

W. WILSON.
SEPARABLE SECTIONAL DRAFT BEAM FOR HARROWS.
APPLICATION FILED MAY 11, 1909.

941,177.

Patented Nov. 23, 1909.

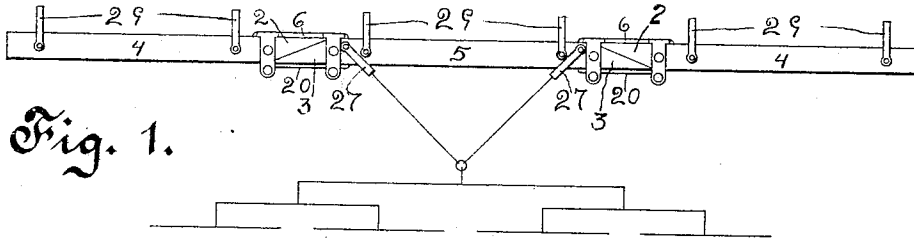


Fig. 1.

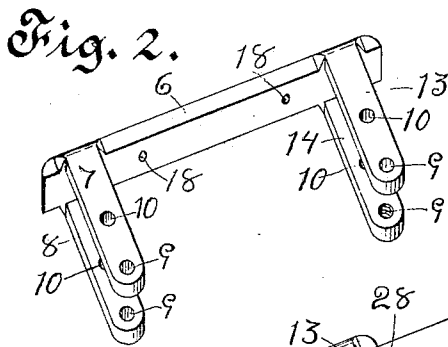


Fig. 2.

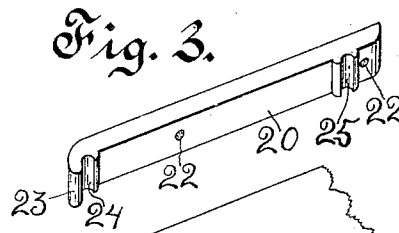


Fig. 3.

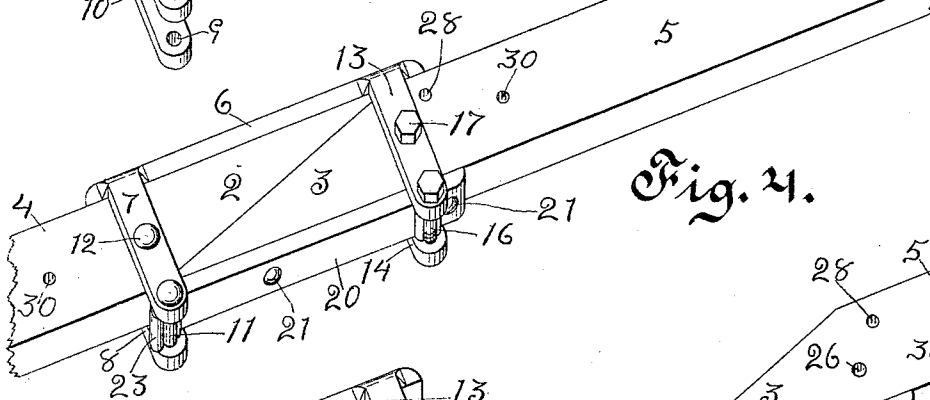


Fig. 4.

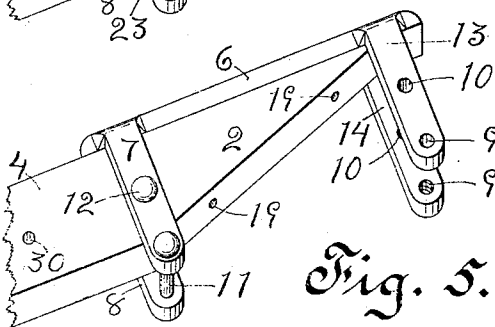


Fig. 5.

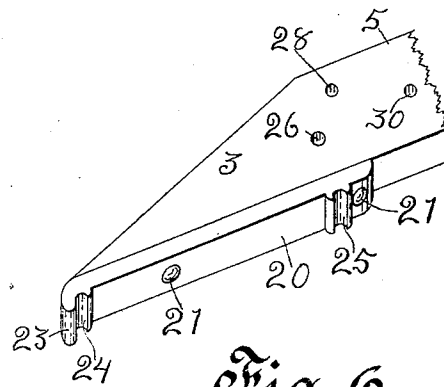


Fig. 6.

WITNESSES:

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SEPARABLE SECTIONAL DRAFT-BEAM FOR HARROWS.

941,177.

Specification of Letters Patent.

Patented Nov. 23, 1909.

Application filed May 11, 1909. Serial No. 495,239.

To all whom it may concern:

Be it known that I, WILLIAM WILSON, citizen of the United States, residing at Blair, in the county of Washington and State of Nebraska, have invented certain new and useful Improvements in Separable Sectional Draft-Beams for Harrows, of which the following is a specification.

My invention relates to improvements in draft-beams for harrows of two or more laterally arranged harrow-sections, usually hinged together, between which harrow and the evener to which the team is hitched, the said draft-beam is interposed to distribute the draft equally to all the sections of the harrow; and the objects of my improvement are, first, to provide a sectional draft-beam in which said sections are easily separated or coupled together at points agreeing with the hinging together of the harrow-sections; second, to provide a scarf-frame of metal to rigidly but separably secure together the joined ends of the sections of a wooden beam at a scarf joint; and, third, to facilitate the requisite coupling and locking together of the parts of said frame fastened to adjacent joined ends on opposite sides of the scarf-joint or line of cut separating the beam into two parts. I attain these objects by the mechanism illustrated in the accompanying drawing in which—

Figure 1 is a plan or top view of the draft-beam, with diagram of the attached team-draft-appliances, at small scale; Figs. 2 and 3 are larger perspective views of opposite parts of the scarf-frame; Fig. 4, is a perspective view showing a separably jointed beam coupled and locked together; Figs. 5 and 6 are perspective views of the jointed ends unlocked, uncoupled and separated.

A scarf-joint is first formed by cutting a beam in two diagonally or by shaping the meeting portions to form the slant ends 2 and 3 of the sections 4 and 5.

The metal scarf-frame consists of the reinforcing-strap or base-bar 6, having near one end a pair of arms 7 and 8 disposed at right angles to said bar, parallel with each other and spaced apart equal to the width of the bar and thickness of the beam. These arms have cross-perforations 9 and 10 at the ends and intermediately, aligned to receive the catch-bolt 11, and the fastening-bolt 12 to form a stirrup at the front edge of the beam. A like pair of arms 13 and 14 are similarly disposed near the opposite end

of the base-bar and have like perforations, threaded in one bar to receive the locking cap-bolts 16 and 17. The base-bar has the perforations 18 to receive fastening rivets or bolts disposed through corresponding perforations 19 in the section 4, by which the base-bar is fastened against the back edge of the beam the scarfed end of which is disposed between the pairs of arms as shown in Figs. 4 and 5.

The coupling or scarf-end 3 of section 5 has the reinforcing, hook and seat-bar 20 fastened to the front edge by rivets 21 disposed in perforations 22 and corresponding perforations through the beam-end. The end of the bar toward or beyond the point of the slant end of the section is shaped to form the forwardly standing hook 23 and adjacent concave seat 24 to engage the catch-bolt 11, and the opposite end has the concave cross-groove 25 to receive and seat the locking-cap-bolt 16. This end 3 also has the vertical perforation 26 to receive the intermediate locking cap-bolt 17.

The arrangement shown in Fig. 1 being for a harrow of three laterally arranged sections the beam is likewise designed in three parts the end sections 4 and 4 and the central section 5 to which the team-draft-devices are connected by the clevises 27 bolted on at 28, and each section of the beam is provided with a pair of rearwardly disposed clevises 29 bolted on at 30, by which to attach a section of the harrow.

Referring to Figs. 4, 5 and 6:—It is obvious that if the arm 13 was omitted and the cap-bolt 17 inserted through the aperture 26 and screwed home into the arm 14 omitting the cap-bolt 16, it would still be an operative device; the strain of draft being largely at the hook 23. The arms 13 and 14 with the cap-bolts 16 and 17 serve principally to retain the scarf-frame in place during draft; but form a stirrup to take the reverse strain occurring on the inside coupling when turning the harrow around, with the team, in use on the field of land.

For passing through narrow openings or over narrow bridges, or for loading the entire harrow into a conveyance, remove the locking-bolts and then the sections of the beam are readily uncoupled and the harrow sections folded together or separated. And when coupled together the beam is rigid and substantial.

One-piece draft-beams now in use are

readily made separably sectional by severing the beam diagonally as shown and applying the metal scarf-frame and hook and seat bar to the ends of the sections as shown and described.

I claim:

1. A separable sectional harrow draft-beam comprising beam-sections obliquely pointed at adjoining ends to form diagonal scarf-joints, one section having a stirrup at the base of its oblique end, and an arm at its point end overlapping the adjoining beam-section, a hook at the point of the oblique end of said adjoining section to engage said stirrup and means to releasably fasten said overlapping arm to said adjoining beam-section.

2. A harrow draft-beam of separable sections comprising beam-sections scarf-jointed end to end, a reinforcing-strap fastened to the edge of one section athwart the joint, a pair of arms on said strap disposed from opposite edges of said strap across the opposite sides of the adjoining scarf-ends of said sections, a reinforcing-bar disposed oppositely to said reinforcing strap and fastened to the edge of the opposite section athwart the joint and the projecting ends of said arms perforated to receive a removable locking-pin to form a stirrup to engage said reinforcing-bar.

3. A separable coupling for sectional harrow draft-beams, comprising a reinforcing-strap fastened to the back edge of the joint end of a section, arms on said reinforcing-strap said arms disposed across to embrace the end of said section and perforated to receive a cross-bolt to form a stirrup at the

opposite edge, arms on said reinforcing-strap disposed across to embrace the end of an adjoining section, a reinforcing-bar fastened to the front edge of said adjoining section and having a hook at one end to engage said stirrup and having a seat, and a removable lock-pin adapted to be disposed through perforations in the arms embracing said adjoining section and engage said seat.

4. A separable coupling attachment for severed draft-beams for harrows, comprising a base-bar adapted to be fastened to one edge of said beam, a seat-bar adapted to be fastened to the opposite edge, a pair of parallelly disposed arms on said base-bar perforated at their ends to receive a lock-bolt to form a stirrup to embrace said beam and seat-bar.

5. A separable coupling attachment for severed draft-beams for harrows, comprising a base-bar adapted to be fastened to one edge of said severed beam, a pair of arms at one end of said base-bar connected at their outer ends by a catch-bolt to form a stirrup, a pair of arms at the opposite end of said base-bar connected at their outer ends by a removable locking-bolt to form a stirrup, a hook and seat-bar adapted to be fastened to the opposite edge of said beam and having a hook at one end to engage said catch-bolt and a seat at the opposite end to receive said locking-bolt.

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

WILLIAM WILSON.

Witnesses:

GEORGE B. WILLSEY,
F. W. KENNY, Sr.