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DETACHABLE IMPLEMENT FOR SPINNING FRAMES.  
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916,940.

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Fig. 3.

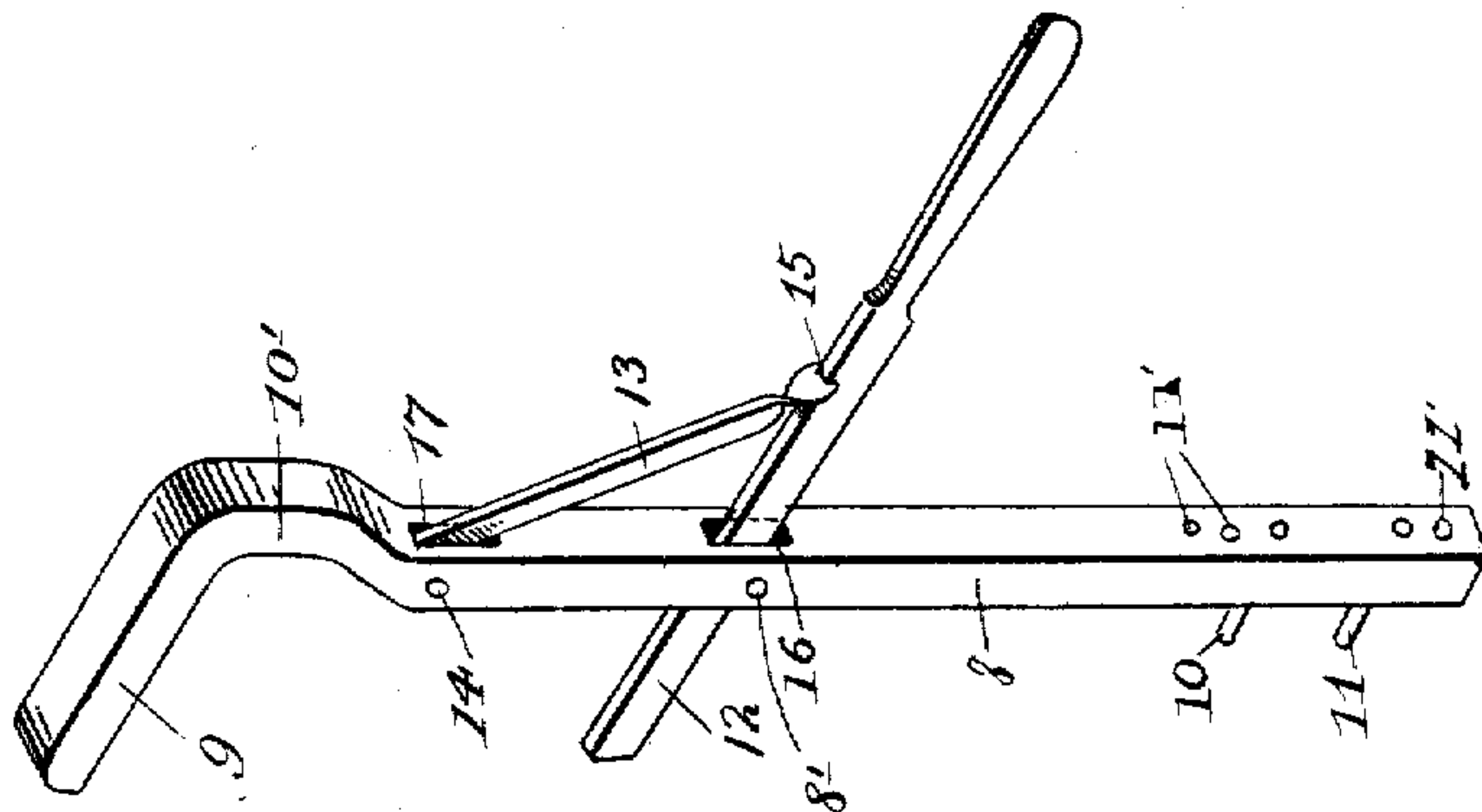


Fig. 2

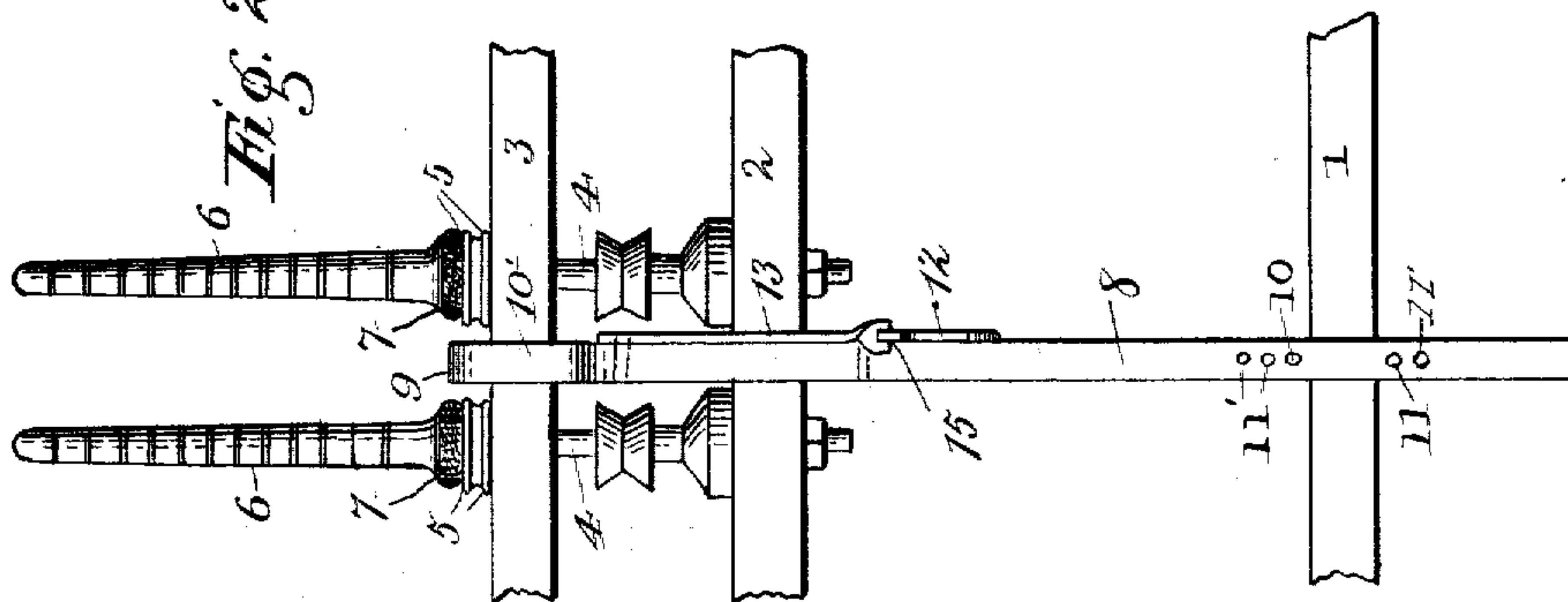
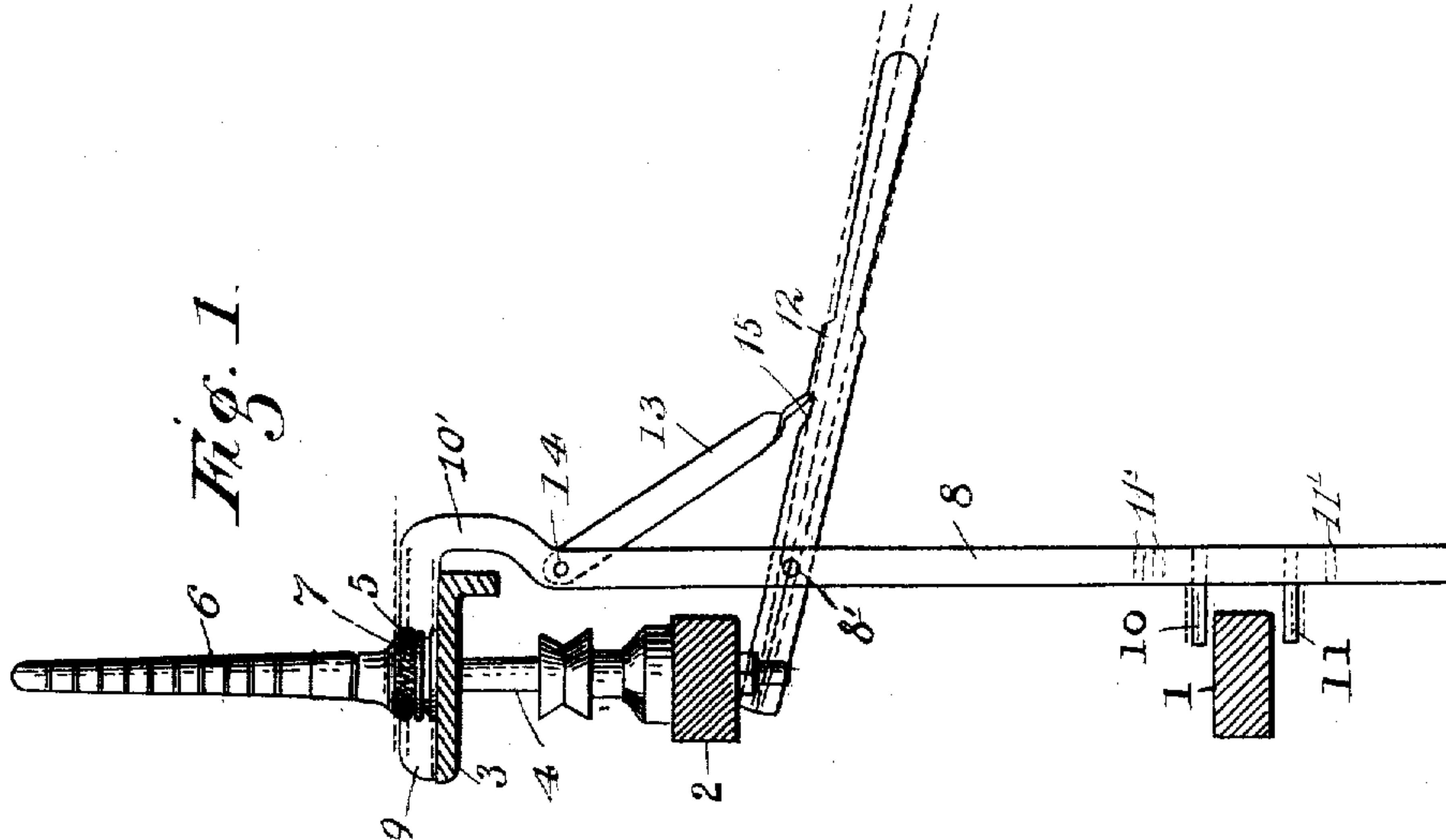


Fig. 1.



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## DETACHABLE IMPLEMENT FOR SPINNING-FRAMES.

No. 916,940.

Specification of Letters Patent.

Patented March 30, 1909.

Application filed November 4, 1908. Serial No. 461,000.

*To all whom it may concern:*

Be it known that I, WILLIAM J. WILLETT, a citizen of the United States, residing at Cooleemee, in the county of Davie and State  
5 of North Carolina, have invented certain new and useful Improvements in Detachable Implements for Spinning-Frames; and I do hereby declare the following to be a full, clear, and exact description of the invention,  
10 such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates primarily to spinning-frames, has especial reference to "bunch  
15 builders" and consists of an implement detachably applied to a spinning-frame for the purpose of manipulating or imparting to the ring-rail traverse motion, whereby the thread or yarn is laid upon the quills, as will be  
20 fully disclosed in the following specification and claims.

In the accompanying drawings, which form part of this specification:—Figure 1 represents a vertical transverse section of the  
25 rails of a spinning-frame, showing the implement in side elevation. Fig. 2 a front elevation of part of a spinning-frame with my implement applied thereto, and Fig. 3 a perspective of a modified form of the implement  
30 detached.

Reference being had to the drawings and the designating characters thereon, the numeral 1 indicates the fixed bottom-rail, 2 the fixed middle-rail, 3 the vertically movable  
35 ring-rail, 4 the spindles, 5 the rings, 6 the quills and 7 the "bunch" on each quill all of which are of well known construction.

8 indicates the standard or body of my implement and consists of a square or rectangular rod or bar of metal provided at its  
40 upper end with a lateral arm 9 which extends across the top or upper side of the ring-rail 3. The standard 8 extends down below the bottom-rail 1 and is provided with  
45 two inwardly projecting members or pins 10, 11, fixed in the standard, which engage the bottom-rail alternately, the members being separated a distance equal to the thickness of the bottom-rail plus the width of the  
50 "bunch" it is desired to make on the quills. One or both pins may be made adjustable by providing additional holes 11' so as to allow for building "bunches" of different widths as needed for different numbers of  
55 yarns.

12 indicates a lever connected to the standard 8 by a pin 8', and the inner end of the lever engages the bottom or underside of the middle-rail 2. On the standard 8 is a latch  
13, pivotally secured by a pin 14, and engages  
60 a notch 15, in the upper edge of the lever 12, for permitting the frame to put yarn on the middle of the "bunch" 7 on the quill 6. The lever 12 may be pivoted in a slot 16, and the latch 13 may be pivoted in a slot 17, as  
65 shown in Fig. 3.

The ring-rail being of greater width than, and extending beyond the middle and the bottom-rails, the standard 8 is provided with an offset 10' to accommodate the front pro-  
70 jection of the ring-rail and allow the standard to approach the middle and the bottom-rails.

The operation is as follows, when empty quills 6 are put on the spindles 4, thread or  
75 yarn is supplied to the quills in the usual manner, the means therefor being omitted from the drawings for the reason that they are well known and form no part of my present invention. The spinning-frame is start-  
80 ed, the operator with one hand depresses the ring-rail 3, and with the other hand puts the arm 9 over the top of the ring-rail, the short arm of the lever 12 under the middle-rail and the pins 10 and 11, one above and the other  
85 below the bottom-rail 1, and presses the standard 8 up to or against the rails 1, 2. He then removes his hand from the ring-rail 3, which will be raised by the weights (not shown) of the spinning-frame until the lower  
90 member or pin 11 comes against the lower side of the bottom-rail 1. The operator then, while holding the standard 8 of the implement with one hand moves the lever 12  
95 down and up a number of times while the pins 10, 11 alternately come in contact with opposite sides of the bottom-rail 1. This puts a "bunch" 7 on the quills, as wide as the vertical travel of the implement. The  
100 ring-rail 3 is depressed by the implement, but when the arm 9 rises from the ring-rail 3, the weights on the spinning-frame carry the ring-rail up with the implement. When  
105 enough thread or yarn has been put on the quills to form the base of the "bunch", the lever 12 is stopped in the middle of the space the members 10, 11, allowed it to travel, and is locked or secured by the pivoted latch 13 engaging the notch 15 in the lever 12, which  
110 will prevent the lever moving upward while



the weights on the spinning-frame carry the ring-rail and the implement upward. While the implement is in this position, the frame is putting the thread or yarn on the middle of the "bunch" on the quills. The "bunches" having been formed on the quills, the operator winds up the traverse motion of the spinning-frame, and then releases and removes the implement from the frame, when it can be used successively as often as required to build "bunches" on the same or on other frames.

The implement may be used on any part of the ring-rail, on either side of the frame. It is however most convenient to use it on the part nearest to where the traverse motion is wound up.

It is obvious that the pins or members 10, 11, may be applied above and below the middle-rail 2, and the short end of the lever 12 may be placed under the bottom-rail if desired.

The implement is inexpensive, as it may be made of wrought metal or of malleable cast iron, is easily and readily applied and removed from a spinning-frame, and can be manipulated by an attendant employed on the frame, and thus takes the place of expensive and complicated machinery now employed as permanent parts of spinning-frames for building "bunches".

Having thus fully described my invention, what I claim is—

1. A separate implement for the purpose described, adapted to be applied to and supported upon a spinning-frame and provided with means for engaging the ring-rail, and means for imparting vertical motion thereto.

2. A separate implement for the purpose described, adapted to be applied to and supported upon a spinning-frame, having a member for engaging the ring-rail and capable of being reciprocated to impart vertical motion thereto.

3. A separate implement for the purpose described, adapted to be applied to and supported upon a spinning-frame, and provided with means for engaging the ring-rail, means for imparting vertical motion thereto, and

means for positioning the ring-rail to apply yarn to the middle of the bunches on the quill.

4. A separate implement for the purpose described, adapted to be applied to and supported upon a spinning-frame, and provided with means for engaging the ring-rail, spacing members for engaging one of the fixed rails and a lever for imparting vertical motion to the ring-rail.

5. A separate implement for the purpose described, adapted to be applied to and supported upon a spinning-frame, comprising a standard provided with means for engaging the ring-rail, a lever for imparting vertical motion thereto, and means for locking the lever on the standard.

6. A separate implement for the purpose described, comprising a standard provided with an arm at its upper end adapted to cross and engage the ring rail of a spinning-frame, means for engaging one of the fixed rails, a lever for engaging one of the fixed rails to impart vertical motion to the ring-rail, and means on the standard for locking the lever.

7. A separate implement for the purpose described, comprising a standard adapted to engage the ring-rail, a lever pivotally connected to the standard and adapted to engage the middle rail, and a latch pivotally secured to the standard and adapted to engage the lever.

8. A separate implement for the purpose described, adapted to be applied to and supported upon a spinning-frame, comprising a standard provided with an arm at its upper end for engaging the ring-rail, an offset adjacent to said arm, members on the standard for engaging one of the fixed rails, a lever pivotally secured on the standard and adapted to engage one of the fixed rails, and a latch pivotally secured to the standard and adapted to engage the lever.

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

WILLIAM J. WILLETT.

Witnesses:

SADIE TATUM,

JAMES W. ZACHARY.