(No Model.)

W. H. HODGSON.

PLOW STANDARD.

No. 381,014. Patented Apr. 10, 1888.

Fig. 1.

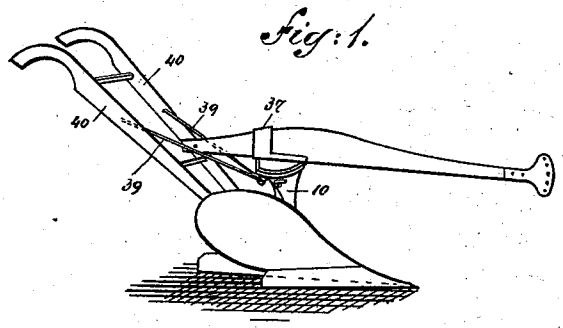


Fig. 5.

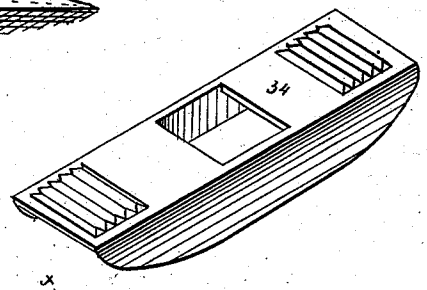


Fig. 2.

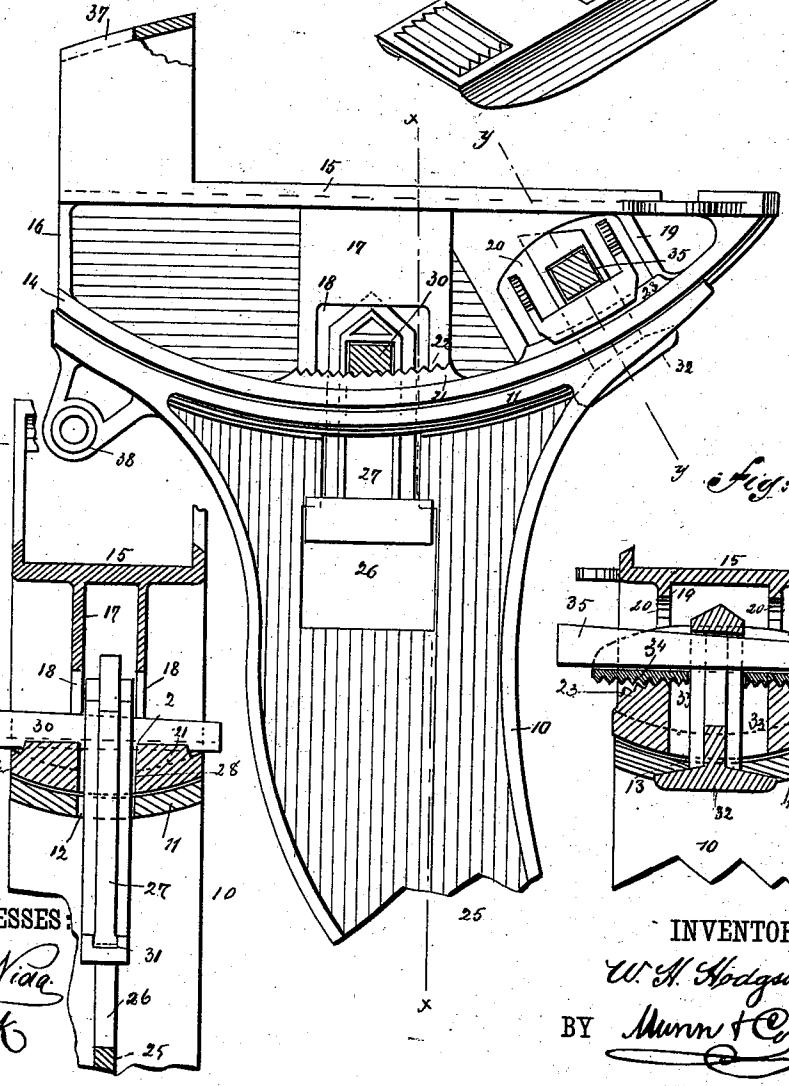


Fig. 3.

Fig. 4.

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UNITED STATES PATENT OFFICE.

WILLIAM HERBERT HODGSON, OF WINONA, MINNESOTA.

PLOW-STANDARD.

SPECIFICATION forming part of Letters Patent No. 381,014, dated April 10, 1888.

Application filed May 3, 1887. Renewed March 17, 1888. Serial No. 267,443. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM HERBERT HODGSON, of Winona, in the county of Winona and State of Minnesota, have invented a new and Improved Plow-Standard Union, of which the following is a full, clear, and exact description.

This invention relates to an improved union, whereby a plow-standard may be connected to a beam, the parts being so arranged that the vertical angle of the beam may be adjusted as desired, a lateral adjustment of the beam being also provided for, all as will be hereinafter more fully described, and specifically pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar figures of reference indicate corresponding parts in all the views.

Figure 1 is a side view of a plow provided with my improved form of union, the parts being represented as they appear when used in connection with a wooden-beam plow. Fig. 2 is an enlarged view of the union, the keys being shown in section, and a portion of the cap through which the beam is passed being broken away. Fig. 3 is a cross-sectional view taken on line *x x* of Fig. 2. Fig. 4 is a cross-sectional view taken on line *y y* of Fig. 2; and Fig. 5 is a perspective view of the washer employed in connection with the forward retaining-bolt.

In the drawings above referred to, 10 represents the plow-standard, the upper end of which consists of a concave-faced plate, 11, that is formed with a central aperture, 12, and a second aperture, 13, said aperture 13 being formed near the forward end of the plate, as represented in the drawings; but this aperture might be formed at a point near the rear end of the plate. A convex-faced plate, 14, is made integral with the beam of the plow, if such beam is of metal; or if, as illustrated in the drawings, the beam of the plow is to be of wood this plate is made integral with a beam-supporting plate, 15, the forward curved end of the plate 14 being connected directly to the plate 15, while the rear ends of the plates are connected by a web, 16.

A cage, 17, is arranged between the plates 14 and 15, the side walls of this cage being broken away, as shown at 18, while a diagonally-arranged cage, 19, having side openings, 20, is formed in advance of the cage 17. Bosses 21, having corrugated faces 22, are arranged at either side of the cage 17, the corrugations 22 running at right angles to the general length of the plate 14, while in connection with the cage 17 I form bosses 23, having corrugations 24, which run parallel with the length of the plate 14.

The web 25 of the standard 10 is formed with a T-shaped opening, 26, the narrow portion of said opening registering with the aperture 12, that is formed in the plate 11. A T-shaped locking key-bolt, 27, the head of which is broad enough to fit within the enlarged portion of the opening 26, is passed up through the opening 12, through an opening, 28, that is formed in the plate 14, to be engaged by a wedge-shaped key, 30, said key being formed with corrugations upon its lower side, and the key-bolt 27 being held from turning by the shoulders formed at the junction of the narrow and enlarged portions of the openings 26, said shoulders fitting in recesses 31, that are formed in the key-bolt 27.

A second key-bolt, 32, is passed through the forward opening, 13, of the plate 11, through a large opening, 33, that is formed in the plate 14, and through an opening that is formed in a corrugated-faced washer, 34, the upper end of the key-bolt 32 being apertured in order that it may be engaged by a wedge-like key, 35, while the corrugations of the washer 34 are arranged to fit within the corrugations 24 of the bosses 23.

As before stated, if the beam of the plow is a metallic beam, the plate 14 would be made integral therewith; but in case the beam is to be of wood the plate 15, which is integral with the plate 14, would be provided with a sleeve, 37, through which the beam of the plow would be passed, as illustrated in Fig. 1. In order that a proper rigidity may be imparted to the plow, I form the standard with an eye, 38, and to this eye I connect brace-rods 39, which extend to the plow-handles 40.

From the construction described it will be seen that if it is desired to change the vertical angle of the plow-beam the key-bolts 32 and 27 are disconnected and the beam is moved to

the required position. The wedge-like key 30 is then inserted and driven to place, and the key-bolt 32 is secured as above described; and if it is desired to change the lateral angle of the beam this may be done by changing the position of the washer 34; and it will also be seen that by my improved form of union I am able to use a wooden-beam plow and secure thereby all the clearance at the throat that is to be had in a metal-beam plow, and at the same time I avoid all possible chance of catching weeds or grass in the union.

If it is deemed advisable that the beam and standard should be connected by brake-pins, the wedges 30 and 35 might be made of wood; but in case the brake-pins are not necessary these wedges might be made of metal.

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

1. The combination, with a plate arranged for connection with a plow-beam having its lower face made convex, both longitudinally and transversely, of a standard provided with a plate on its upper end, having its upper surface made concave both longitudinally and transversely, and means for connecting the standard to the said plate, substantially as described.

2. The combination, with a plow-beam, of a plate secured thereto and having its lower face convex longitudinally and transversely, a plow-standard formed with a plate on its upper end having its upper face concave longitudinally and transversely, and means for adjustably securing the standard to the plate on the plow-beam, substantially as herein shown and described.

3. The combination, with a plow-beam, of a convex plate rigidly connected thereto, a standard, a concave plate formed thereon, key-bolts passing through the plates, and wedges arranged in connection with the bolts, substantially as described.

4. The combination, with a plate, 15, of a convex plate, 14, rigidly connected thereto, cages arranged between the two plates, transverse corrugations formed in connection with one of the cages and longitudinal corrugations formed in connection with the other, a plow-standard, a concave plate formed thereon, key-bolts passing through the concave and convex plates, and wedges arranged in connection with the key-bolts, substantially as described.

5. The combination, with a convex plate, 14, and a means for connecting said plate to a plow-beam, of transverse corrugations formed above said plate, a plow-standard, a concave plate formed thereon, a key-bolt passing through apertures formed in the concave and convex plates, and a wedge arranged to pass through said key-bolt and engage with the corrugations formed in connection with the convex plate, substantially as described.

6. The combination, with a convex plate, 14, and a means for connecting said plate with a plow-beam, of cages 17 and 19, transverse corrugations 22 and longitudinal corrugations 24, a plow-standard, a concave plate formed thereon, a T-shaped opening formed in the web of the standard, a T-shaped key-bolt, 27, formed with recesses 31, a wedge, 30, a key-bolt, 32, a corrugated washer, 34, and a bolt, 35, substantially as described.

7. The combination, with a plow-beam, of a standard adjustably connected thereto and formed with an eye, 38, a plow-handle, and braces 39 leading from said handle to the eye 38, substantially as described.

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Witnesses:
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