(Model.) 2 Sheets—Sheet 1.

F. SIMONDS.

PLOW.

No. 256,750. Patented Apr. 18, 1882.

Fig. 1

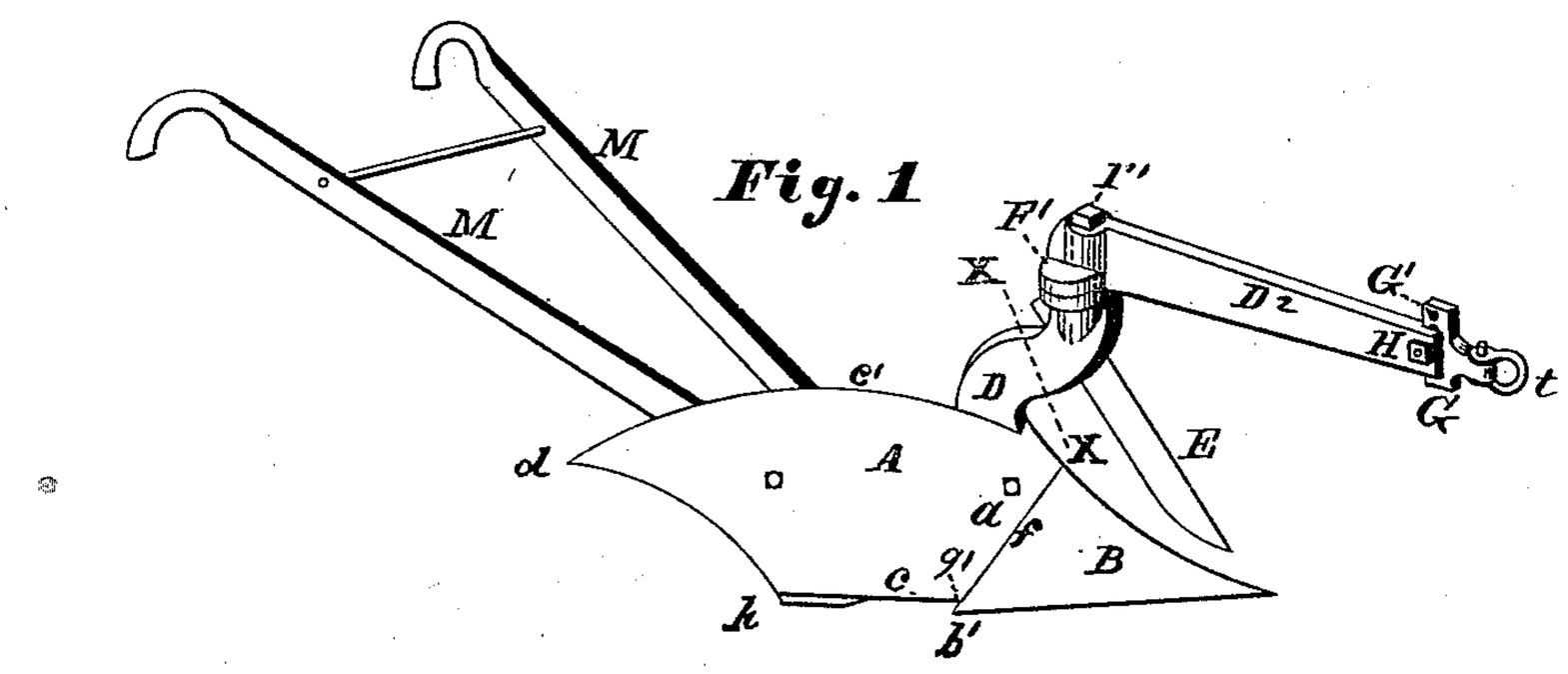


Fig. 2

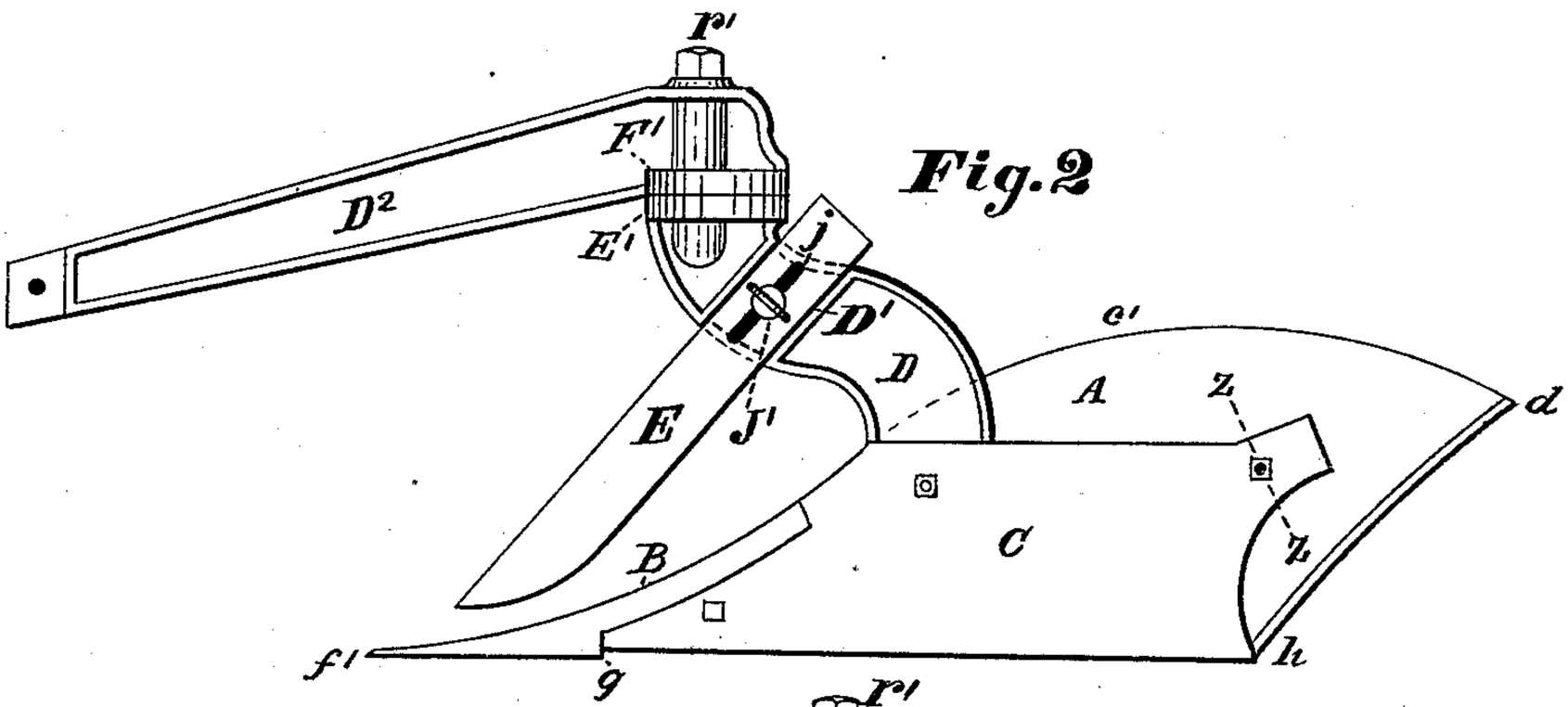
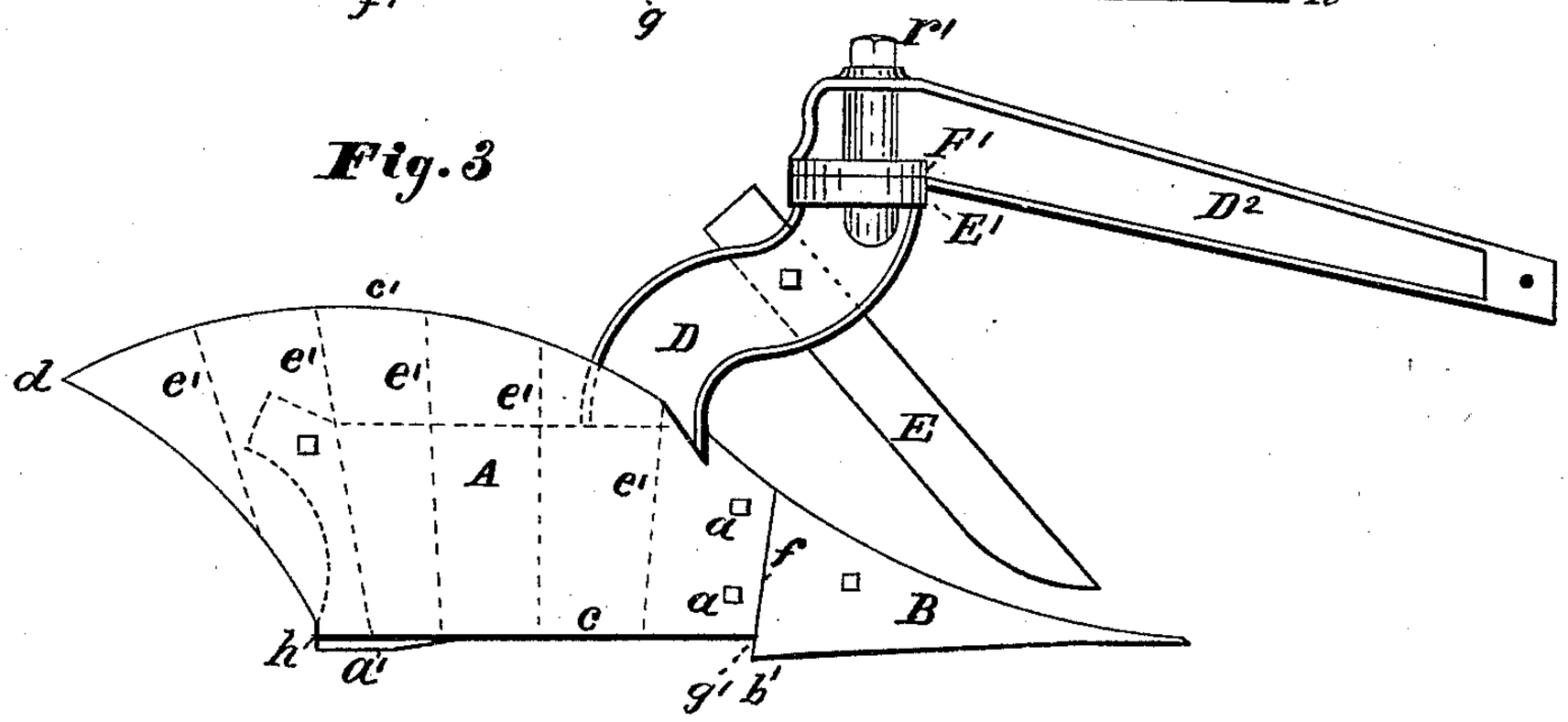


Fig. 3



Witnesses.

F. W. Braun

C. A. Schenck

Inventor.

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By James Sangster

Atty.

(Model.) 2 Sheets—Sheet 2.

F. SIMONDS.

PLOW.

No. 256,750. Patented Apr. 18, 1882.

Fig. 4

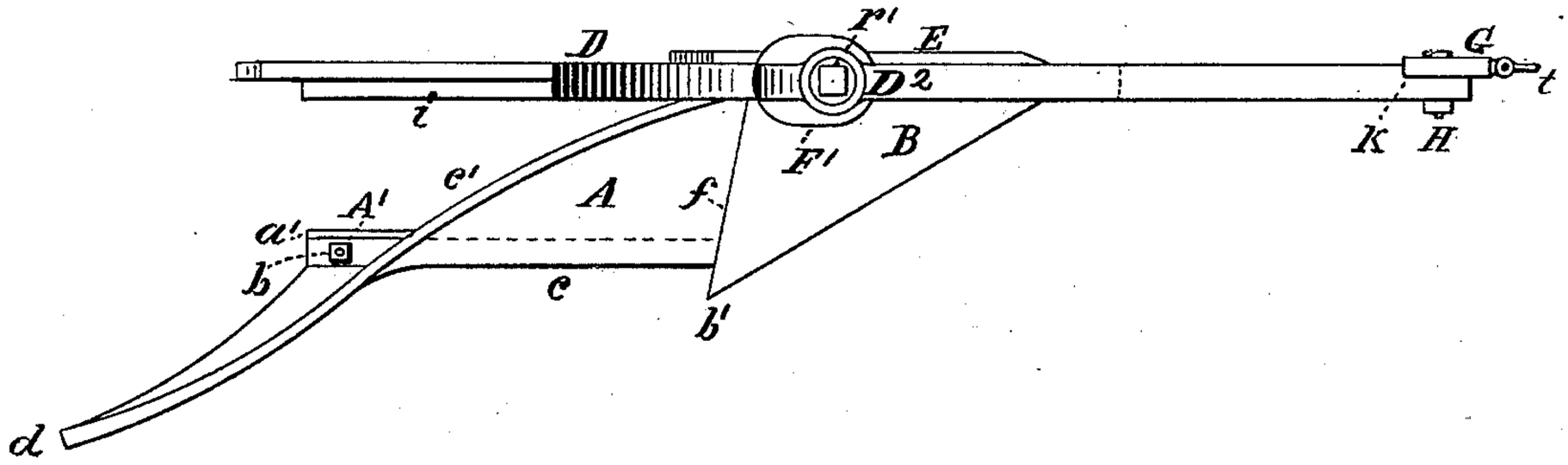

Fig. 5

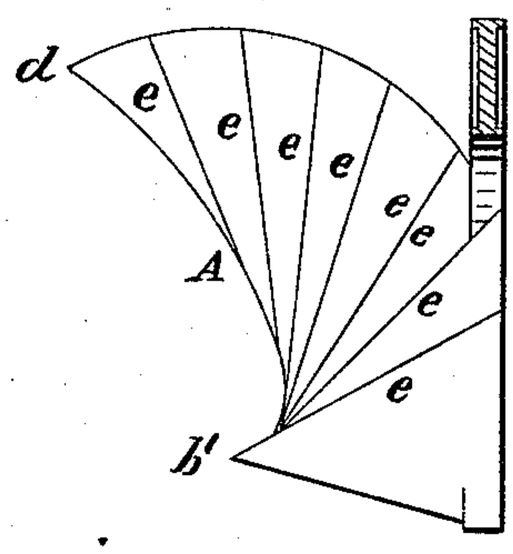

Fig. 6

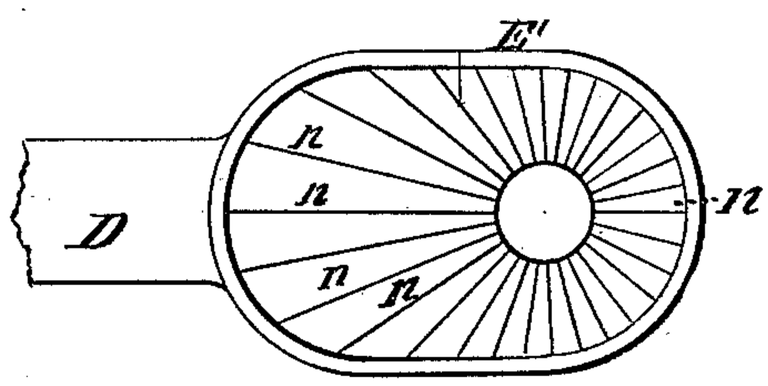

Fig. 7

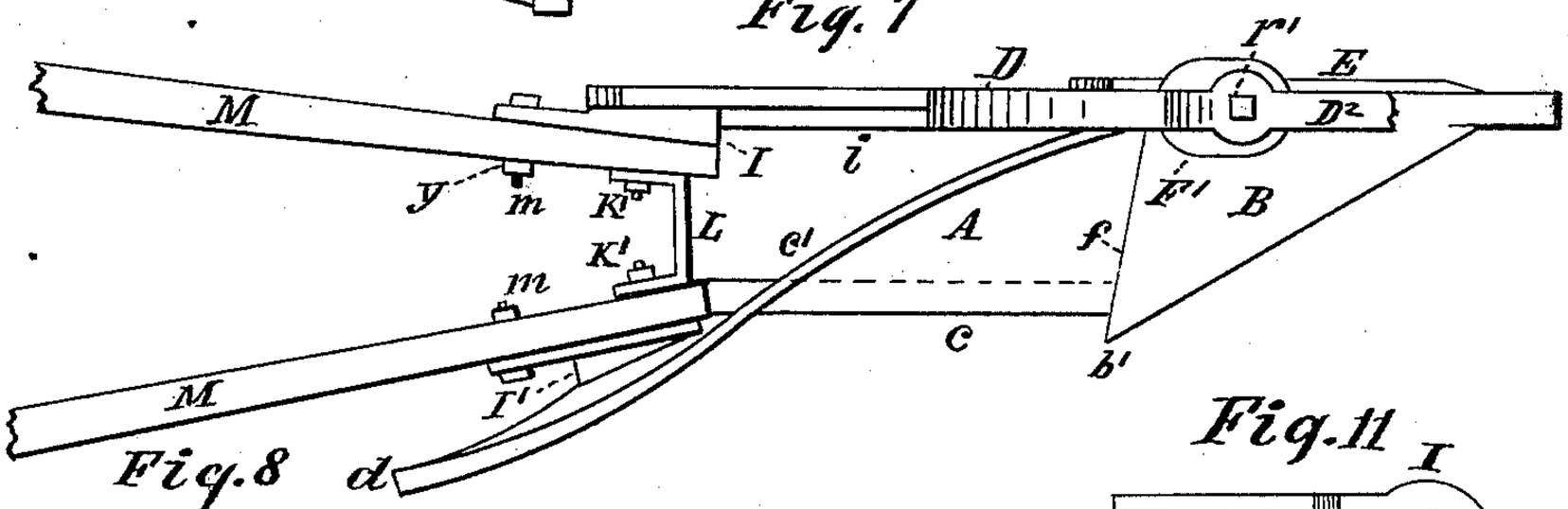

Fig. 8

Fig. 9

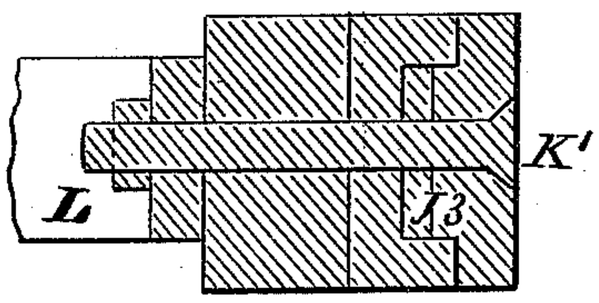

Fig. 10

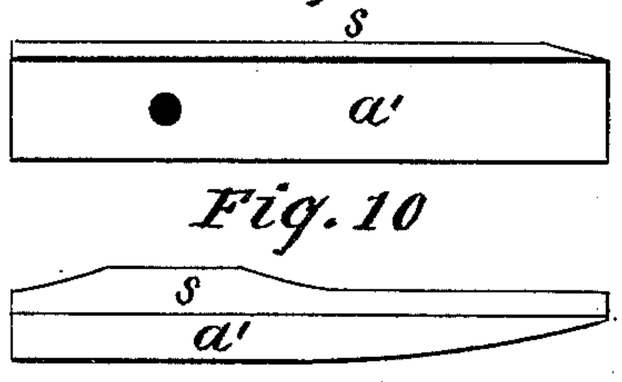

Fig. 11

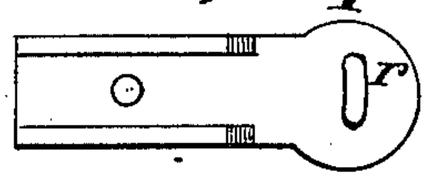

Fig. 12

Witnesses—
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C. A. Seheler

Inventor—
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By James Sangster
Atty.

UNITED STATES PATENT OFFICE.

FREMONT SIMONDS, OF GRAND ISLAND, NEW YORK.

PLOW.

SPECIFICATION forming part of Letters Patent No. 256,750, dated April 18, 1882.

Application filed June 1, 1881. (Model.)

To all whom it may concern:

Be it known that I, FREMONT SIMONDS, a citizen of the United States, residing on Grand Island, in the county of Erie and State of New York, have invented certain new and useful Improvements in Plows, of which the following is a specification.

My invention consists of certain improvements in plows, fully described hereinafter, whereby to secure more effective operation and facilitate the combination and adjustment of the parts.

In said drawings, Figure 1 is a perspective view; Fig. 2, a side elevation of all the land side of the plow except the handles and clevis. Fig. 3 is a similar view of a plow on the mold-board side, showing all the parts except the handles. Fig. 4 represents a top view, showing all the parts except the handles. Fig. 5 is a front view of the mold-board, partly in perspective, showing also a section through a portion of the standard in line *x x*, Fig. 1. Fig. 6 represents an enlarged top view of the standard. Fig. 7 is a top view of the plow and a portion of the handles. Fig. 8 represents an enlarged view, showing a section through the landside in line *z z*, Fig. 2, showing also a cross-section through one of the handle-plates, one of the handles, and one of the sides of the holding-brace, and also the bolt for holding such parts together. Fig. 9 is an enlarged plan or top view of the shoe; Fig. 10, an enlarged side elevation of the same; Fig. 11, an enlarged face view of one of the handle-plates; and Fig. 12 represents an enlarged side elevation of the same.

A represents the mold-board. It is connected to the other parts in the usual way by bolts *a*. At the bottom, on the inside, is a straight strengthening-rib, A′, adapted to receive the shoe *a′*, which is secured to it by a bolt, *b*, which shoe is provided with an upwardly-projecting flange, *s*, to fit against the side of the rib, so as to hold it in line. The bottom edge of the mold-board is straight, or nearly so, and is arranged parallel, or nearly so, with the landside, (see Figs. 4 and 7;) but its outside bottom edge, *c*, may be made to incline more or less toward the front, so as to allow more or less projection to the point *b′* of the plowshare. The form of the mold-board is such that while the bottom edge, *c*, is straight the top edge, *c′*, is in the form of a portion of a spiral curve, and the face presents a straight surface at every point as it turns from the lower straight edge to the end *d* of the curved edge *c′* at the top. (See the straight lines *e* in Fig. 5, which lines, as the top edge, *c′*, is longer than the bottom edge, would be diverging lines, as shown by the dotted lines *e′* in Fig. 3.) The plowshare B has also the same form, but is made sharper, so as to start the furrow more easily. Hence where it joins the mold-board at *f* the edge is in a straight line. The bottom of the plowshare is also straight and level from the point *f′* to the part marked *g* in Fig. 2, which form allows the plow to move straight without the use of a wheel, so that the plow is much easier handled or operated. By this form of the mold-board and share it is obvious that the furrow will be gradually lifted as the plow advances, and that every part of the mold-board surface it passes over in its turning movement is a straight surface, so that the furrow is not bent in cross-section, and lies perfectly flat and true when it is turned over; and it will be further seen that as the lower edge of the mold-board is straight and in line with the furrow, and rests upon the ground along its whole length from the point *g′* to the back end, *h*, and that as the lower edge of the furrow rests upon and is supported by the subsoil, and is turned evenly over without being broken or thrown out of line, no power is lost in this way, and consequently the plow is more easily operated and the draft is comparatively light.

The object in making the shoe *a′* easily removable when required is to provide the means for repairing it or replacing it with another when worn, and the object of the shoe on the mold-board, in addition to the landside, which also acts as a shoe, is to make the plow run true and level and to prevent it from tipping to one side or the other, and thereby avoid any extra labor on the part of the operator to keep it straight, as would be the case with a plow having a single shoe. The landside C is also provided with a strengthening-rib, *i*, which serves at the same time as a shoe.

D represents the standard, made in the form of an S, as shown in Figs. 1, 2, and 3. It is connected to the other parts by the usual bolts. It is provided with a depression, D′, Fig. 2, into which the colter is fitted, so as to be kept in line and allowed to move easily up and down. The colter E is provided with a slot, *j*, through which a thumb-screw or bolt, J′, is passed and screwed into the standard to hold it securely at any point when adjusted. The top E′ of the standard (see Fig. 6) is provided with a series of corrugations, *n*, and the under part of the portion F′ of the beam D^2 is also provided with a series of similar corrugations, the only difference between them being that while the corrugations in either one should be concave the corresponding corrugations in the other should be the reverse, so as to fit into and fill them, and as the corrugations in both all radiate from the same center, it is evident that the beam may be adjusted to any desired angle and firmly fastened by a bolt, *r′*, and that when so fastened there is no danger of the beam slipping.

G represents the clevis in the form of a perforated block, having a series of perforations, G′, through any one of which the bolt H is passed when it is fastened in place. (See Fig. 1.) The block G fits into an offset, *k*, in the end of the beam, (see Fig. 4,) so as to hold it more securely in place. It is adjusted up or down by using either of the perforations for the purposes hereinbefore mentioned.

The handles are connected to the plow by means of the handle-plates I I′. (See Figs. 7, 11, 12.) The plates are fitted to a projection, J^3, (see Fig. 8,) one on the landside and one on the mold-board. A bolt, K′, is then put through the sides of the plow, one on each side, then through the handle-plates and handles and through an angle plate or brace, L. (See Figs. 7 and 8.) By this arrangement all the parts are held securely together by two bolts, K′, and the rear ends of the mold-board and landside are held rigidly in position. The handles M are adjusted to suit different persons by means of a bolt, *m*, (see Fig. 7,) which passes through a slot, *r*, (shown in Fig. 11,) and is secured by a nut, *y*. (See Fig. 7.)

The plow may be used without the removable shoe by having a shoe or the equivalent thereof cast in one piece with it or permanently fastened to it; but it would not answer the purpose so well for the reasons heretofore stated.

I do not claim a movable shoe on the heel of a plow, nor do I claim a beam clamped adjustably to a standard.

I claim—

1. A mold-board provided with an inwardly-extending flange, *b*, at the lower edge, in combination with a shoe, *a′*, secured detachably to the under side of said flange, to extend below the lower edge of the mold-board, as and for the purpose set forth.

2. A plow having a mold-board and landside, in combination with handles pivoted one to the mold-board and the other to the landside, and with angle-plates I and an intermediate plate, L, bolted to both handles, as set forth.

FREMONT SIMONDS.

Witnesses:
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