

No. 685,556.

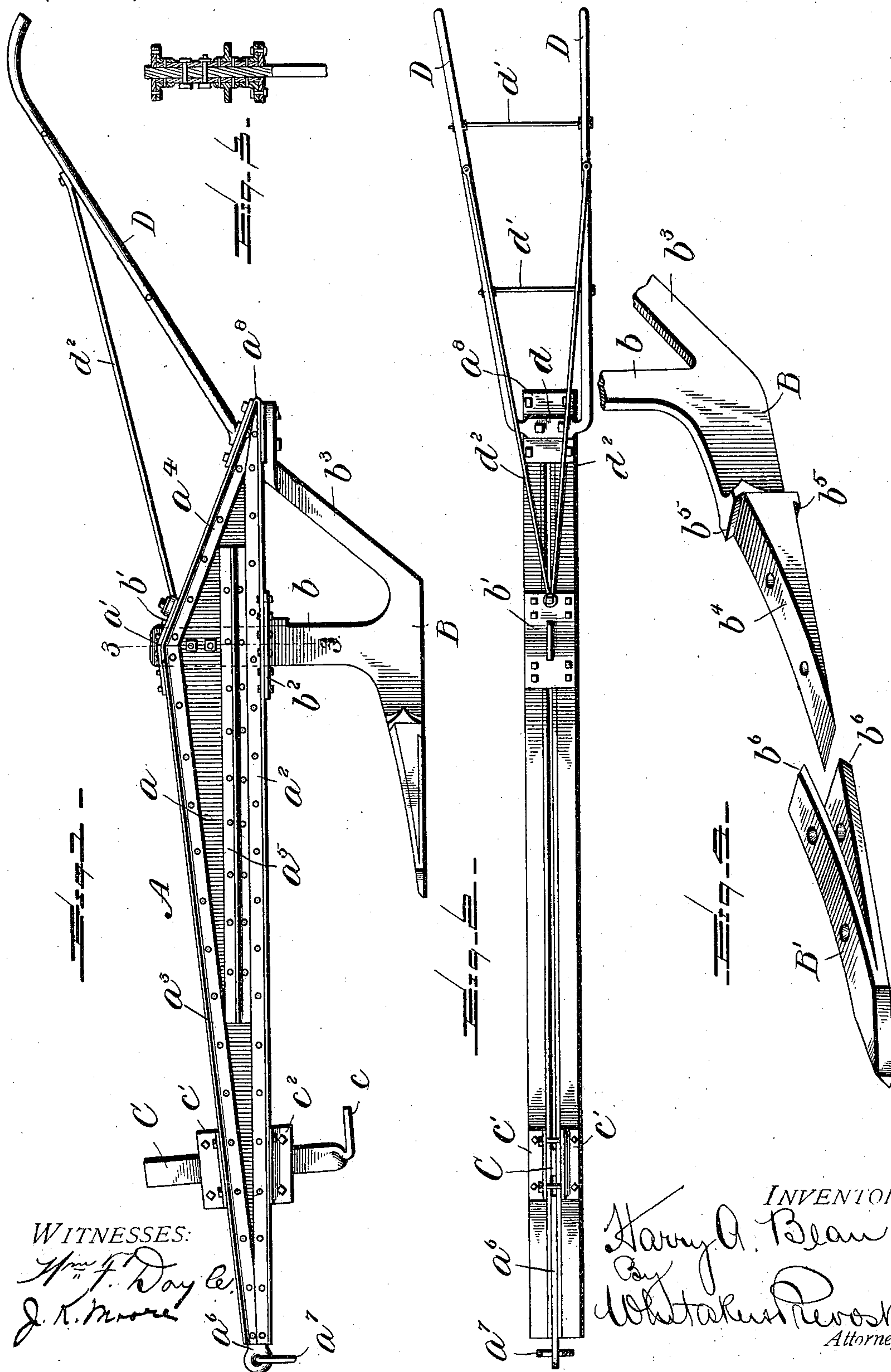
Patented Oct. 29, 1901.

H. A. BEAN.

PLOW.

(Application filed May 13, 1901.)

(No Model.)



UNITED STATES PATENT OFFICE.

HARRY ALFONSO BEAN, OF MULBERRY, KANSAS.

PLOW.

SPECIFICATION forming part of Letters Patent No. 685,556, dated October 29, 1901.

Application filed May 13, 1901. Serial No. 60,050. (No model.)

To all whom it may concern:

Be it known that I, HARRY ALFONSO BEAN, a citizen of the United States, residing at Mulberry, in the county of Crawford and State of Kansas, have invented certain new and useful Improvements 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.

My invention consists in the novel features hereinafter described, reference being had to the accompanying drawings, which illustrate one form in which I have contemplated embodying my invention, and said invention is fully disclosed in the following description and claims.

Referring to the said drawings, Figure 1 represents a side elevation of a plow embodying my invention. Fig. 2 is a top plan view of the same. Fig. 3 is a section on line 3 3 of Fig. 1. Fig. 4 is a detail view of the detachable plow-point.

The object of my invention is to provide a plow capable of resisting very great strains without injury and capable of use for plowing slate and the like, although it may be used for other purposes, if desired.

In carrying out my invention I provide my improved plow with a built-up beam A, constructed in the following manner:

a represent two vertically-disposed plates of steel or iron, each of which has a straight horizontal lower edge and inclined upper edges, forming an obtuse angle at a' at the widest part of the plate. Each plate a is strengthened along its bottom edge by an angle-iron a^2 and along said inclined upper edges by the angle-irons a^3 a^4 . Each plate is also strengthened through its central portion preferably by a T-iron a^5 , although I may sometimes use an angle-iron for this purpose. These angle-irons and T-iron are riveted, bolted, or otherwise secured to each plate a , preferably by rivets, as shown, although I may use bolts and nuts or screws, if found desirable. The two plates a are placed on edge parallel to each other, with the angle-irons on the outer sides, and between the forward ends of said plates is placed a draft-bar a^6 , having an eye at its front end and a draft-

ring a^7 in said eye. I prefer to have the rivets at the forward ends of these plate a extend through both plates and through the draft-bar a^6 , as shown, thus securing the two plates rigidly together. However, this is not essential, and in some cases the plates may have their angle-irons riveted thereto separately throughout, and the plates may be secured together and to the draft-bar a^6 by bolts and nuts or by separate rivets, as will be perfectly obvious. The two plates a , it will be observed, will be placed a distance apart equal to the thickness of the draft-bar, and this space I preserve throughout the length of the beam A.

Adjacent to the widest part of the beam the vertical standard b of the plowshare B extends upward between the plates a and is rigidly clamped and secured to the beam by bolts, as shown. I also provide strengthening-plates b' b^2 , provided with central apertures for the passage of the standard b , said plates being bolted or otherwise secured to the angle-irons at the top and bottom of the beam. These plates serve to strengthen the connection between the standard b and the beam and also serve to hold the two plates of the beam rigidly together at those points.

At its rear end the beam is provided with a V-shaped plate a^8 , which engages the upper faces of angle-irons a^4 and the lower faces of angle-irons a^2 and is bolted or riveted securely thereto.

C represents a depth-gage having a vertical shank and a horizontally-turned portion c to determine the depth to which the plow may penetrate. The shank of this depth-gage passes between the plates a of beam A and is securely clamped therein by means of four angle-plates c' c' c^2 c^2 , two above and two below the beam, which are bolted or riveted to the angle-plates a^3 and a^2 , respectively, and are also bolted together, as shown, to clamp the shank of the depth-gage rigidly between them. By loosening the bolts securing these plates together the depth-gage may be removed and replaced by a colter, if desired.

The plowshare B is provided with a rearwardly-extending inclined brace b^3 , bolted to the rear end of the beam A to further stiffen the construction, and at its forward end is

provided with a wedge-shaped portion b^4 , having undercut shoulders $b^5 b^5$, extending transversely of the share.

B' represents a detachable V-shaped point adapted to fit over the wedge-shaped portion b^4 and having its inner ends beveled, as at b^6 , to fit into and beneath the undercut shoulders $b^5 b^5$. The detachable point is secured in place by bolts passing vertically through it and through the wedge-shaped portion b^4 .

D D represent the handles, which are preferably made from an integral piece of steel tubing flattened in the center at d to form an attaching part, which is secured to the rear end of the beam by bolts. The handles are braced transversely by rods $d' d'$ and longitudinally by rods $d^2 d^2$, extending to a part of the beam forward of the point of attachment of the handles to the beam.

I have found by experiment that a plow constructed in this manner will stand a tremendous strain, far greater than any ordinary plow, without bending or being injured in any way.

What I claim, and desire to secure by Letters Patent, is—

1. A plow comprising among its members, a beam, consisting of two parallel separated plates, each provided with reinforcing angle-irons, devices for spacing said plates apart, and a plowshare having a vertical standard extending upward between said plates and means for securing said standard to said beam, substantially as described.

2. A plow comprising among its members, a beam consisting of two parallel separated plates, each provided with reinforcing angle-irons, devices for spacing said plates apart, a plowshare having a vertical standard extending upward between said plates, means for securing said standard to said beam, a depth-gage having a standard extending upwardly between said plates and means for securing the standard of said gage to said beam, substantially as described.

3. A plow having a beam consisting of two vertical separated parallel plates, each provided with reinforcing angle-irons riveted

thereto, and devices for connecting said plates rigidly together at different portions of its length, substantially as described.

4. A plow having a beam consisting of two vertical separated parallel plates, each having a straight bottom edge and inclined upper edges meeting in an obtuse angle, and reinforcing angle-irons secured to each plate along its edge, substantially as described.

5. A plow having a beam consisting of two vertical separated parallel plates each having a straight bottom edge and inclined upper edges meeting in an obtuse angle, reinforcing angle-irons secured to each plate along its edges, and a central angle-iron secured to each plate between its edges, substantially as described.

6. A plow having a beam consisting of two vertical separated parallel plates, each having a straight bottom edge and inclined upper edges meeting in an obtuse angle, reinforcing angle-irons secured to each plate along its edges, and plates secured to the angle-irons of both plates and securing said parallel plates together, substantially as described.

7. A plow having a beam consisting of two vertical separated parallel plates, each having a straight bottom edge and inclined upper edges meeting in an obtuse angle, reinforcing angle-irons secured to said plates adjacent to their edges, a draft-bar interposed between and secured to said plates, a V-shaped plate secured to the angle-irons of both plates at their rear ends, and a pair of plates provided with apertures to receive the standard of the plowshare, secured to the angle-irons above and below said parallel plates between its ends, substantially as described.

8. A plow having a beam comprising among its members, a vertically-disposed plate, and reinforcing angle-irons extending along the edges of said plate, substantially as described.

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

HARRY ALFONSO BEAN.

Witnesses:

JOHN HONSTEAD,
JACOB HALLER.