March 4, 1924. 1,485,880

F. PALMER

PLATFORM TRUCK

Filed Oct. 10, 1922

FIG. 1.

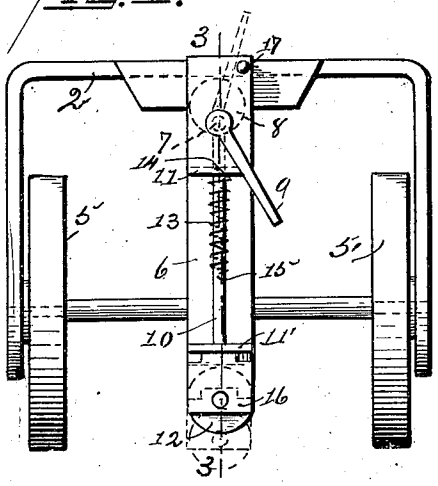


FIG. 2.

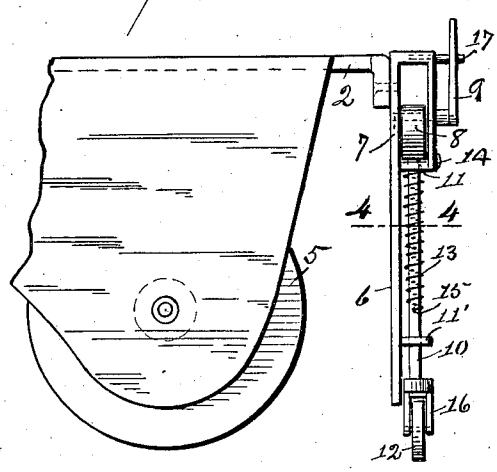


FIG. 3.

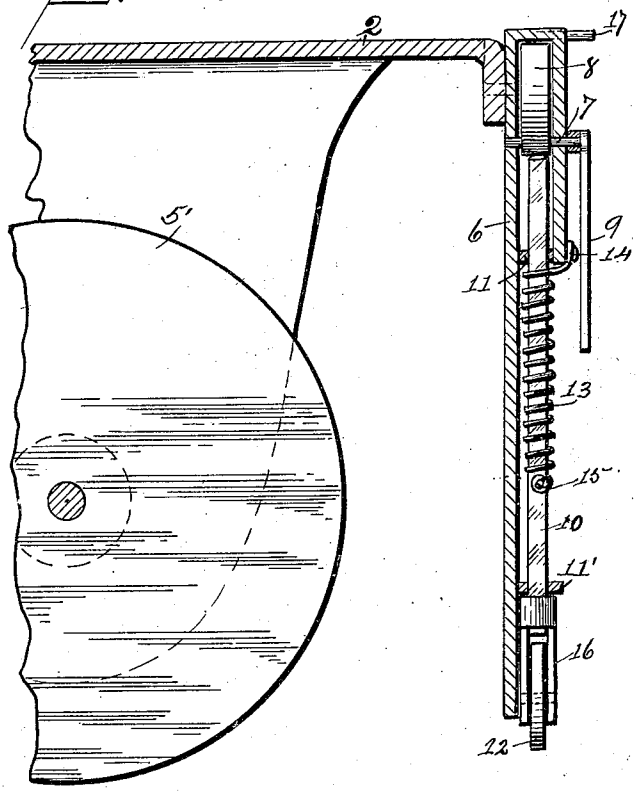
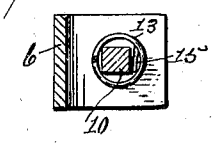


FIG. 4.



Inventor:
Frank Palmer
By Albert C. Danner
Atty.

Patented Mar. 4, 1924. 1,485,880

UNITED STATES PATENT OFFICE.

FRANK PALMER, OF NAUGATUCK, CONNECTICUT.

PLATFORM TRUCK.

Application filed October 10, 1922. Serial No. 593,539.

To all whom it may concern:

Be it known that I, FRANK PALMER, a citizen of the United States, and a resident of Naugatuck, in the county of New Haven and State of Connecticut, have invented certain new and useful Improvements in Platform Trucks, which improvements are fully set forth in the following specification.

This invention relates to improvements in hand-propellent trucks, and more particularly to trucks of that class capable, normally, of being driven in a straight line only between two points, the same being commonly designated as platform trucks, and employed quite generally in large industrial plants for heavy load-carrying purposes.

The object of this invention is to provide a truck of the character above indicated which shall be simple and comparatively inexpensive as regards its construction; which shall embody parts and details of construction whereby the same may be rendered dirigible at the will of the user; which shall be convenient in its application to practical purposes; and which shall possess certain well-defined advantages over prior analogous constructions.

The invention consists in certain novel combinations, details and parts to be hereinafter more specifically referred to and set forth in the claims hereto appended.

The invention is clearly illustrated in the accompanying drawing, wherein:

Fig. 1 is a view in front elevation of a platform truck embodying my said improvements, the steering-wheel spindle retracted.

Fig. 2 is a view in side elevation of same, the steering-wheel spindle protracted.

Fig. 3 is a central, vertical, longitudinal section of the upright hanger made use of, the section being taken generally along the dotted lines 3—3 of Fig. 1, and the scale being enlarged.

Fig. 4 is a cross-section of the hanger aforenamed, as along the dotted line 4—4 of Fig. 2, the scale still enlarged.

Having reference to the accompanying drawing, wherein similar reference characters denote like parts throughout the several views, I, in carrying out my present invention, provide a platform 2, supported by a front pair of carrying-wheels 5, 5′, and a similar pair of rear carrying-wheels, not shown, said carrying-wheels being all so disposed in their relation to the platform 2 as to prevent lateral joint deflection of either pair thereof, and whereby the truck proper may be moved only directly forwardly or directly rearwardly, as will be readily understood, and as is customary.

I further dispose fixedly at the forward end of the platform 2 an upright hanger 6, and wherein, at the upper portion thereof, is arranged to rotate a crank-shaft 7, having an eccentric-block 8 firmly mounted thereon, and fitted at its forward end with a hand-crank 9, whereby said crank-shaft may be operated.

10 denotes a steering-wheel spindle, angular in cross-section by preference, and disposed to reciprocate vertically in guide-pieces 11, 11′, projecting forwardly from the hanger 2, one suitably above the other, said spindle operating, accordingly, in registry with the eccentric-block 8 and thereby to be engaged at its upper extremity and depressed or protracted upon the crank-shaft 7 being duly rotated, as will hereinafter more fully appear.

It is essential that the spindle 10 be held elastically at all times elevated or retracted to bring and hold the steering-wheel 12 upwardly out of contact with the floor or other surface on which the carrying-wheels of the truck bear; and to the attainment of the foregoing end, I provide a spiral spring 13, the upper end of which is attached to the hanger 6, as at the point 14 and the lower end of which is attached to the spindle 10, above the guide-piece 11′ and as at the point 15, the stress of said spring tending at all times to hold retracted the spindle aforenamed, and the latter being fitted at its lower end with a terminal-clip 16, between the opposing side-members of which is disposed to rotate the steering-wheel 12.

The disposition of the eccentric-block 8 and crank 9 relatively to the crank-shaft 7 is such that when the crank-shaft is swung upwardly to a more or less vertical position, eccentric-block 8 will have engaged the upper end of the spindle 10 and depressed or protracted said spindle against the elastic stress of the spring 13, and when said crank shall have been swung downwardly to a position more or less vertical, the eccentric-block aforenamed will have released said spindle for movement upwardly under the stress of said spring, all as will be readily understood.

It is desirable that the upward swinging movement of the crank 9 be limited to a

point somewhat over and beyond the dead center of the crank-shaft 7, supporting such crank, and to this end the stop 17 is provided.

It will be understood that the eccentric-block 8 has a peripheral cam face which co-acts with the upper extremity of the spindle 10 for depression and releasement of the latter as above defined.

In operation, due depression of the spindle 10 through the medium of the crank 9 and parts more immediately co-operating therewith, results, as will be quite readily understood, in the lifting or elevation of the front portion of the platform 2 together with the front carrying-wheels 5, 5', whereby the latter are caused to clear the surface thereunder with the steering-wheel 12 bearing on such surface and supporting the load otherwise supported by said carrying-wheels, and whereby the truck proper is rendered dirigible and may be readily swung laterally in either direction, together with any load supported by the platform of said truck.

It will be seen that my improved truck is well adapted for the purposes for which it is intended, being simple and inexpensive in its construction and very conveniently applicable to practical purposes.

It will be further seen that the construction of my improved truck may be modified to a considerable extent, particularly as regards the medium availed of for actuating the spindle 10 for protraction thereof, together with various minor details of the general construction, without materially departing from the spirit and principle of my invention as set forth and coming within the scope of claims hereto appended.

Having thus described my invention, I claim:

1. A truck of the class herein described comprising a platform; carrying-wheels so supporting the platform as to be movable forwardly and rearwardly only; an upright hanger fixedly attached to said platform at its forward end; a spring-controlled spindle working vertically in said hanger and affording a steering-wheel at its lower end; and means whereby said spindle may, at the will of the user, be protracted downwardly against the stress of its controlling spring to bring said steering-wheel into contact with the surface thereunder, and with pressure sufficient to lift from such surface the front portion of the truck together with its front carrying-wheels.

2. A truck of the class herein described comprising a wheeled platform; a steering-wheel duly supported at the advance end of said platform, vertically adjustable into and out of contact with the surface thereunder and at all times spring-pressed upwardly; and means whereby said steering-wheel may, at the will of the user, be protracted downwardly into contact with the surface thereunder, against the stress of its controlling spring, and with pressure sufficient to lift the front carrying-wheels of the truck clear of said surface.

3. A truck of the class herein described comprising a wheeled platform; an upright hanger fixedly attached to said platform at the advance end thereof and fitted with forwardly projecting guide-pieces suitably spaced one above the other; a spindle workable vertically in said guide-pieces and supporting a steering-wheel at its lower end; a spiral spring attached at its upper and lower ends, respectively, to said hanger and said spindle and serving at all times to hold the latter retracted; and means whereby said spindle may be duly protracted, at the will of the user, to bring the steering-wheel supported thereby into partial truck-lifting contact with the surface thereunder.

4. A truck of the class herein described comprising a wheeled platform; an upright hanger fixedly attached to said platform at the advance end thereof and fitted with forwardly projecting guide pieces suitably spaced one above the other; a spindle angular in cross-section, workable vertically in said guide-pieces, normally spring-retracted, and supporting a steering-wheel at its lower terminus; a crank-operable eccentric duly supported by the hanger aforenamed and having an active cam-face engaging the spindle aforenamed at its upper end and whereby, upon said crank being duly manipulated, the same is protracted and released for retraction under the stress of its controlling spring, and further whereby the steering-wheel aforenamed may be brought, at the will of the user, into and out of partial truck-lifting contact with the surface thereunder.

5. An elongated hanger attachable to a truck-platform; a spindle duly supported by said hanger for movement endwise in opposite directions relatively thereto and normally held elastically retracted in one direction; an eccentric also duly supported by said hanger and adapted when directly actuated to cause protraction of said spindle against the stress of its controlling spring, and to release, when reversely actuated, said spindle for retractive action under the stress of its controlling spring, said spindle fitted with a steering-wheel at the end thereof most distant from said eccentric; and means whereby the eccentric may be duly actuated.

6. An elongated hanger attachable to a truck-platform; a spindle duly supported by said hanger for movement endwise in opposite directions relatively thereto and normally held, by spring tension, elastically retracted in one direction; a shaft journalled in said hanger and having an eccentric-

block fixedly mounted thereon, said eccentric-block adapted, when directly actuated, to cause protraction of said spindle against the stress of its controlling spring and to release, when reversely actuated, said spindle for retractive action under the stress of its controlling spring, said spindle fitted with a terminal-clip at the end thereof most distant from said eccentric-block; and a hand-crank, the latter fixedly supported by said shaft and whereby the same may be actuated.

7. A hanger attachable to a truck-platform and supporting for longitudinal reciprocation a spring-controlled spindle fitted with a steering-wheel at one end thereof, said hanger further supporting adjacent the opposite end of said spindle a rotatable eccentric-block, the latter adapted, when duly actuated, to coact with the spindle in a manner to cause protraction thereof against the stress of its controlling spring, and to permit retraction thereof automatically under the stress of its controlling spring.

FRANK PALMER.