of the heel-sweep at its middle, while arms e^5 are also provided, which rest upon the front side of the heel-sweep, or, to speak more exactly, are contacted with by the upper front corner of the heel-sweep on either side of its longitudinal center, whereby bearings are obtained for the upper edge of the heel-sweep, and in order that as the wedge is lowered the upper edge of the heel-sweep may be pressed backwardly from the back side of the standard these arms e^5 are inclined at an angle to the general plane of the wedge.

If it is desired, the portion of the wedge marked e^6 in Fig. 14 may be elevated so that it will contact with the heel-sweep at its longitudinal center and form a fourth bearing for the heel-sweep and a third bearing for its upper front corner. This wedge is set in position and adjusted to change the angle of the heel-sweep and provide rigidity of the attachment thereof as follows, and as shown in Figs. 1 and 3, inclusive, in which the front side—that is, the side shown in Fig. 10—rests against the back side of the standard, with the lips engaging the same, as aforesaid, and the heel-bolt passing through the slot e. It will be noted that this wedge is adjustable vertically along the standard independently of the movements of the heel-bolt. The heel-sweep C, being provided with the plate D, where the said sweep is of a nature adapted to receive same, also receives the heel-bolt, but is not adjustable independently thereof. Its face rests against the back side of the plate E, as hereinbefore specified, so that when the said plate E is moved along the standard with the heel-bolt loosened its upper front corner will traverse the face of the arms e^5 and its lower front corner will engage any one of the notches e^4 and hold the parts, as soon as the heel-bolt is tightened, in any set position. Of course, as the arms e^5 are inclined to the general plane of the plate E and as the lower front corner of the heel-sweep always coincides transversely of the inclined arms e^5 the upper front corner of the heel-sweep will change its angle.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent of the United States, is—

1. In a plow a heel-sweep stiffener consisting of a plate adapted to fit the back side thereof at its middle and having lips adapted to project through the heel-bolt hole and be bent over against the face of the said heel-sweep, for the purpose specified.

2. In a plow, a heel-sweep stiffener consisting of a plate adapted to fit the middle portion thereof at its back side and having lips on its face provided with angular projecting sections on their free ends adapted to be passed through the heel-bolt hole and be bent down upon the face of said heel-sweep.

3. In a plow, a heel-sweep stiffener consisting of a plate adapted to fit the middle portion thereof at its back side and having inwardly-inclined lips on its face provided with angular projecting sections on their free ends adapted to be passed through the heel-bolt hole and be bent down upon the face of said heel-sweep.

4. In a plow, a heel-sweep stiffener consisting of a plate adapted to fit the back side thereof at its middle and having lips adapted to project through the heel-bolt hole and be bent over against the face of the said heel-sweep, and project above the face thereof above and below said heel-bolt hole, for the purpose specified.

5. In a plow, a heel-sweep and a plate adapted to be secured to the back side of the standard and having an inclined surface at the back side of its upper end and a roughened or dentated surface on the back side of its lower end, for the purpose specified.

6. In a plow, a heel-sweep and a slotted plate adapted to be secured to the back side of the standard, backwardly and upwardly extended arms on its upper end and a multiplicity of sweep-engaging abutments on its lower back surface, for the purpose specified.

In testimony whereof I hereunto affix my signature in presence of two witnesses.

REUBEN JONES.

Witnesses:
A. P. WOOD,
M. BROWN.