

(No Model.)

G. F. ARMSTRONG.

WHEEL FOR TRUCKS.

No. 344,471.

Patented June 29, 1886.

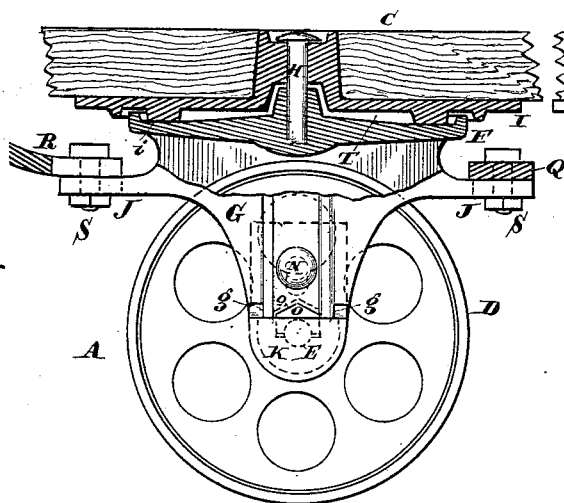


Fig. 1

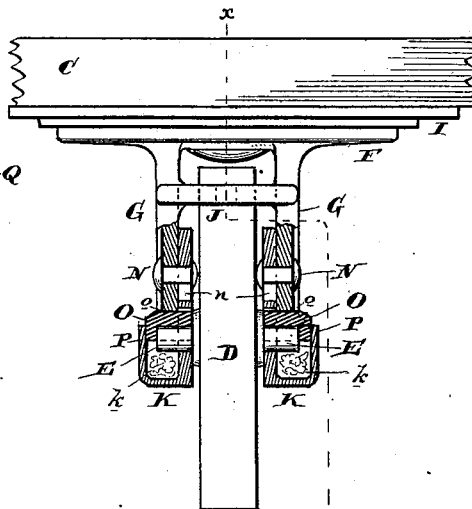


Fig. 2

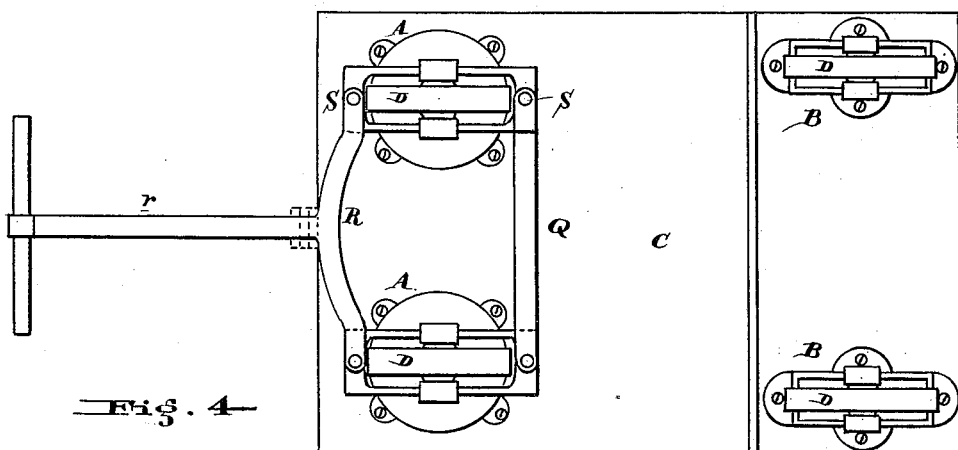


Fig. 4

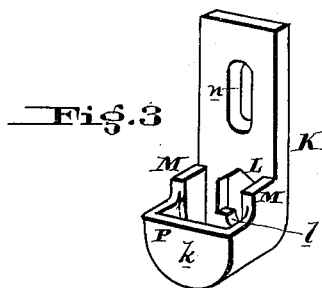


Fig. 3

Attest
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UNITED STATES PATENT OFFICE.

GEORGE F. ARMSTRONG, OF PHILADELPHIA, PENNSYLVANIA.

WHEEL FOR TRUCKS.

SPECIFICATION forming part of Letters Patent No. 344,471, dated June 29, 1886.

Application filed August 21, 1885. Serial No. 174,928. (No model.)

To all whom it may concern:

Be it known that I, GEORGE F. ARMSTRONG, of the city and county of Philadelphia, and State of Pennsylvania, have invented an Improvement in Wheels, of which the following is a specification.

My invention has reference to wheels especially adapted to trucks; and it consists in certain improvements fully set forth in the following specification, and shown in the accompanying drawings, which form part thereof.

In an application of mine filed December 19, 1884, is described a caster-wheel somewhat similar to the invention herein set forth, this being an improvement upon the invention there described.

The object of this invention is to so form the bearings of the axles that they may be replaced, and to reduce the friction to a minimum, and at the same time allow of the use of axles cast solid with the supporting-wheels, and, further, to provide the wheel-frame with a centrally-located pivot and combine two of said wheels and their frames with parallel bars or their equivalents, so that when one of said wheels is turned the other of the pair is turned also.

In the drawings, Figure 1 is a sectional side elevation on line *x x* of Fig. 2. Fig. 2 is an end elevation of same with part of the bearings in section. Fig. 3 is a perspective view of the bearing-cap and oil-chamber, and Fig. 4 is an inverted plan view of a truck having my improved wheels applied thereto.

A are the forward or caster wheels, and B are the rear or rigid supported wheels.

C is the platform or floor of the truck.

D are the wheels proper, and are provided with bearings E, formed integral with their hubs.

F is a cup-shaped plate having annular depressions T, to receive and hold the lubricant. This plate has a centrally-located pivot-stud, H, which works through a suitable hub in the bearing-plate I, which plate is also provided with the annular bearing-piece *i*, which is received in the annular groove T by the plate F. Secured to this plate F are the arms G, between which the axle-wheel D is located. The lower portions of these arms are provided with notches *g* and *o*, the latter of which receive the brass bearing.

K are the caps, adapted to be bolted or riveted upon the lower ends of these arms G, for the purpose of forming an oil-reservoir, and also to retain the brass bearings in position. These caps K are provided with an aperture, L, through which the brass bearing passes, and a semi-cylindrical aperture, *l*, forming the lower bearing for the axles of the wheel, and it is also provided on the lower part with the oil-cup *k* and the projections or lugs M, which fit into the notches *g* on the arms G and hold said cap in position against lateral displacement.

O are the brass bearings, which are open at the bottom and provided with a semi-cylindrical depression to receive the bearings, and the upper parts of these bearings are made annular, so as to fit into the notched portions of the arms G, to prevent turning. These brasses are first placed in the caps K, and after the two caps are placed upon the axle of the wheel the caps are fitted to the arms G, and are riveted or bolted thereto, as at N, the rivet or bolt passing through the arms G and the hole *n* in the caps K. As the brasses wear, the caps may be moved up to compensate for said wear, and to enable this adjustment the holes *n* may be made oblong or slotted. Oil may be put directly into the cup *k* or cotton waste saturated with oil may be placed therein, if so desired, and thereby lubricate the axles on the under sides, where they are fully exposed. The brasses are just as long as the distance between the outer wall P of the oil-cup and the hub of the wheel; hence they cannot possibly become displaced longitudinally, and are not required to be bolted or otherwise secured than by the simple clamping action of the caps. The arms G are provided in the front and back with bearings J, and the two rear bearings of a pair of these pivot or caster wheels are coupled together by a parallel bar, Q, and bolts S, while the forward bearings are coupled together by the handle R and bolts S; or, if desired, the handle proper, *r*, may be hinged to that portion, R, corresponding with the bar Q, as indicated in dotted lines. From this it is seen that if the handle be moved to one side in turning the truck both caster-wheels will simultaneously turn also, the parallel bars insuring the action in the most positive manner.

While I prefer the construction shown, I do not limit myself to the details thereof, as they may be modified in various ways without departing from my invention.

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

1. In a wheel for trucks, the wheel provided with an axle secured to or formed integral
10 therewith, in combination with an axle-frame having a central pivot located directly over the center of the wheel, removable brass bearings, and ears or arms by which said frame may be turned, substantially as and for the
15 purpose specified.

2. The wheel and its axle, in combination with the axle-frame having its two side arms furnished with end sections and secured thereto by bolts or rivets, and brass axle-bearings
20 clamped between said arms and end sections and adapted to receive the axle, substantially as and for the purpose specified.

3. The wheel and its axle, in combination with the axle-frame having its two arms fur-

nished with end sections formed with oil-res- 25
ervoirs, and secured thereto by bolts or rivets, and brass axle-bearings clamped between said arms and end sections and adapted to receive the axle, substantially as and for the purpose
30 specified.

4. The combination of the two centrally-pivoted guide-wheels with a parallel link device by which both are moved synchronously, and a handle secured to or forming one of said
35 bars or links, substantially as and for the purpose specified.

5. The cup-plate F, having bearing J, and central pivot, H, plate I, having wearing-face
40 i, wheels D, journaled to said plate F, bars Q R, and handle r, substantially as and for the purpose specified.

In testimony of which invention I hereunto set my hand.

GEORGE F. ARMSTRONG.

Witnesses:

CHAS. KISNER,
T. J. KEELER.