

No. 731,576.

PATENTED JUNE 23, 1903.

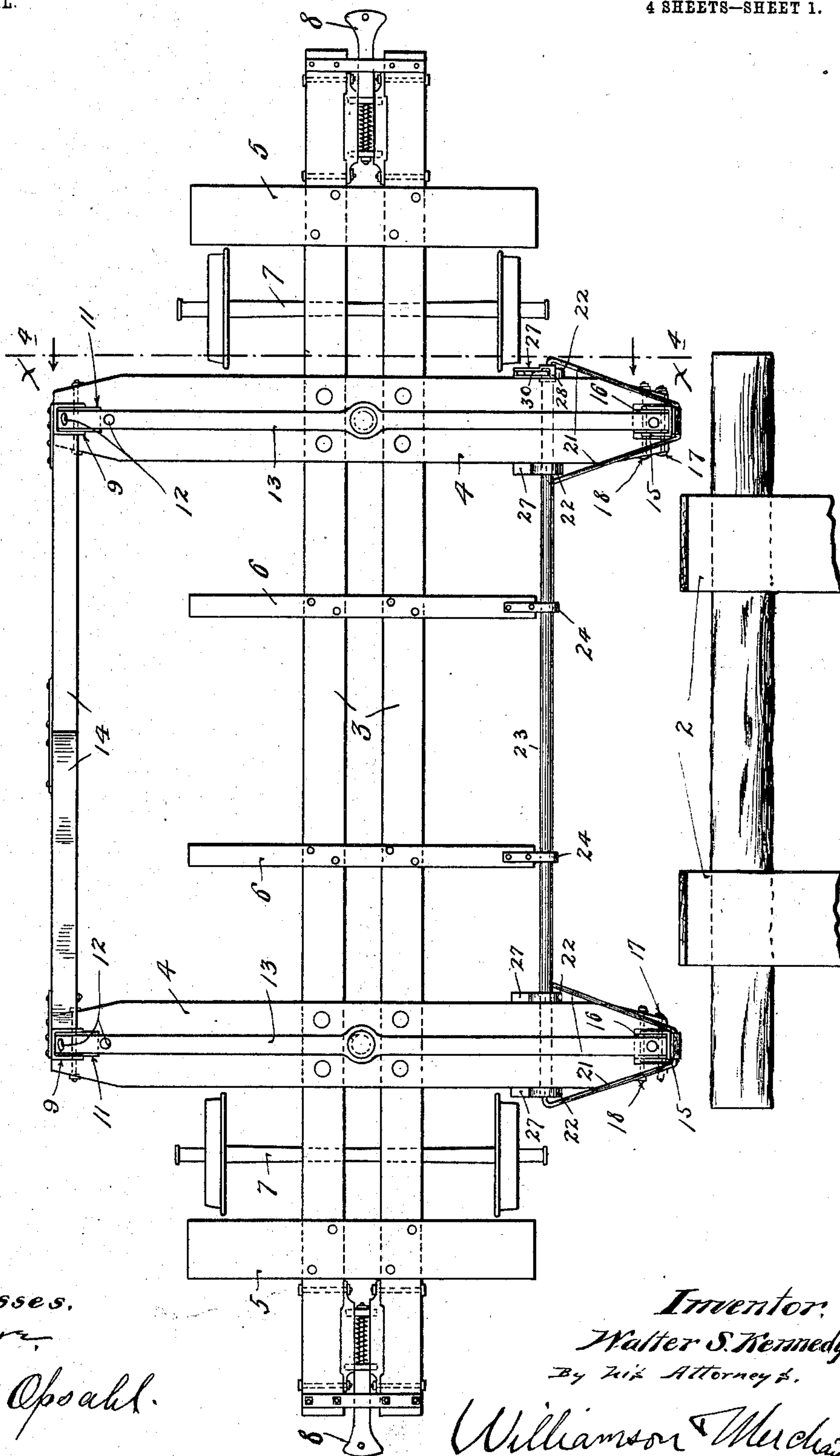
W. S. KENNEDY.
LOG CAR.

APPLICATION FILED JAN. 21, 1903.

NO MODEL.

4 SHEETS—SHEET 1.

Fig. 1.



Witnesses.
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A. H. Osoahl.

Inventor.
Walter S. Kennedy
By his Attorney &c.

Williamson & Merchant

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4 SHEETS—SHEET 2.

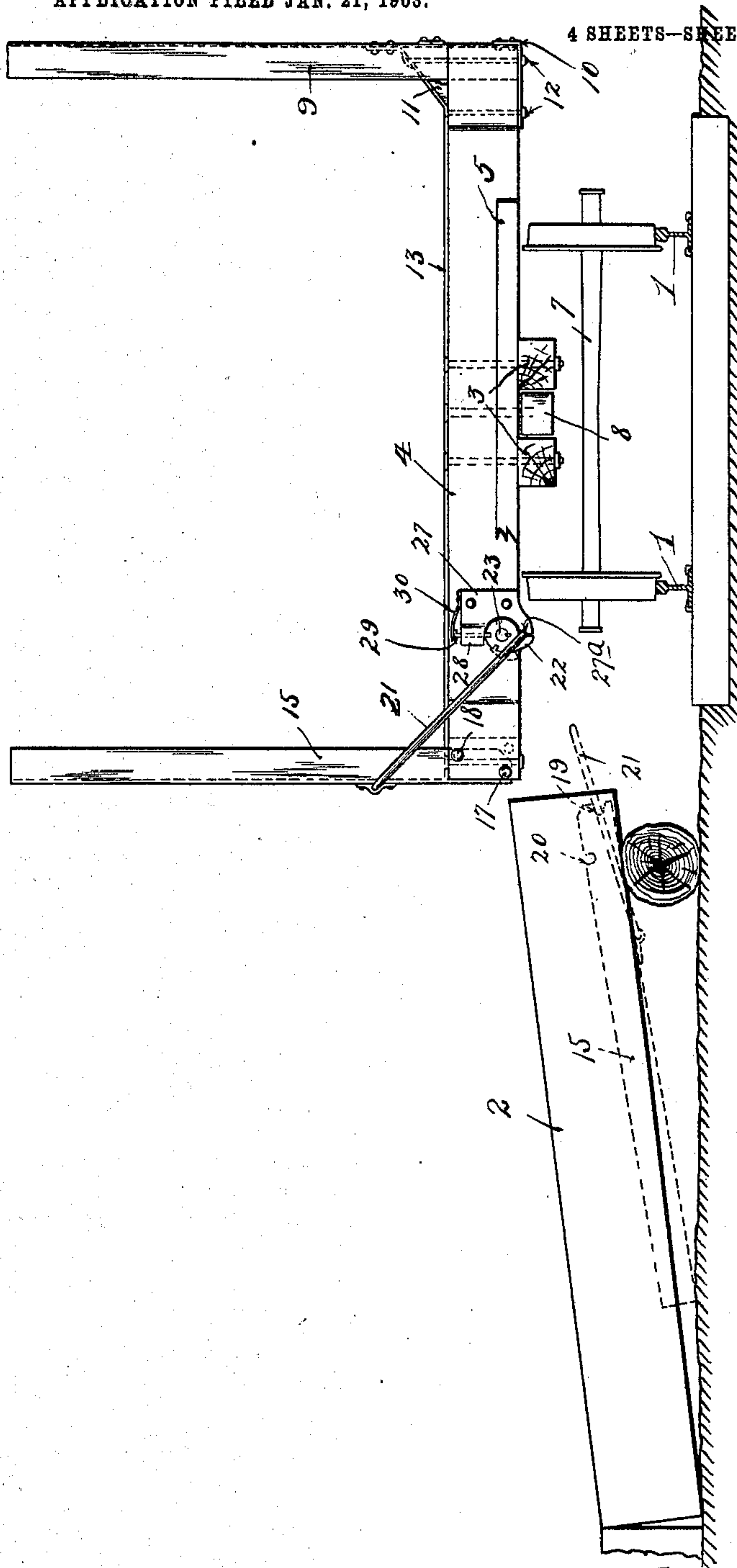


Fig. 2.

Witnesses.

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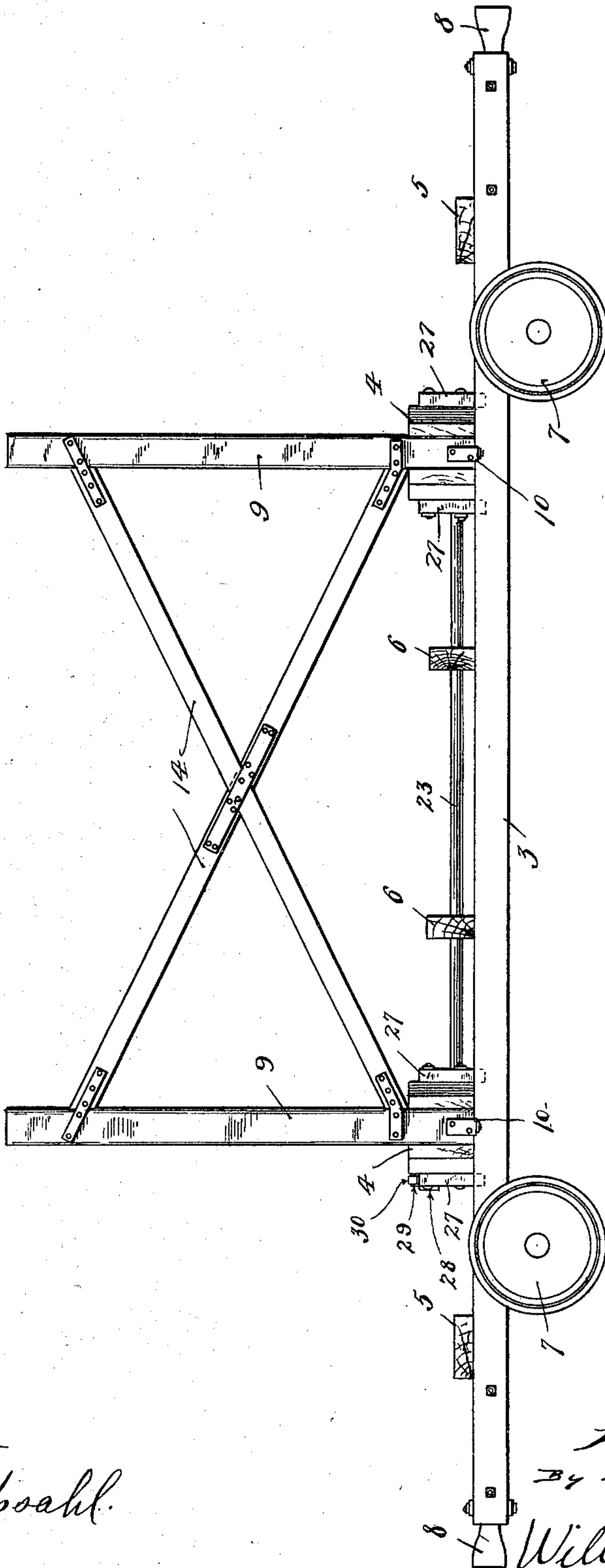
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4 SHEETS—SHEET 3.

Fig. 3.



Witnesses.

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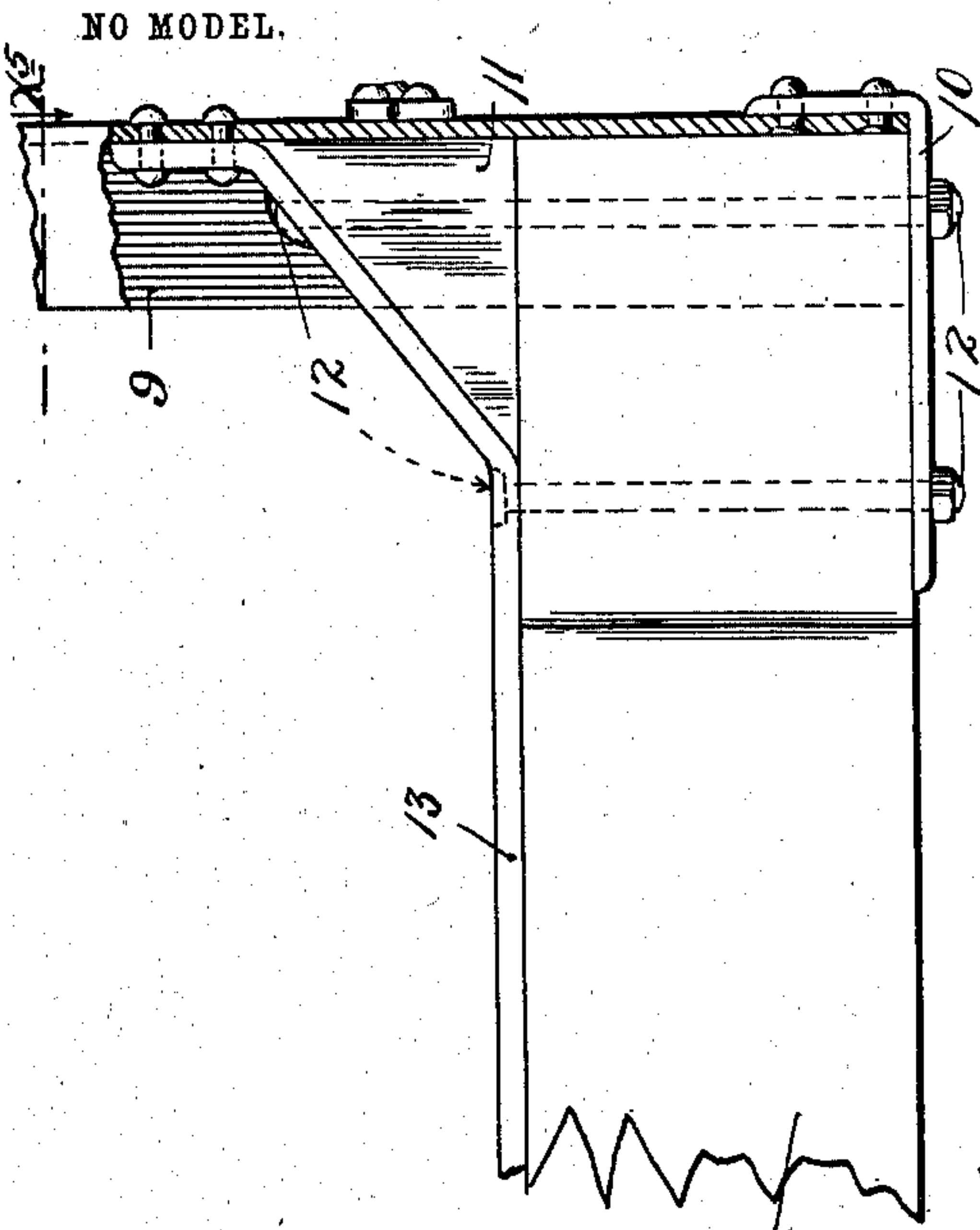


Fig. 4.

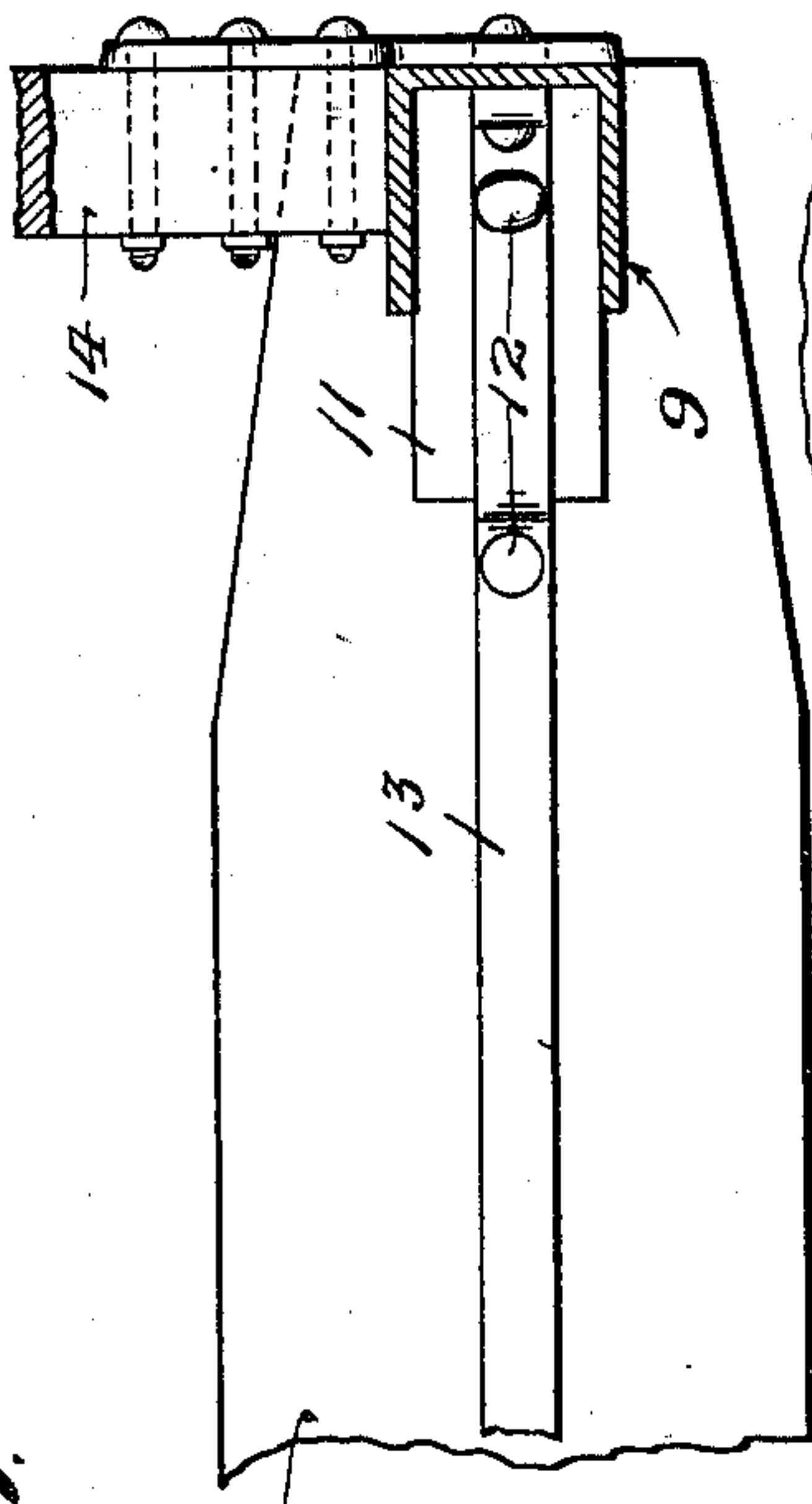


Fig. 5.

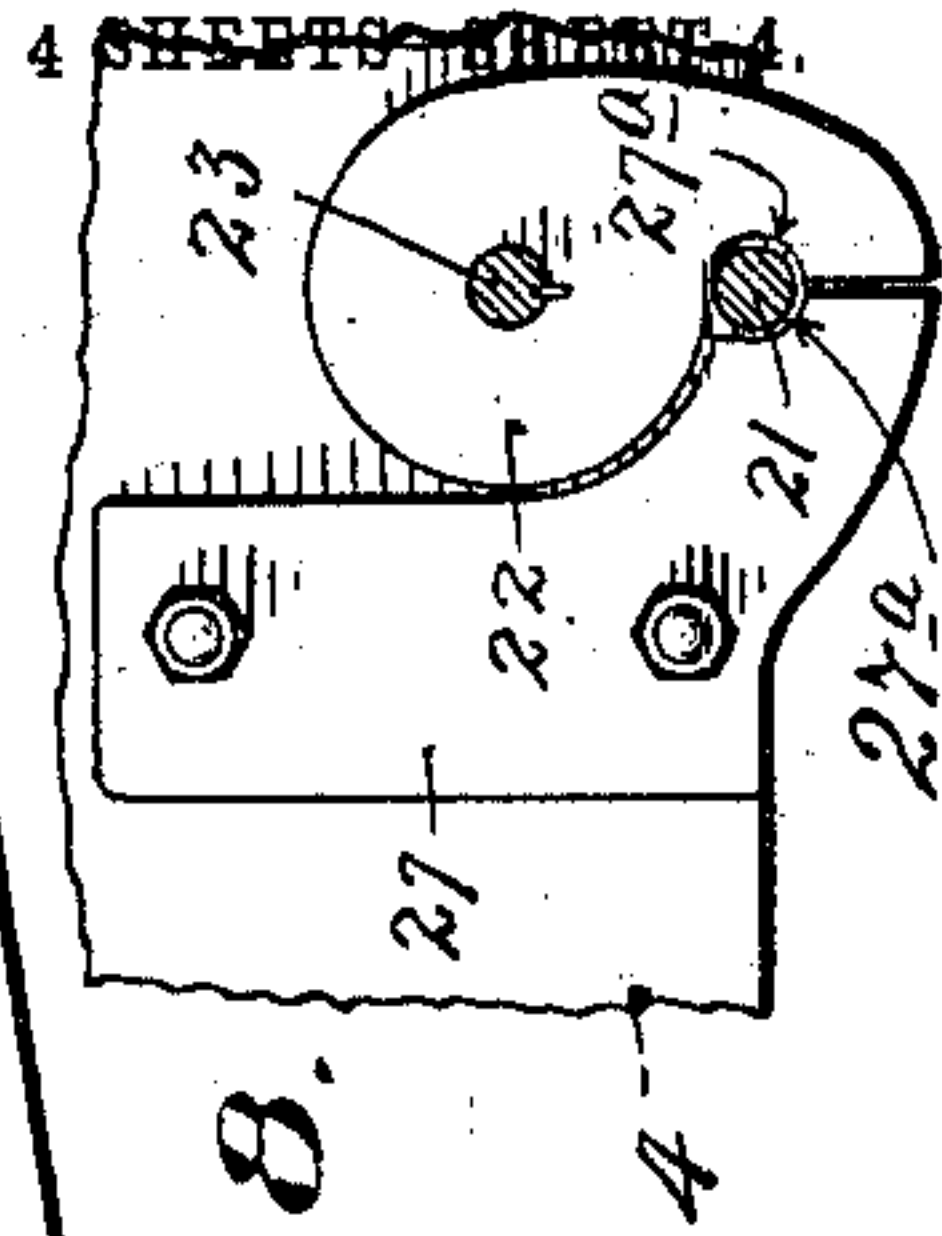


Fig. 8.

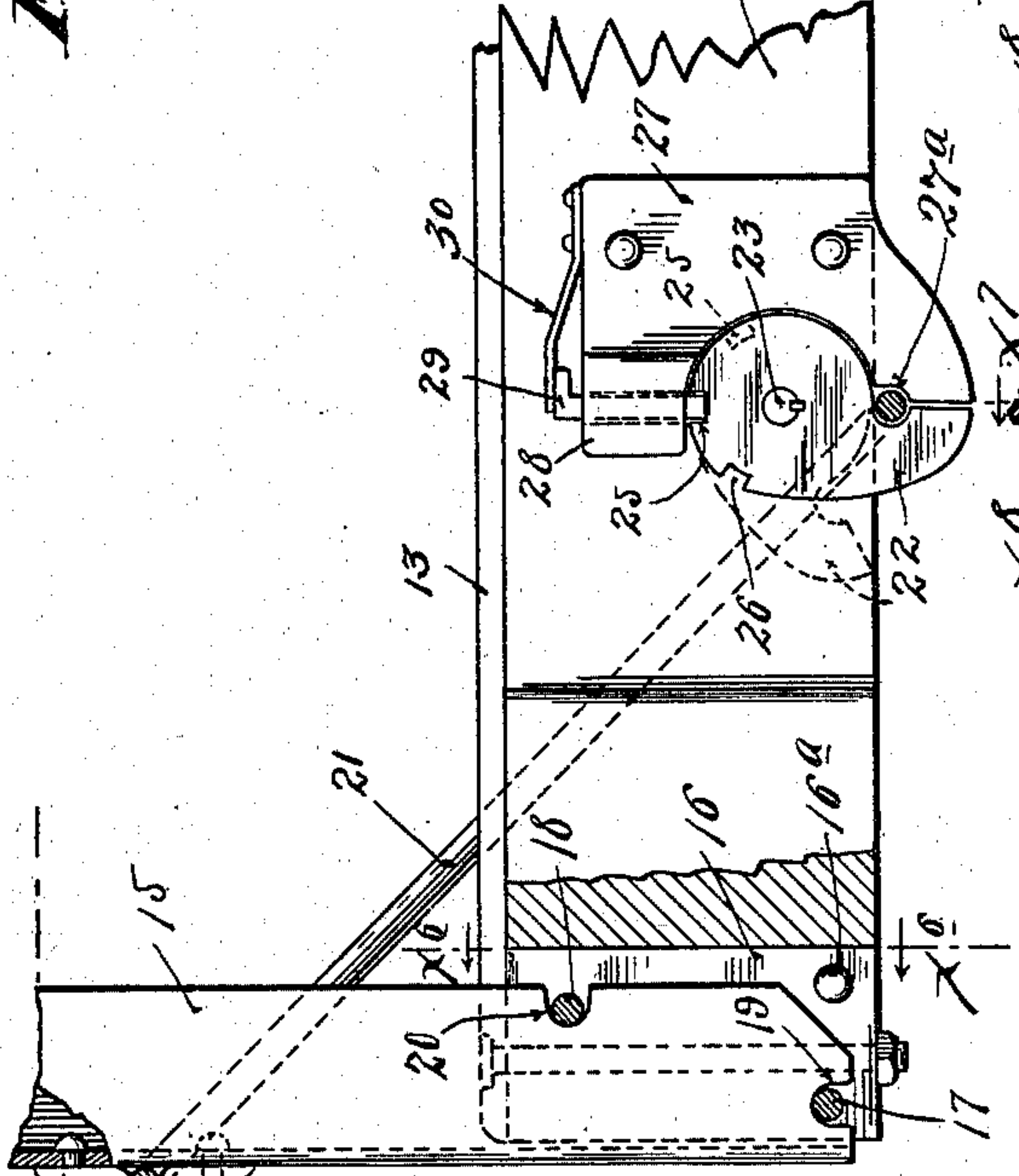


Fig. 6.

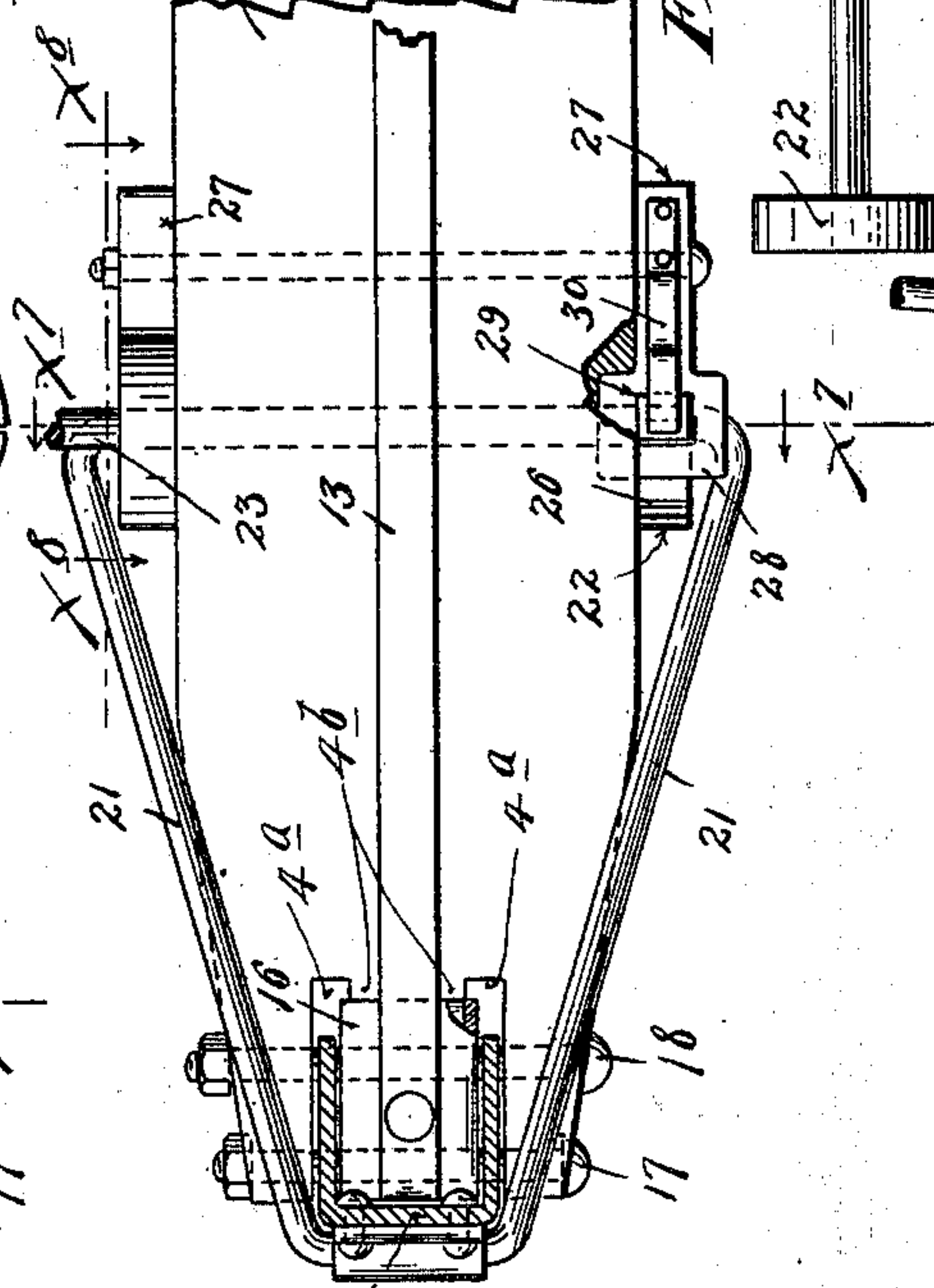
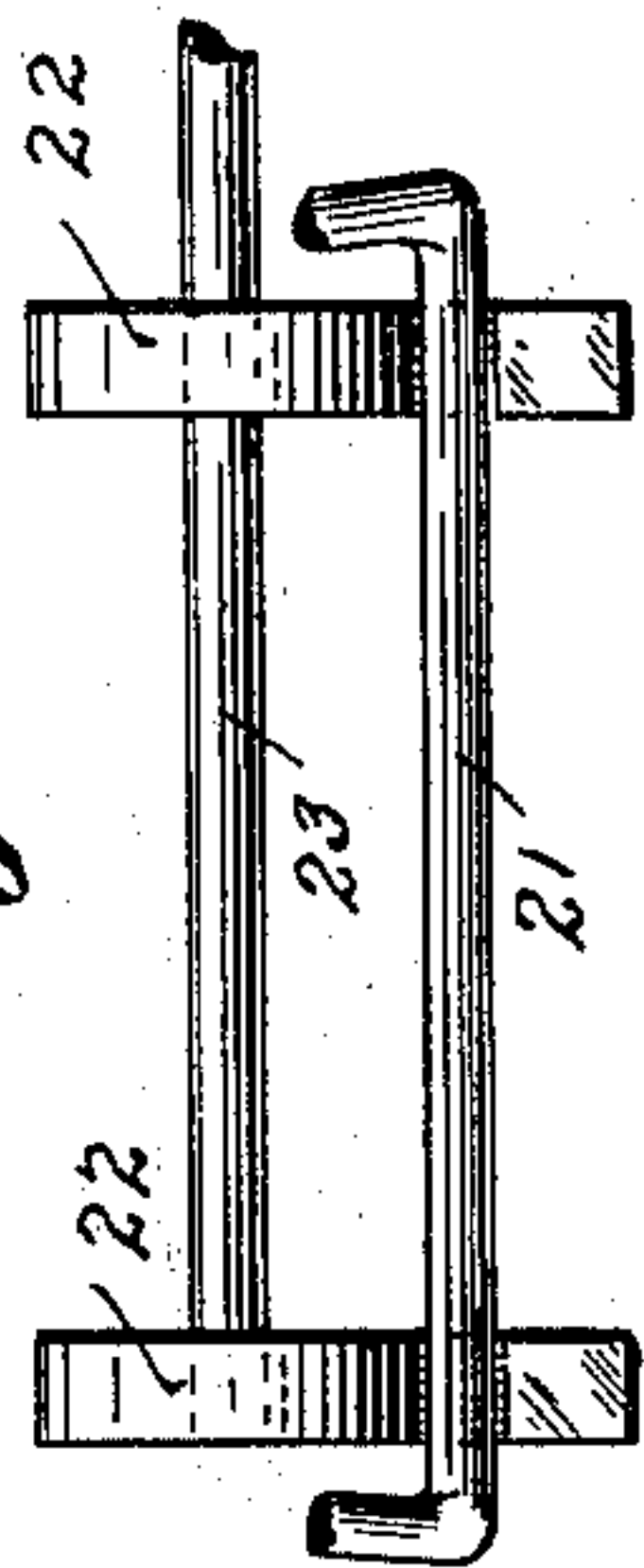


Fig. 7.



Witnesses.
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UNITED STATES PATENT OFFICE.

WALTER S. KENNEDY, OF MINNEAPOLIS, MINNESOTA.

LOG-CAR.

SPECIFICATION forming part of Letters Patent No. 731,576, dated June 23, 1903.

Application filed January 21, 1903. Serial No. 139,929. (No model.)

To all whom it may concern:

Be it known that I, WALTER S. KENNEDY, a citizen of the United States, residing at Minneapolis, in the county of Hennepin and State of Minnesota, have invented certain new and useful Improvements in Log-Cars; 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.

My present invention relates to log-cars, and has for its especial object to provide improved drop-stakes therefor and means for actuating such stakes.

To such ends the invention consists of the novel devices and combinations of devices hereinafter described, and defined in the claims.

The invention is illustrated in the accompanying drawings, wherein like characters indicate like parts throughout the several views.

Figure 1 is a plan view of a log-car having my present invention applied thereto, said view showing in connection therewith a track and skid-deck. Fig. 2 is an end elevation of the log-car and other parts shown in Fig. 1, some parts being removed. Fig. 3 is a side elevation of a log-car looking at that side of the car to which the rigid stakes are applied. Fig. 4 is a transverse vertical section taken approximately on the line $x^4 x^4$ of Fig. 1, some parts being broken away. Fig. 5 is a horizontal section on the line $x^5 x^5$ of Fig. 4. Fig. 6 is a vertical section on the line $x^6 x^6$ of Fig. 4. Fig. 7 is a vertical section approximately on the line $x^7 x^7$ of Fig. 5; and Fig. 8 is a vertical section on the line $x^8 x^8$ of Fig. 5, some parts being broken away.

In Fig. 2 the numeral 1 indicates the rails of the track over which the car runs, and in Figs. 1 and 2 the numeral 2 indicates an inclined skid-deck at the side of the track.

The body of the car is made up chiefly of longitudinal body-beams 3 and a transverse bunk 4. As shown, the car-body also involves transverse end beams 5 and transverse intermediate bars 6. This body is supported in the usual way by trucks 7. (Shown only in part in the drawings.)

The numeral 8 indicates suitable couplers secured to the ends of the body-beams 3.

The log-stakes are all preferably formed of channel-iron. The stakes at one side of the car are rigidly secured to the ends of the bunks, while those on the other side of the car are detachably secured thereto by novel means, which constitutes the main feature of my present invention. The rigidly-secured stakes 9 stand with their flanges turned inward and with their lower ends mortised into the adjacent ends of the bunks 4 and secured thereto, preferably by corner-irons 10 and angular filling-blocks 11, through which parts are passed long bolts 12, as best shown in Fig. 4. Metallic wearing-straps 13, which run over the tops of the bunks 4, are bent to fit the upper surfaces of the angular blocks 11 and are riveted to the backs of the said rigid stakes. The bolts 12, before noted, are also passed through the adjacent ends of the straps 13. In this way the permanent or rigid stakes are very securely and rigidly connected to the body of the car. The rigid stakes 9 are preferably tied together from front to rear of the car by crossed truss-bars 14. The detachable or so-called "drop-stakes" 15 are also formed of channel-iron and when in working position their flanges are turned inward and loosely fit in mortises or notches 4^a cut in the adjacent ends of the bunks 4. The projecting lug-like portions 4^b, formed at the ends of the bunks between the notches 4^a, are preferably covered by a U-shaped wearing-plate 16, which is suitably secured thereto in any suitable way, as by a bolt 16^a, as best shown in Figs. 4, 5, and 6. A pair of bolts 17 and 18 are passed horizontally through the ends of the bunks 4, both thereof passing through the mortises or notches 4^a. The flanges of the drop-stakes 15 are provided in their extreme lower ends with notches 19, which are adapted to rest on the bolts 17, and a little farther up the said flanges are provided at their inner edges with notches 20, that are adapted to engage the bolts 18. When the drop-stakes 15 are held in working positions, their flanges embrace the wearing-plates 16 on the lug portions 4^b of the bunks, and their notches 19 and 20 engage, respectively, the bolts 17 and 18, as best shown in

Figs. 4 and 5. When the stakes 15 are applied, as just stated, their upper ends are by the bolts 17 and 18 held against movement inward from vertical positions; but they are, so far as the said bolts are concerned, free to fall outward.

To each drop-stake 15 at a point some little distance above the lower end thereof is pivoted a brace afforded by an approximately triangular bail-like link 21. The flaring free ends of the links 21 of the two drop-stakes embrace the adjacent ends of the bunks and are normally held by detents or lock-hooks 22, rigidly secured to an oscillating shaft 23, extended longitudinally of the car and journaled in the bunks 4, and, as shown, also in bearings 24 on the adjacent ends of the bars 6. The detents 22 are arranged in pairs, two thereof engaging with each link 21. One of the detents 22, as shown the extreme right-hand member with respect to Fig. 1, has a disk-like hub armed with two peripheral notches 25 and 26. Rigidly secured to the adjacent ends of the bunks 4 for cooperation, one with the detent 22, is a bracket or head 27, the lower portions of which afford stops for limiting the inward movements of the hooked free ends of said detents and cooperating therewith to hold the free ends of the cooperating links 21 when the drop-stakes are locked in upright or working positions. The bracket 27 at the extreme right, which cooperates with the detent having the notches 25 and 26, is provided with a bearing 28, in which is loosely mounted the lock bolt or plunger 29, which is yieldingly pressed downward for engagement with one or the other of said notches by a spring 30, shown as secured to the said bracket 27.

The manner in which the drop-stakes are normally locked and held in working positions has already been made clear. When the car stands opposite the skids 2 or at other suitable point for dumping, the drop-stakes are released as follows: By means of a crow-bar or other suitable tool applied to the head of the lock-bolt 29 the said bolt is raised out of engagement with the notch 25, and this being done all of the detents 22 and the shaft to which they are secured are released and permitted to swing into the position indicated by dotted lines in Fig. 4. The outward pressure of the logs on the drop-stakes will of course force the same pivotally outward on the bolts 17, and as the links 21 are drawn outward their horizontally-extended free portions are drawn along against the under sides of the bunks, thereby causing the detents or hooks 22 to swing pivotally upward until their free ends pass above the lower portions of the bunks, (see Fig. 4,) whereupon the said links being entirely free from the detents permit the drop-stakes to fall outward and onto the ground or onto some other support below the tops of the skids 2, where they will be protected, so that they cannot be broken by the falling logs.

When the detents or hooks 22 are moved into their inoperative positions, (indicated by dotted lines in Fig. 4,) they will be locked in such inoperative positions by the engagement of the bolt 29 with the notch 26.

It will be noted that the depending prongs of the brackets 27 are provided with notches 27^a, in which the transverse portions of the link 21 rest in part when the said links are in operative positions. It will also be noted that the bolts 17, which chiefly sustain the weight of the drop-stakes 15, stand close to the outer sides of the said stakes. From this it results that when the stakes are placed upright in working position and their links 21 applied to the said notches 27^a the said parts will temporarily stand as set while the detents or hooks 22 are being moved back to operative or locking positions. Such return movement of the detents of course requires the lock-bolt 29 to be raised out of engagement with the notch 26.

The device above described, while extremely simple, strong, and durable, may be very easily manipulated. It will of course be understood that the device is capable of considerable modification within the scope of my invention as herein set forth and claimed.

What I claim, and desire to secure by Letters Patent of the United States, is as follows:

1. In a log-car, the combination with transverse bunks, of drop-stakes detachably supported at the ends of said bunks, bail-like braces applied to said stakes and embracing the same and the adjacent ends of said bunks, and means for securing the inner ends of said links to said bunks and releasing the same, substantially as described.

2. In a log-car, the combination with bunks, of channel-shaped stakes, the flanges of which fit in notches cut in the ends of said bunks, substantially as described.

3. In a log-car, the combination with bunks, of channel-shaped stakes, the flanges of which are seated in notches cut in the ends of said bunks, and means for securing said stakes in working position and for releasing the same, at will, substantially as described.

4. In a log-car, the combination with bunks, of drop-stakes detachably connected thereto at their lower ends, braces applied at their outer ends to said stakes, a shaft mounted on the truck-frame, and provided with detents or hooks, engageable with the inner ends of said braces, a notched limb on said shaft, and a link cooperating with said notched hub to normally hold said detents in operative position, substantially as described.

5. In a log-car, the combination with the bunks 4, notched and provided at their ends with the transverse bolts or rods 17 and 18, of the drop-stakes having the notches 19 and 20, for engagement, respectively, with the said bolts 19 and 20, the bail-like links 21 pivoted to said stakes and adapted to embrace the lower ends of said stakes and the adjacent ends of said hubs, the shaft 23 being mounted

in said bunks and provided with the detents or hooks 22 engageable with the free portions of said links 21, one of said detents having a notched hub, and a lock-bolt suitably mounted for coöperation with said notched hub, to hold all of said detents in locking positions, substantially as described.

6. In a log-car, the combination with the bunks 4 notched at their ends and provided with bolts 17 and 18, of the channel-like drop-stakes 15 having the notches 19 and 20 engageable, respectively with said bolts 17 and 18, the bail-like links pivoted to said stakes and adapted to embrace the lower ends of said stakes and the adjacent ends of said

bunks, the shaft 23 mounted on said bunks, the detents or hooks 22 secured on said shaft and coöperating with the free ends of said links, the hub of the said detents having the notches 25 and 26, the brackets 27 coöperating with said detents, and the spring-pressed lock-bolt 29 mounted in one of said brackets 27 for coöperation with said notches 25 and 26, substantially as described.

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

WALTER S. KENNEDY.

Witnesses:

GEO. W. MURPHY,
FRED W. FRINK.