

No. 875,855.

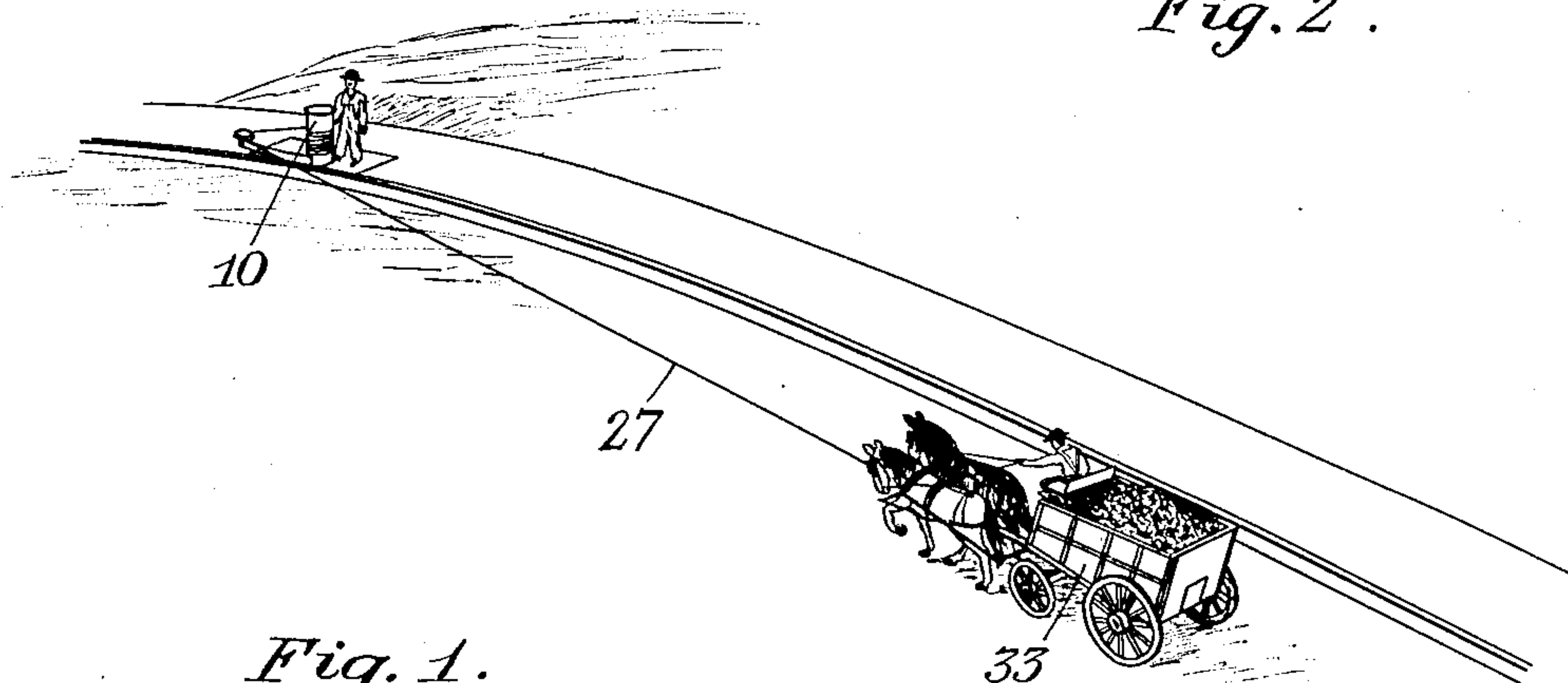
PATENTED JAN. 7, 1908.

P. F. SHEVLIN.  
ELECTRIC HOIST OR DRAFT APPARATUS.

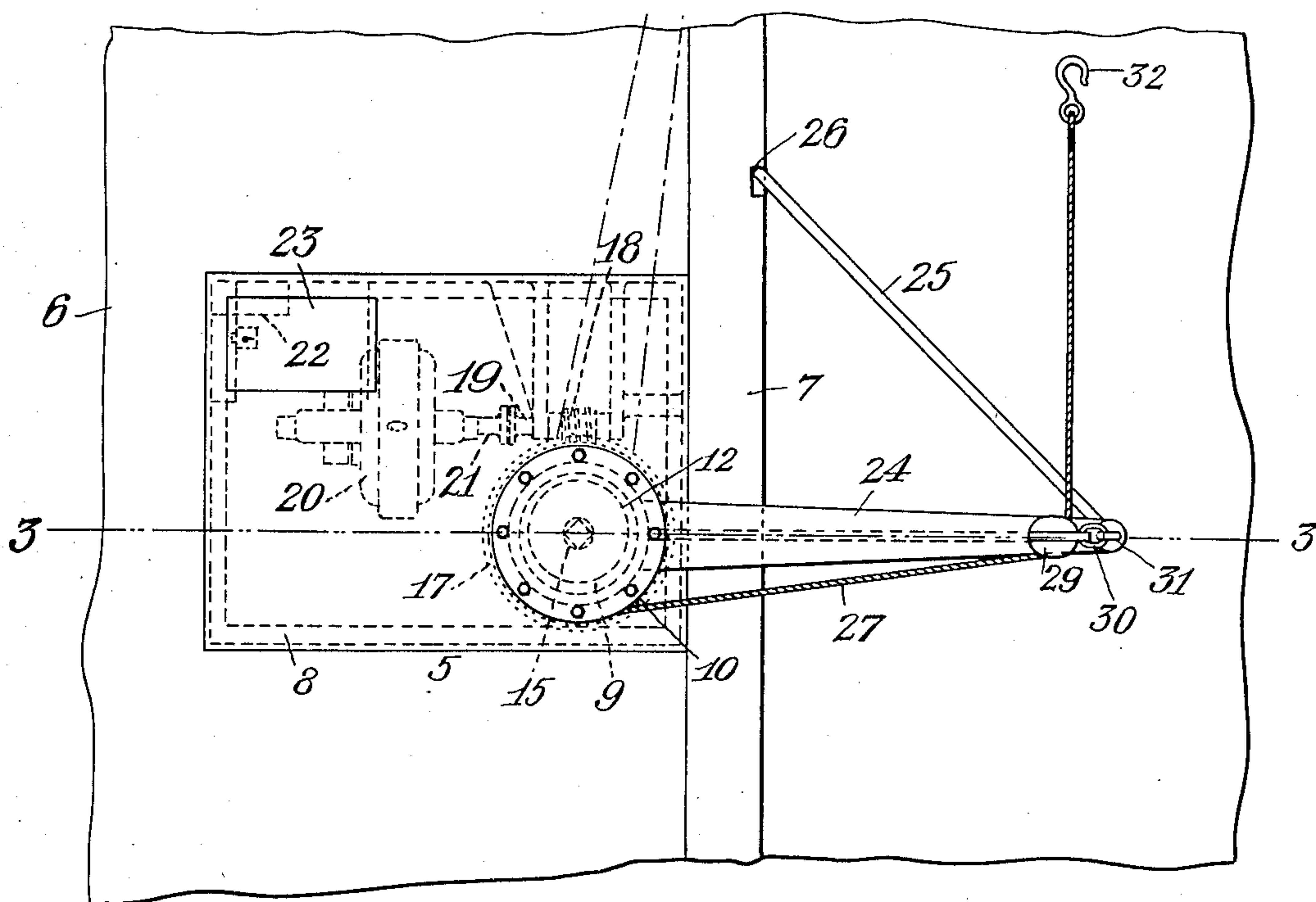
APPLICATION FILED DEC. 21, 1906.

2 SHEETS—SHEET 1.

*Fig. 2 .*



*Fig. 1.*



*Witnesses:*  
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*Louis A. Jones.*

*Inventor:*  
*Patrick F. Shevlin.*  
*By his attorney, Charles S. Ford.*

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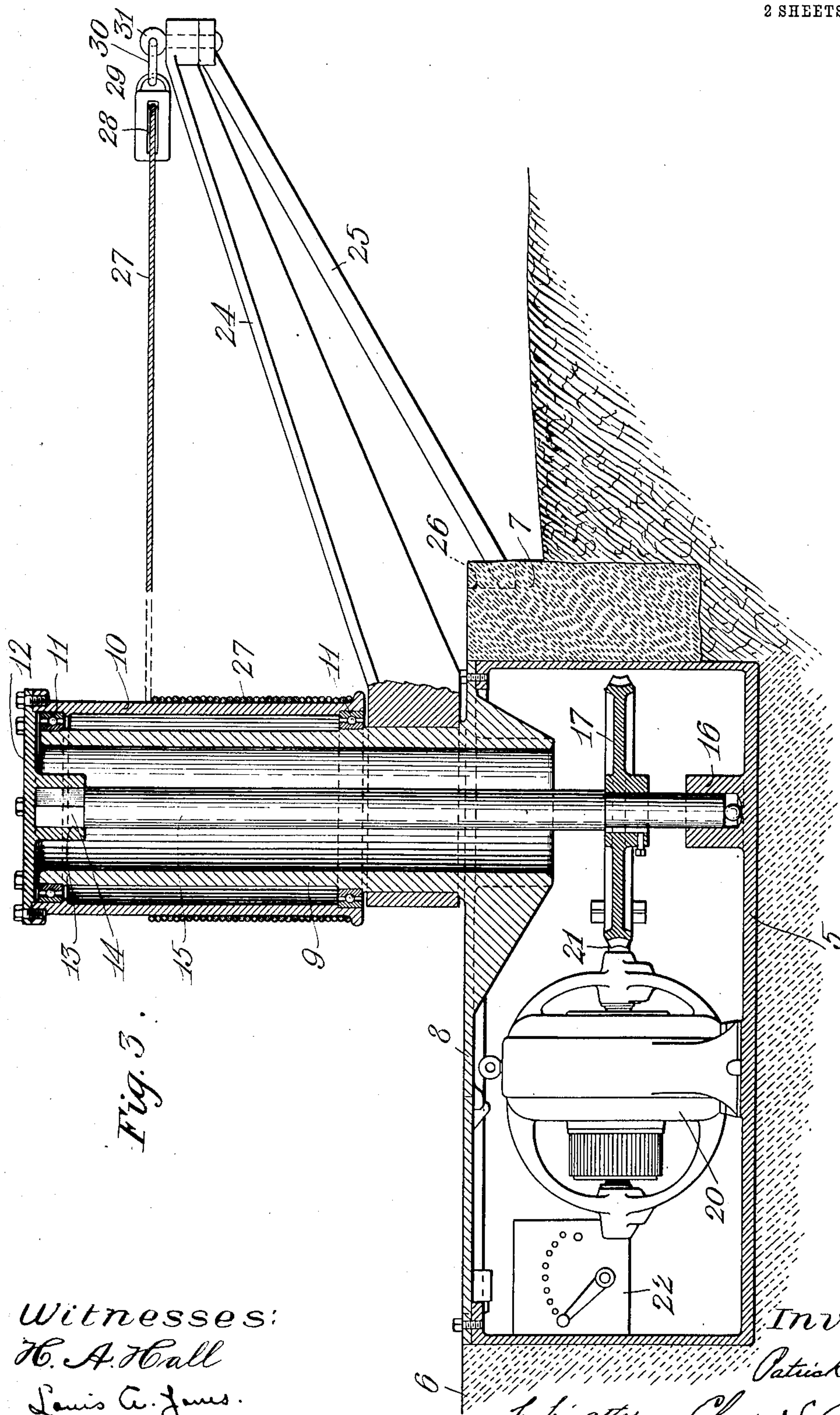
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## ELECTRIC HOIST OR DRAFT APPARATUS.

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2 SHEETS—SHEET 2.



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H. A. Hall  
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# UNITED STATES PATENT OFFICE.

PATRICK F. SHEVLIN, OF SOUTH BOSTON, MASSACHUSETTS.

## ELECTRIC HOIST OR DRAFT APPARATUS.

No. 875,855.

Specification of Letters Patent.

Patented Jan. 7, 1908.

Application filed December 21, 1906. Serial No. 348,866.

*To all whom it may concern:*

Be it known that I, PATRICK F. SHEVLIN, a citizen of the United States, residing at South Boston, in the county of Suffolk and State of Massachusetts, have invented new and useful Improvements in Electric Hoist or Draft Apparatus, of which the following is a specification.

This invention relates to an electric hoist or draft apparatus particularly adapted for assisting teams to ascend or descend steep grades.

It very often happens that a horse or pair of horses hitched to a wagon is capable of hauling a load along level roads and up moderate grades, but when a steep grade is reached the horses have a hard struggle to ascend it. It is a familiar sight under such circumstances to see an inhumane driver cruelly whipping and abusing the horses to compel them to put forth their best efforts. It is not unusual when the streets are covered with snow and ice to see a horse lose his footing and fall. Sometimes when heavily loaded wagons without brakes are descending hills a horse stumbles and falls and the wagon runs onto him and injures him severely.

The object of this invention is to provide an apparatus for assisting horses to ascend or descend steep and slippery grades and to that end the invention consists in an apparatus comprising an electric motor and a drum operatively connected thereto, the same being preferably placed at the summit of the hill so that a rope or cable surrounding the drum may be attached to a wagon and the horses may be assisted by the motor in hauling a wagon.

Other objects and advantages will appear hereinafter.

Referring to the drawings: Figure 1 is a plan view of my apparatus showing the base embedded in a sidewalk. Fig. 2 is a perspective view of the same located at the summit of a hill and being used to haul a wagon up the hill. Fig. 3 is an enlarged section, partly in elevation, taken on line 3—3 of Fig. 1.

Like numerals refer to like parts throughout the several views of the drawings.

In the drawings, 5 is a hollow base embedded in a sidewalk 6 adjacent to a curbstone 7. The base 5 is provided with a cover plate 8 secured thereto in such a manner as to be water tight. A column 9 extending upwardly from the base 5 has journaled thereon a drum 10 there being suitable annular ball bearings 11, 11 interposed between said column and said drum. The drum 10 is provided with a cap 12 fast thereto, said cap having a square recess 13 in which is located the squared end 14 of a shaft 15. The shaft 15 is journaled at its lower end in a bearing 16 formed on the base 5. A worm gear 17 fast to the shaft 15 meshes into a worm 18, said worm being fast to a shaft 19 journaled in suitable bearings formed on the interior of the base 5.

An electric motor 20 is provided with a shaft 21 which is coupled to the shaft 19. A controller 22 in circuit in the motor 20 is adapted to control said motor so that said motor may be started, stopped, and reversed at will. In order that access may be had to the controller 22, a hinged door 23 is provided. An arm 24 is rotatably mounted on the column 9, said arm being provided with a strut 25 pivotally connected thereto, said strut when in operative position as shown in the drawings, being in engagement with a notch 26 formed in the curbstone 7. When the apparatus is out of use, the strut 25 may be removed from the notch 26 and the arm 24 may then be swung to the position illustrated in broken lines, Fig. 1.

A rope or cable 27 surrounding the drum 10 and preferably fast thereto at one end passes around a sheave wheel 28 of a block 29, said block being connected by a link 30 to a pivotal pin 31. A hook 32 is fast to the free end of the rope 27, said hook being adapted to be attached to a wagon. When it is desired to assist a wagon 33 up the hill, the hook 32 may be attached to any suitable part of the wagon and the motor 20 may be run in the proper direction to wind the rope 27 onto the drum 10.

Should a heavily loaded wagon be without brakes and should it be desired to descend the hill the hook 32 may be attached to the rear end of said wagon and the motor 20



may be run slowly in the proper direction to allow the rope 27 to unwind from the drum 10, thereby allowing the wagon to go slowly down the hill without danger of said wagon running onto the horses. It will be evident that the worm 18 and the worm gear 17 constitute a positive lock so that the motor 20 may be stopped at any time during the ascending or descending of the hill and the wagon will be held against descending the hill by reason of the action of gravity.

It will be evident that the apparatus hereinbefore described is capable of various modifications within the spirit and scope of the invention and that the same may be utilized for purposes other than the one herein described. If the conditions make it desirable, the arm 24, the strut 25, and the pulley block 29 may be dispensed with.

Having thus described my invention, what I claim and desire by Letters Patent to secure is:

1. A draft apparatus comprising in its construction a hollow base, a hollow column extending upwardly from said base, a hollow drum surrounding said column and journaled on bearings surrounding said column, a shaft located within said column, said shaft being connected at its upper end to said drum and being journaled at its lower end on said base, said shaft being of less diameter than the inside diameter of said column, a motor located within said base, and mechanism operatively connecting said motor to said shaft.

2. A draft apparatus comprising in its construction a hollow base, a hollow column extending upwardly from said base, a hollow drum surrounding said column and journaled on bearings surrounding said column, a shaft located within said column, said shaft being connected at its upper end to said drum and being journaled at its lower end on said base, said shaft being of less diameter than the inside diameter of said column, a worm gear fast to said shaft, a worm meshing into said worm gear, and a motor located within said base operatively connected to said worm.

3. A draft apparatus comprising in its construction a hollow base, a hollow column extending upwardly from said base, a hollow drum surrounding said column and journaled on bearings surrounding said column, a shaft located within said column, said shaft being connected at its upper end to said drum and being journaled at its lower end on said base, said shaft being of less diameter than the inside diameter of said column, a motor located within said base, mechanism operatively connecting said motor to said shaft, an arm mounted on said column, and a sheave wheel supported on said arm.

4. A draft apparatus comprising in its con-

struction a hollow base, a hollow column extending upwardly from said base, a hollow drum surrounding said column and journaled on bearings surrounding said column, a shaft located within said column, said shaft being connected at its upper end to said drum and being journaled at its lower end on said base, said shaft being of less diameter than the inside diameter of said column, a motor located within said base, mechanism operatively connecting said motor to said shaft, an arm rotatably mounted on said column, a sheave wheel supported on said arm, and means for preventing rotation of said arm on said column.

5. A draft apparatus comprising in its construction a hollow base, a column extending upwardly from said base, a hollow drum surrounding said column and journaled thereon, a motor located in said base, mechanism operatively connecting said motor to said drum, an arm rotatably mounted on said column, a sheave wheel carried by said arm, and means for preventing rotation of said arm on said column.

6. A draft apparatus comprising in its construction a hollow base, a column extending upwardly from said base, a hollow drum surrounding said column and journaled thereon, a motor located in said base, mechanism operatively connecting said motor to said drum, an arm rotatably mounted on said column, a sheave wheel carried by said arm, and a strut pivotally mounted on said arm.

7. A draft apparatus comprising in its construction a hollow base, a column extending upwardly from said base, a hollow drum surrounding said column and journaled thereon, a motor located in said base, mechanism operatively connecting said motor to said drum, an arm rotatably mounted on said column, a pulley carried by said arm, and a strut pivotally mounted on said arm.

8. A draft apparatus comprising in its construction a hollow base, a hollow column extending upwardly from said base, a hollow drum surrounding said column and journaled on bearings surrounding said column, a shaft located within said column, said shaft being connected at its upper end to said drum and being journaled at its lower end on said base, said shaft being of less diameter than the inside diameter of said column, a motor located within said base, mechanism operatively connecting said motor to said shaft, an arm mounted on said column, a sheave wheel supported on said arm, and a cable having a hook fast thereto at one end thereof, the other end of said cable being fast to said drum, said cable passing part way around said sheave wheel.

9. A draft apparatus comprising in its con-



struction a base, a column extending upwardly  
from said base, a drum rotatably mounted  
on said column, a motor mounted on said  
base, mechanism operatively connecting said  
5 motor to said drum, an arm rotatably mount-  
ed on said column, a sheave wheel carried by  
said arm, and means for preventing rotation  
of said arm on said column.

In testimony whereof I have hereunto set  
my hand in presence of two subscribing wit- 10  
nesses.

PATRICK F. SHEVLIN.

Witnesses:

LOUIS A. JONES,

ANNIE J. DAILEY.