

**No. 670,782.**

**Patented Mar. 26, 1901.**

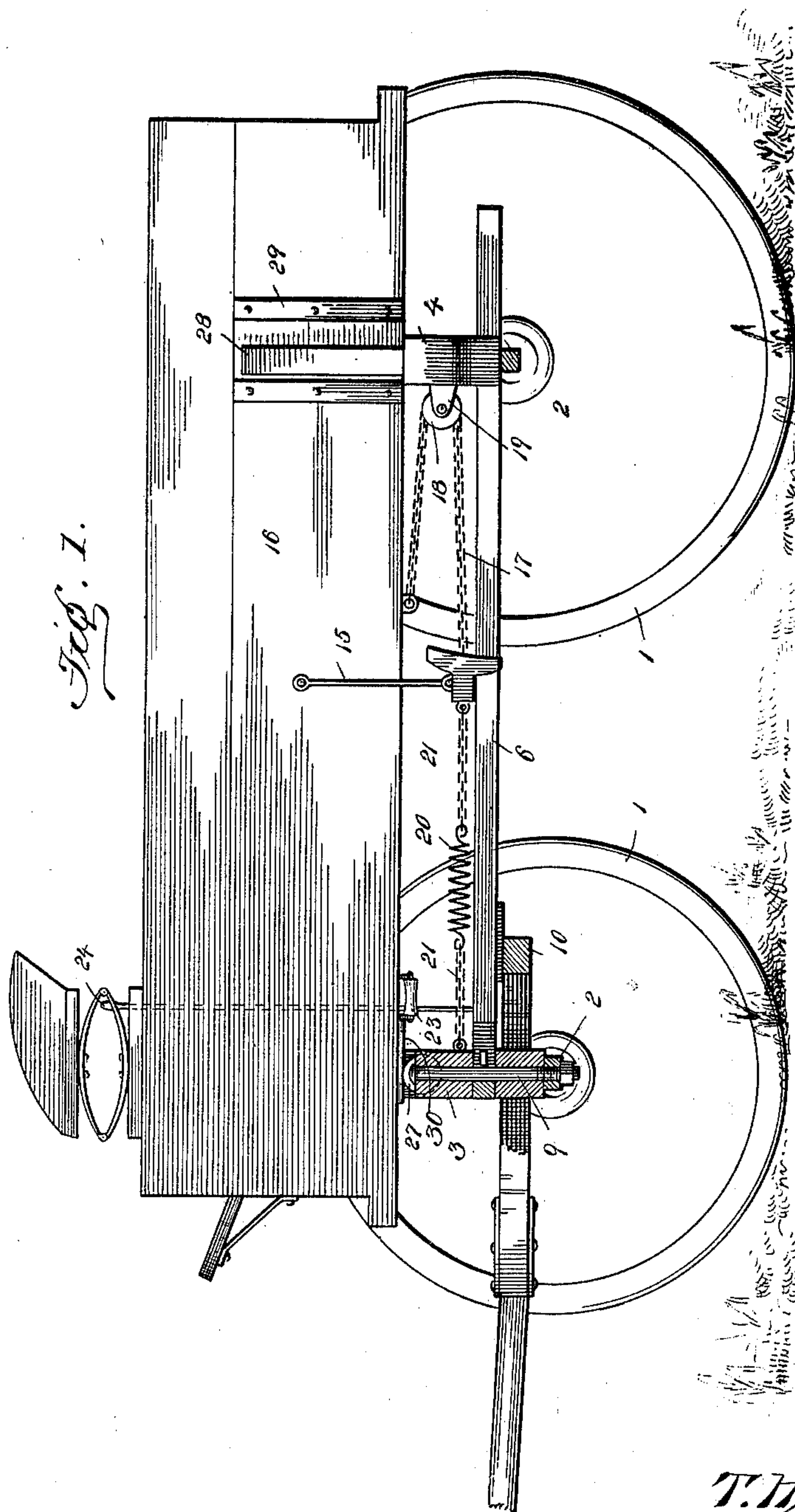
**T. HOWIE.**

## AUTOMATIC WAGON BRAKE.

(Application filed Oct. 24, 1900.)

(No Model.)

**3 Sheets—Sheet 1.**



Witnesses  
J. W. Riley,  
Hubert S. Lawson.

Inventor  
*T. Howie.*

By *Victor J. Evans* Attorney

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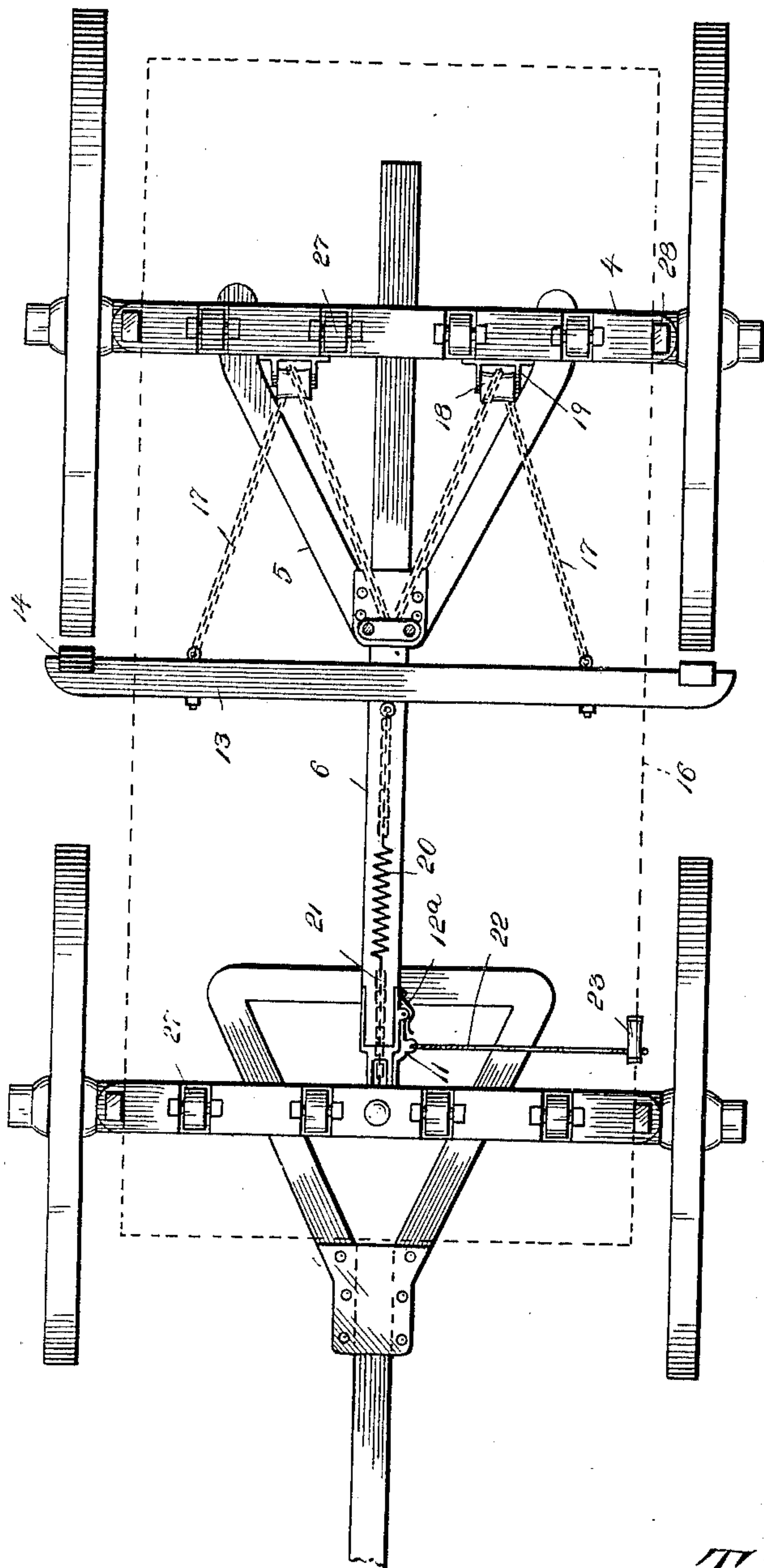
T. HOWIE.  
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3 Sheets—Sheet 2.

Fig. 2.



Witnesses  
J. W. Riley,  
Arthur W. Lawson

Inventor  
T. Howie,

334 Victor J. Evans. Attorney

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Fig. 3.

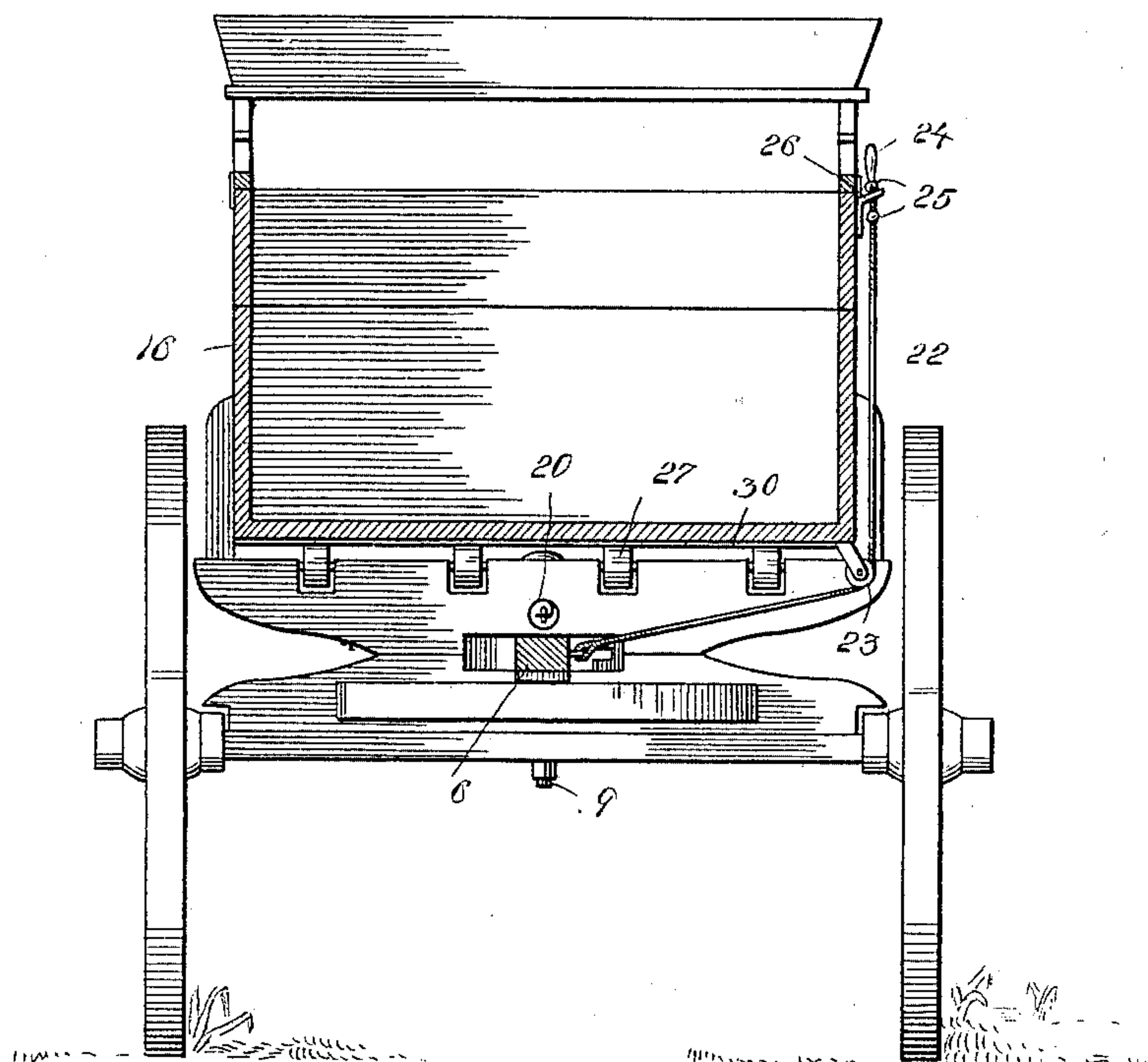


Fig. 4.

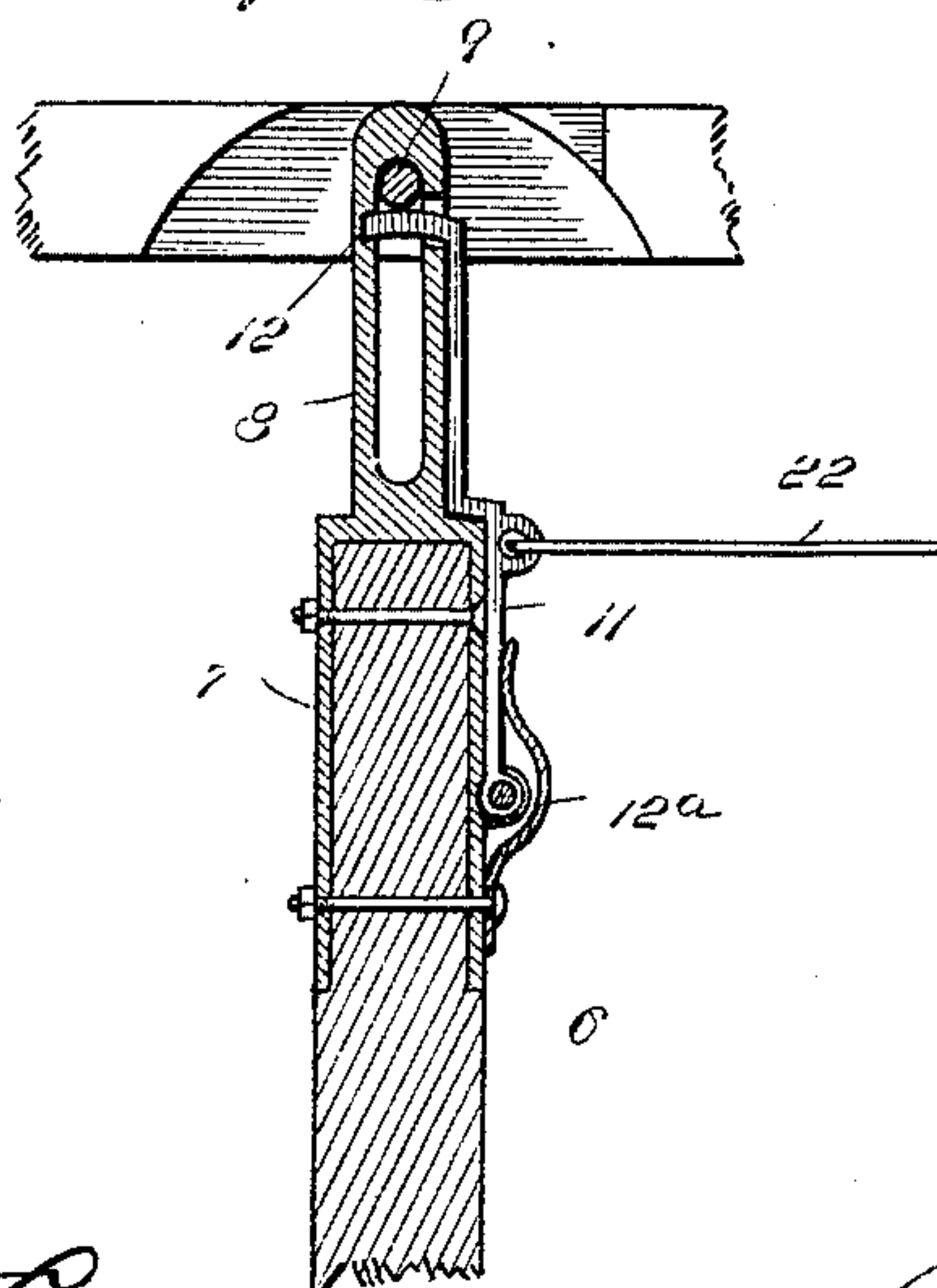
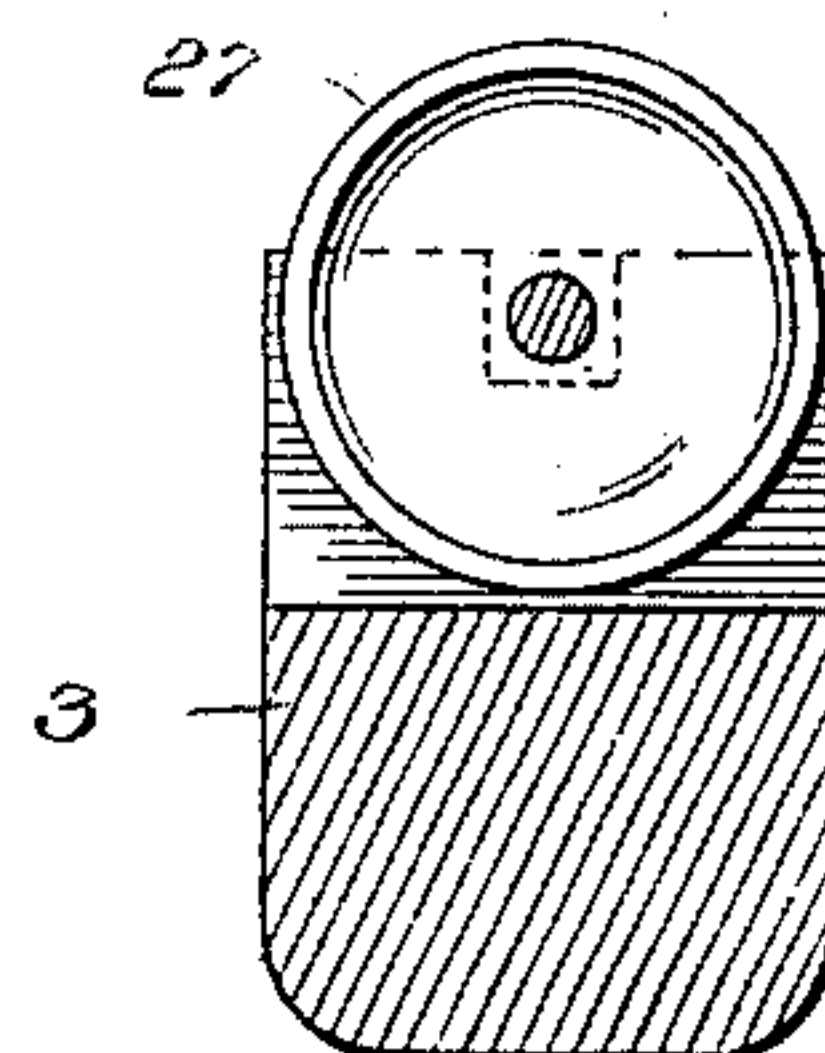


Fig. 5.



Witnesses  
J. W. Riley,  
Herbert Lawson.

Inventor  
T. Howie,  
By Victor J. Crane Attorney



# UNITED STATES PATENT OFFICE.

THOMAS HOWIE, OF VINITA, INDIAN TERRITORY.

## AUTOMATIC WAGON-BRAKE.

SPECIFICATION forming part of Letters Patent No. 670,782, dated March 26, 1901.

Application filed October 24, 1900. Serial No. 34,188. (No model.)

*To all whom it may concern:*

Be it known that I, THOMAS HOWIE, residing at Vinita, in the Cherokee Nation, Indian Territory, have invented new and useful Improvements in Automatic Wagon-Brakes, of which the following is a specification.

This invention relates to new and useful improvements in wagon-brakes; and its primary object is to provide a device of this character whereby the brakes will be applied automatically to the wheels when the wagon is on a downgrade and will be released from engagement therewith on a level or upgrade.

To this end the invention consists in providing a wagon-bed having rollers journaled thereon, which form bearings for the wagon-body. A brake-beam is mounted upon the wagon-bed and is connected to the wagon-body by means of chains which pass over pulleys secured to the rear bolster of the wagon. Means are provided whereby the operation of the brake may be prevented, if desired.

The invention also consists in the further novel construction and combination of parts hereinafter more fully described and claimed, and illustrated in the accompanying drawings, showing the preferred form of my invention, and in which—

Figure 1 is a side elevation of the wagon having my improved brake secured thereto, the forward portion of the bed being shown in section. Fig. 2 is a top plan view of the device, showing the wagon-body in dotted lines. Fig. 3 is a transverse section. Fig. 4 is a longitudinal section through the forward portion of the bed and the means for locking the king-bolt, and Fig. 5 is a transverse section through a bolster.

Referring to the figures by numerals of reference, 1 1 are the traction-wheels, upon the axles 2 of which are secured front and rear bolsters 3 and 4, respectively. Hounds 5 extend forward from the rear bolster 4, and a pole 6 is connected thereto and is inclosed at its forward end by a casting 7. This casting is provided with a slotted tongue 8, adapted to receive the king-bolt 9, which extends through the bolster 3. A strip 11 is hinged to the casting 7 and is provided at its free end with a hook 12, adapted to extend into the tongue 8 and prevent movement of the king-bolt within the slot. A spring 12<sup>a</sup> is pro-

vided and is adapted to hold the hook 12 normally in the position shown in Fig. 4. A brake-beam 13 is provided with shoes 14, which lie within the paths of the rear wheels 1. This beam is connected, by means of links 15, to the sides of a wagon-body 16, and the same is also connected to said body by means of chains 17, which pass over pulleys 18, journaled within brackets 19, arranged upon the front face of the bolster 4.

A coil-spring 20 is connected at opposite ends to the brake-beam and the bolster 3, respectively, chains 21 being employed for this purpose. The hooked strip 11 is provided with a flexible strip 22, which extends over a roller 23, journaled upon the lower edge of one side of the wagon-body. This strip is provided at its free end with a handle 24, and knots 25 are formed within the strip and either of them is adapted to engage a slot within a bracket 26. Rollers 27 are journaled upon the bolsters 3 and 4 and form bearings for the wagon-body 16. Uprights 28 extend upward from the bolster 4, at the ends thereof, and lie between cleats 29, secured to the sides of the body 16.

It will be seen that when the wagon is traveling downhill the bed 16 will move forward upon the rollers 27 and will cause the brake-beam 13 to swing toward the rear wheels 1, bringing the shoes into contact therewith.

As the hook 12 is normally out of the path of the king-bolt 9, said bolt will slip to the inner end of the slot in the pole 6, thereby removing the tension of the spring 20 and preventing the chains 21 from offering any resistance to the action of the brake-beam.

The forward movement of the body 16 is limited by the cleats 29.

When the wagon reaches the bottom of the incline, the king-bolt will be drawn to the front end of the slot by the horses pulling thereon, and the brake-beam will thus be pulled out of contact with the wheels. The wagon-body will also move back to normal position.

When it is desired to back the wagon, the king-bolt will contact with the hook 12 and the chains 21 and spring 20 will hold the shoes 14 out of contact with the wheels.

As shown in the drawings, wear-plates 30 are secured to the bottom of the wagon-body



and are adapted to bear upon the rollers 27 and prevent injury to said body.

In the foregoing description I have shown the preferred form of my invention; but I do not limit myself thereto, as I am aware that modifications may be made therein without departing from the spirit or sacrificing any of the advantages thereof, and I therefore reserve the right to make all such changes as fairly fall within the scope of my invention.

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

1. The combination with a pole, of bolsters secured thereto, rollers upon the bolsters, a wagon-body mounted upon the rollers, a brake-beam, a link connection between said beam and body, a pulley journaled upon one bolster, a chain upon the pulley connecting the beam and body, uprights upon one of the bolsters, and cleats secured to the body in the path of the uprights and adapted to limit the movement of said body.

2. The combination with a wagon-bed; of a bolster secured thereto; a second bolster; a slotted end to the bed; slidable within said bolster; a king-bolt passing through said bolster and slot; a hinged catch for limiting the movement of the king-bolt; a wagon-body movable upon the bolster; a brake-beam; a chain connecting said beam and body and passing over a pulley secured to the rear bolster; and an elastic connection between the beam and front bolster.

3. The combination with a wagon-bed; of a bolster secured to one end thereof; a pulley journaled thereto; a second bolster; a slotted end to the bed, slidably mounted within said second bolster; a king-bolt engaging the slot; a strip hinged to the bed; a hooked end thereof adapted to limit the movement of the bolt; means for operating said strip; rollers upon the bolsters; a wagon-body thereon; means for limiting the movement of said body; a

brake-beam; links connecting said beam and body; a chain connecting said beam and body and passing over the pulley; and an elastic connection between the beam and said second bolster.

4. The combination with a pole, a bolster secured thereto, of a wagon-body slidably mounted upon said bolster, a brake-beam, a pulley journaled upon the bolster, a flexible connection between the wagon-body and beam and passing over the pulley, a slotted end to the pole, a bolster adapted to support one end of the wagon-body and slidably mounted upon the slotted pole, a king-bolt engaging said bolster and passing through the slot, an elastic flexible connection between the brake-beam and bolster and a hook adapted to swing into the slot and prevent movement of the bolt therein, and means for retracting said hook from the slot.

5. The combination with a pole having a slot in one end thereof, of a bolster slidably mounted upon the pole adjacent to said slot, a bolster secured to the pole adjacent to the opposite end thereof, rollers upon the bolsters, a wagon-body mounted thereon, a brake-beam suspended from the wagon-body, a pulley journaled upon the fixed bolster, a flexible connection between the body and beam and passing over the pulley, a king-bolt passing through the movable bolster and through the slot in the pole, a hook normally projected into the slot and adapted to hold the king-bolt normally removed from the brake-beam, a flexible and elastic connection between the brake-beam and sliding bolster, and means for retracting the hook from the slot.

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

THOMAS HOWIE.

Witnesses:

WALTER H. MARTIN,  
C. E. HOLDERMAN.