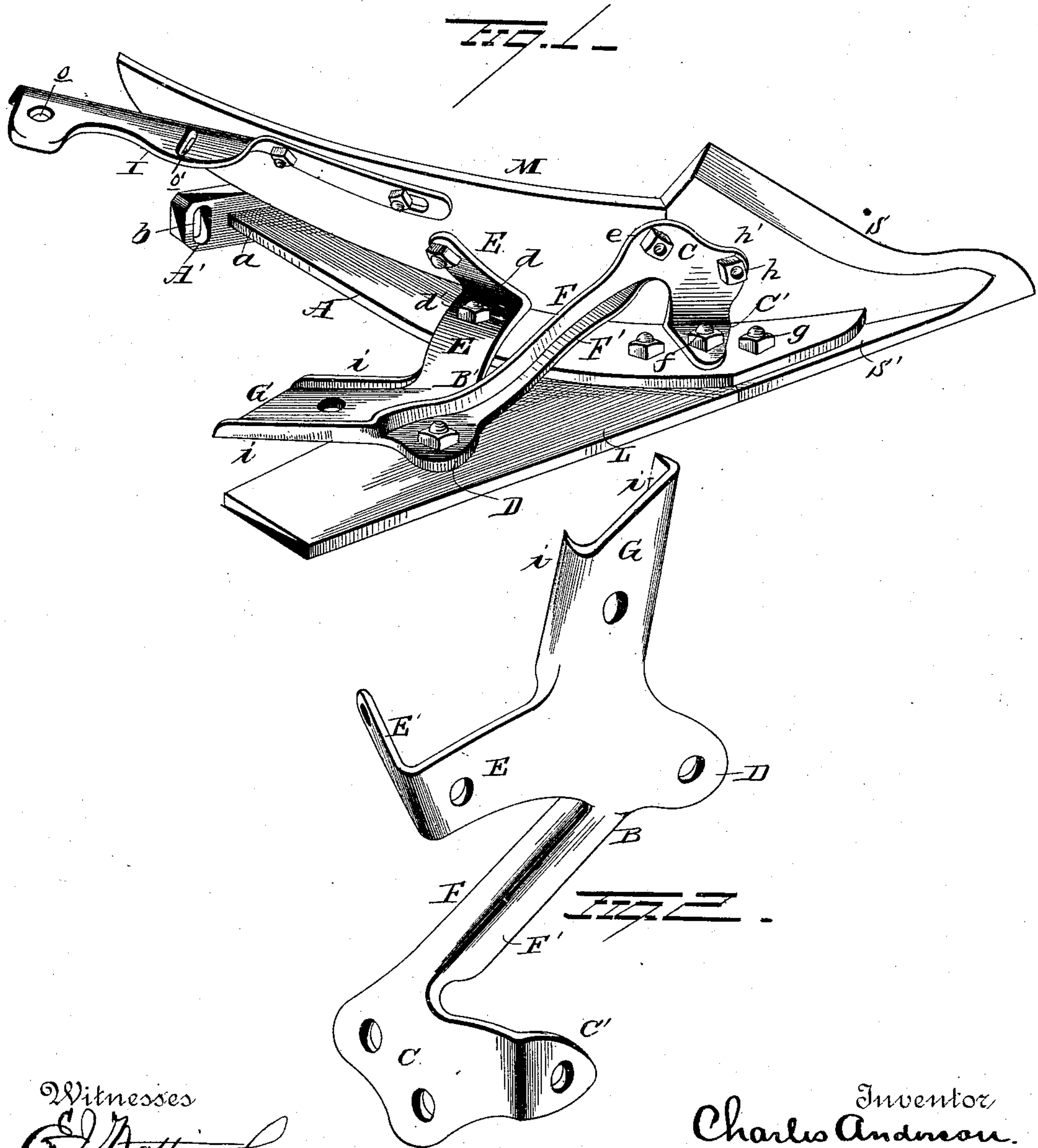


(No Model.)

C. ANDERSON.
SKELETON FRAME FOR PLOWS.

No. 375,525.

Patented Dec. 27, 1887.



Witnesses
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UNITED STATES PATENT OFFICE.

CHARLES ANDERSON, OF SOUTH BEND, INDIANA, ASSIGNOR TO THE SOUTH BEND IRON WORKS, OF SAME PLACE

SKELETON FRAME FOR PLOWS.

SPECIFICATION forming part of Letters Patent No. 375,525, dated December 27, 1887.

Application filed September 29, 1887. Serial No. 251,063. (No model.)

To all whom it may concern:

Be it known that I, CHARLES ANDERSON, of South Bend, in the county of St. Joseph and State of Indiana, have invented certain new and useful Improvements in Skeleton Frames for 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 relates to an improvement in skeleton frames for plows.

The nature and object of my invention consist in the provision of a light rigid frame of metal, so constructed that it will securely hold in proper relative position the standard, landside, mold-board, and share of the plow, and also afford an integral bracket, to which the landside-handle of the plow may be attached.

A further object is to construct a light skeleton frame of metal, that will afford a means of assembling the detached parts that compose a plow and permit their secure adjustment in connection with said frame as a foundation, the ready removal of any attached part being provided for independent of the other attached parts, so as to avoid disturbance of the same unless it is required.

In the drawings making a part of this specification, Figure 1 is a rear perspective view of a plow with the beam and handle removed, showing the improved skeleton frame, with other parts of the plow attached thereto. Fig. 2 is an enlarged detached view of the skeleton frame.

A represents the standard of the plow, consisting of a metal bar curved edgewise to project its lower end forwardly, the upper end, *a*, being furnished with a T-head or flange, *A'*, affixed at right angles to it, this flange having slots *b*, through which bolts are inserted to attach the standard to the plow-beam. (Not shown.)

The landside *L* is attached to the lower curved end of the standard *A*, upon the outside of the same, by a bolt, *c*, which is inserted through a perforation made in these parts.

The skeleton frame *B*, which is the feature of primary importance, is made of any suitable metal—preferably, however, of cast metal—that will possess the requisite strength to per-

mit it to be made light and of a shapely form. It consists of three main limbs, *G E F*, which radiate from a common center, *B'*. The limb *E* of the skeleton frame *B* is a flat plate that is projected upwardly and forwardly to permit it to bear closely upon the inner face of the standard *A*, to which it is secured by a bolt, *d*, and nut *d'*, the nut bearing upon the inner face of the limb *E*. An integral extension, *E'*, of the limb *E* is bent to properly engage the inner surface of the mold-board *M* as a bracket-pad and give it support at this point, the bracket-pad *E'* being attached by screw-bolt or other proper means.

The landside *L* is further secured to the skeleton frame *B* by bolt attachment to an ear, *D*, which is projected below the portion *B'* of the frame, and is an integral portion of the same.

To afford a further support for the mold-board *M*, the integral limb *F* of the skeleton frame *B* is laterally and forwardly extended as a strut-brace, and has its front end flattened as a plate, *C*, which is made to conform in surface-bearing to the mold-board *M*, against which it impinges and to which it is bolted, as shown at *e*.

The bracket-plate *C* is extended toward the standard *A*, and has a depending ear, *C'*, formed on it, to have a bearing against the inner surface of the standard, to which this ear *C'* is bolted at *f*.

The plowshare *S* is given a proper relative curvature with regard to the mold-board *M*, and has a depending flange, *S'*, integrally formed, which is, in effect, a forward extension of the landside *L*, this flange *S'* being attached to the standard *A* by a bolt, *g*.

To rigidly secure the plowshare *S* in connection with the mold-board *M*, the bracket-plate *C*, formed on limb *F* of the skeleton frame *B*, is forwardly projected to have proper surface-bearing upon the under side of the share *S*, and is attached to it by threaded bolt *h*, the nut *h'* of which bears upon the lower surface of the bracket-plate to adjustably but firmly secure the share in proper position.

To afford a proper rigidity and lightness to the limb *F* of the skeleton frame *B*, a flange, *F'*, is formed integral with its inner edge, said flange depending in a manner to stiffen the

curved flat part F, and thus render the limb stable as well as light.

The bracket-plate extension G of the skeleton frame B is provided with two flanges, *i*, that are integrally formed on the edges of the plate to stiffen said plate G, which is designed to receive the landside-handle of the plow. The handle, being adapted to fit edgewise between the flanges *i*, is held securely by them and a bolt that is inserted through a hole in plate G and the perforated body of the handle.

A plate, I, is formed to fit upon the inner surface of the mold-board M at a point opposite the bracket-plate G, and is rearwardly extended to give rigid support to the other plow-handle, which is bolted to this bracket-plate I at two points, *o o'*, the lower hole, *o'*, being transversely slotted to allow this handle to be properly adjusted with regard to the mated handle on the landside of the plow.

It will be seen from the foregoing description that my invention provides a light strong foundation-frame for a plow that gives secure support in proper relative position to the mold-board, plowshare, landside, and one handle, and connects them to the standard in a manner to permit the ready removal of any of these parts without interference with the other portions of the plow. This device is specially applicable to the manufacture of plows cast from homogeneous steel; but I do not restrict its use to that type of plow, it being available in the manufacture of cast-iron or malleable-iron as well as steel plows.

Slight changes might be made in the details of construction without departure from the spirit of my invention. Hence I do not wish to limit myself to the exact form herein shown; but,

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

1. In a plow, a skeleton foundation-frame to give support to mold-board, landside, and share, and connect them to the standard, and provided at its rear free end with a flat plate having side flanges, between which the landside-handle of the plow is secured, substantially as set forth.

2. In a plow, a skeleton foundation-frame having a limb that engages the standard and gives support to the mold-board, a depending ear that bears against the inner face of the landside to be attached thereto, an integral bracket-plate which affords support to a plow-handle, and an integral limb that extends from the rear end of the handle-bracket plate toward the mold-board and plowshare, this limb being flattened into plate form and adapted to have a bearing upon and be adjustably attached to the standard, mold-board, and plowshare, substantially as set forth.

3. In a plow, the combination, with a flat standard curved edgewise toward the front of the plow, a mold-board, a plowshare, and a landside, of a metal skeleton foundation-frame provided with limbs that are adapted to engage with, give support, and be attached to the landside, mold-board, plowshare, and one plow-handle, substantially as set forth.

4. In a plow, the combination, with a standard, a mold-board, a plowshare, and a landside, of a skeleton foundation-frame detachably connected to the standard, mold-board, landside, and landside-plow handle, and a handle-bracket plate adjustably attached to the mold-board for support of a plow-handle, substantially as set forth.

5. In a plow, a skeleton foundation-frame provided with three limbs and an ear, one limb securing the mold-board to the standard at adjacent points on each, an integral ear securing the rear portion of the landside in connection with the standard, another limb forwardly and outwardly projected to engage the mold-board and plowshare at their outer edges, and a third limb which is rearwardly and upwardly extended to give support to a plow-handle, substantially as set forth.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

CHARLES ANDERSON.

Witnesses:

F. C. NIPPOLD,
M. M. MATTHEWS.