

No. 613,138.

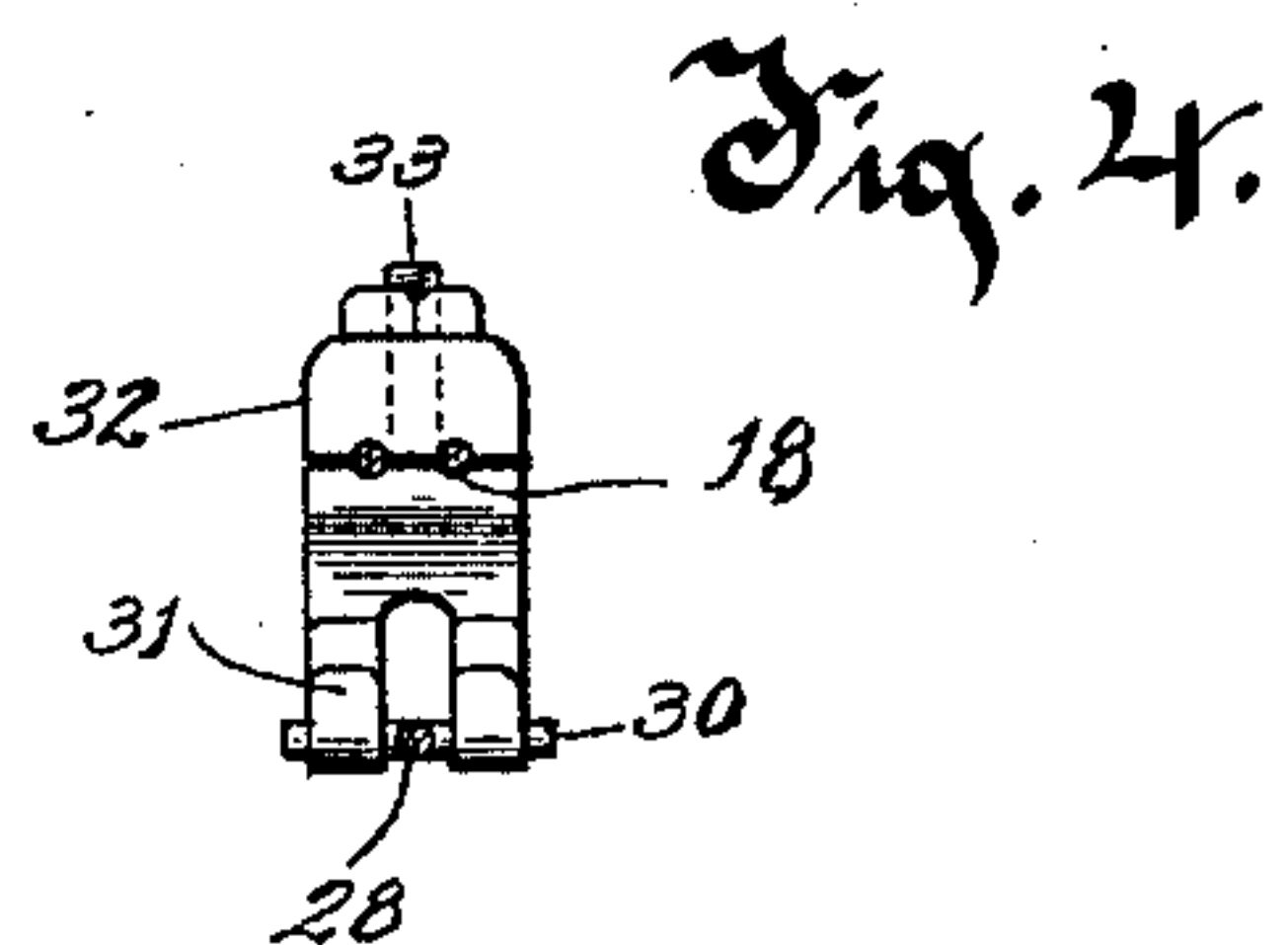
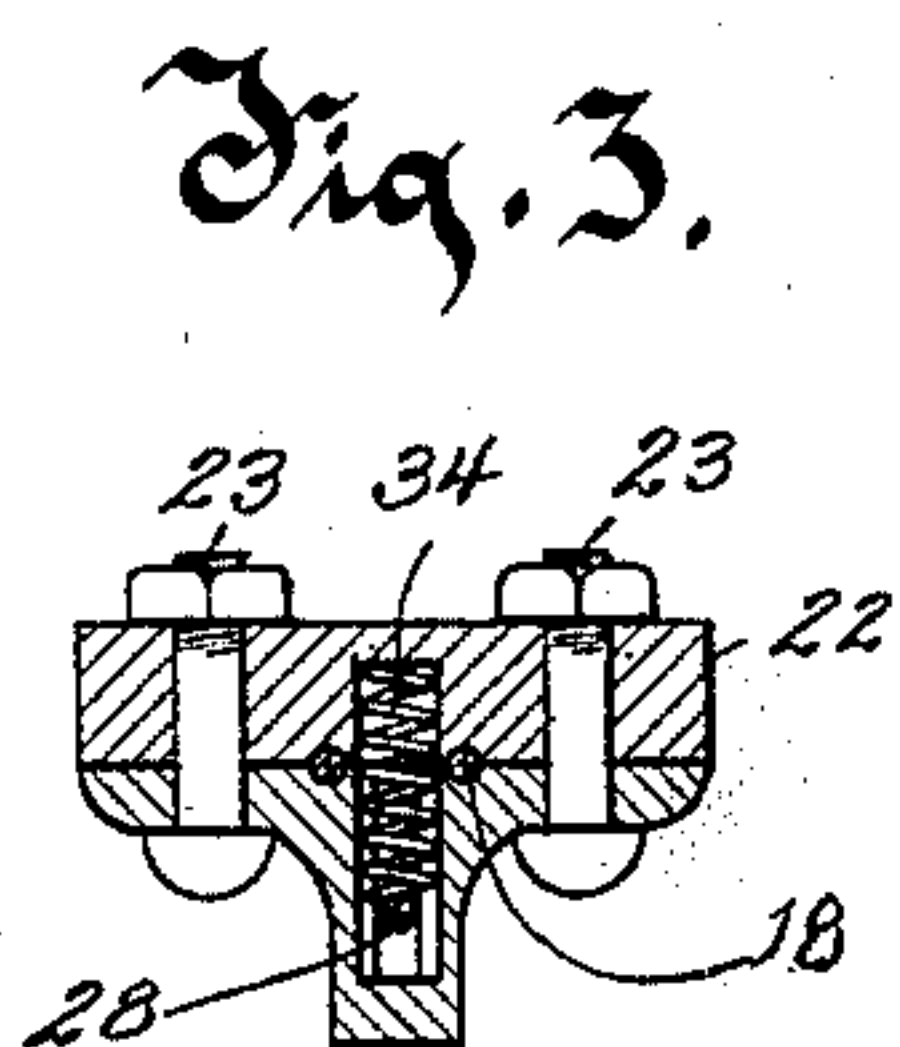
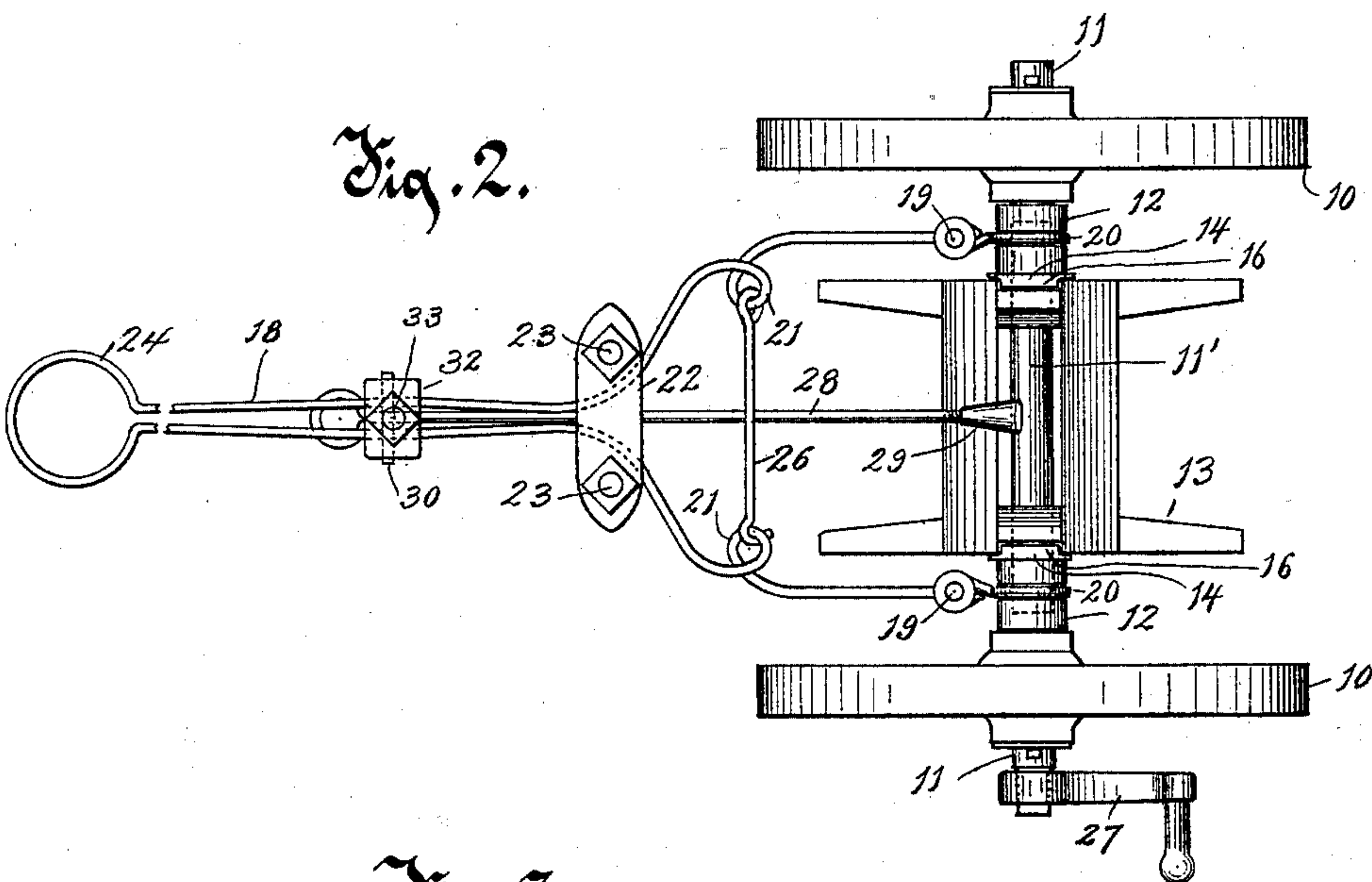
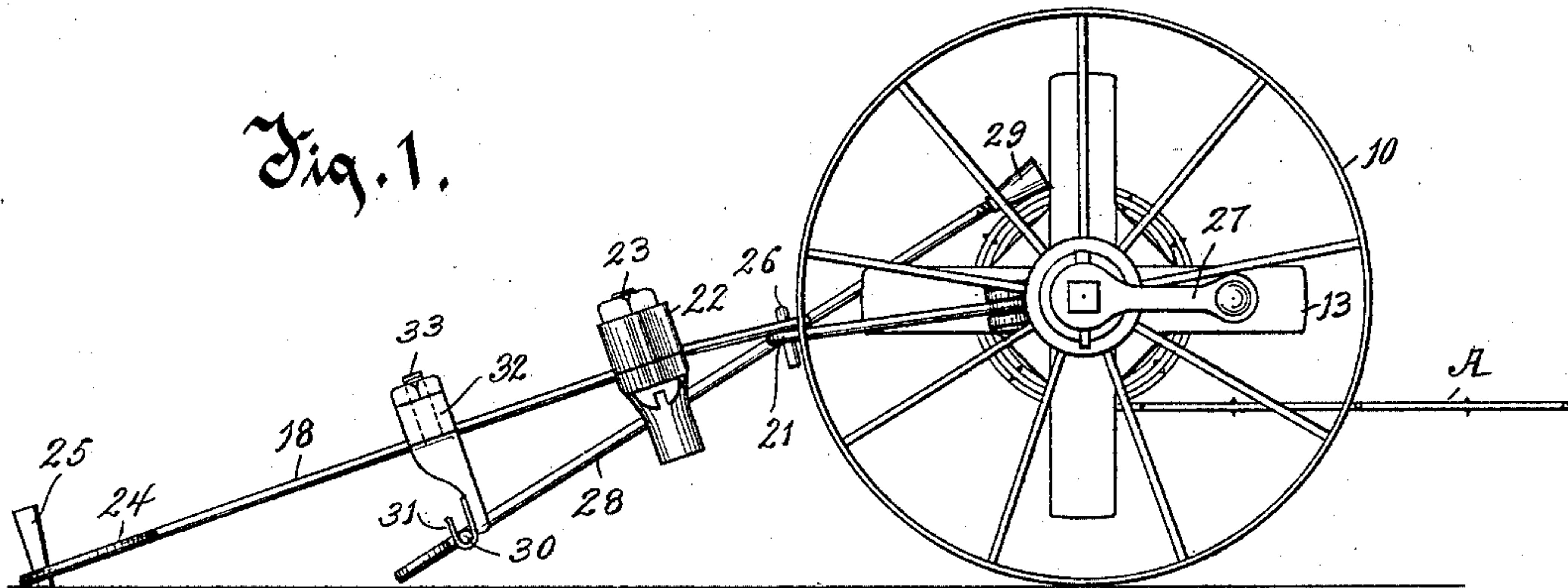
Patented Oct. 25, 1898.

F. GEMPELER.
FENCE WIRE REEL CART.

(Application filed Aug. 4, 1898.)

(No Model.)

2 Sheets—Sheet 1.



Witnesses.

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2 Sheets—Sheet 2.

Fig. 5.

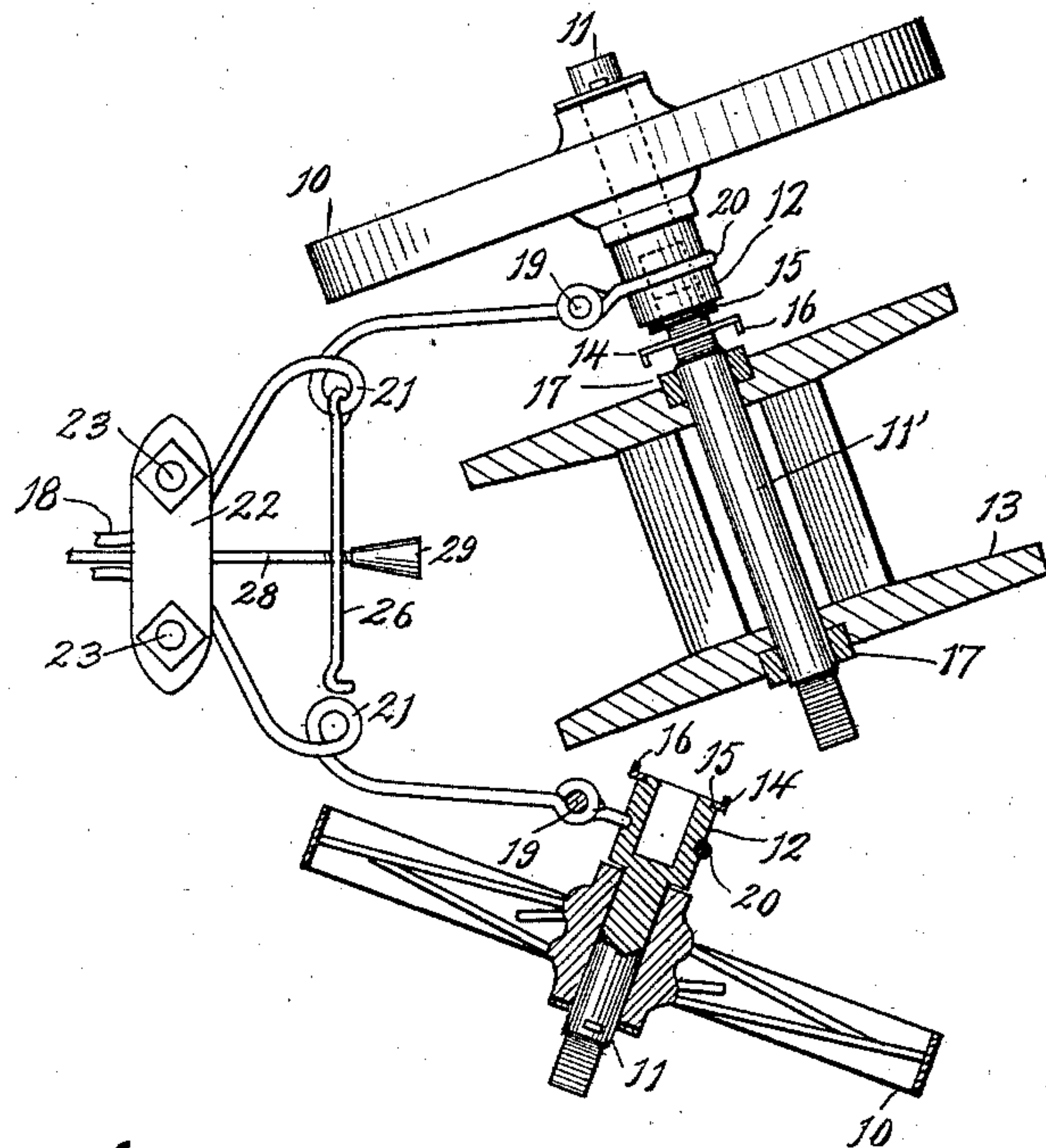


Fig. 6.

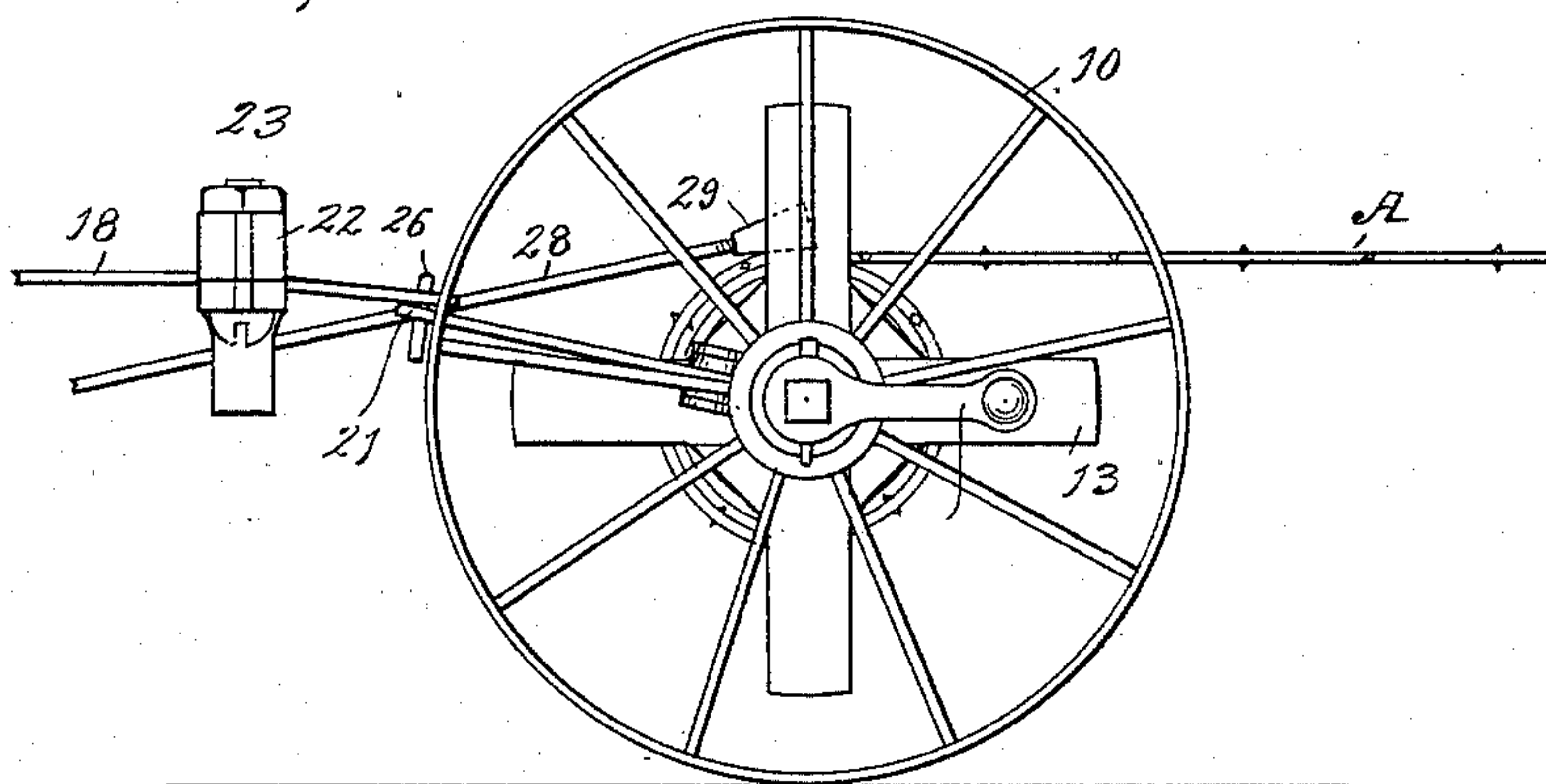
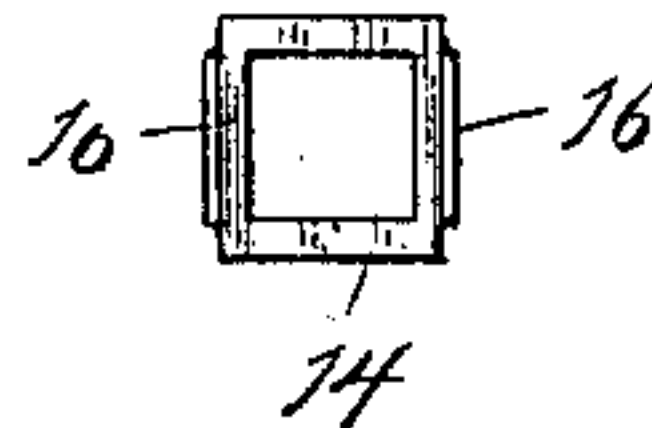


Fig. 7.



Fig. 8.



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UNITED STATES PATENT OFFICE.

FRITZ GEMPELER, OF WASHINGTON, WISCONSIN.

FENCE-WIRE-REEL CART.

SPECIFICATION forming part of Letters Patent No. 613,138, dated October 25, 1898.

Application filed August 4, 1898. Serial No. 687,756. (No model.)

To all whom it may concern:

Be it known that I, FRITZ GEMPELER, of Washington, in the county of Green and State of Wisconsin, have invented a new and useful
5 Improvement in Fence-Wire-Reel Carts, of which the following is a description, reference being had to the accompanying drawings, which are a part of this specification.

My invention relates to improved means,
10 especially adapted for use by farmers and others in building barbed-wire fences, for loading wire, transporting it to the field, and unloading it in suitable position convenient for putting it on the posts of the fence being
15 constructed. The improved means provided for this purpose makes it possible and even easy for one man to handle a considerable supply of wire without danger or inconvenience to him and in such manner as to keep
20 the wire from kinking or being snarled up and to deposit it for being applied to the fence in a straight and suitable line for ready application thereto.

The invention consists of the apparatus, its
25 parts and combinations of parts, as hereinafter described and claimed, or their equivalents.

In the drawings, Figure 1 is a side elevation of my improved apparatus, the wire and reel being in the positions occupied by them when
30 wire is being loaded onto the cart. Fig. 2 is a top plan view of my improved apparatus. Figs. 3 and 4 are details. Fig. 5 is a top plan view of the apparatus, parts being in section, the parts being separated to some extent in
35 such manner as to illustrate the method of removing the spool or reel for changing its position with reference to the axle. Fig. 6 is a side elevation of the apparatus, the wire and the reel being in such positions as they
40 occupy when the wire is being discharged therefrom. Figs. 7 and 8 are details.

My improved apparatus consists, in a general way, of a two-wheel hand-cart with such means thereon as is required to complete the
45 necessary construction or apparatus for the purpose of conveniently and suitably loading and unloading the wire. The two wheels 10 10 are mounted on an axle that is constructed in three parts 11 11 11', the medial portion
50 11' being detachable from the lateral terminal

portions 11 11. The outer portions or spindles of the axle are of suitable size and receive and carry the wheels rotatably thereon, and adjacent thereto the axles are enlarged at 12 in short cylindrical portions that form
55 shoulders against which the inner ends of the hubs bear movably, and these enlarged members 12 are provided with axially-disposed sockets or recesses entering their inner ends, which sockets are square or faced in cross-
60 section, Fig. 7, and are adapted to receive the correspondingly squared or faced ends of the medial axle member 11', the ends of which are fitted removably in the recesses in the enlarged parts 12.
65

A spool or reel 13, substantially as long as the exposed portion of the axle member 11', is mounted revolubly on the member 11', which is preferably of cylindrical form, between the parts 12 12. This reel 13 is normally free to revolve on the axle member 11' and in use does so revolve while the wire is being discharged from the reel. It is, however, desirable that the reel should be compelled to rotate with the axle for the purpose
70 of winding, and thereby loading the wire onto the reel and cart, and for this purpose two small metal keys 14 14, Figs. 2 and 8, are provided, which have a central square or faced opening adapted to fit removably on corresponding squared or faced ends 15 15 of the
75 axle members 12 12 and also laterally-projecting lips or flanges 16 16, adapted to take onto corresponding surfaces or shoulders 17 17 on the reel 13, thereby connecting and
80 locking the reel revolubly to the axle. The reel, the axle members 11' and 12, and the keys 14 are held normally in suitable relation to each other by means of the tongue hereinafter described.
85

For holding the members of the axle normally in suitable relation to each other and providing means for hauling the cart and its load along a tongue 18 is provided, which preferably consists of a looped elastic metal
90 rod, the rear ends of which are pivoted about bolts 19 19, fixed in the forwardly-projecting eyes of metal clips or collars 20, conveniently made of heavy wire rod, which encircle the axle members 12 12 in grooves therefor, where-
95 100

by the collars are prevented from moving along the axle longitudinally thereof, while permitting free revoluble movement of the axle in the collars. At a little distance in front of the terminal ends of the tongue 18, where they are pivoted on the collars 20 20, the rod of which the tongue is formed is preferably bent into eyes 21 21, and therefrom outwardly are bent toward each other, being brought near together and bound in place by the tie-block 22, which is conveniently made of two members secured together by bolts 23 23, holding the two rod members of the tongue in rigid position near each other. From this tie-block the tongue projects a sufficient distance to the front and terminates, preferably, in a loop 24, adapted to be conveniently taken hold of by the hand of the person who pulls the card along. This loop also furnishes a convenient part for anchoring or securing the cart permanently in place on the ground by means of a small stake or pin 25, adapted to be driven into the ground by the attendant and to receive thereon the loop termination 24 of the tongue. As the metal rod of which the tongue is formed is elastic, and such elasticity is made especially available by means of the coils therein forming the eyes 21, an axle member 12 and the wheel thereon may be pushed laterally, as shown in Fig. 5, so as to separate the member 12 from the member 11', making it possible and convenient to remove the axle member 11' and the reel 13 thereon from the remaining portions of the axle when desired. To secure the axle members to each other in position as shown in Fig. 2, a locking-hook 26 is employed, which hook is hinged at one end in one of the eyes 21 in one furcate member of the tongue and is adapted to take into the eye 21 in the other furcate tongue member, whereby the tongue members are held in such substantially rigid position with reference to each other against spreading as to hold the axle members in place with reference to each other.

For winding wire onto the reel 13 one end of the axle 11 is provided with a crank-handle 27, fitted detachably onto the suitably-faced end of the axle, and thereby the attendant may rotate the axle for winding the wire thereon. It is during the process of winding the wire thereon in the manner indicated in Fig. 1 that an anchor 25 is employed to hold the cart in position against the pull of the weight of the wire as it is wound on the reel. For further steadying the reel when the wire is being wound thereon, and also while the wire is being unwound therefrom, I provide a detachable brake, consisting, preferably, of a metal rod 28, terminating at one end in a beveled or cone-shaped bearing member or shoe 29. This brake-shoe 29 is adapted to bear against the surface of the wire while being wound on or unwound from the reel at the top or above the axle of the reel and has its base or greatest diameter directed toward

the rear, which is in the direction of the motion of the wire in contact therewith, whereby this brake-shoe always presents an inclining surface to the advancing surface of the mass of wire and permits it to slide freely past it without such engagement as to lock the movement, only exerting such action thereon as prevents any undue rotation of the reel. Near the other extremity of the brake-stem 28 a transverse arm 30 is fixed on the brake-stem and is adapted to enter releasably a furcate hook 31, secured to the tongue 18 conveniently by means of a hook-block 32, fixed on the tongue adjustably by means of clamping members secured together by a bolt 33. The brake member is held actively, but yieldingly, to its work by means of a spring 34, which spring is placed in a socket therefor in the tie-block 22 and bears yieldingly against the brake-stem 28 medially, where it passes movably through a slot therefor in the tie-block 22.

When the apparatus is about to be loaded with wire, it is arranged in the manner illustrated in Figs. 1 and 2, and thereupon by rotating the crank-handle 27 the wire A, the end of which has been secured to the reel, will be wound on the reel, running onto it from the rear at the under side, thus causing the pull of the wire on the reel to be downwardly as well as rearwardly, holding the cart to the ground while being loaded. When the reel is to be unloaded, it is desirable to have the wire unwound toward the rear and to have the pull downwardly from the top of the reel, and for this purpose, as well as to secure the free revolution of the wheel independently of the axle, the medial axle member 11' is removed in the manner indicated in Fig. 5, and the reel is turned over, the keys 14 are removed, and the reel is replaced on the member 11', and that axle member is then replaced in its position in the axle of the cart, and the tongue members are locked together by the hook 31, putting the apparatus and its load in the position shown in Fig. 6, in which position the cart may be unloaded by anchoring the rear end of the wire to the ground and drawing the cart ahead, discharging the wire from the reel.

It will be understood that the brake member can be readily removed when it is desired to change the position of the reel and replaced in position when the reel has been put in place for operation.

What I claim as my invention is—

1. The combination with two wheels, of an axle on which the wheels are mounted which axle has a removable medial portion, a reel mounted revolubly on the medial removable portion of the axle, and means adapted to hold the parts separably in position with relation to and against each other.

2. The combination with two wheels, of an axle on which the wheels are mounted which axle has a removable medial portion, a reel mounted revolubly on the medial removable

portion of the axle, keys fitting on the axle and engaging the reel adapted to hold the reel to revolution with the axle.

3. The combination with two wheels, of an axle on which the wheels are mounted which axle has a removable medial portion, a reel mounted revolubly on the medial removable portion of the axle, a removable key adapted to engage the axle and the reel and to hold the reel to revolution with the axle, and a crank-handle detachably fitted to the axle for rotating the axle and the reel thereon.

4. The combination with two wheels of a rotatable axle on which the wheels are mounted rotatably, a reel rotatable on the axle, collars loose about the axle adjacent to the wheels, and a tongue having furcate extremities pivoted to said collars.

5. The combination with two wheels, of a rotatable axle on which the wheels are mounted, said axle having a medial removable portion, a reel revoluble on the axle, collars about and permitting the revolution of the axle, a tongue having elastic furcate ends pivoted to said collars, and means to lock the members of the tongue in position prevent-

ing spreading of the members of the tongue and removal of the medial portion of the axle.

6. In combination with a reel mounted revolubly on the axle of a cart, of a wire-brake comprising a rod, a shoe on the rod having a beveled or cone-shaped surface, a means adapted to take and hold the rod detachably, and a spring adapted to hold the brake yieldingly to its work.

7. In a fence-reel cart, the combination with a separable revoluble axle, of a tongue consisting of an elastic metal rod folded medially on itself forming the front looped end of the tongue, a tie-block holding the members of the tongue medially in juxtaposition to each other, eyes formed in the furcate members of the tongue at the rear of the tie-block by coiling it on itself, and means for attaching the furcate ends of the tongue to the axle pivotally.

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

FRITZ GEMPELER.

Witnesses:

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JACOB GEIGER.