No. 717,701. PATENTED JAN. 6, 1903.

J. MURPHY.

LOADING ATTACHMENT FOR WAGONS.

APPLICATION FILED SEPT. 29, 1902.

NO MODEL. 2 SHEETS—SHEET 1.

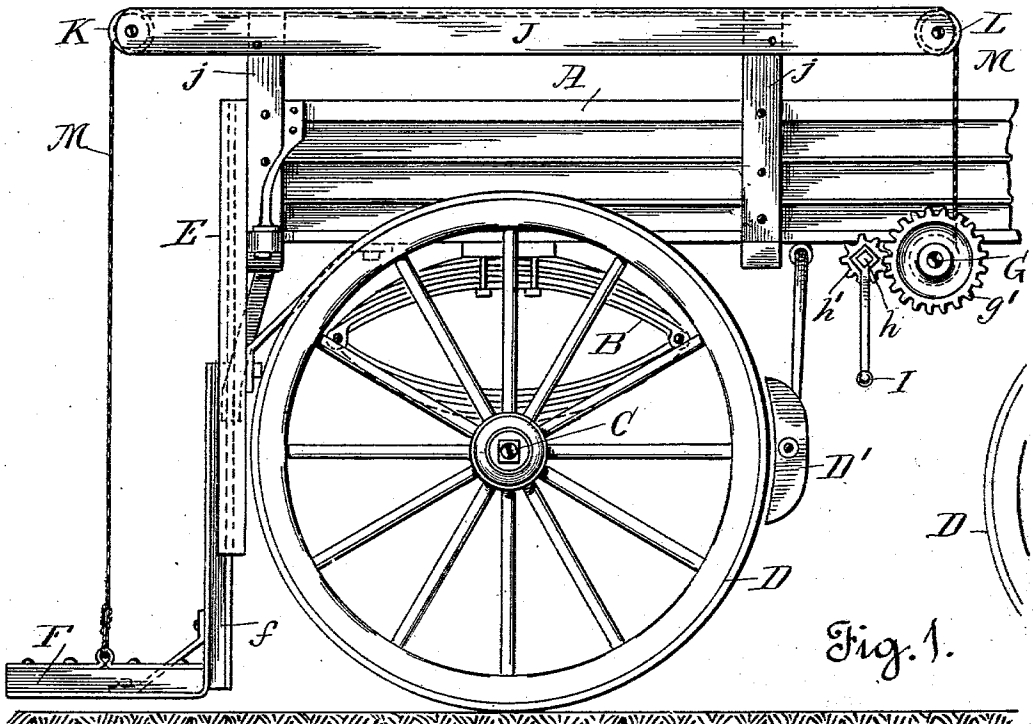


Fig. 1.

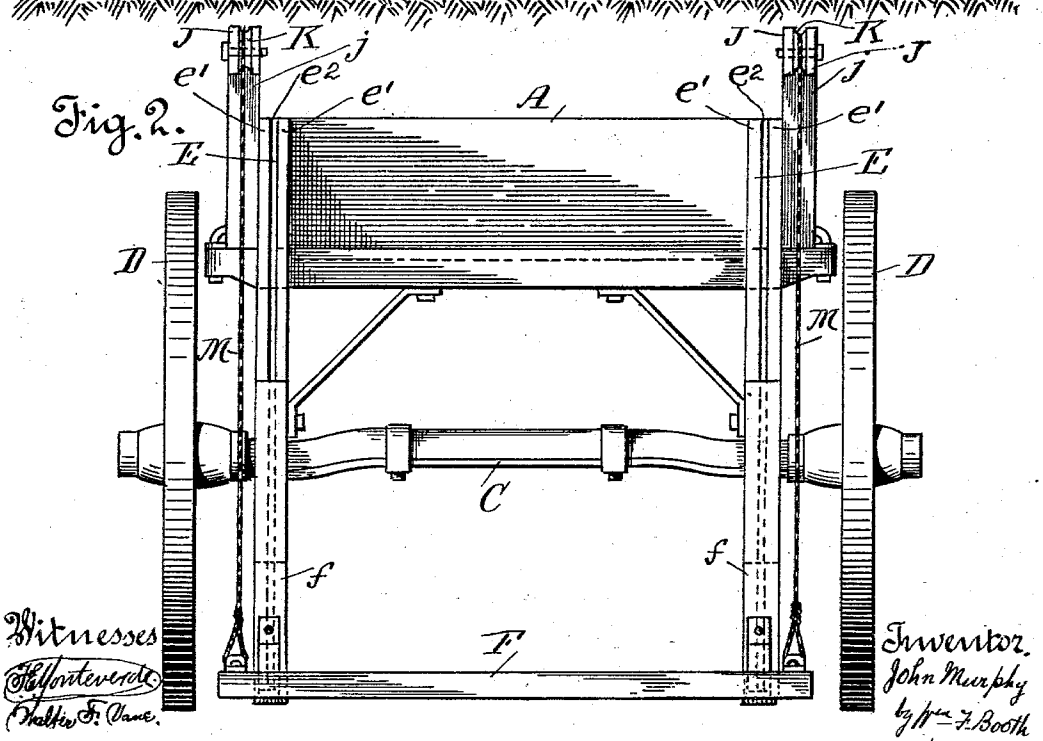


Fig. 2.

Witnesses
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NO MODEL. 2 SHEETS—SHEET 2.

Fig. 3.

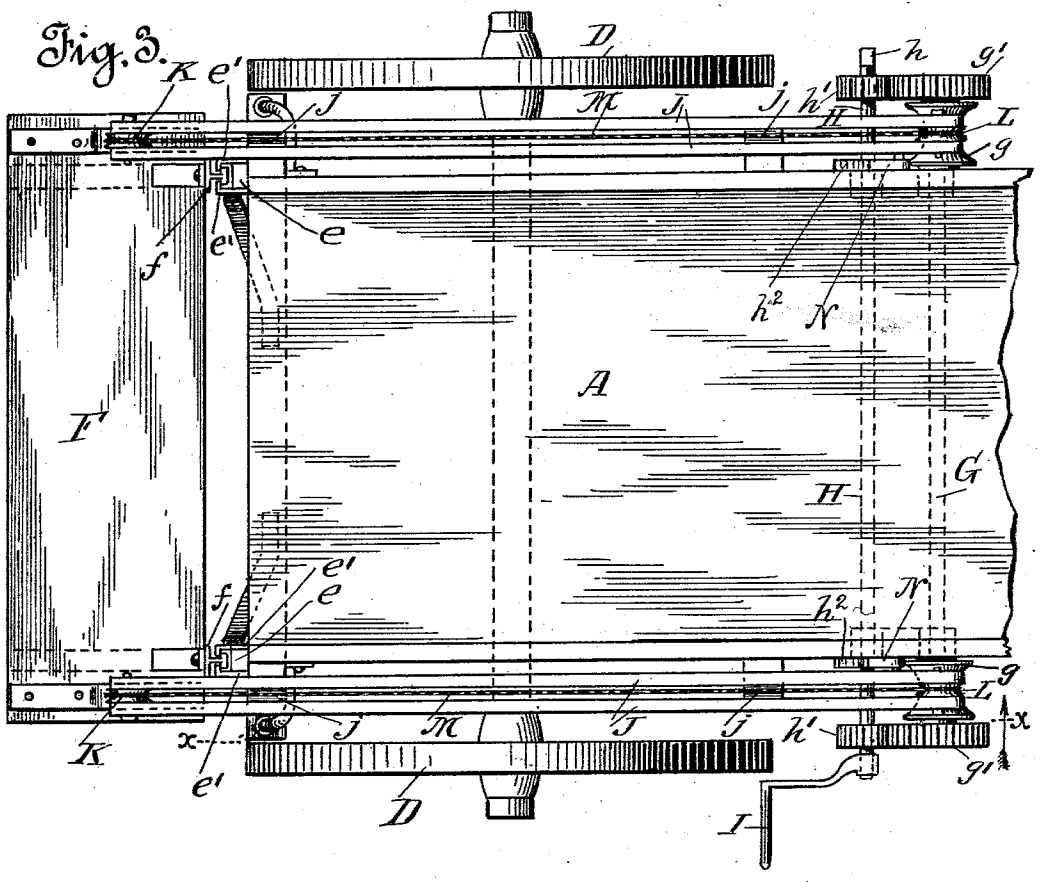
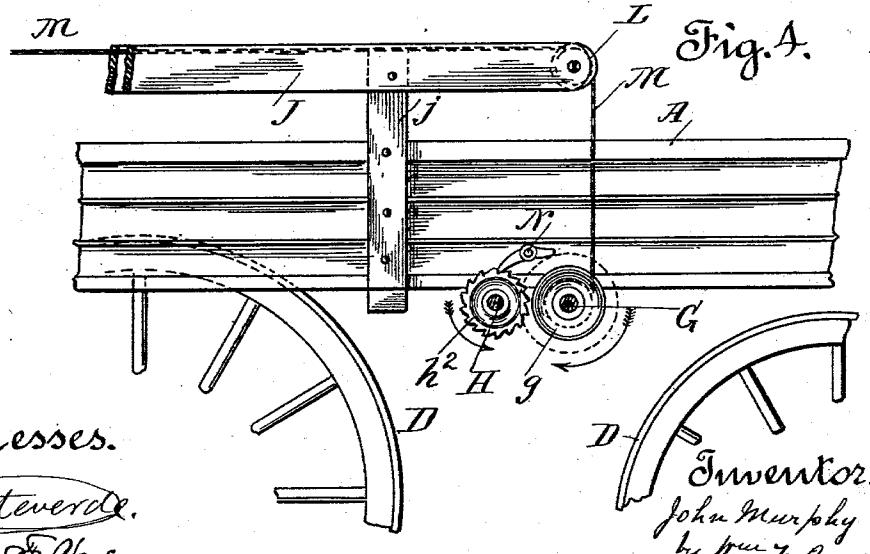


Fig. 4.



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UNITED STATES PATENT OFFICE.

JOHN MURPHY, OF SAN FRANCISCO, CALIFORNIA.

LOADING ATTACHMENT FOR WAGONS.

SPECIFICATION forming part of Letters Patent No. 717,701, dated January 6, 1903.

Application filed September 29, 1902. Serial No. 125,243. (No model.)

To all whom it may concern:

Be it known that I, JOHN MURPHY, a citizen of the United States, residing in the city and county of San Francisco, State of California, have invented certain new and useful Improvements in Loading Attachments for Wagons; and I do hereby declare the following to be a full, clear, and exact description of the same.

My invention relates to the class of wagons, and is especially applicable to spring-wagons, such as are commonly used as express-wagons.

The common type of these wagons is in most respects very satisfactory. Their noticeable disadvantage, however, is the difficulty of loading them, due to the height of the bed above the ground. Various attempts have been made to remedy this defect not only in spring-wagons, but in wagons in general by lowering the bed, which in some cases has been effected by putting the springs in a plane lower than the axle, in others by dropping the rear end of the bed, and, as in the case of trucks, by crank-axles. The tail-board also has been dropped to a lower plane by dropping the line of its hinge connection with a view of affording a more convenient step in loading. Notwithstanding these attempts the ordinary spring-wagon, with its springs above the axle and its high bed, remains in favor for advantages which more than counterbalance the difficulty of loading and unloading. This difficulty is, however, a serious one, and many expedients and much labor have been used in loading these wagons.

The object of my invention (which though applicable to wagons in general is especially intended for spring-wagons) is to make the loading and unloading an easy matter both with respect to convenience and power, thus doing away with much labor and many hands.

To this end my invention consists generally in a wagon having at its rear end suitable guides in which is mounted a horizontal platform adapted to be lowered to the ground and lifted to the level of the bed, the wagon being provided with a suitable power mechanism and connections to the platform to lift and lower said platform, all of which I shall hereinafter fully describe.

My invention also consists in the novel construction, arrangement, and combinations of parts hereinafter described and claimed.

Referring to the accompanying drawings, Figure 1 is a side elevation of my wagon, the front portion being broken away. Fig. 2 is a rear elevation of same. Fig. 3 is a plan of same. Fig. 4 is a detail side elevation to show the controlling-pawl and ratchet of the power-shaft. This view is taken on line $x\ x$ of Fig. 3.

The wagon here represented is the usual type of spring-wagon, having the bed A, springs B, axle C, wheels D, and brake D'. To the rear end of the wagon-bed, which it may be here stated has no tail-gate, (such being dispensed with,) are secured, one at each side, downwardly-extending guides E, which may be of any suitable character. The construction I here show is one which will be found adapted for the purpose. It consists of groove-faced bars e, flanked and overlapped by angle-irons e', separated to form a slot e^2 between them.

F is a platform. Its length is that of the width of the wagon-bed and its width may be suitable to receive the general run of things to be loaded into the wagon. In practice it will be as wide or a little wider than a tail-gate. The platform has secured to it on its inner edge near each end a guide-bar f, which is adapted to engage and slide in the guides E. The shape of the guide-bars f is of course conformable to that of the guides, and in the present illustration they are shown as T-shaped in cross-section, Fig. 3, the narrow head fitting behind the angle-iron e' of guides E, the shank passing through slot e^2, and the wide base or foot lying in front of the faces of the angle-irons e'. These interengaging guides E and f give a very steady connection for the platform and enable it to move easily and smoothly up and down without binding or cramping. The relative length of the guides E and f is such as to permit the platform to rise to the level of the floor of the wagon-bed and to descend as far as may be deemed convenient, preferably to the ground. The guides E must, however, terminate a sufficient distance above the ground to obviate any chance

of meeting with obstructions in the street or road. This can readily be done by terminating them at a safe height and regulating the length of the guides *f* in conformity with them.

In order to lift and lower the platform F, any suitable power device and connections may be employed. Those I have here shown and which will be found well adapted for the purpose are as follows. Under the wagon-bed at its forward portion extends transversely a shaft G, having on each end at the side of the bed a winding-drum *g* and a gear *g'*. A second shaft H extends under the bed parallel with the first and has near each end a pinion *h'*, which meshes with gear *g'*, while each extremity *h* is squared to receive a crank I.

To each side of the wagon-bed are secured by uprights *j* horizontal bars J, the rear ends of which project beyond the rear of the wagon-bed. In the rear ends of said bars are mounted sheaves K, and in their forward ends other sheaves L are mounted. Cables M are wound on drums *g*, thence pass up over sheaves L, thence backwardly along the bars J, (which are best formed of parallel-spaced strips, as shown in Figs. 2 and 3, to house and protect the cable between them,) thence down over sheaves K to a suitable connection with the platform F. Now by turning shaft H from either or both sides of the wagon the cables M are wound up or paid out, thereby lifting or lowering the platform F, as required. A retaining-pawl N, Figs. 3 and 4, secured to the wagon-bed, one on each side, engaging with a ratchet h^2 on each end of shaft H, is used to hold the platform at any height desired.

When the wagon is moving, the platform is held in an elevated position level with the bed, and thus acts as an extension of the bed and may carry like a tail-gate a part of the load. To load the wagon, the platform is lowered to or near the ground, as is deemed best. The load is placed upon it and the platform is then lifted again to the bed-level and the load pushed or rolled into the bed. This operation is repeated until all the load is on the wagon. Unloading is accomplished in similar manner. The work of loading and unloading is thus rendered easy and may be quickly done.

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

In a wagon, the combination of its bed having guides depending from its rear end, a platform provided with guides slidably engaging the bed-guides, whereby said platform is adapted to move up and down to and from the level of the bed, side supports on the wagon-bed, sheaves in said supports, a controllable winding mechanism carried by the wagon, and cables secured to the platform and winding mechanism and passing over the sheaves in the side supports.

In witness whereof I have hereunto set my hand.

JOHN MURPHY.

Witnesses:
WALTER F. VANE,
D. B. RICHARDS.