

(No Model.)

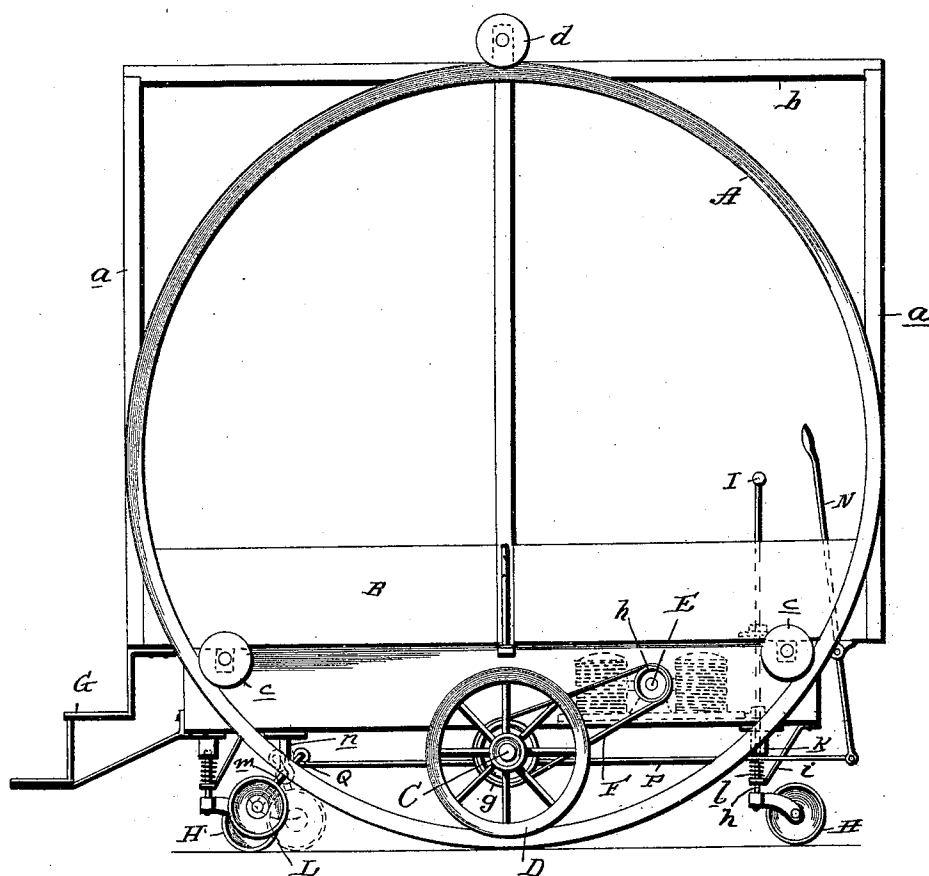
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D. MADDEN.
WHEELED CONVEYANCE.

No. 470,841.

Patented Mar. 15, 1892.

Fig. 1.



Witnesses:
C. H. Gaudin
A. F. Matthews

Inventor
Dutton Madden
by *James Sheehy*
Attorney

(No Model.)

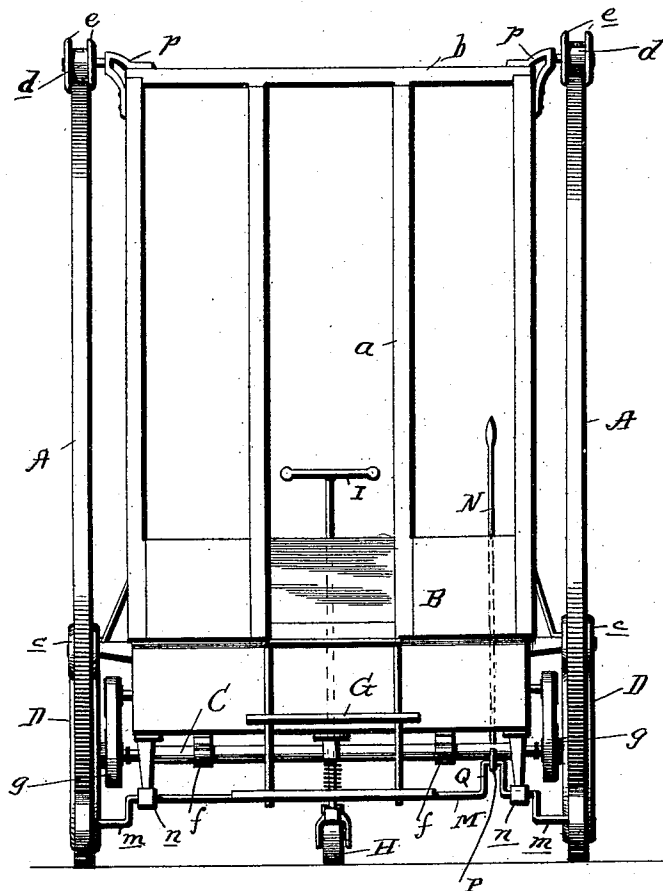
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D. MADDEN.
WHEELED CONVEYANCE.

No. 470,841.

Patented Mar. 15, 1892.

Fig. 2.



Witnesses:
C. H. Raeder.
H. G. Matthews.

Inventor
Dutton Madden
By James Sheehy
Attorney

UNITED STATES PATENT OFFICE.

DUTTON MADDEN, OF MECHANICSBURG, PENNSYLVANIA.

WHEELED CONVEYANCE.

SPECIFICATION forming part of Letters Patent No. 470,841, dated March 15, 1892.

Application filed October 23, 1891. Serial No. 409,584. (No model.)

To all whom it may concern:

Be it known that I, DUTTON MADDEN, a citizen of the United States, residing at Mechanicsburg, in the county of Cumberland and State of Pennsylvania, have invented certain new and useful Improvements in Wheeled Conveyances; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to a wheeled conveyance for passengers and freight, and the novelty will be fully understood from the following description and claims when taken in connection with the annexed drawings, in which—

Figure 1 is a side elevation of my improved vehicle, and Fig. 2 is an end view of the same. Referring by letter to said drawings, A indicates the traveling wheels. These wheels are arranged in a vertical position and one on each side of the carriage body or frame.

B indicates the body, which may be provided with seats for passengers and a suitable seat for the operator. Rising from the horizontal body B are uprights *a*, which are connected at their upper ends by horizontal beams *b*, comprising a rectangular frame and suitably bracing the uprights. This body or frame is supported within or on the traveling wheels A by means of friction sheaves or rollers *c* and *d*, the former being arranged within the band or tire of the wheels A and bearing at a point below the horizontal center within said wheels, while the latter bear upon the external surface and at the apex of the wheels. These sheaves or rollers are provided with flanges *e*, as better shown in Fig. 2 of the drawings, so as to straddle the bands or tires of the traveling wheels, so as to prevent displacement of the frame or body therein. In some cases these rollers or sheaves may be toothed or roughened, so as to insure a more firm engagement of the parts.

Journalled about the center of the frame or carriage in depending hangers or bearings *f* is a transverse shaft C. This shaft is provided near opposite ends with band-wheels *g*. These band-wheels are arranged loosely upon the shaft and are fixed upon the inner side of drive-wheels D, which have their periph-

eries in frictional contact with the inner rims of the traveling wheels A, so as to impart motion to the latter. If desired, these drive-wheels may have teeth on their peripheries, and the inner sides or felly portions of the traveling wheels may be provided with corresponding teeth, so as to insure a more positive engagement.

E indicates a power-shaft carrying a band-pulley *h*, over which passes an endless chain or band F, which band is connected with the guide-pulleys *g* on the shaft C.

In the present illustration of my invention I have illustrated an electric motor, as shown in dotted lines in Fig. 1, for driving the shaft E, and it is designed that one of these motors be arranged on each side of the frame, so as to separately drive the wheels for the respective traveling wheels A, although I do not wish to confine myself to the electro-motive power, as I may use a spring-motor or any suitable mechanical means for imparting motion to the driving-wheels. By the construction described it will be seen that when it is desired to turn the machine the motor at one side should be allowed to remain idle while the motor on the opposite side is in operation, and in this way the machine may make a complete turn within a space equal to its length.

As a means of obtaining ready access to the platform of the vehicle I have provided steps G at one end of the frame.

H indicates balance-wheels, which are arranged in the longitudinal centers and at opposite ends of the main frame. These balance-wheels are of a form known as "caster-wheels," and are journaled on the lower ends of vertical shafts *h*, bearing in hangers *i*, depending from the main frame. These vertical shafts pass through sleeves *k*, depending from the underside of the frame, and spiral springs surround said shafts between the lower ends of the sleeves and the hangers, as shown at *l*. These wheels are designed to balance the machine when it has stopped or when taking on or letting off passengers, and the shaft of one of said wheels may pass up through the frame and carry a handle-bar I, so that said wheel may also be used as a means of steering the machine, when desired.

L indicates brake-wheels. These brake-wheels are arranged at one end of the main

frame and journaled in a shaft M. This shaft carries the brake-wheels L on its crank ends *m* and is journaled in hangers *n*, depending from the main frame.

5 N indicates a hand-lever, which passes through the main frame at one end and within convenient reach of the operator. The depending end of this pivoted hand-lever is connected with a longitudinal rod P, which is in
10 turn connected at its opposite end with a crank Q on the shaft M, so that by manipulating said hand-lever the brake-wheels may be raised or lowered.

15 The guide sheaves or rollers *d* have their shafts secured by brackets *p* to the tops of the main frame at opposite sides, as better shown in Fig. 2 of the drawings.

In operation, when it is desired to start the machine, the operator, through the medium
20 of an electric or other suitable motor, allows the shaft E, and consequently the pulleys thereon, to rotate, which, through the medium of the belts F, imparts a similar motion to the pulleys *d* and consequently the drive-wheels
25 fixed thereto, and these drive-wheels in turn making frictional contact with the traveling wheels turn the latter and propel the machine. To apply the brake it is simply necessary to manipulate the hand-lever.

30 As there should be no slipping of the traveling wheels in ascending or descending grades, which may occur in snow and frosty weather, I design providing the peripheries of the wheels with teeth, or I may roughen them in
35 any suitable manner. This may be done by securing a band carrying such teeth or roughness to the peripheries or tires of the wheels

in such manner that the same may be readily removed and replaced when desired.

Having described my invention, what I 40 claim is—

1. The wheeled vehicle described, comprising the traveling wheels, the guide sheaves or rollers sustained thereon and the body or frame supported on said sheaves or rollers, 45 the drive-wheel engaging the traveling wheels and carrying belt-pulleys and also bearing in the frame, the endless belts or chains and a suitable motor-power for driving the same, the balance-wheels arranged at opposite ends 50 in the longitudinal center of the frame, the brake-wheels, the cranked shaft carrying said wheels and journaled in the frame, the pivoted hand-lever, and the rod connecting said lever with the crank-shaft, substantially as 55 specified.

2. The wheeled vehicle having the traveling wheels, in combination with the guide sheaves or rollers embracing said traveling wheels, the body or frame supported on said 60 sheaves, the drive-wheel engaging the traveling wheels and carrying belt-pulleys and also bearing in the frame, the endless belt or chains, a suitable motor for driving the same, and the balance-wheels arranged at opposite 65 ends of the main frame, all adapted to operate substantially as specified.

In testimony whereof I affix my signature in presence of two witnesses.

DUTTON MADDEN.

Witnesses:

W. K. FISTER,
H. H. MERCER.