(No Model.)

B. F. SWEET.

SLEIGH.

No. 556,783. Patented Mar. 24, 1896.

Fig. 1.

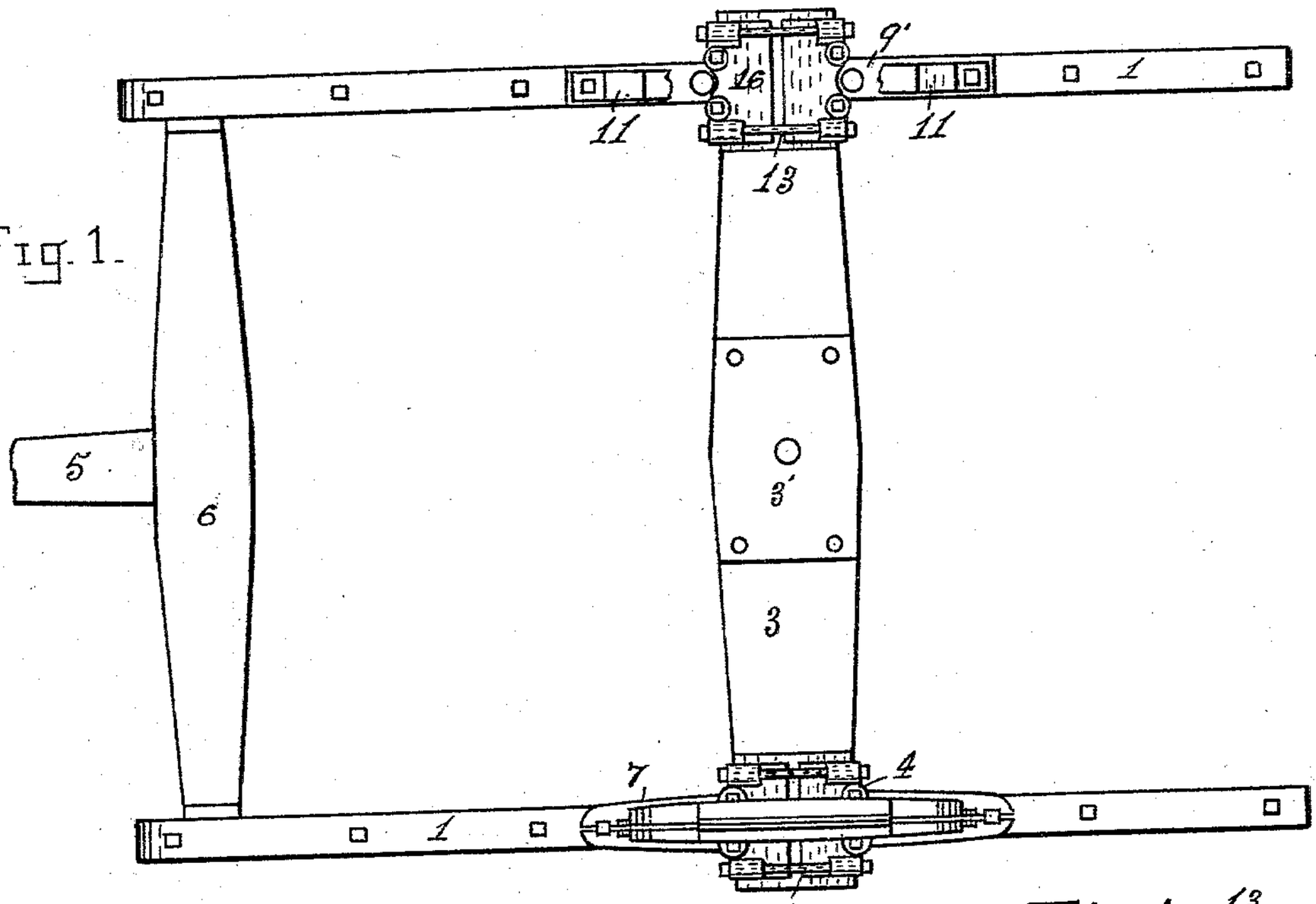


Fig. 2.

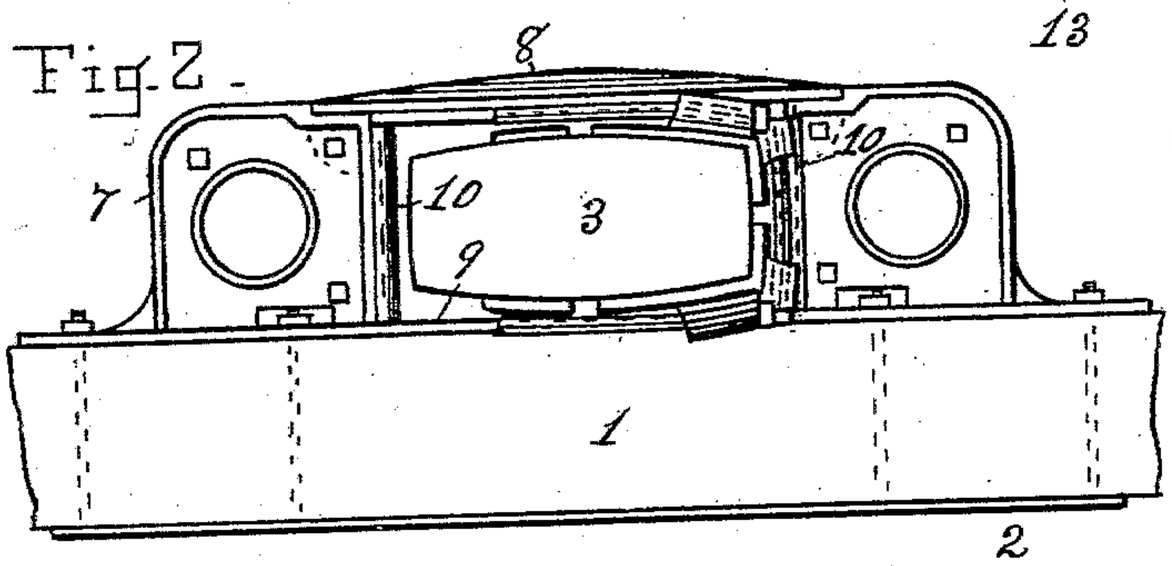


Fig. 3.

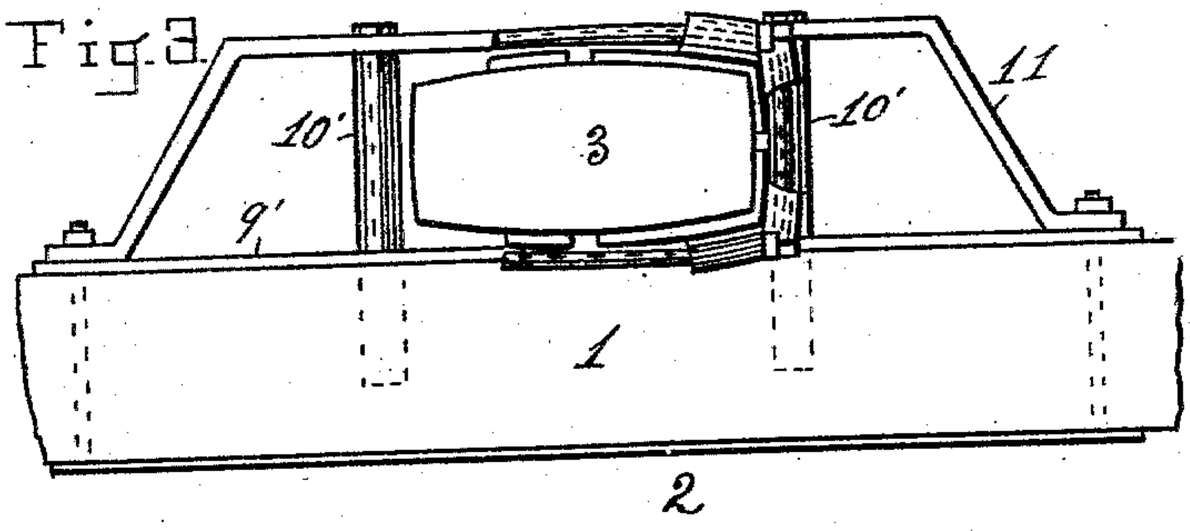
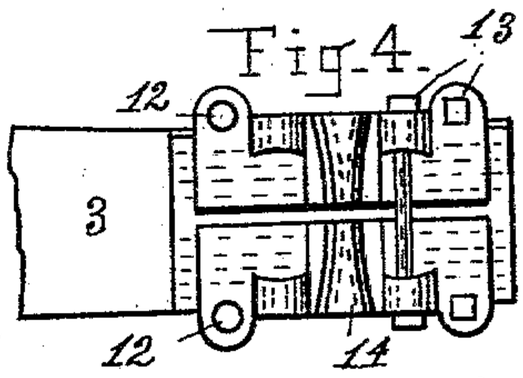


Fig. 4.



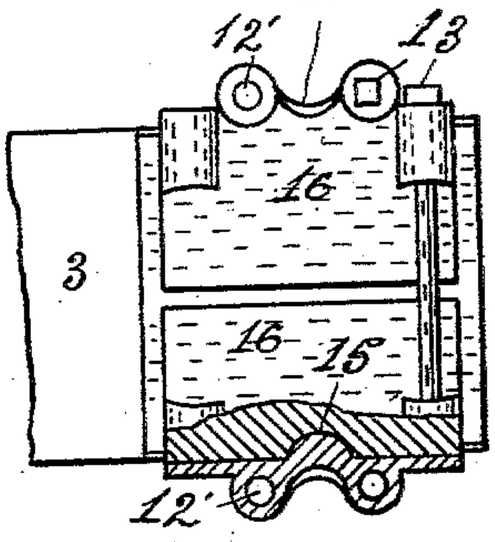


Fig. 5.

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UNITED STATES PATENT OFFICE.

BENJAMIN F. SWEET, OF FOND DU LAC, WISCONSIN.

SLEIGH.

SPECIFICATION forming part of Letters Patent No. 556,783, dated March 24, 1896.

Application filed December 23, 1895. Serial No. 573,150. (No model.)

To all whom it may concern:

Be it known that I, BENJAMIN F. SWEET, a citizen of the United States, and a resident of Fond du Lac, in the county of Fond du Lac and State of Wisconsin, have invented a new and useful Improvement in Sleighs, of which the following is a specification.

My invention relates to the formation of an angle iron or plate for application to each end of the beam, the plates being for preventing the beam ends, where they rest upon the runner or upon its seat, from excessive wear; and the object of the improvement is to provide said plates with means for taking up any wear or shrinkage that may occur around the ends of the beam where said plates are fitted to it, and also to provide plates therefor that should one of them become broken a duplicate can be quickly applied.

The accompanying drawings illustrate my improvement, in which—

Figure 1 is a plan of the opposite runners of a sleigh having a beam with angle-plates of my improvement upon its ends, one of the runners having the beam resting upon a flat plate with two large bolts or pins for holding the beam in position and the other one having a metallic saddle for holding the beam. Fig. 2 and the following ones are upon an enlarged scale. Fig. 2 is a side elevation of the central part, lengthwise of the sleigh, of the runner and its metallic saddle, the beam resting in it. Fig. 3 is a like elevation of the runner, the beam resting upon a flat plate as in one of the runners of Fig. 1. Fig. 4 is a side elevation of one end of the sleigh-beam and its angle-plates; and Fig. 5 is a top view of the beam and said plates, one side being in section.

Similar numerals indicate like parts in the several views.

1 indicates the runners; 2, the sleigh-shoes; 3, its beam; 3′, the beam wear-plate; 4, the beam end angle-plates; 5, the sleigh-tongue; 6, the tongue-roller; 7, the beam-saddle; 8, the saddle-cap piece; 9, the saddle-seat; 9′, a plate which serves as a seat for the beam when no saddle is used; 10, opposite vertical beam-holders which extend upward from the metallic saddle; 10′, opposite vertical beam-holders, which extend upward from the plate 9′; 11, an iron-strap which is secured to the runner and extends upward over the beam for holding it from being lifted from its seat; 12 12′, holes for bolts in the angle-plates; 13, bolts for connecting the angle-plates; 14, a groove outside of the short leg of the angle; 15, an inward projection upon the inside and opposite the groove 14; 16, the curved surface of the long leg of the angle.

The sleigh for which these angle-plates are particularly adapted is for use principally for logging purposes; but it may be used successfully for large sleighs for drawing heavy loads of any material. Their beams being made large and often of timber which is imperfectly seasoned, it is essential that the iron plates for them are so formed that they can be kept tightly bolted thereon, and that by the screwing up of said bolts the plates may be kept tightly clamped upon the beam for remedying any shrinkage or wearing of the beam around said plates.

The plates consist of four pieces for each end of the beam, all of which may be cast from the same pattern. Four bolt-holes 12 12′ are formed in each piece in casting the plates, two for bolts lying parallel with each leg of the angle, and consequently when the four plates are placed upon the beam they can be held firmly in position with the bolts 13. An inward curved projection 15 is formed upon the inside of the short leg of the angle, the beam being cut out for receiving said projection, whereby the plates are held from moving lengthwise of the beam without relying wholly upon their bolts.

It will be observed that the angle-plates are held together and to the beam with bolts which pass outside of the beam, none going through it. Consequently there are no holes to be bored in the beam. They are provided with a nearly semicircular groove 14, into which the curved sides of the seat for the beam fit loosely and hold the beam therein. These grooves are tapering slightly, so that when the four plates are bolted together upon the beam they produce a groove upon opposite sides of the beam of increasing width from the vertical center of the beam sides to its upper and lower corners, whereby a limited movement of the beam is permitted within its seat.

I do not claim broadly a loose connection

between the beam and its seat as being new in its application to logging-sleighs, it having been used in some form for a long time.

The outer surface of the long leg of the angle-plates is curved slightly, so that the beam can move easily upon its seat in all directions.

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

1. A set of angle-plates for a sleigh-beam, consisting of four similar and interchangeable pieces, one for each corner near the end of the beam, ears arranged upon the outside of said plates having holes therein for bolts extending outside of said plates and parallel with each leg of their angle for bolting said plates together, the inside of each leg having a length of less than one-half the breadth of the side of the beam for which said legs are adapted for allowing the beam to shrink and said plates to be drawn toward each other, that leg of their angle for engaging the front and rear side of the beam having a projecting part intermediate the side edges and inside of said leg for entering a groove formed across said side of the beam, and said leg having outside of it and opposite said projection a groove adapted for receiving the vertical sides of the seat for said beam for holding the beam therein, substantially as described.

2. In a sleigh for logging and similar uses, its runners being provided with seats having vertical sides and inward-curved projections oppositely arranged thereon for holding the sleigh-beam, the combination with its beam of similar and interchangeable angle-plates, one upon each of its four corners near each end of the beam, the meeting ends of adjoining irons being spaced apart for allowing the beam to shrink and the plates to be drawn toward each other, and bolts arranged to pass through the plates outside of said beam for clamping the plates thereto, the inside of that leg of their angle for engaging the front and rear sides of the beam having a projecting part adapted to enter a groove formed across said sides for holding said plates from moving lengthwise of said beam, and the outside of said legs having a groove opposite and parallel with said projection, said last-named grooves being adapted for engaging the aforesaid inward-curved projections of the seat for the sleigh-beam, substantially as set forth.

3. In a sleigh for logging and similar uses, its runners being provided with seats having vertical sides and inward-curved projections oppositely arranged thereon for holding the sleigh-beam, the combination with its beam of similar and interchangeable angle-plates, one upon each of its four corners near each end of the beam, the meeting ends of adjoining plates being spaced apart for allowing the beam to shrink and the plates to be drawn toward each other, and bolts arranged to pass through the plates outside of said beam for clamping the plates thereto, said plates when bolted together around the beam having convex surfaces for bearing upon the seat of the beam and for engaging the vertical sides thereof, the inside of that leg of their angle for engaging the front and rear sides of the beam having a projecting part adapted to enter a groove formed across said sides for holding said plates from moving lengthwise of said beam, and the outside of said legs having a groove opposite and parallel with said projection, said last-named grooves being adapted for engaging the aforesaid inward-curved projections of the seat for the sleigh-beam, substantially as described.

BENJAMIN F. SWEET.

Witnesses:
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