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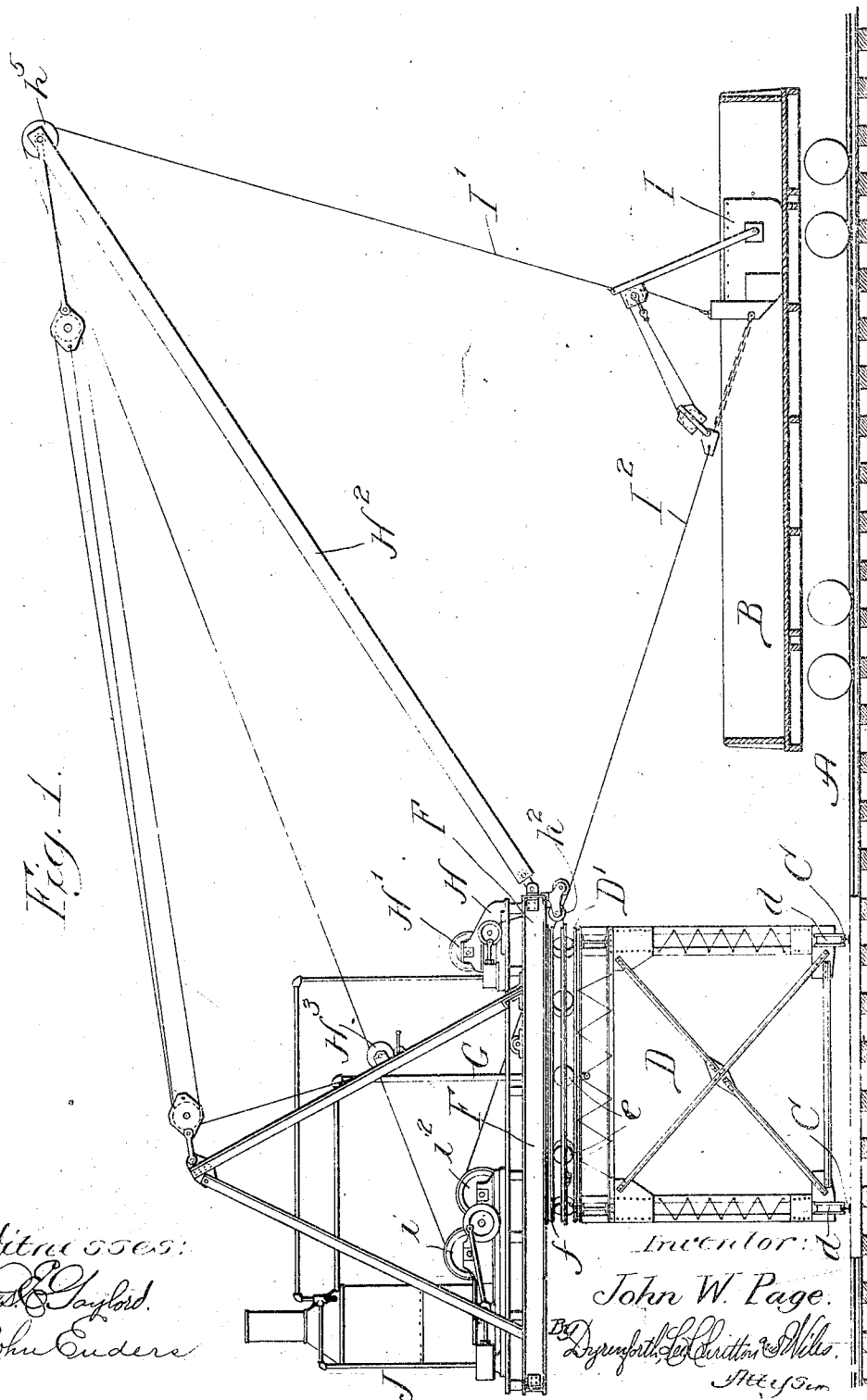
J. W. PAGE.
CAR UNLOADING APPARATUS.
APPLICATION FILED JAN. 24, 1908.

Patented Dec. 7, 1909.

4 SHEETS—SHEET 1.

Fig. 1.

Witnesses:
E. C. Taylor.
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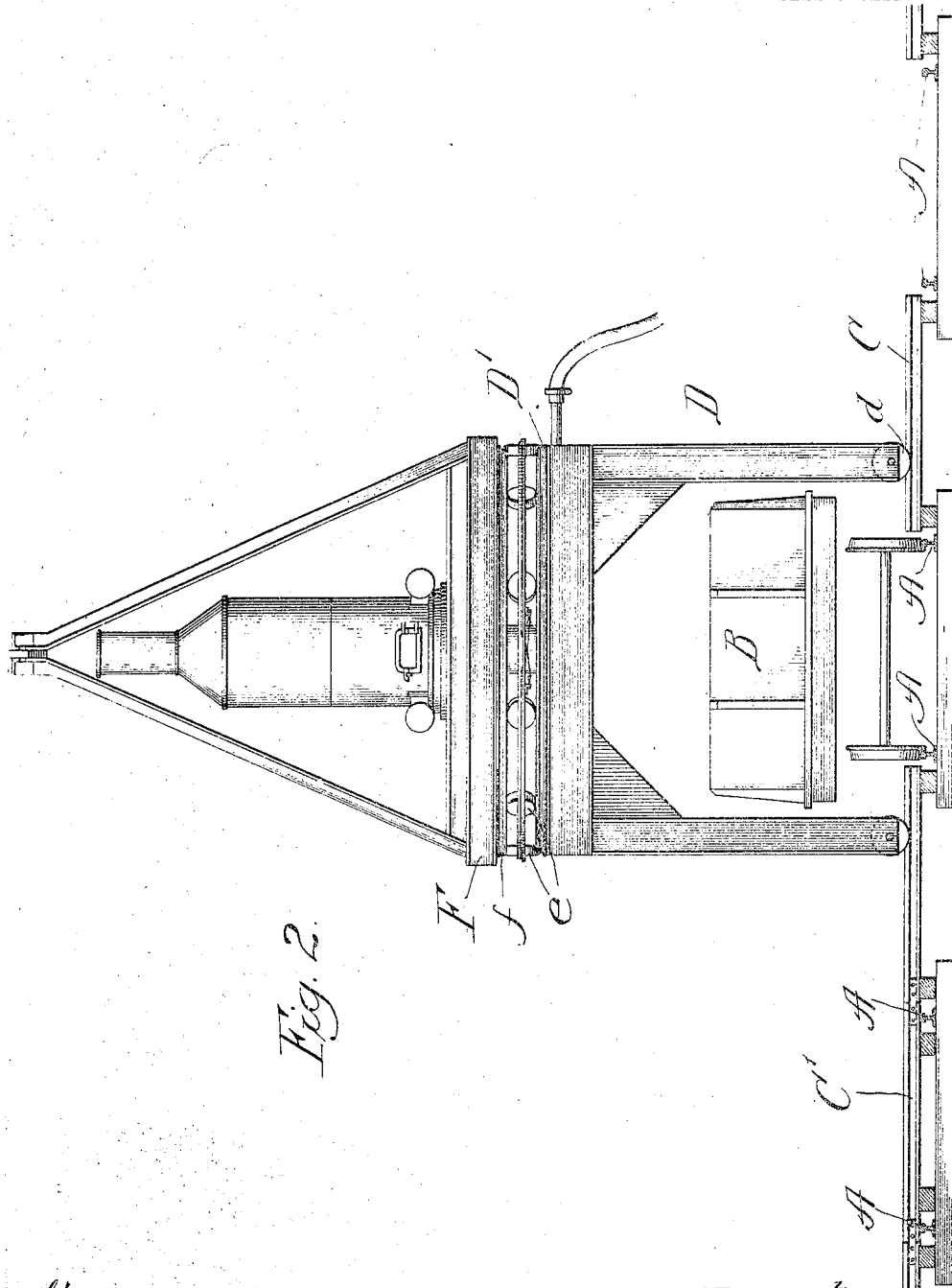


Fig. 2.

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4 SHEETS—SHEET 3.

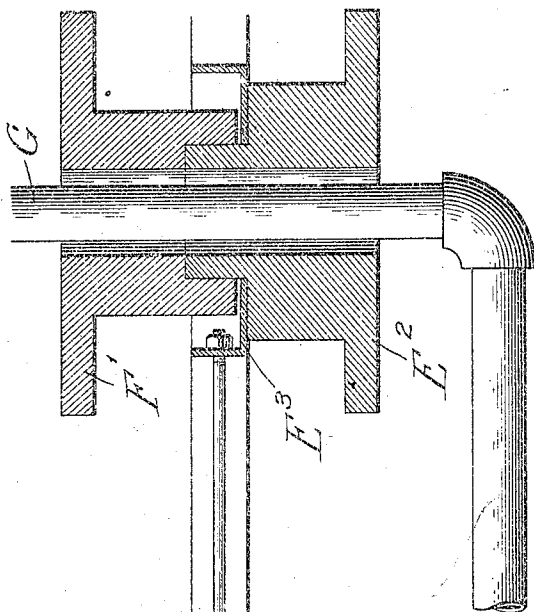


Fig. 3.

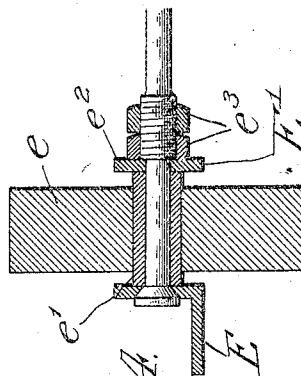
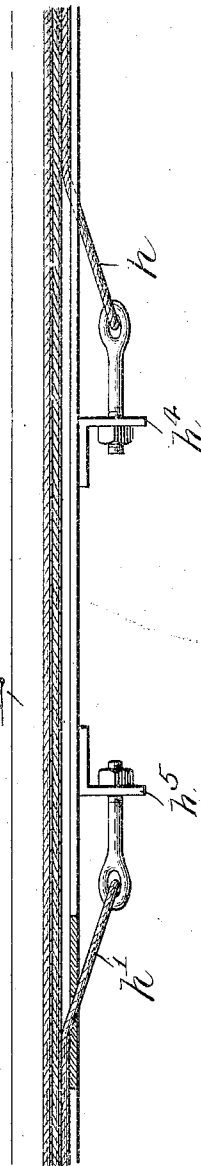


Fig. 4.

Fig. 5.



Witnesses:

Edw. Gaylord,
John Enders

Inventor:

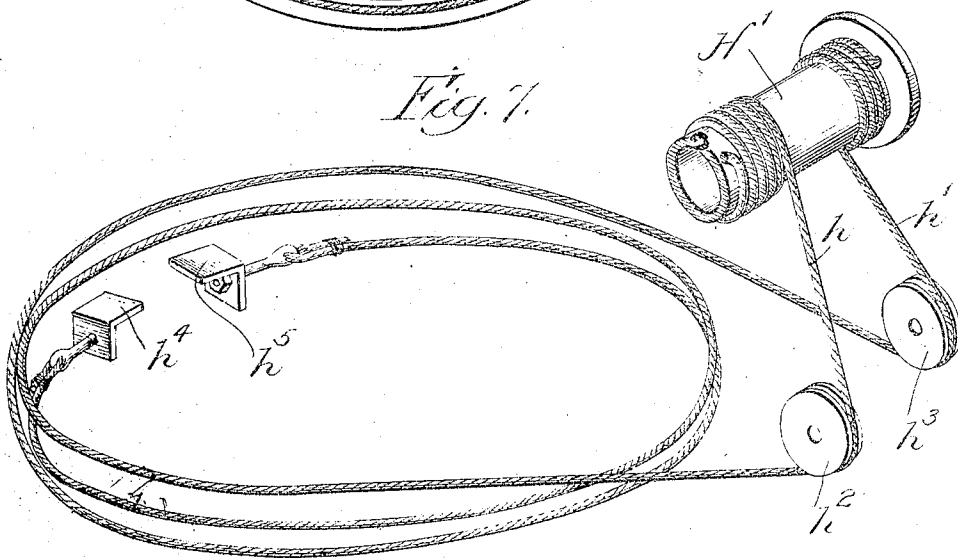
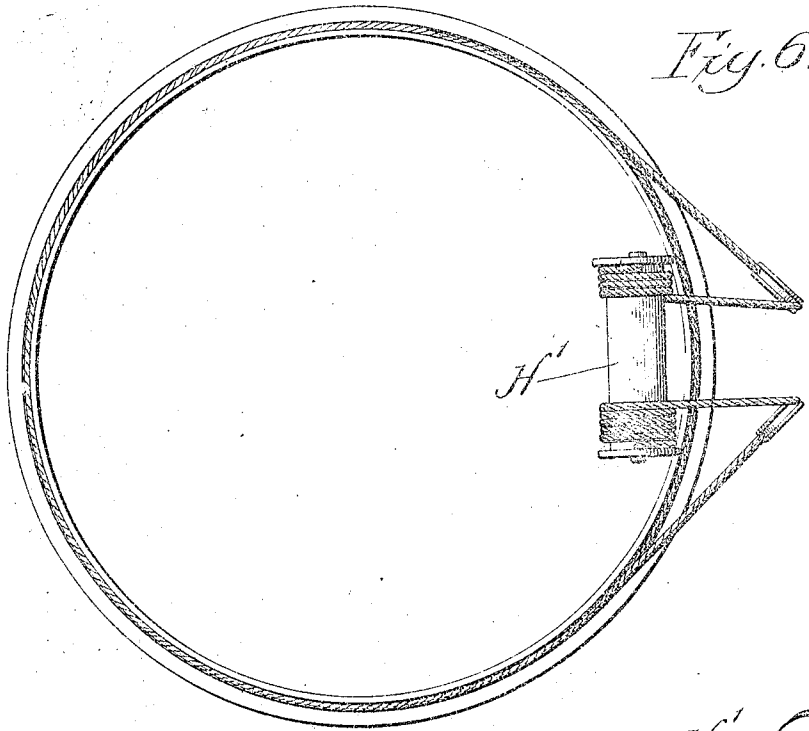
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APPLICATION FILED JAN. 24, 1908.

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4 SHEETS—SHEET 4.



Witnesses:
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UNITED STATES PATENT OFFICE.

JOHN W. PAGE, OF CHICAGO, ILLINOIS.

CAR-UNLOADING APPARATUS.

942,840.

Specification of Letters Patent.

Patented Dec. 7, 1909.

Application filed January 24, 1908. Serial No. 412,401.

To all whom it may concern:

Be it known that I, JOHN W. PAGE, a citizen of the United States, residing at 188 Madison street, Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Car-Unloading Apparatus, of which the following is a specification.

My invention relates to certain new and useful improvements in car-unloading apparatus; and is fully described and shown in the accompanying drawings, in which:

Figure 1 is a side elevation of my improved device; Fig. 2 is a rear elevation thereof; Fig. 3 is a radial section through the spider and adjacent parts; Fig. 4 is a radial section through one of the wheels of the spider; Fig. 5 is an elevation showing the means of attachment of the turning cables to the spider; Fig. 6 is a top plan diagrammatically illustrating the arrangement of the turning cables and Fig. 7 is a perspective view showing the same arrangement.

Referring to the drawings, A are a series of rails of ordinary railroad track upon which the cars to be unloaded are adapted to be run, and B indicates one of the cars to be unloaded. Rails C are provided at right angles to the rails A and at such a height above the rails A that the lower line of the rails C is level with or above the level of the tops of the rails A as illustrated. The rails C are set at a comparatively wide gauge as seen in Fig. 1 and terminate at the two sides of each pair of rails A to permit the passage of the cars along the rails A without interference. A series of removable rails C¹ are provided which can be laid down to connect the ends of the rails C across the rails A.

D indicates a frame having an upper platform and four vertical posts or columns at the corners, the said columns being braced at the sides parallel to the tracks A (Fig. 1) but being provided with only short struts at the ends of the frame so as to leave a clear and unobstructed passage through the frame for the cars B. The frame D is provided with wheels or rollers *d* running upon the rails C and by this arrangement the frame D can be moved laterally across the rails A. When the frame D is to be moved, the removable sections C¹ are placed in position to make a continuous track along which the frame can be moved, and when

the frame has reached the proper position straddling one pair of rails A, the removable section is taken out so as to leave an unobstructed passage through the frame D for the cars to be unloaded. The cars can be successively drawn through the frame as desired; and when it is desired to remove the frame for the passage of a locomotive or a higher car than the ordinary gondola car the removable section can be placed in position and the frame D moved out of the way very readily.

The frame D is surrounded by a circular rail D¹ upon which run a series of rollers *e* mounted upon a spider the construction of which is well illustrated in Figs. 3 and 4. Each of the rollers runs upon a spreader *e*¹ which is confined between a ring E¹ of outwardly facing angle-iron and an inner ring E² made from strap or sheet metal, the rings E¹ and E² being held together by bolts *e*² passed through the spreaders *e* and having heads on the outside and nuts *e*³ on the inside. At the center of the frame D is a boss E² shouldered at its upper end to provide a bearing for a ring E³ of inwardly facing angle-iron. The ring E³ is connected to the bolts *e*² by eye bolts C⁴ having nuts inside the ring E³ and clevises *e*⁴ connected to nuts on the ends of the bolts *e*². By this arrangement a rotatable spider is provided which is of light and simple construction and yet exceedingly strong, the suspension principle being utilized for producing the requisite strength. On top of the spider is a platform F supplied on its lower surface with a downwardly facing rail *f* running upon the tops of the rollers *e*. The platform F is prevented from lateral or radial displacement and yet is permitted freely to rotate by means of a boss F¹ secured to its lower face, the said boss being shouldered to co-operate with the shoulder on the boss E² on the frame D. These two bosses are centrally perforated as illustrated and afford a passage for a pipe G through which the water supply can be taken to the boiler on the platform F. Upon the platform F is mounted a turning engine H which drives a drum H¹. Cables *h* and *h*¹ are wound in opposite directions about the drum H¹ and extend thence downward over sheaves *h*² and *h*³ and thence in opposite rotary directions about the angle-iron ring E¹ of the spider, the ends of the said cables being passed through perforations provided for the purpose in the

horizontal flange of said ring and secured in place by eye-bolts to brackets A^4 , A^5 secured to the ring E as illustrated. It will be evident that by rotating the drum H^4 in one direction the cable A will be drawn in and the cable A^1 will be paid out so that relative rotation will be produced between the spider and the platform F while opposite rotation of the drum H^3 will produce the opposite effect and consequently opposite rotation. The arrangement is such that if power is thrown on to the turning engine suddenly the platform F will not start with a jerk but there will be slippage of the spider both on the rail D^1 and the rail f so that the platform F will start its rotation in a smooth and easy manner without shock or jar regardless of the suddenness with which power is applied. Furthermore, the platform will move at double the angular velocity of the spider with the result that a comparatively short operation of the turning engine is necessary and with the further result that to secure any given capacity for angular movement, the cables can be made of one half the usual length.

On the front of the platform F is pivoted a boom H^2 capable of vertical oscillation and under control of a hand-windlass H^3 . The boom H^2 carries at its outer end a sheave A^2 over which runs a cable I^1 operating as one of the two operative ropes connecting with a scraper bucket L. This cable runs over a drum I operated by a hoisting engine J. A cable I^2 which forms the holding rope of the shovel I runs over a similar drum K . The shovel in question is substantially that of my application for patent No. 291013 filed December 9th, 1905, which in turn is an improvement on the shovel of my Patent No. 735390. The operation of the shovel under the control of the two ropes is fully set forth in the patent and application aforesaid.

In the operation of the device the apparatus is placed in position in the usual way as already set forth and a series of the cars to be unloaded is arranged in position in front of the said frame. The shovel I is then brought into action and the contents of the car are removed by drawing the shovel longitudinally of the car, then hauling the

shovel upward by means of the cable I^1 and then swinging the shovel laterally to the dumping position by rotating the platform upon which the contents of the shovel can be dumped by releasing the rope I^2 . It will be understood that during this operation the car operated upon has its wheels blocked to prevent its longitudinal displacement upon the track. As soon as the car is unloaded or practically unloaded, its wheels are unblocked and the shovel is brought into action on the next car of the series and if desired the action of the shovel on the next car can be made to draw the whole series of cars forward toward the apparatus, the car already unloaded, passing underneath the frame. When the series has reached a proper position for convenient operation, the wheels are again blocked and the work is proceeded with as before until the entire series of cars is unloaded and the track cleared. The removable section of track can then be taken up and the apparatus moved sidewise to free the track for traffic.

I realize that considerable variation is possible in the details of construction of my improved device, without departing from the spirit of my invention, and I do not intend therefore, to limit myself to the specific form herein shown and described.

What I claim as new and desire to secure by Letters Patent, is—

1. In a device of the class described, the combination with a main-track, cars to be unloaded movable thereon, a surface cross-track, a frame movable on said cross-track and adapted to straddle the main-track, and excavating means mounted on the frame.

2. In a device of the class described, the combination with a main-track, cars thereon, a surface cross-track at higher level than the main-track and having a gap to permit the passage of cars on the main-track through said gap, a movable section adapted to fill the gap, a frame movable on the cross-track and adapted to straddle the main-track and excavating means upon the frame.

JOHN W. PAGE.

In presence of—
L. HEISLER,
E. SCHAEFER.