

No. 815,036.

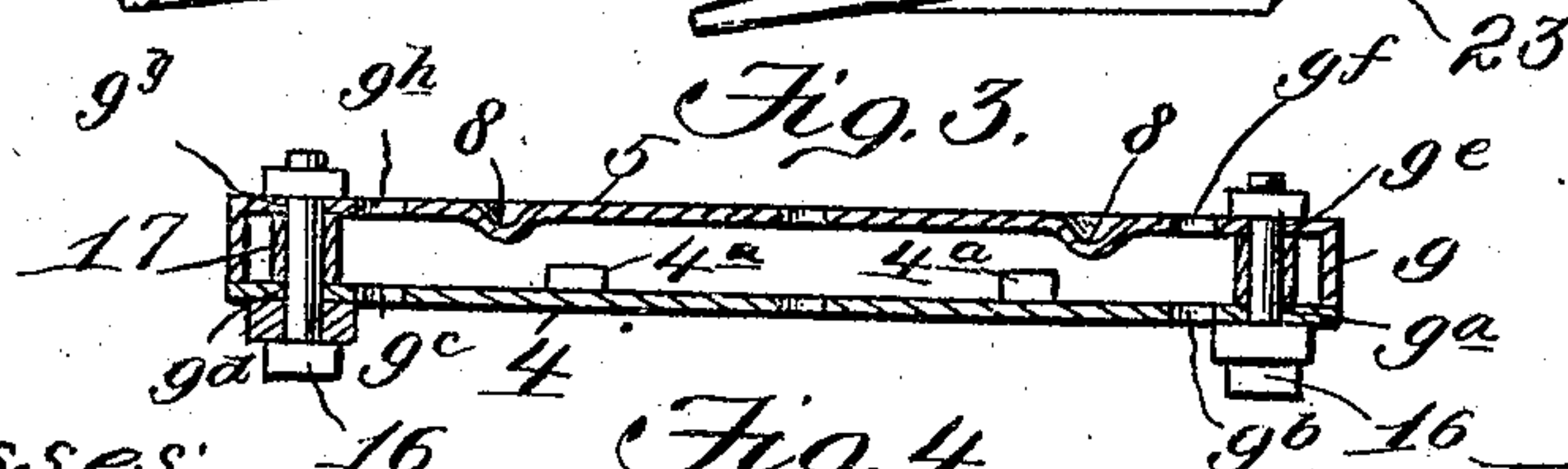
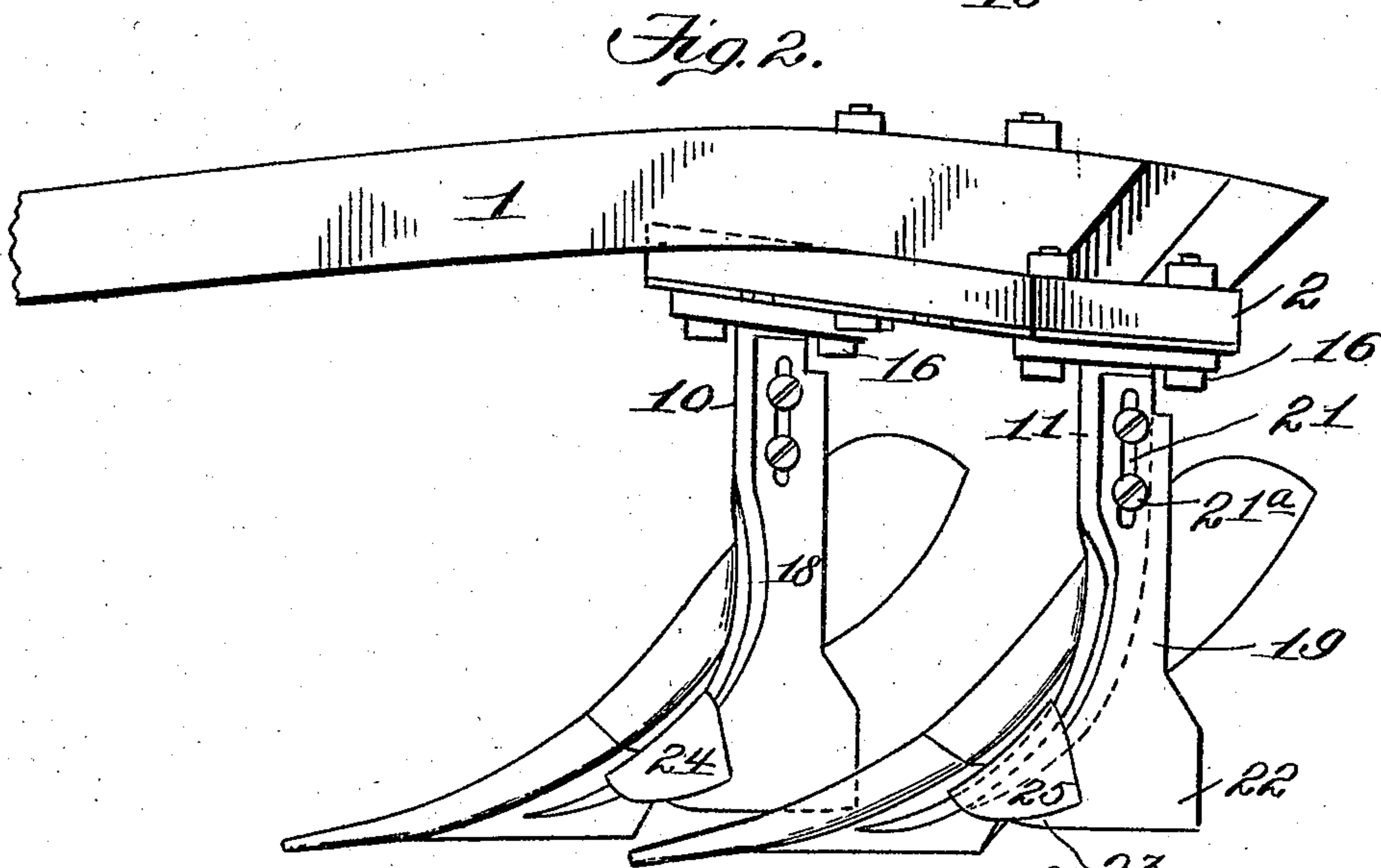
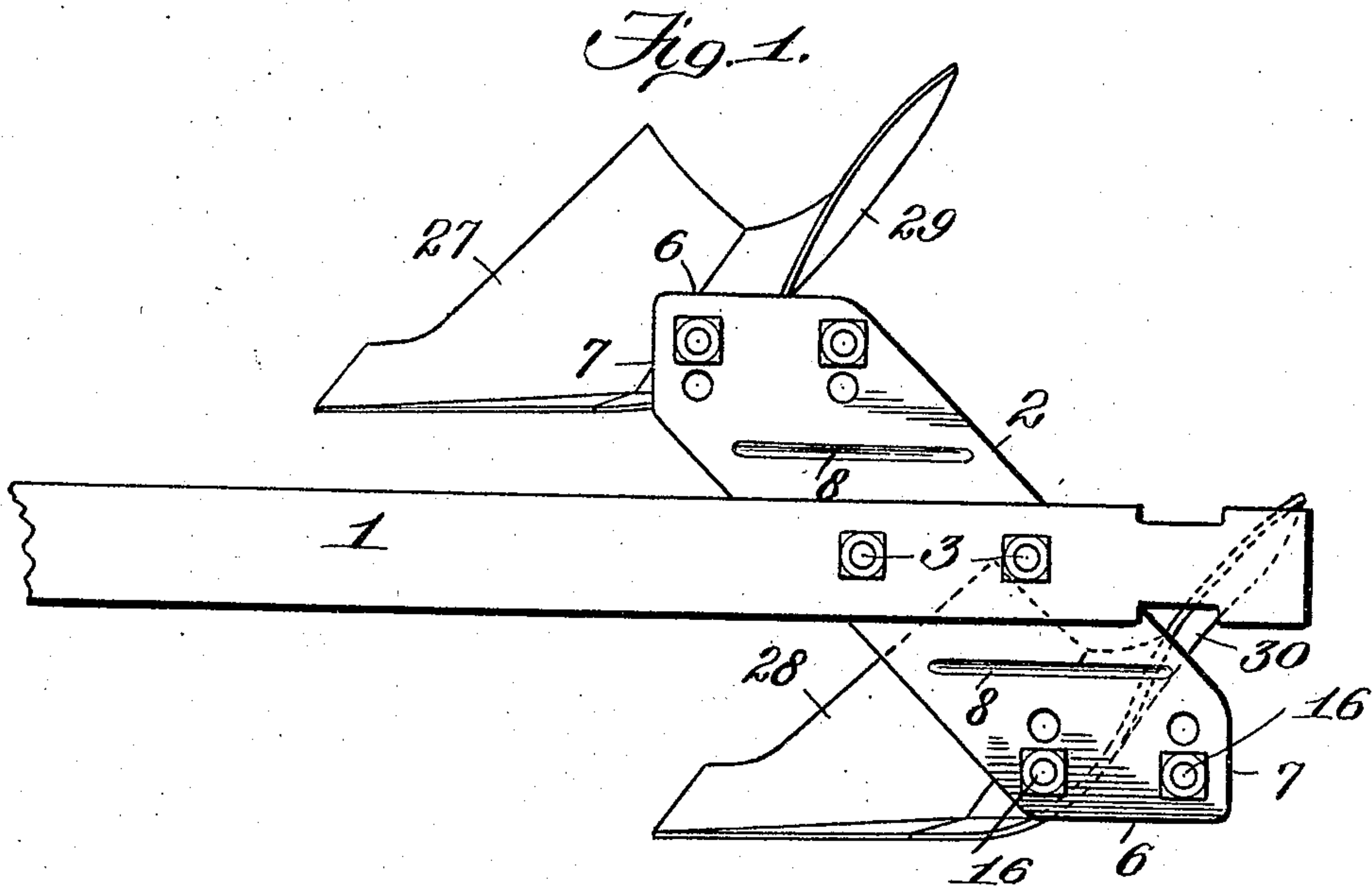
PATENTED MAR. 13, 1906.

A. G. PERRY.

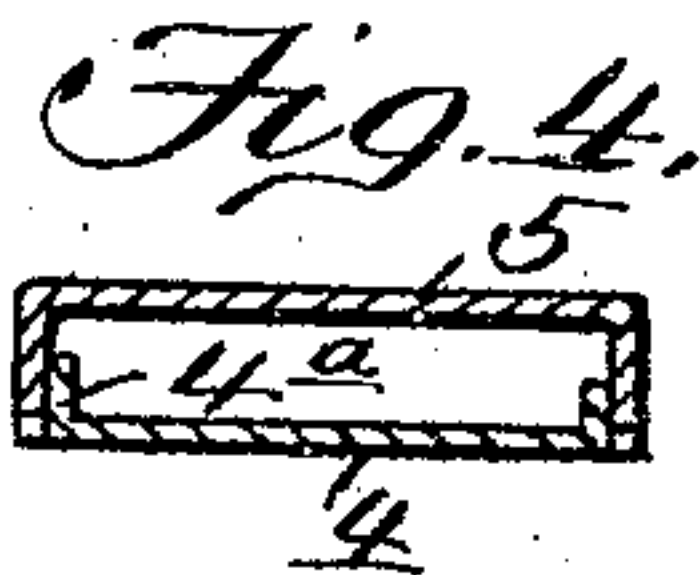
PLOW.

APPLICATION FILED SEPT. 16, 1905.

2 SHEETS—SHEET 1.



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2 SHEETS—SHEET 2.

Fig. 5.

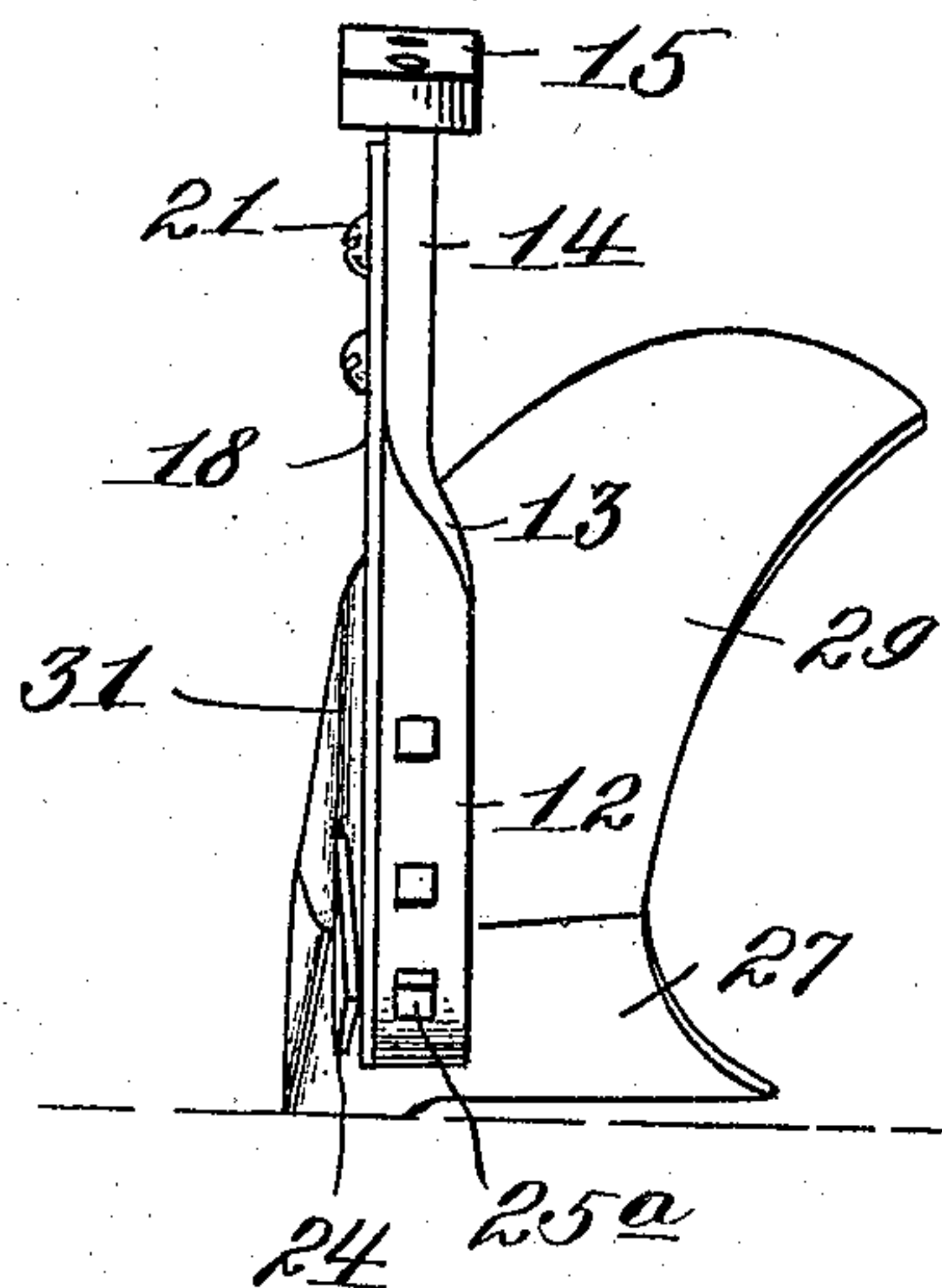


Fig. 6.

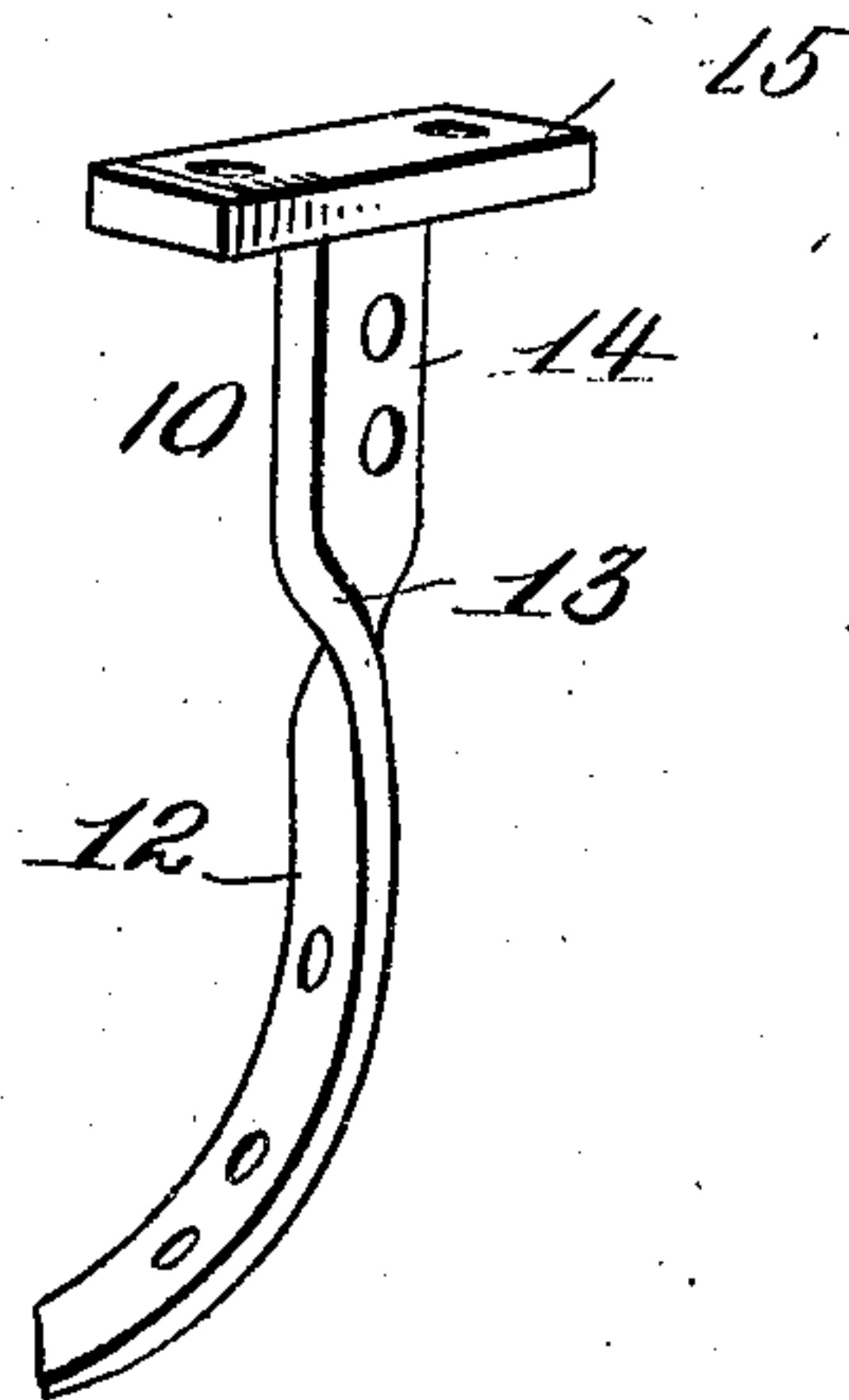


Fig. 7.

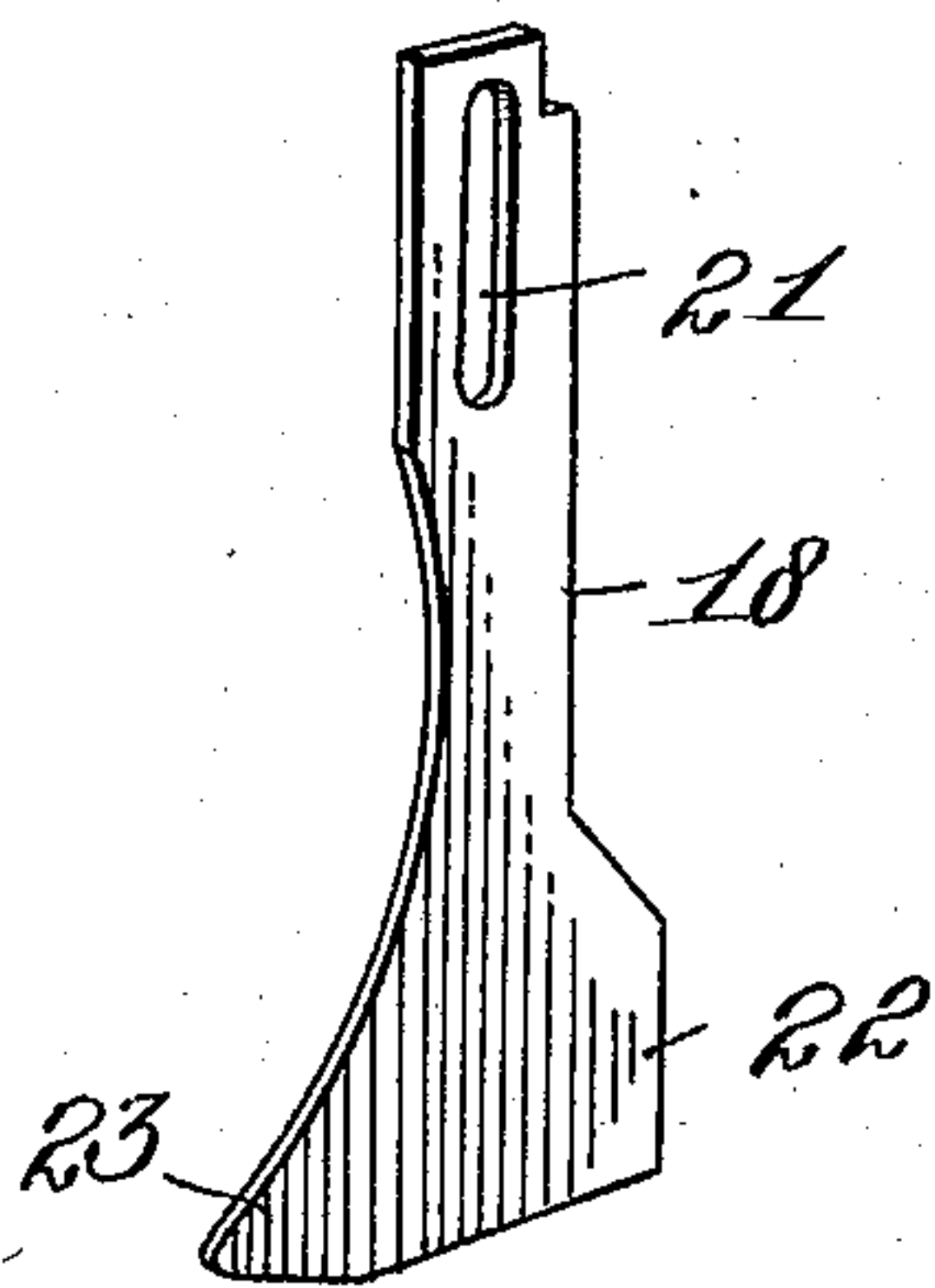


Fig. 9.

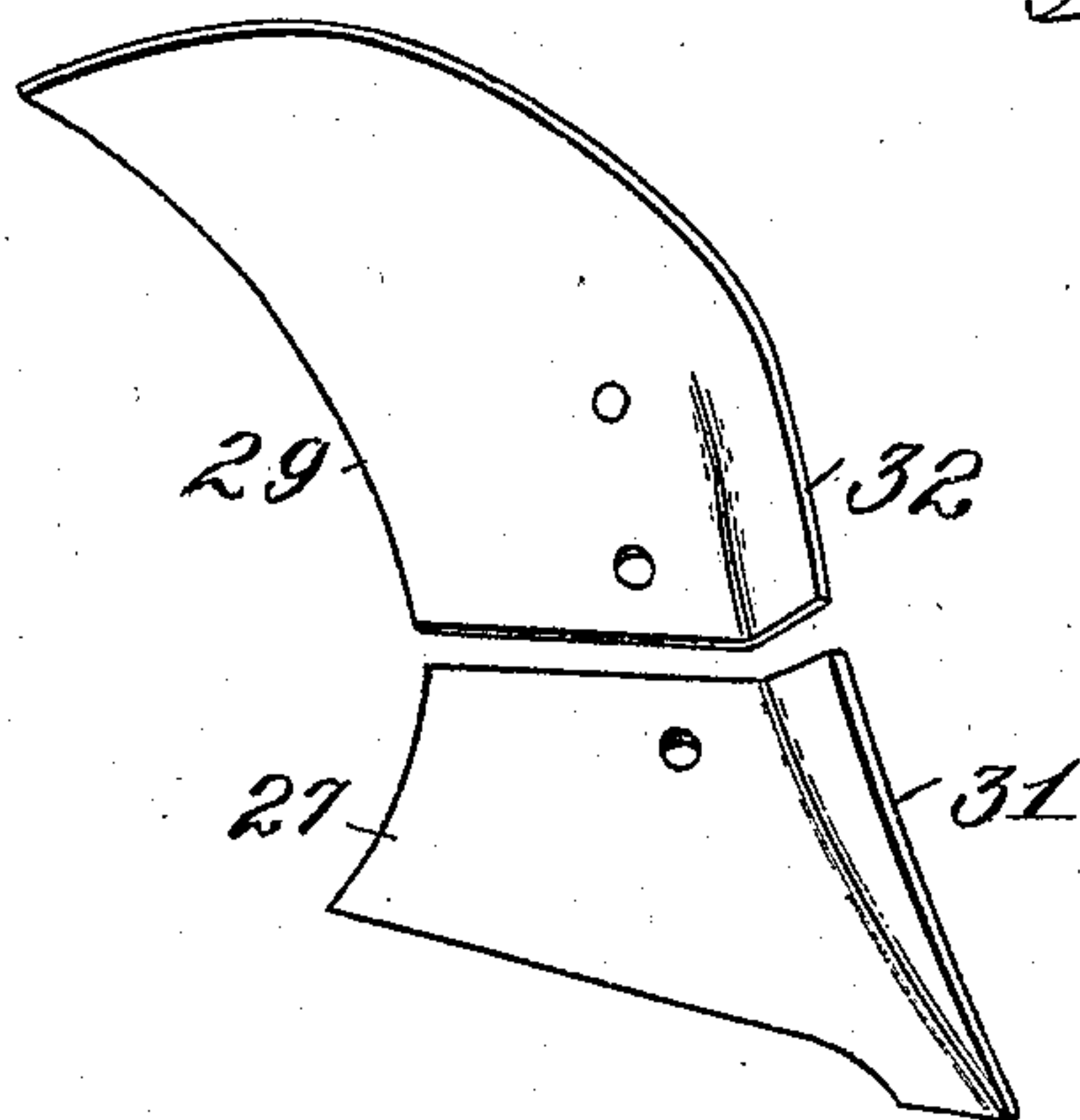
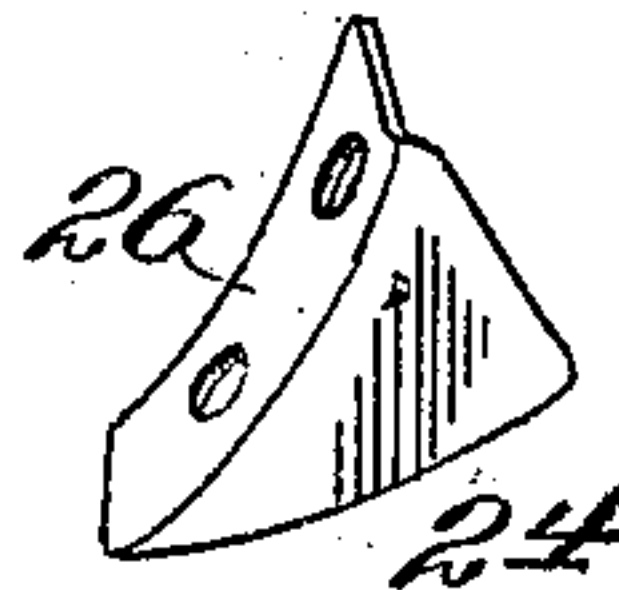


Fig. 8.



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UNITED STATES PATENT OFFICE.

ALVY G. PERRY, OF COLDWATER, MISSISSIPPI.

PLOW.

No. 815,036.

Specification of Letters Patent.

Patented March 13, 1906.

Application filed September 16, 1905. Serial No. 278,742.

To all whom it may concern.

Be it known that I, ALVY G. PERRY, a citizen of the United States, residing at Coldwater, in the county of Tate and State of Mississippi, have invented new and useful Improvements in Plows, of which the following is a specification.

This invention relates to double-turning plows for bedding and breaking land; and the object thereof is to construct a plow for the purpose set forth which shall be simple in its construction, strong, durable, dispense with the ordinary landside, efficient in its use, reduce the friction and draft on the plowshare, and comparatively inexpensive to set up.

With the foregoing and other objects in view the invention consists of the novel construction, combination, and arrangement of parts hereinafter more specifically described, illustrated in the accompanying drawings, which form a part of this specification, and wherein is shown the preferred embodiment of the invention; but it is to be understood that changes, variations, and modifications can be resorted to which come within the scope of the claims hereunto appended.

In describing the invention in detail reference is had to the accompanying drawings, in which like characters of reference denote corresponding parts throughout the several views, and in which—

Figure 1 is a top plan; Fig. 2, a side elevation. Fig. 3 is a longitudinal section of the cross-head. Fig. 4 is a transverse section of the cross-head. Fig. 5 is a rear elevation of one of the standards combined with the plowshare, moldboard, rudder, and fender. Fig. 6 is a detail of one of the standards. Fig. 7 is a detail of one of the rudders. Fig. 8 is a detail of one of the fenders, and Fig. 9 is a like view of one of the plowshares and moldboards.

A double plow constructed in accordance with this invention comprises a beam, a cross-head to which the beam is attached, a pair of plowshare-standards, one of less height than the other, but otherwise constructed in a similar manner, a vertically-adjustable rudder attached to each of the standards, a fender attached to each of the standards, a flanged plowshare connected to each of the standards, and a flanged moldboard connected to each of the standards and forming a continuation of the shares.

The plow-beam 1 is arranged at an angle with respect to the cross-head 2. The said

plow-beam is detachably connected with the cross-head 2 through the medium of the holdfast devices 3, each of which consists of a headed bolt and nut, the bolts extending upwardly through the cross-head 2 and plow-beam 1 and the nuts mounted upon the upper end of the bolt. The cross-head 2 is hollow and is constructed of a lower flat metallic plate 4 and an upper flanged metallic plate 5. The flanges of the plate 5 are mounted upon the upper face of the plate 4, and the manner in which the plates are connected together will be hereinafter referred to. The ends of the cross-head are cut away in a diagonal manner, as at 6 7, that portion 7 of each end extending in an opposite direction with respect to that portion indicated by the reference character 6, the portion 6 being of greater length than the portion 7.

The plates 4 5 are secured together through the medium of the holdfast devices 3 and also through the medium of the holdfast devices hereinafter referred to for securing the plowshare-standards to the cross-head 2. The plate 5 is provided with a series of strengthening-ribs 8, and the flanges of the said plate are indicated by the reference character 9. The plate 4 is provided with stop-lugs 4^a, extending at the rear of the flanges 9, so as to facilitate the positioning of the plate 5 and also to act as stops so as to prevent the shifting of the plate 5 upon the plate 4. The plate 4, as well as the plate 5, at each end thereof is provided with two pairs of openings. The pairs of openings at one end of the plate 4 are indicated by the reference characters 9^a and 9^b and at the other end by the reference characters 9^c and 9^d. The pairs of openings in the plate 5 at one end thereof are indicated by the reference characters 9^e and 9^f, and at the other end by the reference characters 9^g and 9^h. The pair of openings 9^e aline with the pair of openings 9^a. The pair of openings 9^f aline with the pair of openings 9^b. The pair of openings 9^g aline with the pair of openings 9^c, and the pair of openings 9^h aline with the openings 9^d.

As shown, the holdfast devices for securing the plowshare-standards to the cross-head extend through the pairs of openings 9^e 9^a 9^g 9^c. The two extra pairs of openings in each plate are provided to permit of setting the plowshares closer together or farther apart, so as to enable the keeping of the plowshares in perfect alinement with the draft on the plow-beam and at the same time to keep the

plowshares at the same distance behind and in front of each other, so as not to change the depth of furrow by each plowshare, thereby obtaining uniform work with the plowshares.

5 By such an arrangement means is provided whereby the plowshares are moved in or out at right angles with respect to the plow-beam. Furthermore, the construction does not cause a change in the direction the plow would
10 want to run, no matter how close the plowshares would be set, for the reason that the plowshares will remain in perfect alinement with the beam.

The reference character 10 indicates the
15 forward plowshare-supporting standard and the reference character 11 the rearward plowshare-supporting standard, the standard 10 being of greater height than the standard 11. Each of the standards 10 11 have their lower
20 portions formed in forwardly-extending curvilinear manner, as at 12, and each of the standards are torsionally twisted, as at 13. The torsionally twisting of the standards causes the curvilinear portions 12 to project
25 forwardly in a manner as shown, and to the said curvilinear portions are secured the plowshares by any suitable holdfast device.

The reference character 14 denotes the upper portion of the standard. The upper portion 14 of each of the standards extends in a direction corresponding to the direction in which the portion 6 of the end of the cross-head 2 extends—that is to say, longitudinally—and the said upper portions of the
35 standards terminate into and approximately centrally of the cross-pieces 15, which abut against the lower face of the plate 4 at the ends thereof. Through the cross-pieces 15 extend the holdfast devices 16, each consisting of a pair of headed bolts and nuts, the
40 bolts passing upwardly through the cross-pieces and ends of the cross-head.

To prevent the collapsing of the plate 5, each of the bolts of each of the holdfast devices is provided with supporting-collars 17,
45 acting as braces, and which are interposed between the inner face of the plate 5 and upper face of the plate 4 and surround the bolts.

The reference characters 18 19 denote the
50 rudders, there being a rudder for each standard. As the construction and manner of attaching the rudders are the same, but one rudder and attaching means will be described, the same reference characters being applied thereto. Each of the rudders is formed of
55 yieldable metallic material and of a length substantially equal to its respective standard. The upper end of each of the rudders is slotted, as at 21, to permit of adjustably connecting
60 the rudders with the standards through the medium of the removable holdfast devices 21 and 21^a, these devices 21 and 21^a detachably engaging in the standards, and by such an arrangement it permits of the vertical adjustment of the rudders, as will be evident.

The rudders have the lower end thereof enlarged, and the said enlarged lower end projects forwardly and rearwardly, as at 22 and 23, and in a direction corresponding to the direction of the upper portion of the standards. The rudders from that point below
70 the holdfast devices 21 are free of the standards, so that the lower portion of each of the rudders is free to yield when occasion so requires. The forward edge of each of the
75 rudders corresponds in contour to the standards in the manner as shown.

The rudders are adapted to carry the weight of the plows and to govern the depth of the cut of the plowshare as it is run into the
80 soil and at the same time steady the share and make it run smoothly with even depth of cut. By constructing the rudders in a manner as set forth the neck portions of the rudders are of considerable length, which enables
85 the rudders to readily spring aside when meeting an obstacle, and thereby allowing considerably more space for hard substances, such as roots or stones, to pass through between the front and rear plow when turning
90 the soil. It will be observed that the rudders are not landsides to press against the sides of the furrow, but when in use are positioned over near the middle of the furrow at the rear of the share when the soil is being
95 turned. By setting up the rudder in the manner as stated the position thereof will be as far from the right-hand corner of the rear share as is possible, which enables the rear
100 share to be arranged at a point nearer the front share than would be the case with the landside that is used on the ordinary turning-plow. The construction and arrangement of the rudder permit of two turning-plows being
105 worked close together without the plows being forced apart when the rear plow runs astride the hard substances, such as roots and stones, the neck of the rudder enabling the rudder to spring from three to four inches, consequently
110 creating a greater space between the two plows for the hard substances to pass through when turning the soil. After the rudder passes by the obstacle the rudder will spring to its normal position, which will be to a point about the middle of the furrow. At
115 the same time it slides smoothly and supports the weight of the plow.

The fenders are indicated by the reference characters 24 25. Each of the fenders is formed with an angularly-extending curvilinear portion 26, which is interposed between the plowshare, moldboard, and standard. The holdfast devices 25^a, which are adapted to secure the plowshares and moldboards to the standards, also retain in position the fenders. Each of the fenders is substantially triangular in contour and extends rearwardly from its respective standard and overlaps the rudder. For example, the fender 24 extends rearwardly and overlaps the
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rudder 18, and the fender 25 extends rearwardly and overlaps the rudder 19. The fenders are adapted to protect the front ends of the rudders and to keep any roots or other substances from coming between the front ends of the rudders and the standards. The fenders are very essential in rough land to protect the rudders; but in clean soil they can be dispensed with.

10 The plowshares are indicated by the reference characters 27 28 and the moldboard by the reference characters 29 and 30. As both of the plowshares are constructed alike and also both moldboards, but one plowshare and
15 one moldboard will be described, the same reference characters being applied thereto. The moldboard 29 is so positioned as to be a continuation of the plowshare 27, and the said share 27 and moldboard 29 are fixedly
20 secured in the seat formed by the curvilinear end 12 of the standard. Each of the shares and each of the moldboards is provided with an upwardly-extending flange 31 32, respectively, the latter being a continuation of the
25 former. The flanges, when a share and a moldboard are in position, form a rib which is substantially segment-shaped in contour. The flange 31 begins at the tip or point of the plowshare and extends rearwardly and gradually increases in width until the flange 32 of the moldboard is reached, the flange 32 of the moldboard extending rearwardly, but gradually decreasing in width until it disappears.
30 The rib formed by a flange 31 and a flange 32, when the shares and moldboards are in position, has the upper edge thereof extending in the arc of a circle. The contour of the body of each of the plowshares is also segment-shaped. The moldboards are also curvilinear in contour and have the upper or free ends thereof extending in an angular manner with respect to the standards. By setting up the shares and moldboards in a manner as stated the flanges of the shares and moldboards bear against the side of the furrow as the soil is being cut and torn away, thereby enabling the guiding of the plowshare in perfect alinement with the draft on the beam and doing away with the necessity of a land-side of the old style. Furthermore, it greatly
50 reduces the friction and draft on the share.

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

55 1. A plow of the character described, having a hollow cross-head formed of a flanged plate and a plate provided with lugs, said flanges abutting against one face of the said plate provided with the lugs, and the said
60 lugs adapted to engage said flanges to position said flanged plate upon the other of the plates, and means for securing the plates together.

65 2. A plow of the character described having a hollow cross-head formed of a flanged

plate and a plate provided with lugs, said flanges abutting against one face of the said plate provided with the lugs, and the said lugs adapted to engage said flanges to position said flanged plate upon the other of the
70 plates, collars interposed between the plates to prevent the collapsing thereof, and means for securing the plates together.

3. A plow of the character described having a hollow cross-head formed of a flanged
75 plate and a plate provided with lugs, said flanges abutting against one face of the said plate provided with the lugs, and the said lugs adapted to engage said flanges to position said flanged plate upon the other of the
80 plates, collars interposed between the plates to prevent the collapsing thereof, and means extending through the collars and plates for connecting the plates together.

4. A plow of the character described having a hollow cross-head formed of a flanged
85 plate and a plate provided with lugs, said flanges abutting against one face of the said plate provided with lugs, said lugs adapted to engage said flanges to position said flanged
90 plate upon the other of the plates, each of said plates provided at each end with two pairs of openings, the pairs of openings of one plate alining with the pairs of openings of the other of the plates, and means extending
95 through the pair of openings at each end of the cross-head for connecting the plates together.

5. A plow of the character described having a hollow cross-head formed of a flanged
100 plate and a plate provided with lugs, said flanges abutting against one face of the said plate provided with lugs, said lugs adapted to engage said flanges to position said flanged plate upon the other of the plates, each of
105 said plates provided at each end with two pairs of openings, the pairs of openings of one plate alining with the pairs of openings of the other of the plates, collars in alinement with the alining pairs of openings, and means extending through the alining pairs of openings and the collars for connecting the plates together.

6. A hollow cross-head having its top and bottom provided at each end with two pairs
115 of openings, the two pairs of openings at each end of the top of the cross-head alining with the two pairs of openings at each end of the bottom of the cross-head, said plurality of pairs of openings adapted to permit of adjustably connecting a pair of plowshare-supporting standards to the cross-head, combined with a pair of plowshare-supporting standards, each of said standards provided with a cross-piece, and means extending through
120 said cross-piece of each of the standards and two pairs of alining openings at each end of the cross-head for adjustably connecting the standards to the cross-head.

7. A hollow cross-head provided with two
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pairs of alining openings at each end thereof to permit of adjustably connecting a pair of standards to the cross-head, the pair of standards, each of said standards provided with a cross-piece abutting against the cross-head, a pair of collars within said cross-head at each end thereof, said pair of collars at each end of the cross-head in alinement with a pair of openings at each end of the cross-head, and means extending through said cross-pieces, said collars and a pair of alining openings at each end of the cross-head for adjustably connecting the standards to the cross-head.

8. A plow comprising a pair of plates suitably spaced apart and constituting a cross-head, a pair of standards adjustably connected thereto, extending in a diagonal direction with respect to the direction in which the cross-head extends and torsionally twisted near the upper end thereof, said standards having their lower portions formed in a curvilinear manner and constituting seats, a moldboard and a plowshare mounted in each of said seats and suitably connected to the standards, and rudders having elongated neck portions, the upper end of said neck portions being secured to the standards above the twist therein and that portion of the rudders below the twist in the standards being free of the standards.

9. A plow of the character described, comprising a standard, a plowshare connected thereto, a moldboard connected to the standard, a rearwardly-extending fender attached to the standard, and a rearwardly-extending rudder adjustably connected with the standard.

10. A plow of the character described, comprising a cross-head, a pair of standards depending therefrom, a flanged plowshare connected to each of the standards, a flanged moldboard connected to each of the standards and forming a continuation of the share, a rearwardly-extending fender attached to each of the standards, and an adjustable rudder suitably connected with each of the standards and extending rearwardly.

11. A plow comprising a pair of plates constituting a cross-head, a pair of standards each provided with a cross-piece, means extending through the said cross-pieces and through the said plates for connecting the latter together and to the standards, a plowshare and a moldboard secured to each of the standards, and a yielding and vertically-adjustable rudder connected to and extending rearwardly from each of the standards.

12. A plow comprising a pair of plates constituting a cross-head, a pair of standards, each provided with a cross-piece, means extending through the said cross-pieces and through the said plates for connecting the latter together and to the standards, a plowshare and a moldboard secured to each of the standards, a yielding and vertically-adjust-

able rudder connected to and extending rearwardly from each of the standards, and a rearwardly-extending fender connected to each of the standards and overlapping the lower portion of the rudders.

13. A plow of the character described, comprising a cross-head, a pair of standards suitably connected thereto, extending diagonally with respect to the direction in which the cross-head extends and torsionally twisted near the upper end thereof, said standards having their lower portions formed in a curvilinear manner constituting seats, a moldboard and a plowshare mounted in each of said seats and suitably connected to the standards, said moldboard and share having a portion thereof bent to form an upwardly-extending flange substantially segment-shaped in contour, and rudders having their upper portions adjustably connected to the standards above the curvilinear portions of the standards, said rudders having the portions thereof opposing the curvilinear portions of the standards shaped to conform to said curvilinear portions and free of the said curvilinear portions.

14. A plow of the character described, comprising a pair of plates, one of said plates being flanged and abutting against the other of said plates and constituting a hollow cross-head, a pair of plowshare-supporting standards, a series of bolts extending through the plates and adapted to connect the said standards to the cross-head, and means mounted upon the said bolts and interposed between the plates to prevent the collapsing of the cross-head.

15. A plow of the character described, comprising a pair of plates, one of said plates being flanged and abutting against the other of said plates and constituting a hollow cross-head, a pair of plowshare-supporting standards, a series of bolts extending through the plates and adapted to connect the said standards to the cross-head, means mounted upon the said bolts and interposed between the plates to prevent the collapsing of the cross-head, a plow-beam mounted upon the cross-head, bolts extending through the plates and through the beam for connecting the latter to the cross-head, and means mounted upon the said last-mentioned bolts to prevent the collapsing of the cross-head.

16. A plow of the character described, provided with a vertically-adjustable and yielding rearwardly-extending rudder.

17. A plow of the character described, provided with a vertically-adjustable and yielding rearwardly-extending rudder, and a rearwardly-extending fender for said rudder.

18. A plow of the character described, provided with a vertically-adjustable and yielding rearwardly-extending rudder, and a rearwardly-extending fender overlapping said rudder.

19. A plow of the character described, comprising a plowshare-supporting standard, a share suitably connected therewith, and a rearwardly-extending rudder having its upper end adjustably connected to said standards and its lower end yielding.

20. A plow of the character described, comprising a pair of plowshare-supporting standards, a plowshare connected to each of said standards, and a rearwardly-extending rudder for each of the shares, said rudders having their upper ends adjustably connected to the standards and their lower ends yieldable.

21. A plow of the character described, comprising

a vertically-adjustable rudder having an enlarged and yieldable lower end.

22. A plow having a hollow cross-head consisting of a pair of plates, one of said plates ribbed and provided with side flanges extending at an angle with respect to the plate and the other of said plates having stop-lugs at each side extending at the rear of the flanges.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

ALVY G. PERRY.

Witnesses:

E. C. GILLILAND,
L. WALTHALL.