

(No Model.)

F. D. SMITH.
SLEIGH KNEE.

No. 562,256.

Patented June 16, 1896.

Fig. 1,

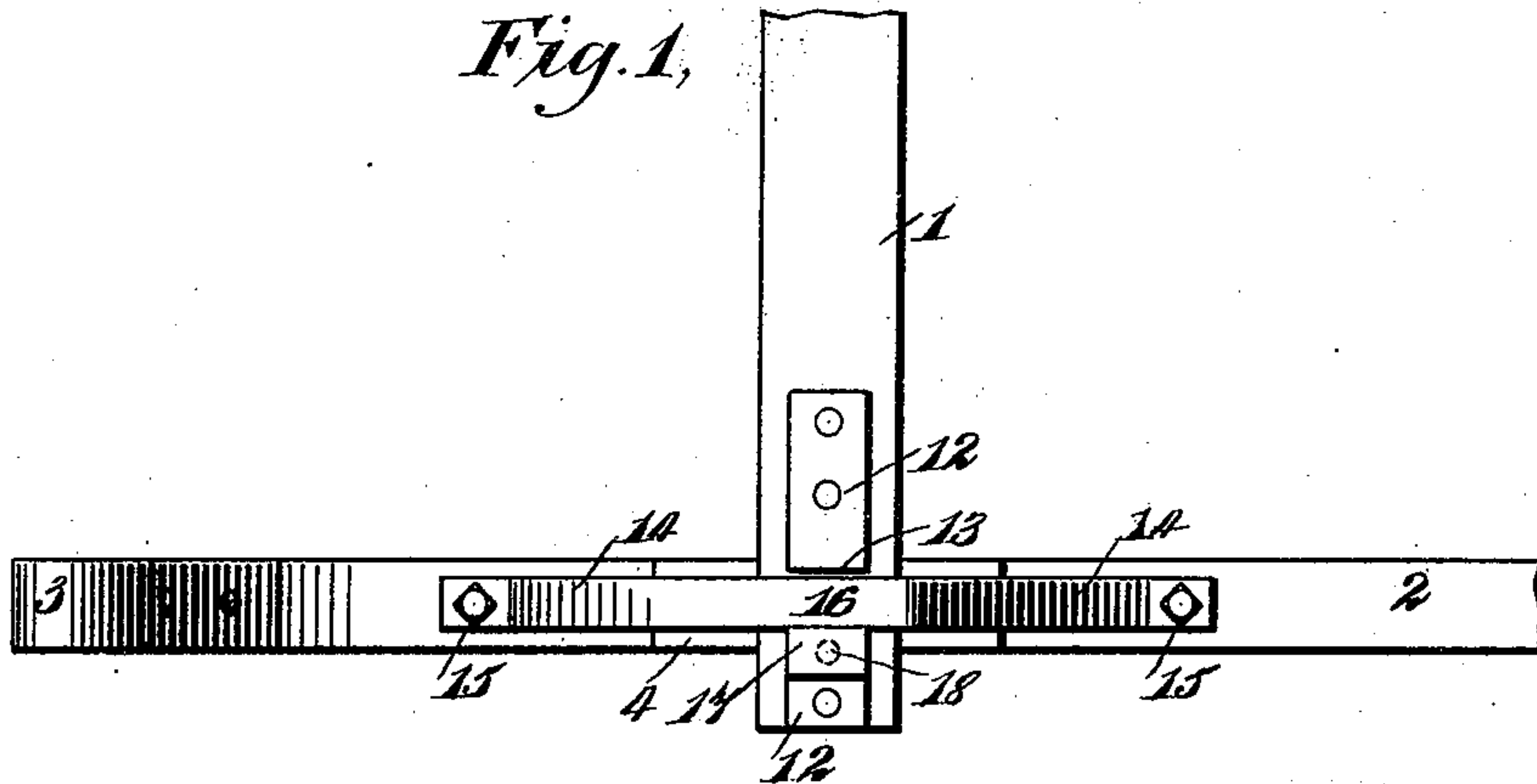


Fig. 2,

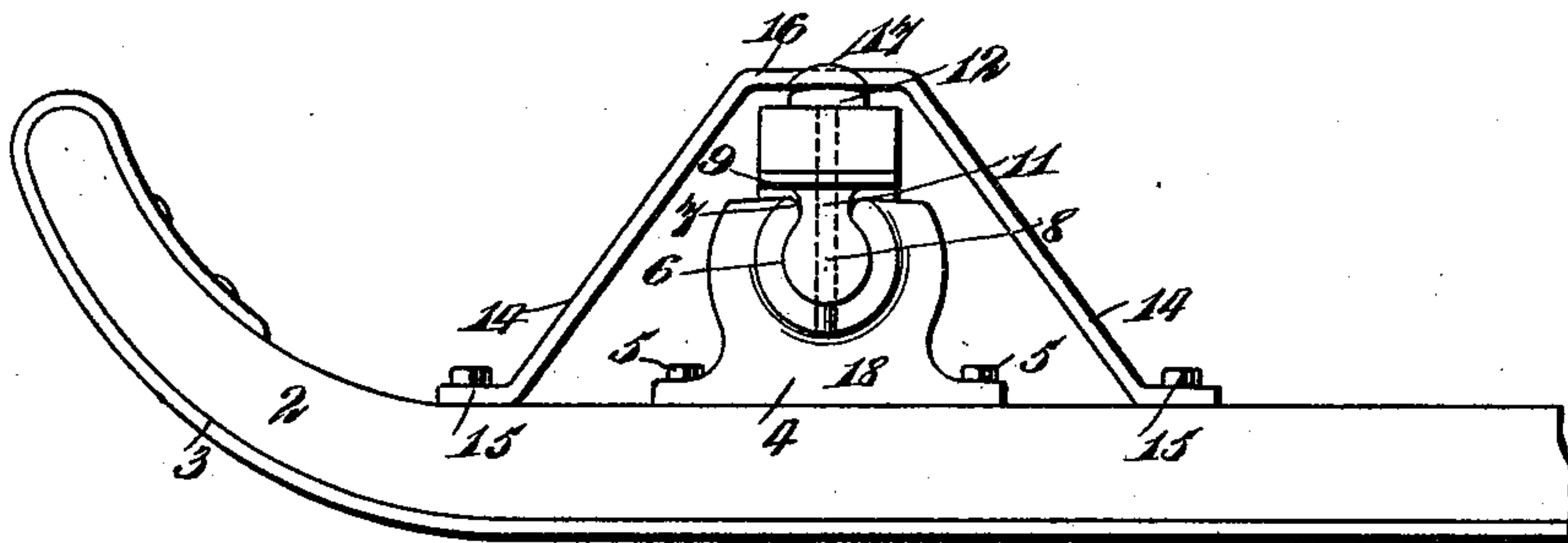
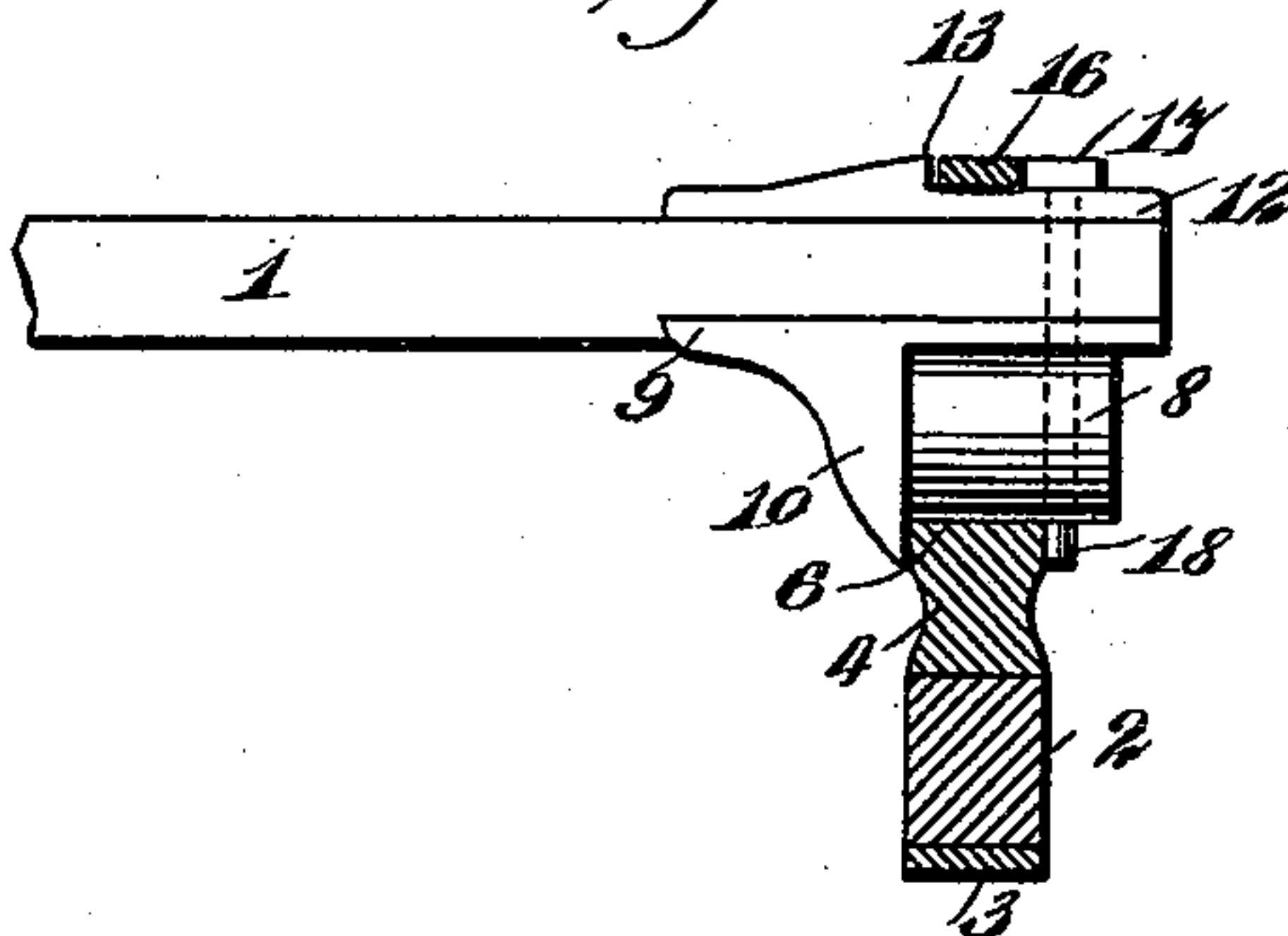


Fig. 3.



WITNESSES:

Edward Thorpe.
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UNITED STATES PATENT OFFICE.

FRANKLIN D. SMITH, OF FREMONT, MICHIGAN, ASSIGNOR OF ONE-HALF
TO JACOB R. DUDLEY, OF SAME PLACE.

SLEIGH-KNEE.

SPECIFICATION forming part of Letters Patent No. 562,256, dated June 16, 1896.

Application filed August 28, 1895. Serial No. 560,798. (No model.)

To all whom it may concern:

Be it known that I, FRANKLIN D. SMITH, of Fremont, in the county of Newaygo and State of Michigan, have invented a new and Improved Sleigh-Knee, of which the following is a full, clear, and exact description.

This invention relates to certain improvements in sleigh-knees, such as are employed for connecting the runners detachably to the beams of sleighs, and the object of the invention is to provide a device of this character of a simple and inexpensive construction, which shall be adapted when in use to hold the runners securely in place, but capable of ready and convenient removal, so that the sleigh may be compactly stored away and packed up during the summer and for shipping.

The invention consists in a sleigh-knee composed of two sections, one of which is secured to the runner and is provided with a socket to receive a correspondingly-formed portion or journal on the other section which is secured to the sleigh-beam, and a locking device to hold said sections together and permit them to oscillate and be readily detached.

The invention also contemplates certain novel features of the construction, combination and arrangement of the various parts of the improved knee, whereby certain important advantages are attained and the device is made stronger, more durable and otherwise better adapted and more convenient for use than various similar devices heretofore in use, all as will be hereinafter fully set forth.

The novel features of the invention will be carefully defined in the claims.

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

Figure 1 is a plan view showing portions of a sleigh beam and runner connected by my improved knee. Fig. 2 is a side elevation showing the same parts, and Fig. 3 is a vertical section taken through that section of the knee which is secured to the runner and showing the locking device for securing the sections together.

In the views, 1 indicates the sleigh-beam, and 2 the runner, these parts being of any preferred construction, and the runner 2 be-

ing provided on its under side with an iron or shoe 3 in the usual way. At its point of attachment to the end of the beam 1 the runner 2 has fixed to its upper side, by means of bolts 5 or the like, a bracket or bearing-piece 4, which forms one member or section of the improved knee, said bracket being provided in its upper end with a transverse socket 6, herein shown as circular in cross-section, provided at its upper part with a reduced slotted opening 7, extending through the end of section 4. The socket 6 in section 4 is adapted to receive a correspondingly-formed projection or journal 8 on a bearing-piece 9, secured to the under side of the beam 1 at the end thereof, said bearing-piece forming the other member or section of my improved knee, and being provided with an enlargement or shoulder 10 at the inner end of said journal 8, against which shoulder bears the inner face or side of the bracket 4 when the parts are assembled as seen in the drawings, and said journal 8 is connected at its upper side to the bearing-piece 9 by means of a reduced web or neck 11, of a size corresponding to and adapted to fit snugly in the open upper end 7 of the socket 6, as shown in Fig. 2.

On the upper side of the beam above the bracket 9 is secured a bearing plate or block 12, having a shoulder 13, and said shoulder is arranged to be engaged by the central horizontal portion 16 of a V-shaped brace, the end portions 14 of which are inclined downward in opposite directions and secured at their lower ends by means of bolts 15, or the like, to the runner 2 at opposite sides of the bearing-piece 4, as clearly seen in Fig. 2. The end of the beam 1, together with the outer ends of the bracket 9 and plate 12, are correspondingly and vertically perforated at a point outside of the bracket 4 and brace 16, and said perforations are adapted to be traversed by a locking-pin 17, the upper end of which is provided with a head 18, the inner face or side of which is arranged to fit close against the outer face of the brace 16, when the said pin is in place, the lower end of said pin being then adapted to project below the journal 8, through which it also extends into position to engage the outer side of the bearing-piece 4 at the base of the socket 6 therein. In operation, when the locking-pin 17 is re-

moved from its perforation, the bearing-piece 4 may be slipped off and on the journal 8 of the bracket 9, with which its socket 6 engages, so as to detach the runner from the beam 5 and secure the same in place thereon, and when the runner is in place it may be securely held against removal, as will be readily seen, by the insertion of said locking-pin 17 in its perforation.

10 From the above description of my improved sleigh-knee it will be apparent that the device is of an extremely simple and inexpensive construction and is adapted to hold the runner securely in place at all times, while 15 permitting the same to be readily and conveniently removed when the sleigh is not required for use and is to be stored away. It will also be seen that the device is very strong and durable, and being composed of but three 20 parts is not liable to become broken or deranged. Furthermore, it will be obvious that the invention is susceptible of some modification without material departure from its principles, and for this reason I do not wish 25 to be understood as limiting myself to the exact construction of the several parts herein set forth.

Having thus described my invention, I claim as new and desire to secure by Letters 30 Patent—

1. A sleigh-knee, comprising a bearing-piece adapted to be secured to the runner and having a socket, a beam having a perforated journal to engage said socket, and having a shoulder on its upper side, a brace secured to the runner and arranged over said beam, one side of said brace engaging the shoulder on the upper side of the beam, and a pin passed through the perforation in the journal and arranged to hold the same against 35 removal from the socket, said pin also engaging said brace on the side thereof opposite to the side engaged by the shoulder on the beam, substantially as set forth. 40

2. A sleigh-knee, comprising a bearing-piece having a transverse socket, a bracket 45 having a journal to engage the socket, said journal being provided at its inner end with a shoulder to engage the side of the bearing-piece when the journal is in place in the 50 socket, and a pin passed through the bracket and arranged to engage the side of the bearing-piece opposite to the side engaged by said shoulder, substantially as set forth.

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Witnesses:

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