(No Model.)

J. B. CRAPP.

SCRAPER.

No. 588,959. Patented Aug. 31, 1897.

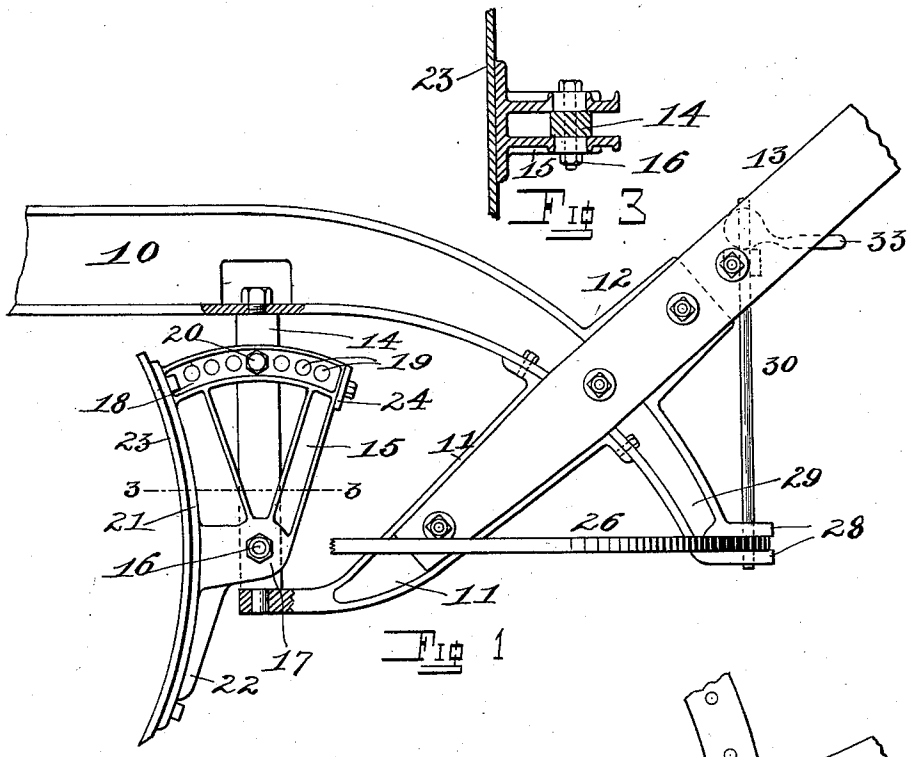


Fig 3

Fig 1

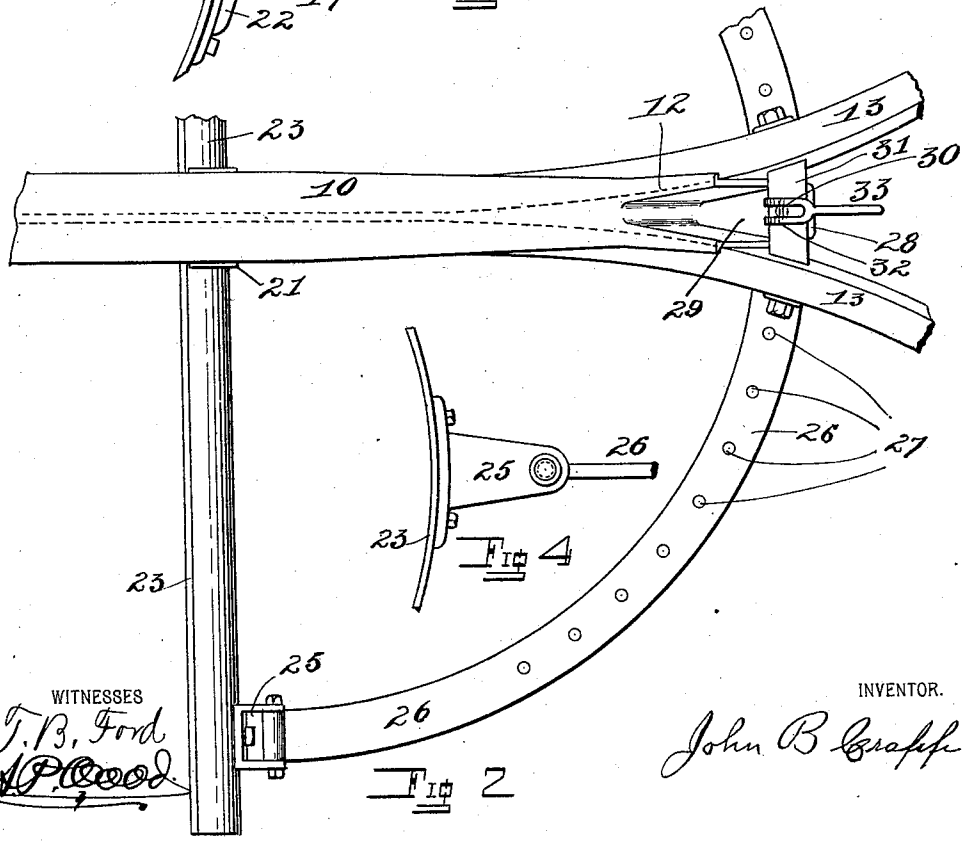


Fig 4

Fig 2

WITNESSES

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SCRAPER.

SPECIFICATION forming part of Letters Patent No. 588,959, dated August 31, 1897.

Application filed February 8, 1897. Serial No. 622,540. (No model.)

To all whom it may concern:

Be it known that I, JOHN B. CRAPP, of Tallapoosa, in the county of Haralson and State of Georgia, have made a certain new and useful Invention in Scrapers; 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, reference being had to the accompanying drawings, and to figures of reference marked thereon, which form a part of this specification.

The object of this invention is to provide a plow-beam with a scraper-blade both of such construction as will enable a curved plate suitable for hillside and road scraping to be attached to the plow-beam and adjusted in vertical and horizontal planes relative to the line of draft. The details of construction whereby these ends are attained will be hereinafter fully specified.

In the accompanying drawings, Figure 1 is a side elevation of the device, and Fig. 2 is a fragmentary plan thereof. Fig. 3 is a horizontal section on the line 3 3, Fig. 1. Fig. 4 is a detail of the attachment of the segment to the scraper-plate.

In the figures like reference-characters are uniformly employed in the designation of corresponding elements of construction.

10 is a beam which, when constructed of metal, its preferable and the strongest form, is curved downwardly at its back end, being provided at its forward end with the usual clevis for attachment of the motive power.

When the beam 10 is made of wood, some equivalent construction will be substituted for the downwardly-curved back end of the beam.

11 is an arm which is bolted to the under side of the curved portion of the beam and projects forwardly, having a portion of its end so curved as to lie substantially parallel to the beam 10.

12 is a flanged extension on the beam, and 13 are handles which are secured to said extension 12 of the beam and to the arm 11 by suitable bolts or otherwise, as found most expedient. The lug 12 serves to hold the handles in their proper position relative to the beam 10, as does also the arm 11, the latter being also made more rigid in its attachment to the beam 10 by reason of said handles 13 lying along each of its sides. The extremity of the arm 11 is vertically perforated, and directly above same a portion of the web of the I-shaped beam is cut away, and through the flange of said beam, directly under the web—that is, under the center of the flange—is made another hole, in which is journaled a bar 14, preferably rectangular in cross-section, journaled so as to rotate on a vertical axis.

15 is a casting which straddles the bar 14, bifurcated and lying parallel to each side thereof and pivoted thereto by a bolt 16, passing through the hub 17 of said casting and the bar 14, near its lower end. The upper end of said casting 15 is provided with a segment 18, which is perforated with a curved series of holes 19. This segment 18 lies against the side of the bar 14 and straddles same, said bar 14 being provided about its center between the two sides of said segment with a correlative hole through which and one of the holes 19 passes a pin or bolt 20.

On the front edge of the casting 15 is a curved plate 21, practically forming part of said casting and stiffened, if desired, by a flange 22.

Secured to the front side of plate 21 is a scraper-plate 23, which is horizontally straight, although it may be curved in that direction, if desired, and vertically curved, as shown in Fig. 1. It will thus be seen that the scraper-plate 23 has movement in a horizontal plane with the pivot 16. This latter adjustment is set and secured by the segment 18, its bolt 20, and the hole in the upper end of the bar 14, the motion of the upper edge of the scraper-plate 23 being limited by the said plate striking the bar 14, and its motion forwardly being limited by the plate 24, which may be either secured to the ends of the bifurcated segment or made integral therewith.

I will now proceed to describe the means and manner of securing the plate 23 in its adjustment in the horizontal plane. Bolted to each end of said plate 23 on its back side are bifurcated blocks 25, and pivotally secured between the bifurcations of these blocks are the ends of the segment 26, which segment is provided with a series of holes 27 and lies intermediately of its ends between lugs 28 on the back end of the downwardly-projecting arm

29 of the beam 10, which said lips are provided correlatively with the perforations 27. Now it will be seen that the pivotal connection of the segment 26 with the plate 23 prevents the motion of said plate in a vertical plane from being communicated to the said segment, and as the plate 23 moves through its horizontal plane of adjustment upon the pivoted bar 14 the segment 26 slides readily between the lips 28. It now becomes necessary to limit the motion of said segment through said lips and so to render the said plate 23 constant in any set position. This I do by means of a pin 30, running vertically through the perforations in the lips 28 and the holes 27 in the segment, its upper end sliding in and being guided by the bar 31, mounted between the handles 13, as best shown in Fig. 2. In order to raise this pin 30, I prefer to pivot an eccentric 32 to its upper end, resting its periphery against the upper side of the bar 31 and being provided with a handle 33 for manual operation, although this end may be attained in many equivalent ways.

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

1. In a plow, a beam, an arm secured to the back end of same and projecting forwardly below same, a bar rotatably mounted between said beam, and the forward end of said arm, a casting pivotally secured to said bar so as to swing in a vertical plane thereon, a scraper-blade secured to the front edge of said casting, and means for securing said bar and casting in any set position, for the purpose specified.

2. In a plow, a beam, an arm secured to the back end of same and projecting forwardly below same, and handles secured to said beam and lying along each side of said arm, a bar rotatably mounted between said beam and the forward end of said arm, a casting pivotally secured to said bar so as to swing in a vertical plane thereon, a scraper-blade secured to the front edge of said casting, and means for securing said bar and casting in any set position, for the purpose specified.

3. In a plow, a beam, and a bar rotatably mounted thereunder so as to rotate in a horizontal plane, a casting pivoted by its lower end upon the lower end of said rotatable bar, a segment on the upper end of said casting provided with a series of holes, said bar being correlatively perforated, a pin fitting the holes in said segment and the perforations in the bar, a scraper-blade secured to the front edge of said casting, and means for securing said bar and casting in any set position, for the purpose specified.

4. In a plow, a beam, and a bar rotarily mounted thereunder so as to rotate in a horizontal plane, a bifurcated casting pivoted by its lower end upon the lower end of said rotatable bar, a segment on the upper end of said casting bifurcated and lying across each side of said bar, and provided with a series of holes, said bar being correlatively perforated, a pin fitting the holes in said segment, and the perforation in the bar, a scraper-blade secured to the front edge of said casting, and means for securing said bar and casting in any set position, for the purpose specified.

5. In a plow, a beam, a bar rotatably mounted thereon in a vertical position, a scraper-blade mounted thereon lying transversely below the bar, a guide secured to the back end of the beam, and a segment secured by its ends to the said scraper-blade and lying within said guide, and means for securing said segment to said guide for the purpose specified.

6. In a plow, a combination of a beam, handles secured thereto, a bar rotatably mounted in a vertical position under said beam, a casting pivotally secured to said bar, means for securing it in any set position, a scraper-blade secured to the front edge thereof, a guide on the back end of said beam, a segment pivotally secured at its ends to the back side of said plate near its ends, and lying in said guide, and means for securing said segment in any set position, substantially as and for the purpose set forth.

7. In a plow, a combination of a beam and standard thereon, a scraper-blade vertically curved and substantially straight horizontally, and means for adjusting said blade on said standard in vertical and horizontal planes.

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

JOHN B. CRAPP.

Witnesses:

THOMAS J. BARRETT,

GERRIT S. COLE.