G. Owen.

Cultivator.

No. 34,316. Patented Feb. 4, 1862.

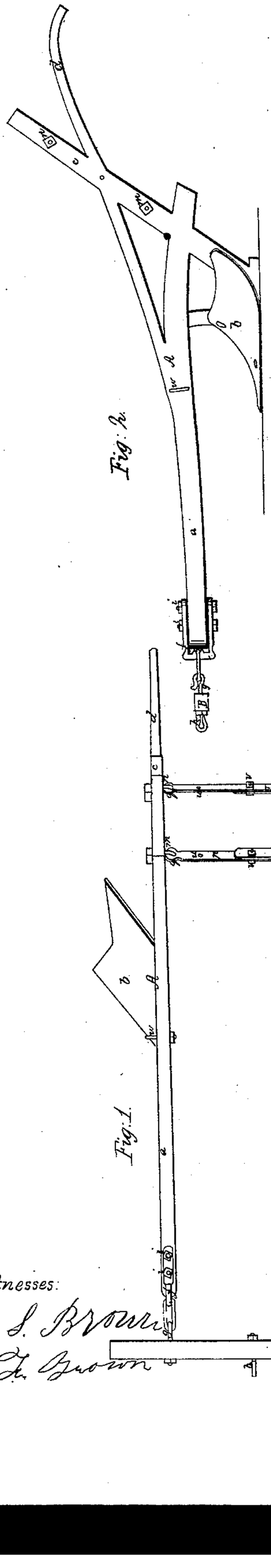

Fig. 2.

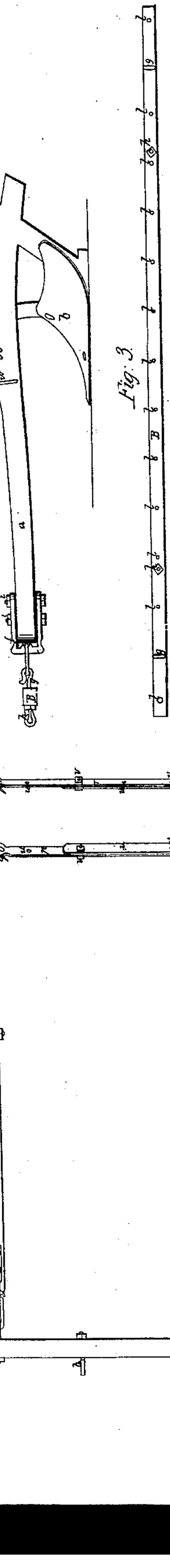

Fig. 3.

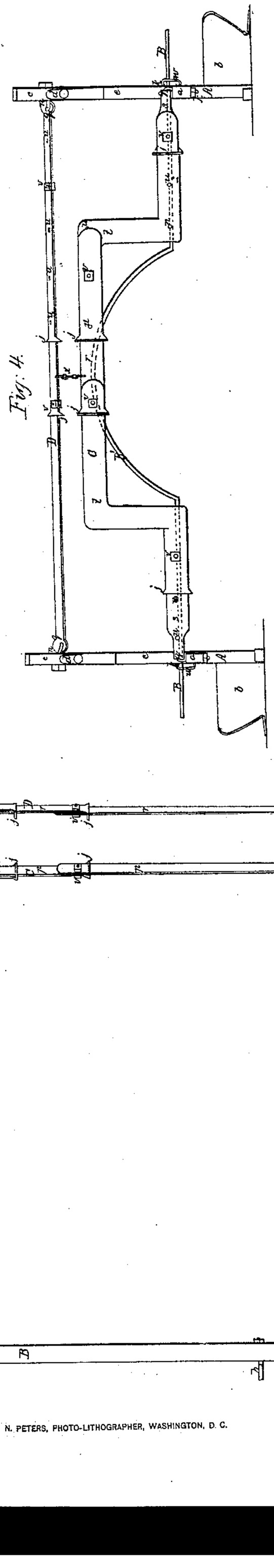

Fig. 4.

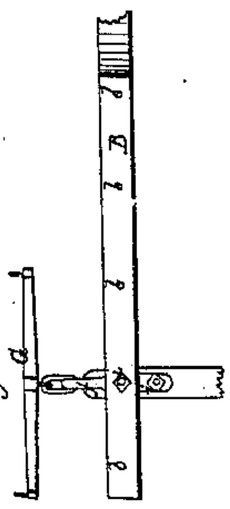

Fig. 5.

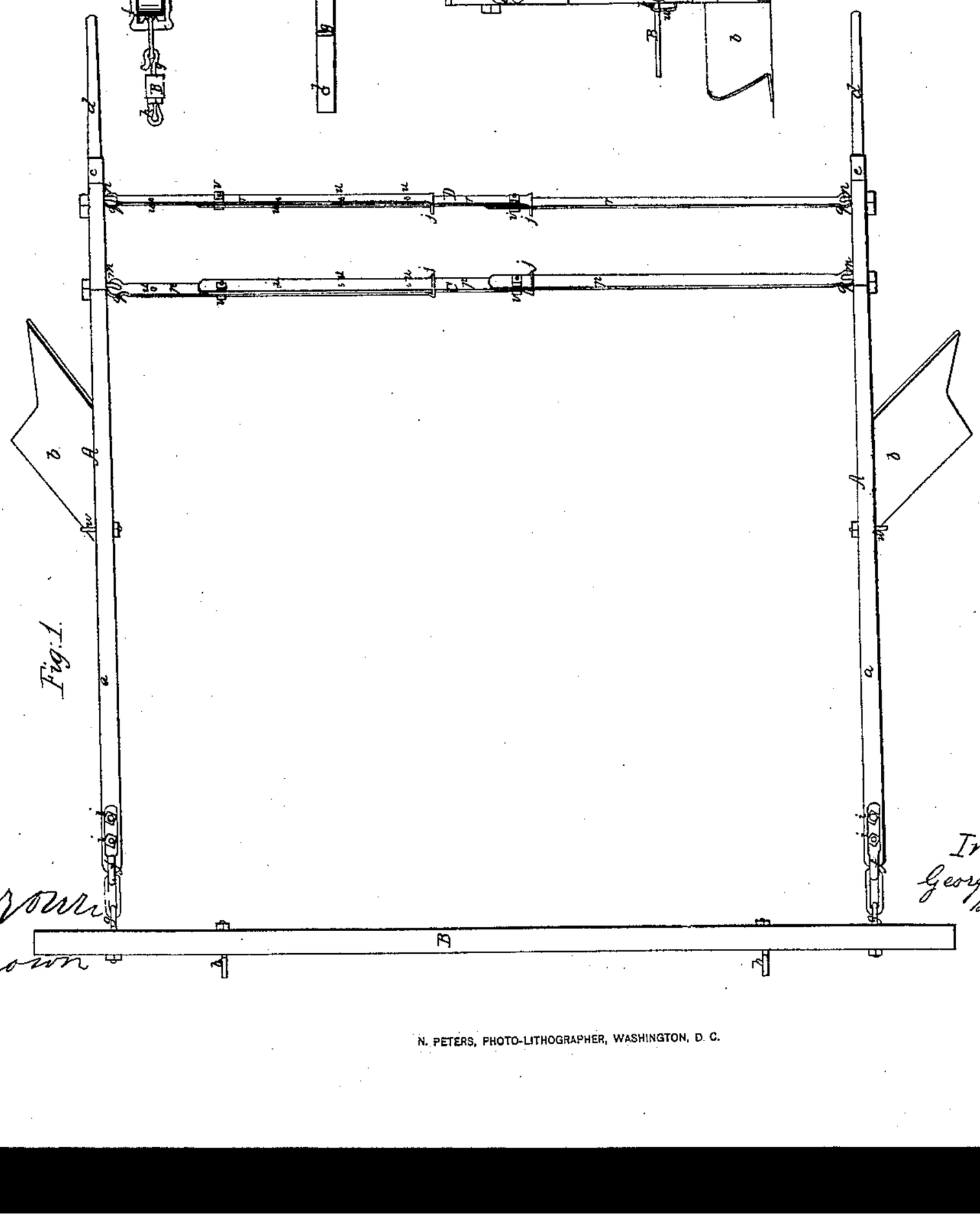

Fig. 1.

Witnesses:

L. S. Brown

Wm. F. Brown

Inventor.

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By his Atty.

Benj. G. Owen

UNITED STATES PATENT OFFICE.

GEORGE OWEN, OF JACKSONVILLE, ILLINOIS.

IMPROVED COUPLING FOR DOUBLE PLOWS.

Specification forming part of Letters Patent No. **34,316,** dated February 4, 1862.

To all whom it may concern:

Be it known that I, GEORGE OWEN, of Jacksonville, in the county of Morgan and State of Illinois, have invented a new and Improved Coupling of Double Plows for Planting and Cultivating; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, making part of this specification—

Figure 1 being a plan of the plows connected by my improved coupling; Fig. 2, a side elevation thereof; Fig. 3, a rear view of a part detached; Fig. 4, a rear view of the whole, showing curved or bent coupling-bars to suit the purpose of cultivating overhigh corn; Fig. 5, a plan of a part detached.

Like letters designate corresponding parts in all the figures.

The object of my invention is to connect two plows for cultivating at once between two rows of corn or other crop, or for planting two rows at once, in such a manner that the plows may be as readily managed and controlled as one; that each plow at the same time may have all the freedom of motion desirable independent of the other; that they may both be adapted to the variable motions and positions of the team without disarrangement, and that the distances between the plows may be varied at pleasure.

In order to effect these results I employ two coupling-bars, C D, having the following qualities and effects: rigid, so as to keep the plows A A properly separated; adjustable in length from the shortest to the longest practicable and desirable extent, so as to adapt the distance of the plows to all desirable purposes and conditions; freely jointed to the plows, and in other respects arranged so that all the necessary freedom of motion may be given to one plow independent of the other, and yet connecting the plows in such positions that one plow will keep the other in proper control, whereby both may be readily managed by one attendant.

To give the coupling-bars C D the first two named qualities in a proper and practicable manner they are respectively composed of a greater or less number of separate parts, *p p p* and *r r r*, one lapping over another, substantially as represented in the drawings, there being some of them short enough to bring the plows as close together as ever desired by using two of them, and sufficient in number to separate the plows as widely as ever required by employing three or more of them. These parts or pieces are joined rigidly together by providing one end of one with an eye or loop, *j*, through a right-angled projection thereof, just large enough to receive the tongue end of the adjacent part or piece, substantially as shown, and in having the plates thus lapped perforated with holes *u u* at uniform distances apart, through which screw-bolts *v v* are inserted, and thus confine the parts firmly together. By changing the bolts to different holes the length of the whole bar is readily varied at pleasure, and whenever the change in length required is too great to be effected by this adjustment in overlapping the parts one or more of them may be entirely removed or inserted, as required.

The extremities of the coupling-bars, constructed as above described, are formed into eyes or rings *q q*, which are respectively linked into the eyes of eyebolts *m m* and *n n*. These eyebolts are passed through holes in the standards *c c* of the plows, and secured there by nuts, so that the plows are thus freely jointed to the coupling-bars; and since the coupling-bars are placed parallel with each other, the plows being also in parallel positions, the joint motions of the plows may be freely varied either vertically or horizontally as much as desired. Thus, for example, one plow may be freely raised or lowered without disturbing the other, or one plow may advance beyond the other as one horse may go a little ahead of his mate, without the slightest restraint or injury to the movement of the plows; but, on the other hand, in order that one plow may be sufficiently controlled by the other, so that one attendant may easily manage both, one coupling-bar, C, is considerably lower down than the other coupling-bar, D, so that when one plow is canted sidewise the other plow must be similarly canted over, and if one is held upright the other must remain upright also; also, one coupling-bar is considerably farther forward than the other, so that, however much one plow may advance before the other, they must remain parallel, and if one is straightforward the other must be straightforward also.

With this coupling of the two plows only

one handle, *d*, is required for each, the attendant holding the single handle of each plow respectively in each hand; but since the plows A A may be used separately for other purposes, each may be provided with a connecting-bolt, *w*, for attaching a second handle, as usual.

The mold-boards *b b* of the two plows turn in opposite directions—say both outward—so that when running between different rows the soil may be turned up against the rows, or, if the plows are near together, by the same arrangement they may turn the soil from the row between; or the plows may both turn inward; and they may be so adjusted as to cultivate midway between the rows. By using very short coupling-bar pieces *s s*, as seen at the ends of the lower coupling-bar, C, in Fig. 4, and jointing them to the rear ends of the plow-beams *a a*, as there shown, the plows may be brought close together and used as one plow—useful for digging potatoes, for instance.

In order that the front ends of the plow-beams *a a* may be kept at the proper distances apart, so as not to bring strain on the coupling-bars, a rigid draft-bar, B, is employed. This is provided with sets of holes *l l*, Fig. 3, at uniform distances apart, corresponding with the distances between the holes *u u* of the coupling-bars C D, and into two of these holes hooks or ring-bolts *g g* are inserted for the purpose of connecting the draft-bar with the clevises *f f* on the plow-beams, the holes *l l* used being the proper ones to keep the plow-beams at the desired distances apart.

Other hooks or staples, *h h*, are secured to the draft-bar to hitch the whiffletrees to for drawing the plows.

When the corn or other crop is high, so that the lower coupling-bar, C, and the draft-bar B would strike and injure it, the following construction is adopted: Two of the middle division-pieces, *t t*, Fig. 4, of the coupling-bar C are bent or curved upward, substantially as represented, so as to carry the portion passing over the corn high enough to prevent injury to the corn. It will be seen that the same mode of uniting and adjusting the parts of this curved or bent coupling-bar is employed as with the straight coupling-bar; but for the sake of convenience it may be desirable to hinge the end of this curved coupling-bar to the rear ends of the plow-beams *a a*, as shown in Fig. 4, instead of jointing them to the standards *c c*.

In order that the raised or curved portion of the coupling-bar may be kept securely up, it is usually suspended from the upper coupling-bar, D, by means of a connecting chain, cord, or its equivalent, as at *x*, Fig. 4.

Since the draft-bar B cannot with convenience be used with high corn, instead of it a stretcher-bar, B′, Fig. 4, is employed, to be curved upward in the middle, and provided with sets of holes *l l* at the proper intervals, so that it may be placed across the forward ends of the plow-beams *a a*, and held in place by one of the clevis-bolts, *i*, at each end, as shown in Fig. 5. In this case the whiffletrees G are hitched directly to the clevises *f f*, as indicated in the same figure.

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

1. Connecting two single plows by means of the hinged coupling-pieces or rods *s s*, attached to the beams of said plows in the rear of the standards thereof, so as to bring the plows close together, and thereby form a double-mold-board plow, in the manner and for the purpose described.

2. The combination of the curved or bent pieces *t t* and the sliding joints of the bars C and D, in the manner and for the purpose specified.

3. Connecting the compound curved or bent bar C with the bar D by means of the chain *x*, or its equivalent, for the purpose herein set forth.

4. The combination of the front curved stretcher-bar, B′, and jointed bars C D, for the purpose of connecting two plows, as set forth.

5. The combination of the front straight bar, B, with the curved or bent jointed bar C and straight jointed bar D, for the purpose of connecting two plows, as specified.

The above specification of my new and improved coupling for double plows for planting and cultivating signed by me this 15th day of July, 1861.

GEORGE OWEN. [L. S.]

Witnesses:
I. P. HENDERSON,
STEPHEN SUTTON.