

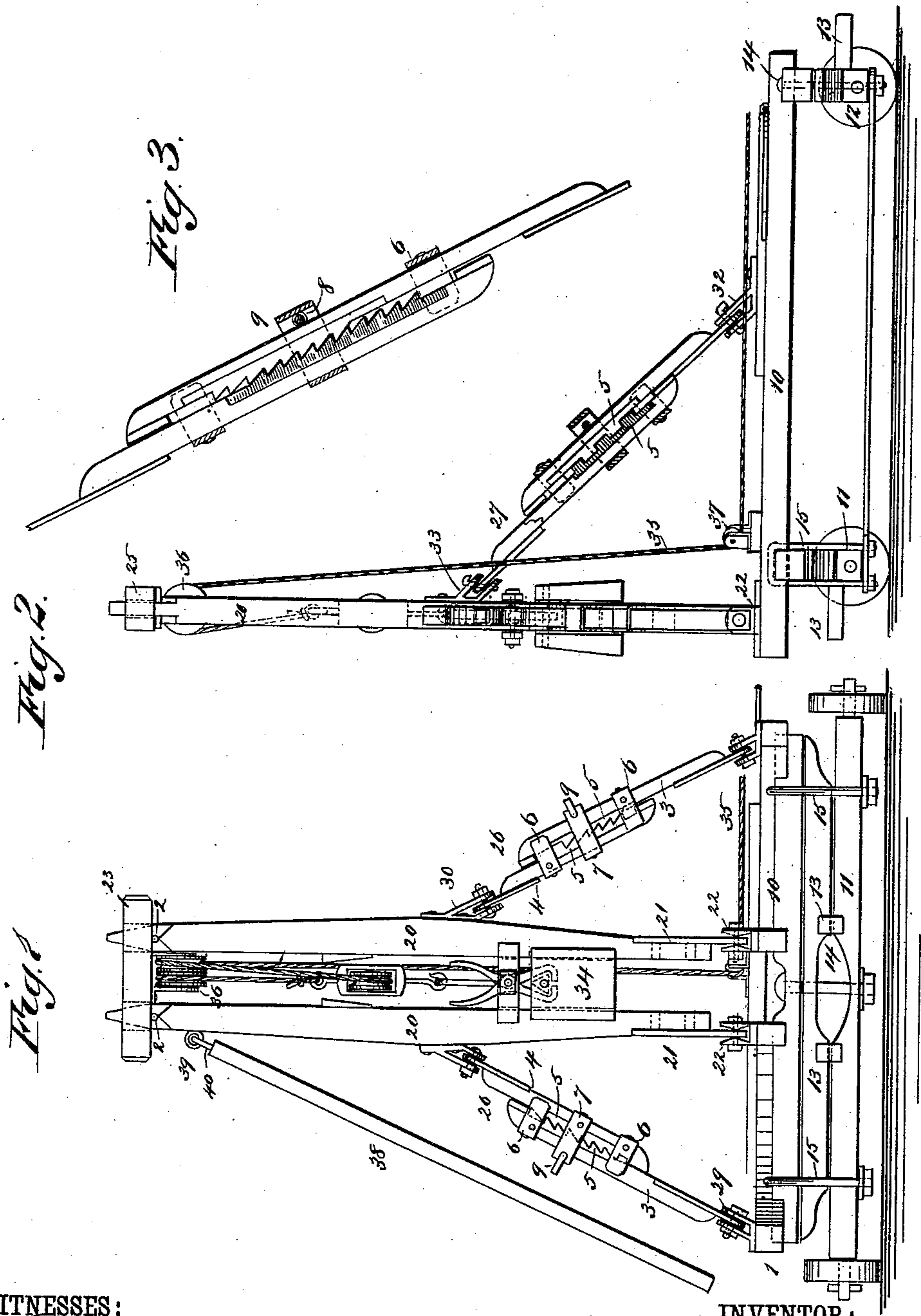
(No Model.)

2 Sheets—Sheet 1.

A. TOWBERMAN.
POST AND PILE DRIVER.

No. 347,211.

Patented Aug. 10, 1886.



WITNESSES:

H. Mc Ardle
G. Sedgwick

INVENTOR:

A. Towberman

BY

Munn & Co

ATTORNEYS.

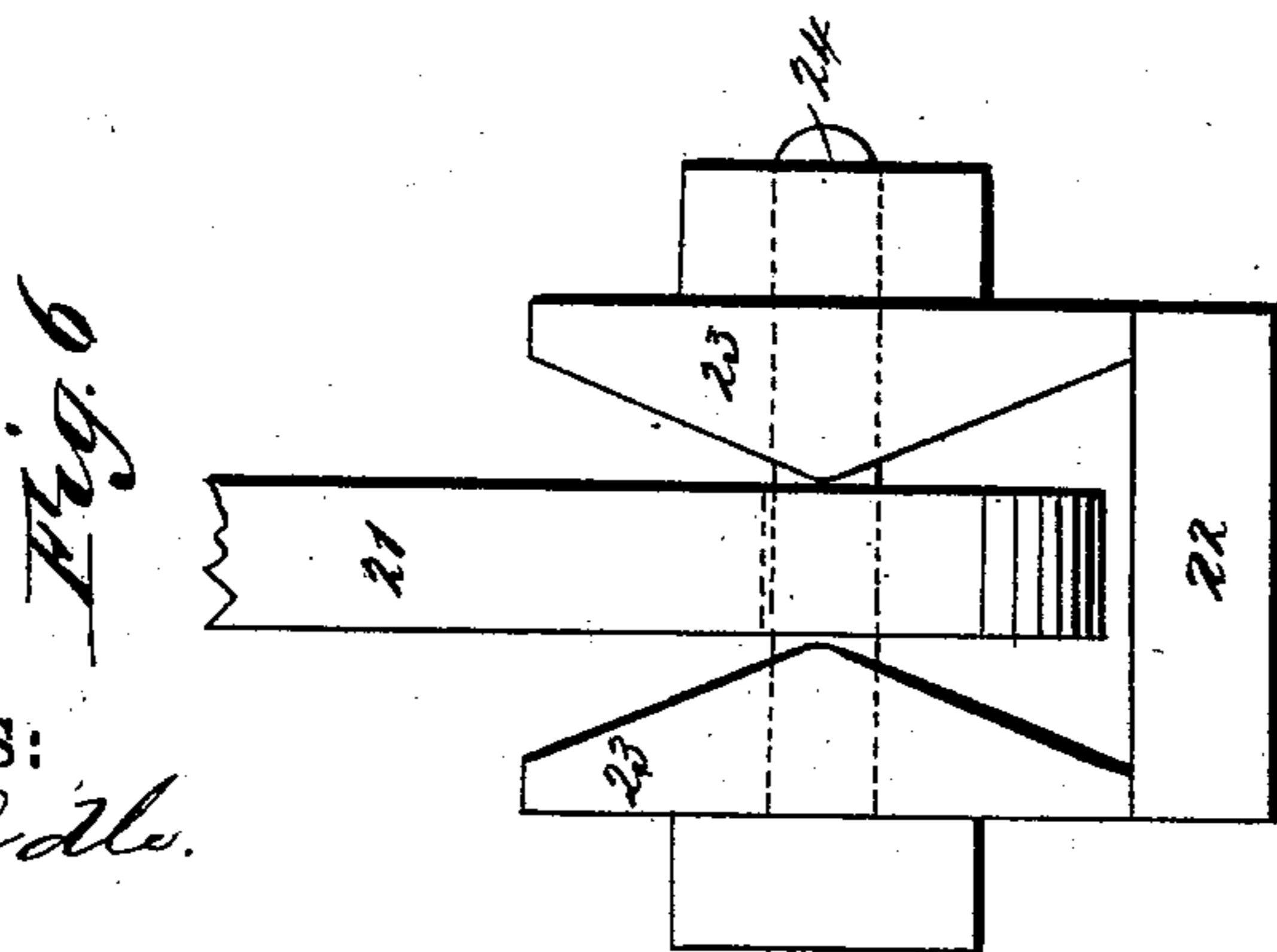
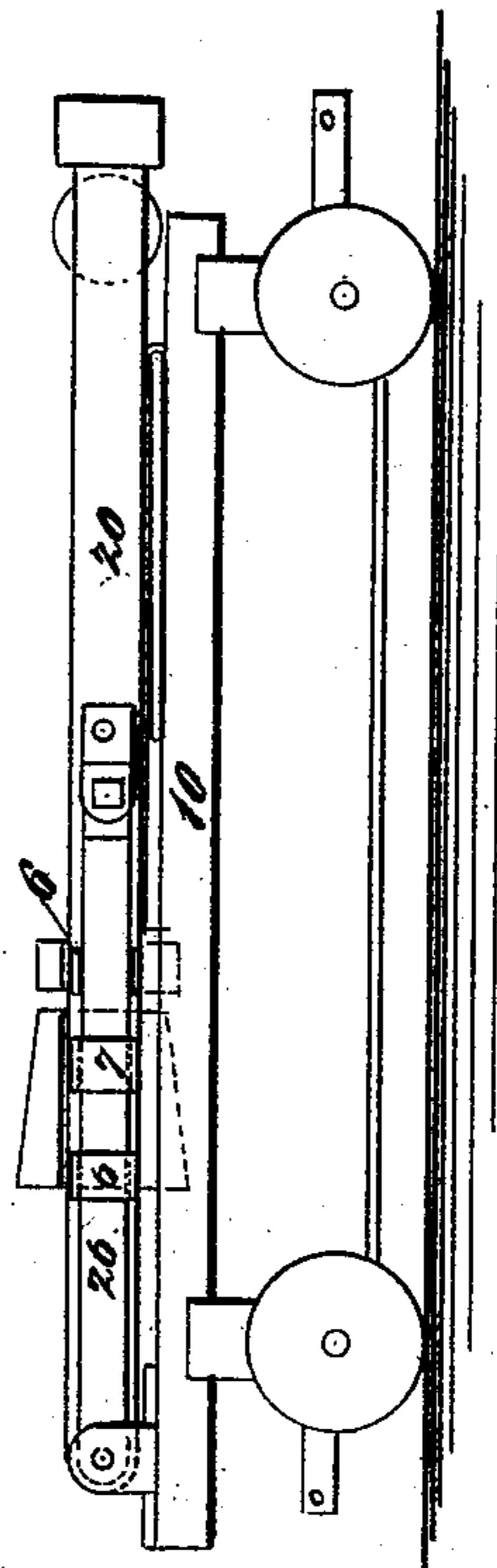
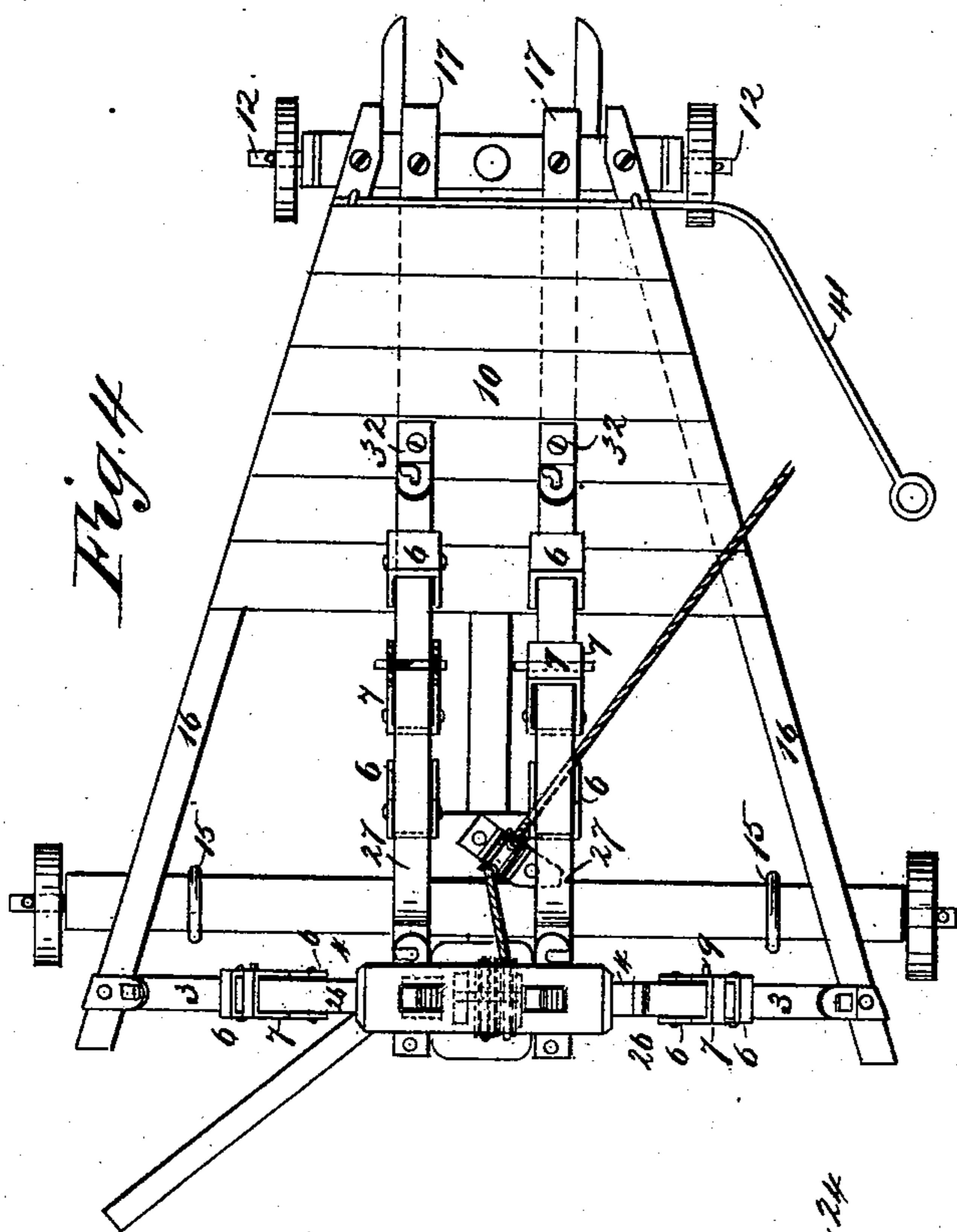
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UNITED STATES PATENT OFFICE.

ADAM TOWBERMAN, OF SUTHERLAND, IOWA.

POST AND PILE DRIVER.

SPECIFICATION forming part of Letters Patent No. 347,211, dated August 10, 1886.

Application filed May 5, 1886. Serial No. 201,190. (No model.)

To all whom it may concern:

Be it known that I, ADAM TOWBERMAN, of Sutherland, in the county of O'Brien and State of Iowa, have invented a new and Improved Post and Pile Driver, of which the following is a full, clear, and exact description.

My invention relates to the construction of a combined post and pile driver, the main objects of the invention being, first, to so mount a derrick upon a vehicle-platform that the derrick may always be adjusted to a perpendicular position irrespective of the contour of the ground upon which the vehicle carrying the derrick is standing; second, to arrange the derrick so that it may be folded down to rest in a horizontal position, and to so arrange the vehicle that the tongue or bolt may be connected to either axle. The objects enumerated I accomplish by means of the novel constructions and combinations to be hereinafter described, and specifically pointed out in the claims.

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

Figure 1 is an elevation representing the rear end of the vehicle, and showing the derrick as elevated and in position for use. Fig. 2 is a side view of the machine, certain portions of one of the forwardly-extending braces being broken away, and other portions being shown in section, in order that the construction of the parts may be more clearly illustrated. Fig. 3 is an enlarged detail view in partial section, representing one of the side braces. Fig. 4 is a plan view of the machine. Fig. 5 is a side view of the same, representing the derrick as folded down to a horizontal position; and Fig. 6 is a detail view illustrating the construction of the shoe to which the lower ends of the guide-strips of the derrick are connected.

The improved form of post and pile driver forming the subject-matter of this application is supported by a vehicle-platform, 10, which platform in turn is carried by two axles, 11 and 12, of which the rear axle, 11, is much longer than the forward axle, 12, both axles being provided with pole-couplings 13, and both axles being connected to the platform frame-work by king-bolts 14. When the ve-

hicle is being moved forward, the rear axle, 11, is held in place by U-bolts 15, which are arranged as best shown in Fig. 1; but when it is desired to move the vehicle in the opposite direction the U-bolts 15 are removed from their connection with the rear end of the vehicle and applied to a position to hold the vehicle-axle 12 from turning upon its king-bolt 14. As shown best in Fig. 4, the side timbers, 16, approach each other as they extend toward the forward axle, 12, and each of the timbers extends some distance beyond the rear of the axle of the vehicle, as do also the central timbers, 17.

The derrick proper consists of two timbers, 20 to the lower ends of which there are secured stout iron legs 21, and these legs rest in shoes 22, that are secured to the upper faces of the rearwardly-extending ends of the central timbers, 17.

The construction of the shoes 22 is best shown in Fig. 6, wherein it will be seen that the shoes are formed with upwardly-projecting flanges 23, formed with double-inclined inner faces, the legs 21 fitting between the flanges and being held in place by pivot-bolts 24. The upper end of each of the timbers 20 is cut away to fit within recesses formed in the upper cross-bar, 25, the said cross-bar resting on pins 2, below which pins the timbers 20 are cut away, as indicated, and although the tenons formed on the timbers and fitting within the mortises formed in the cross-bar 25 fit closely within the lower portion of the mortise, the said tenons are cut away upon each side, as clearly shown. Now, from the construction described, it will be seen that the derrick-timbers may be tilted upon their connection with the vehicle-platform either to one side or to the other, or the said derrick-timbers may be folded backward to the position shown in Fig. 5; but in order that the timbers may be supported in the vertical position, I provide side braces, 26, and forwardly-extending braces 27, the construction of which braces will now be specifically described.

As before stated, it is necessary that the guide-timbers of the derrick should be capable of adjustment irrespective of the contour of the ground upon which the transporting-vehicle is standing, and to meet this requirement I form each of the side braces, 26, in two

sections, the lower section, 3, being pivotally connected to a shoe, 29, that is fixed to the rearwardly-extending end of the side timber of the vehicle, while the upper section, 4, is pivotally connected to a bracket, 30, that is secured to the outer side face of the guide-timber. Each of the sections 3 and 4 carry two blocks, 5, arranged so that their teeth will interlock, as clearly illustrated in the drawings, and each section is also provided with a U-shaped guiding-clip, 6, which clips serve to hold the two sections in the same general line. One of the sections, as shown in the drawings, (it is the upper one,) is provided with a second clip, 7, in both legs of which there are formed apertures 8, and through these apertures I insert a binding-pin, 9, which, when in position, holds the teeth of the legs 5 in engagement, but which may be withdrawn in order that the length of the brace may be adjusted to suit the requirements of the case, and the brace having been adjusted to a proper length the pin may be inserted, and having been so inserted will lock the two sections together. The forwardly-extending braces 27 are exactly the same as the side braces, except that the teeth of the sections 5 are shown as being formed with rectangular edges, instead of being in the form of saw-teeth, as is the case with the side braces, and these braces are connected with proper shoes, 32, carried by the vehicle-platform, and with brackets 33, carried by the forward faces of the guide-timbers.

Between the guide-timbers 20 I arrange a weight, 34, that is provided with any of the ordinary forms of hoisting or tripping mechanisms, the one illustrated in the drawings being the one that I prefer to use. The hoisting-rope 35 passes from the upper pulley, 36, that is carried by the cross-bar 25, downward and under a sheave, 37, and then forward to a position to allow of the hitching of the horse employed to operate the hammer.

In order that the derrick may be readily handled—that is, adjusted to a vertical position—I connect a long pole, 38, to one of the vertical timbers 20, connection between the pole and the timber being established by means of the I-bolts 39 and 40, the I-bolts 39 being fixed to the timber 20, while the I-bolt 40 is secured within the end of the pole 38, from which construction it will be understood that the pole 38 may be carried to the side, to the front, or to the rear of the derrick, and that, irrespective of the position of the operator, he may move the derrick either toward or from him.

The horse employed to operate the hammer 34 is hitched to the outwardly-extending arm

41, when the vehicle is being transported from place to place or from post to post; and it will be understood that when the machine is to be transported for any distance the braces 27 are disconnected and the derrick is folded to the position shown in Fig. 5.

In operating the machine described it is drawn to the position where it is desired to drive a post or a pile. The derrick is then adjusted so that it will extend upward in a vertical line. The post or pile to be driven is placed beneath the hammer, and the operation of driving is commenced.

If desired, the machine could be provided with a measuring or spacing chain, and this chain, after a post has been driven, could be attached thereto and the vehicle moved forward until the chain was taut, from which arrangement it will be understood that the post would be accurately and uniformly spaced without the trouble or necessity of measuring off the distance for each post.

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

1. The combination, with the vehicle having the shoes 22, provided with flanges 23, having double-inclined inner faces, of the vertical guide-posts stepped in said shoes and adjustable braces for said posts, substantially as set forth.

2. The combination, with a transporting-vehicle, of shoes 22, provided with flanges 23, having double-inclined faces, vertical guide-posts stepped in said shoes, the upper ends of the guide-posts being tenoned to fit within mortises formed in the cross-bar 25, adjustable side braces, 26, and forward braces, 27, substantially as described.

3. The combination, with the transporting-vehicle and a derrick carried thereby, of adjustable braces formed in sections 3 and 4, that are pivotally connected to the vehicle and guide-timbers of the derrick, respectively, toothed strips 5, clips 7, and a pin, 9, substantially as described.

4. A derrick consisting, essentially, of vertical guide-timbers 20, having lugs 21, that are stepped in shoes 22, formed with flanges 23, the inner faces of which are double-inclined, a cross-bar, 25, mortised to receive the upper ends of the guide-timbers, pins 22, upon which the cross-bar rests, and adjustable side and forward guides, substantially as described.

ADAM TOWBERMAN.

Witnesses:

L. E. ALEXANDER,
A. P. SEEMAN.