To all whom it may concern:

Be it known that I, JOHN H. MARSH, a citizen of the United States, residing at and whose post-office address is Amanda, in the county of Oconto and State of Wisconsin, have invented new and useful Improvements in Passenger and Freight Conveyances, of which the following is a specification.

My invention relates to an improved means for conveying passengers and freight across rivers, valleys, and swamps, and the object is to construct a device which will be cheap, durable, efficient, and which will obviate the necessity of bridges and ferry-boats.

Generally the invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and particularly claimed.

Figure 1 of the drawings is a vertical longitudinal sectional view of a device constructed in accordance with my invention, showing the car in side elevation and in dotted lines the manner of passing the cable under the water to permit of the passage of vessels.

Fig. 2 is a top plan view of the same. Fig. 3 is a detail view of one of the supports and rollers 2, showing the manner of winding the cable thereon.

Referring now more particularly to the drawings, the numeral 1 designates two longitudinal rows or series of parallel vertical supports, mounted between which are rollers 2 and 3 upon shafts 4 and 5. The supports 1 are of a height sufficient when the device is used as a conveyance over a stream or swamp to support the rollers in the same plane as that of the surfaces of the embankments on either side of the stream or swamp, and when the same is constructed over a navigable river the cable 6 is carried under the water a suitable distance around rollers 2 and 3, said rollers 2 and 3 being mounted between two parallel-arranged horizontal beams 2, (one only being shown in dotted lines in Fig. 1,) secured between two of the supports 1, and the rollers 3 secured between the said supports 1, thereby providing ample space for the passage of vessels.

The endless cable 6 extends between the two wharves or abutments 7 and 8, located upon opposite sides of the river or stream, which carry end-supporting rollers and corresponding to those denoted 2 and 3 on the intermediate supports 1. The upper stretch of the cable is successively wound one or more times about the rollers 2, while its lower stretch rests upon and travels over the lower rollers 3, which serve as idlers. Arranged beneath or adjacent to the wharf or abutment 7 is an engine 9, which communicates motion to a drum 10, around which the adjacent loop of the cable passes and by which said cable is driven. Through the medium of the engine 9 and the cable 6 motion is imparted to 65 the rollers 2, upon which rides the car 11, whereby the latter is propelled.

Mounted upon the supports 1 are vertical shafts 12, carrying antifriction or guide rollers 13, which guide and maintain the car 11 in proper position upon the rollers 2 and obviate all liability of the car becoming derailed or sliding laterally off said rollers.

The car 11 consists of a flat body portion 14, which is approximately elliptical in form. The peculiar construction of the body portion permits the car to be guided between the antifriction or guide rollers, thereby obviating any liability of the car becoming derailed or sliding laterally off the rollers 2. The car 11 has a cabin 15 to accommodate the passengers, and the space not occupied by the cabin is utilized to carry wagons and freight. This particular disposition of the top of the body portion is immaterial, as it may be fitted up in any improved style to adapt it to any particular use to which it may be put. The flat body portion or bottom of the car forms a friction-surface resting on the upper stretch of the cable and the rollers 2, whereby when said cable and rollers are put in motion the car is driven.

In operation it will be readily seen that when motion is imparted to the cable and rollers 2 by means of the engine 9 the car 11 will be propelled in one direction or the other, according to the direction of rotation of the drum 10, whereby passengers and freight may be transported across a river, marsh, or stream without liability of danger.

From the foregoing description, taken in connection with the accompanying drawings, the construction, mode of operation, and advantages of the invention will be readily un-
derstood, and it will be seen that a simple, cheap, durable, and effective device is pro-
vided.

While I have specifically described what ap-
ppears to me at this time to be the very best
means of accomplishing the desired result, I
would have it understood that I do not limit
myself to the exact construction shown, but
reserve the right to make such slight changes
and alterations as would properly come within
the scope of my invention without departing
from the spirit thereof.

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

1. In an apparatus of the character de-
scribed the combination of a car provided
with an elliptical-shaped bottom, a track on
which the car is propelled, and antifriction-
rollers engaging the sides of the ellipse to
prevent lateral displacement.

2. In a device of the character described,
the combination of suitable supports, upper
and lower rollers mounted between said sup-
ports, a car carried by said rollers, an end-
less cable carried by said rollers for impart-
ing motion to the rollers to propel the car,
and means to actuate the cable.

3. In a device of the character described,
the combination with two longitudinal rows
or series of parallel vertical supports, rollers
mounted between said supports, a car carried
by said rollers, means for imparting motion
to the rollers to propel the car, antifriction
or guide rollers arranged on top of said sup-
pports to guide the car laterally.

4. In a device of the character described,
the combination with two longitudinal rows
or series of parallel vertical supports, shafts
mounted between said supports, rollers jour-
neled on said shafts, a car carried by said
rollers, a cable imparting motion to said roll-
ers to propel said car, and vertical shafts
mounted upon said supports and carrying
antifriction-rollers to guide the car laterally.

5. In a device of the character described,
the combination with two longitudinal rows
or series of parallel vertical supports, upper
and lower sets of shafts carried between said
supports, rollers journaled on said shafts, an
endless cable having its lower stretch resting
upon and traveling over the lower rollers and
its upper stretch wound successively around
the upper rollers, a car mounted upon the up-
per rollers, and means for driving the cable,
substantially as described.

6. In a device of the character described,
the combination of two longitudinal rows or
series of parallel supports, rollers journaled
between the supports, an intermediate set of
rollers carried by the supports and normally
submerged, a cable passing over the first-
named rollers and under the intermediate
rollers to permit the passage of vessels be-
tween the supports, and a car normally rest-
ing on the first-named rollers and adapted to
be propelled by the cable.

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

JOHN H. MARSH.

Witnesses:

ETTA R. SMITH,
CARRIE A. HURLEY.