

J. E. HEWITT.

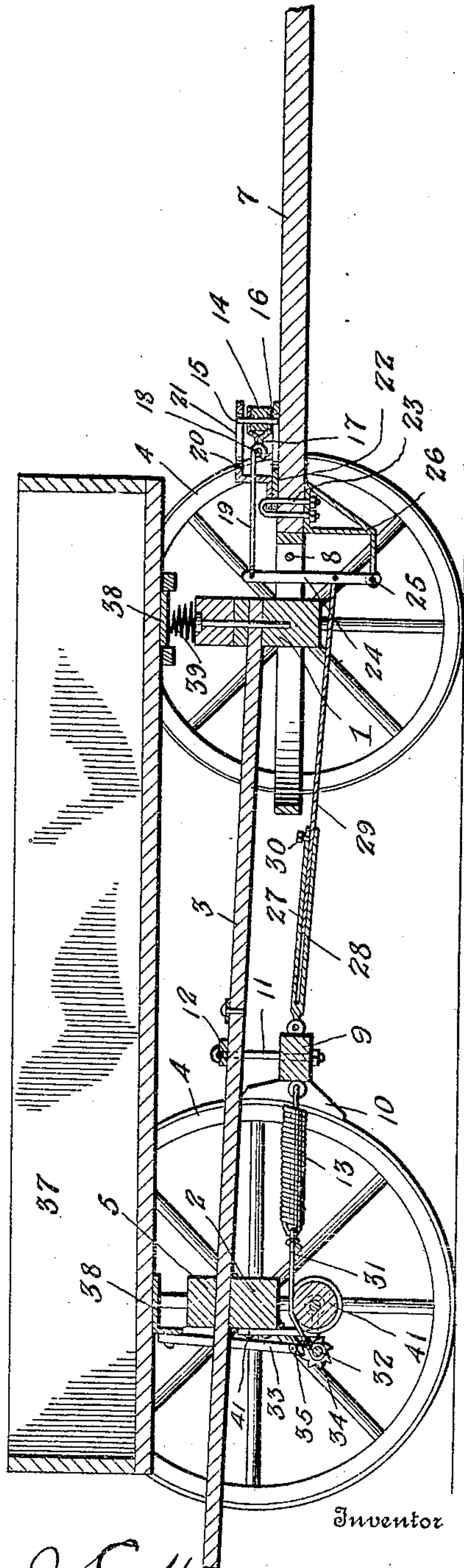
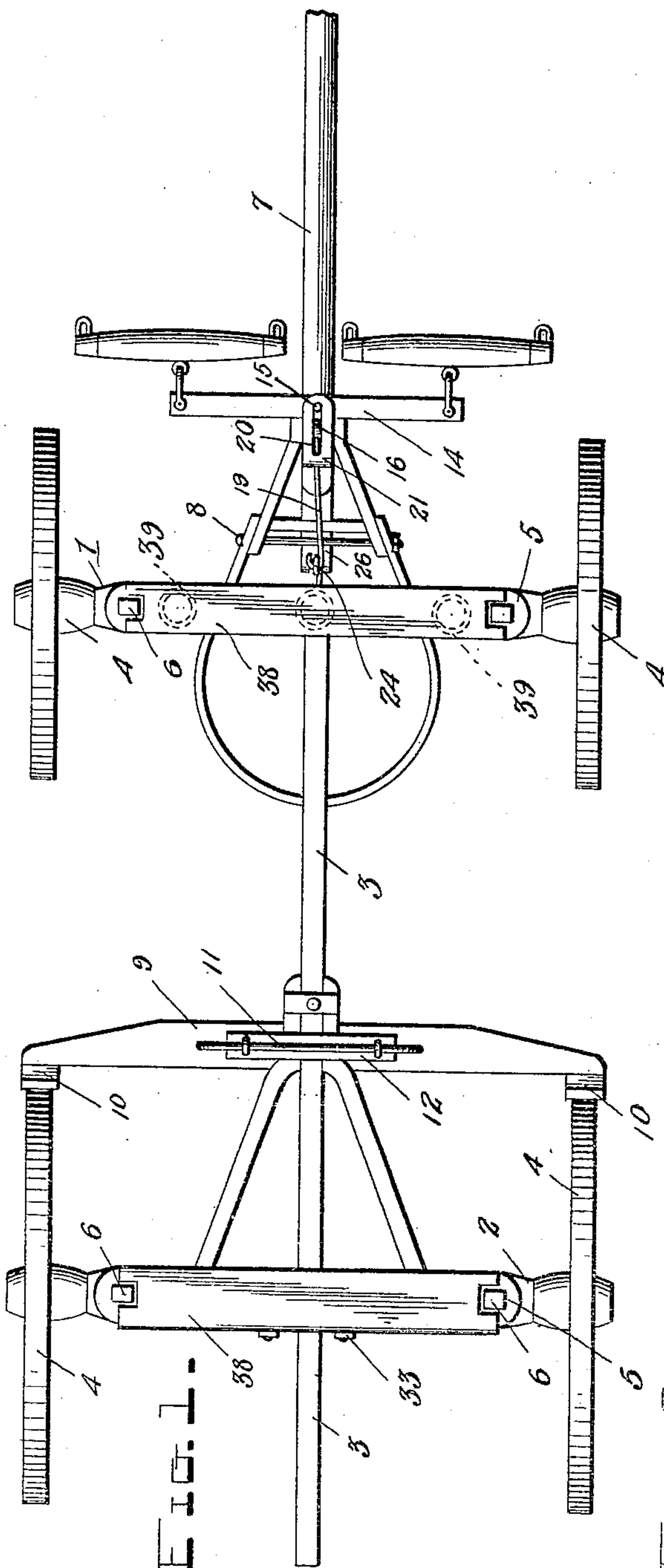
WAGON BRAKE.

APPLICATION FILED AUG. 3, 1908.

940,249.

Patented Nov. 16, 1909.

2 SHEETS—SHEET 1.



Witnesses

Chas. L. Griesbauer.

J. M. Terry

34

J. E. Hewitt

Watson E. Coleman
Attorney

J. E. HEWITT.

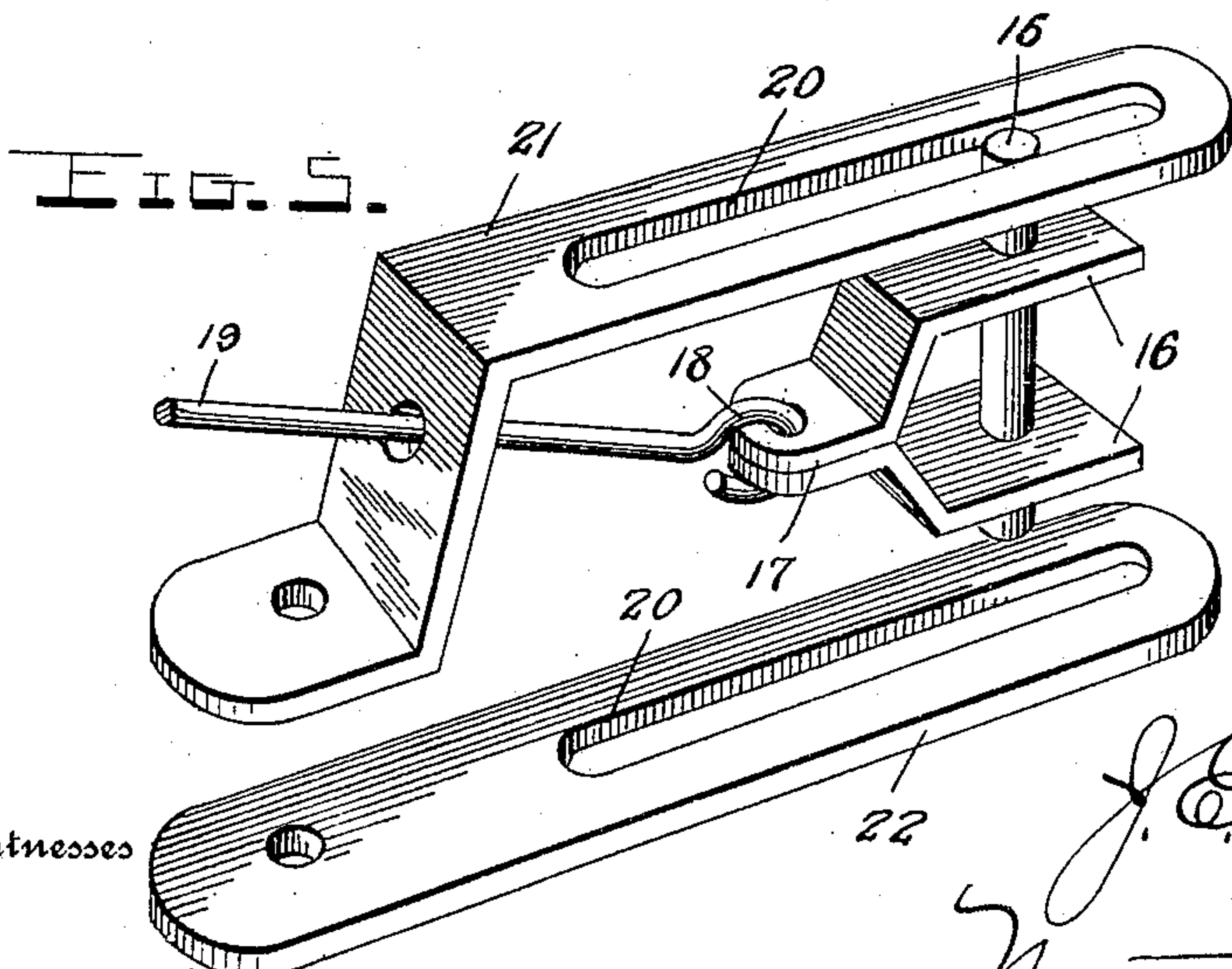
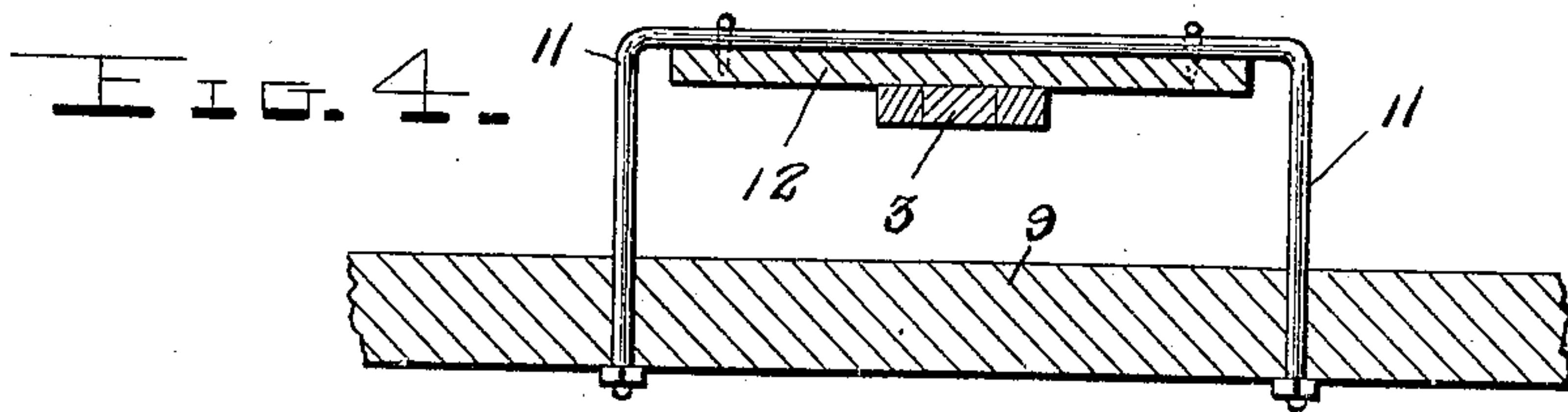
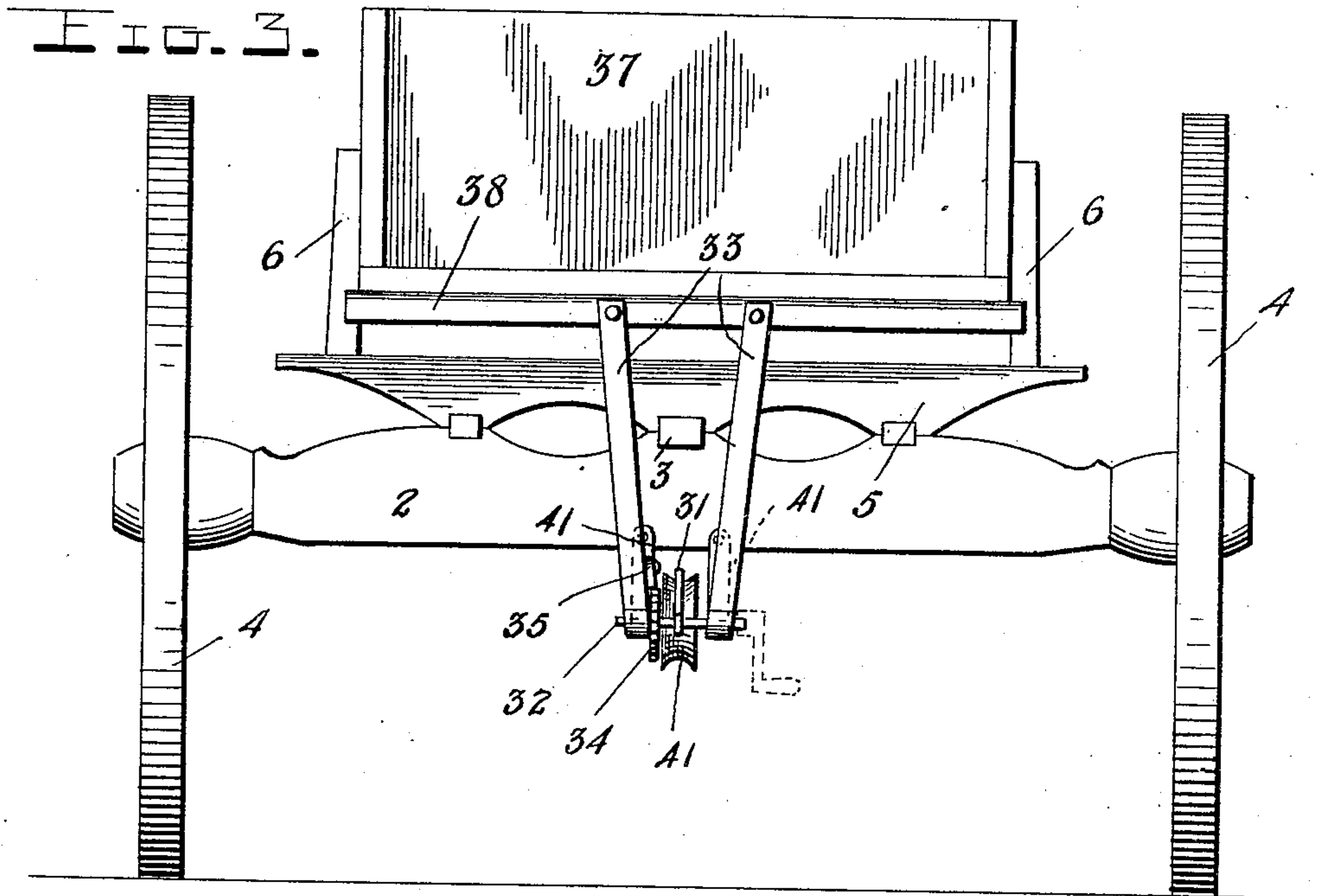
WAGON BRAKE.

APPLICATION FILED AUG. 3, 1908.

940,249.

Patented Nov. 16, 1909.

2 SHEETS—SHEET 2.



Witnesses

Chas. L. Griebauer.
J. M. Terry

J. E. Hewitt Inventor
By Watson E. Cleiman Attorney

UNITED STATES PATENT OFFICE.

JAMES E. HEWITT, OF LEAGUE CITY, TEXAS.

WAGON-BRAKE.

940,249.

Specification of Letters Patent.

Patented Nov. 16, 1909.

Application filed August 3, 1908. Serial No. 446,629.

To all whom it may concern:

Be it known that I, JAMES E. HEWITT, a citizen of the United States, residing at League City, in the county of Galveston and State of Texas, have invented certain new and useful Improvements in Wagon-Brakes, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to improvements in automatic brakes for wagons, buggies and other vehicles.

The object of the invention is to provide a simple and practical automatic brake of this character which will be spring actuated to its applied position and attached to the draft connection, whereby the brake will be automatically and normally applied so that the vehicle will not roll or move by gravity on uneven or inclined ground and will be automatically released by the draft animals when they pull the vehicle forwardly.

Another object of the invention is to provide a vehicle brake in which the weight of the load will either wholly or partially hold it in its applied position.

With the above and other objects in view, the invention consists of the novel features of construction and the combination and arrangement of parts hereinafter fully described and claimed, and illustrated in the accompanying drawings, in which—

Figure 1 is a plan view of the running gear of a wagon illustrating the application of the improved automatic brake thereto; Fig. 2 is a vertical longitudinal section; Fig. 3 is a rear end elevation; and Figs. 4 and 5 are detail views.

While the invention may be applied to a buggy, wagon or other vehicle the running gear in the embodiment illustrated consists of front and rear axles 1, 2 connected by a reach 3 and carrying wheels 4 and bolsters 5, the latter being provided with stakes or standards 6. A draft tongue or pole 7 is pivoted at 8 to the forward portions of the hounds of the front axle but it may be otherwise mounted for vertical swinging movement.

9 denotes a transverse brake beam provided at its ends with shoes 10 to engage the rear wheels 4. Said beam is loosely supported by an inverted U-shaped hanger 11, the central or connecting portion of which is secured to a transverse bar 12 car-

ried by the reach 3 and the depending ends of which form links which loosely suspend the brake beam so that it may swing in a forward and rearward direction to permit its shoes to frictionally engage and disengage the peripheries of the rear wheels 4. The brake beam is spring actuated in a rearward direction, preferably by means of a centrally arranged coil spring 13 so that the brake shoes will be normally held in frictional contact with the wheels. The brake is adapted to be released by the forward movement of the draft connection 14 carried by the tongue 7 and here shown in the form of a double tree carrying two swingletrees but which may be of any other form and construction. Said double tree is arranged upon a vertical pivot 15 which passes through it and through upper and lower plates or members 16 of a two-part clevis or clip. Said sections 16 are angular and have their offset rear ends 17 formed with alined apertures which receive an eye 18 upon the forward end of a rod or link 19. The projecting ends of the pivot 15 project through and slide in longitudinal slots 20 formed in the upper and lower plates or members 21, 22 of a pivotally mounted guide within which the double tree and the clips 16 are adapted to slide. The lower plate 22 of said guide is straight while the rear end of the upper one 21 is offset and engaged with the rear end of the plate 22, the offset or angular portion being formed with a guide opening for the link 19. The guide device is pivotally or loosely mounted upon the tongue 7 by a U-bolt 23 which passes through alined openings in the rear ends of the plates 21, 22, as clearly shown in the drawings. The rear end of the link 19 is connected to the upper end of a vertically disposed lever 24 fulcrumed at its lower end at 25 in an angular bracket 26 secured to and depending from the bottom of the tongue 7. A connection 27 unites the intermediate portion of the lever 24 with the brake beam 9. Said connection 27 is preferably made longitudinally adjustable by constructing it of a tubular section 28 to telescopically receive another section 29, the two sections being retained in adjusted position by a set screw 30. These parts provide a rigid link connection between the lever and the brake beam so that when the animals pull forwardly on the draft device 14 the brake beam will be swung forwardly to disengage

its shoes 10 from the rear wheels and the instant the draft on the device 14 ceases the spring 13 will draw the brake beam rearwardly to apply the brake shoes to said wheels.

In order to control the pressure of the brake shoes against the rear wheels 4, any suitable means may be provided for varying the tension of the spring 13. As shown this is accomplished by connecting to the rear end of the spring a flexible cable, chain or the like 31 which is attached to and wound upon a shaft 32 journaled in suitable bearings, the latter being here shown as bearings upon the lower ends of two spaced hangers 33. Upon the shaft 32 is provided a ratchet wheel 34 to receive a locking pawl 35 and upon one end of said shaft may be provided a squared portion for the reception of a crank handle or wrench. It will be seen that the shaft 32 may be rotated to wind the cable 31 thereon and thereby stretch the spring 13 to control the pressure of the brake shoes against the rear wheels.

If desired, the weight of the load upon the wagon or vehicle may be utilized to apply or assist in applying the brake. While this may be accomplished in various ways, it is preferably done as illustrated in the drawings by arranging the body or box 37 upon two false bolsters or supports 38 arranged for vertical sliding movement above the bolsters 5. These bolsters are guided in their sliding movement by forming their ends with notches or recesses to receive the standards 6, which latter serve as guides. The false bolster or support 38 above the front axle may be supported by suitable springs 39 attached to its bottom and engaged with the top of the front bolster 5, but the false bolster 38 above the rear axle is connected to the upper ends of the hangers 33 so that the weight of the body and the load therein will actuate the hangers 33 downwardly. This downward movement of said hangers is caused to draw the cable 31 rearwardly by passing said cable over a grooved guide pulley 40 journaled in angular brackets 41 depending from the rear axle 2.

The operation of the invention will be readily understood from the foregoing description taken in connection with Figs. 1 and 2 of the drawings. It will be seen that the spring 13 will hold the brake normally in its applied position so that when the vehicle is stopped upon uneven or hilly ground, it will remain stationary and will not move or roll down the incline by gravity. However, the instant the animals pull the draft device or connection 14 forwardly the brake will be released. Owing to the adjustable connection for the rear end of the spring 13 the tension of the latter may be conveniently varied to vary the application of

the brake according to the weight of the vehicle and its load; and by mounting the body upon a movable member or support and connecting the latter to the spring the weight of the body and its load will be utilized to assist in applying the brake. This feature is especially advantageous since heavy loads will cause the brake to be more firmly applied as is necessary. When it is desired to back the vehicle the brake may be released by swinging the outer end of the tongue 7 upwardly a slight extent. When this is done, the angular bracket or hanger 26 will cause the lever 24 to draw the connecting rod or link 27 forwardly and hence retract the brake shoes.

While the preferred embodiment of the invention is shown and described in detail, it will be understood that the invention is not limited to the precise construction set forth and that various changes in the form, proportion and minor details may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

Having thus described the invention what is claimed is:

1. The combination of a vehicle, a brake therefor, a vertically movable support for the body of the vehicle, a hanger depending from said support, a spring for actuating the brake, a flexible connection between said spring and said hanger and a guide for said flexible connection.
2. The combination of a vehicle having a vertically movable body, a brake for the vehicle, a hanger movable vertically with the body of the vehicle, a spring for actuating the brake, a flexible connection between said spring and hanger and a guide for said flexible connection.
3. The combination of a vehicle having a vertically movable body, a brake for the vehicle, a hanger movable vertically with the body of the vehicle, a spring for actuating the brake, a flexible connection between said spring and hanger, a guide for said flexible connection and means for releasing the brake.
4. The combination of a vehicle, a brake therefor, a vertically movable support for the body of the vehicle, a hanger depending from said support, a spring for actuating the brake, a flexible connection between said spring and said hanger, a guide for said flexible connection, and a draft device adapted to release the brake.
5. The combination with a vehicle running gear having bolsters and standards thereon, of supplemental body supporting bolsters arranged above the first mentioned bolsters and vertically slidable on their standards, springs for cushioning one of said supplemental bolsters, a brake mechanism, a spring for holding said brake mechanism

applied, an operative connection between the last mentioned spring and the other supplemental bolster and means for releasing the brake.

5 6. The combination with a vehicle running gear having bolsters and standards thereon, of supplemental body supporting bolsters arranged above the first mentioned bolsters and vertically slidable on their
10 standards, springs for cushioning one of said supplemental bolsters, a brake mechanism, a spring for holding said brake mechanism applied and an operative connection between
15 the last mentioned spring and the other supplemental bolster.

7. The combination with the running gear of a vehicle, of a supplemental body supporting bolster arranged for vertical movement above one of the bolsters of the running gear, a hanger depending from said
20 supplemental bolster, a winding shaft journaled in said hanger, a brake mechanism, a coil spring connected to said brake mechanism

ism for holding it applied, a flexible connection between said coil spring and said winding shaft, a guide for said flexible connection and a draft connection for the vehicle adapted to release the brake. 25

8. The combination of a vehicle running gear, a hanger, a winding shaft journaled in said hanger, a crank handle at one end of said shaft, a pawl and ratchet device for preventing retrograde rotation of the shaft, a brake mechanism, a coil spring connected to said brake mechanism for holding it applied, a guide, a cable passed over said guide and having one end attached to said coil spring and its other attached to and wound upon said shaft. 30 35

In testimony whereof I hereunto affix my signature in the presence of two witnesses. 40

JAMES E. HEWITT.

Witnesses:

J. E. BEERWURT,
P. L. YOLLAND.