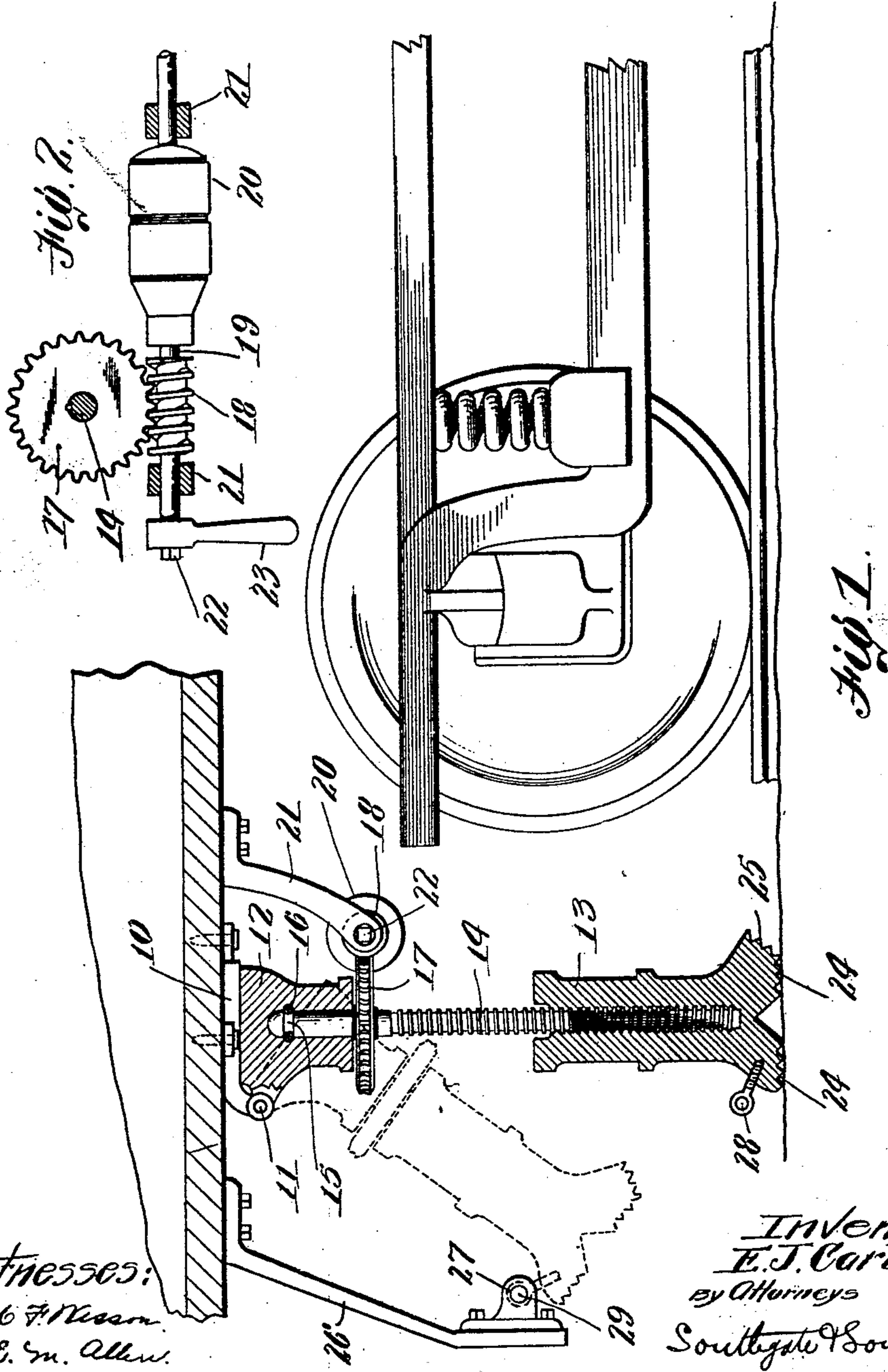


No. 862,609.

PATENTED AUG. 6, 1907.

E. J. CARBERRY.  
JACK.

APPLICATION FILED FEB. 12, 1907.



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# UNITED STATES PATENT OFFICE.

EDWARD J. CARBERRY, OF WORCESTER, MASSACHUSETTS.

JACK.

No. 862,609.

Specification of Letters Patent.

Patented Aug. 6, 1907.

Application filed February 12, 1907. Serial No. 356,979.

*To all whom it may concern:*

Be it known that I, EDWARD J. CARBERRY, a citizen of the United States, residing at Worcester, in the county of Worcester and State of Massachusetts, have invented a new and useful Jack, of which the following is a specification.

The principal objects of this invention are to provide an electric or other car or vehicle with a jack so mounted and constructed that while ordinarily being carried in a position where it is entirely out of the way it will be so located that it can be brought into position for effective use in a most simple and convenient manner; to provide means whereby the same can be operated by hand or by power; to provide a construction in which the parts cannot become separated or easily broken in the ordinary operation of the vehicle or jack; to provide means whereby the slipping of the wheels will result in giving the jack a firmer hold; and generally to improve the construction and operation of devices of this character.

Reference is to be had to the accompanying drawings, in which

Figure 1 is a central longitudinal sectional view of a portion of a car showing a jack mounted thereon and constructed in accordance with this invention, Fig. 2 is a horizontal sectional view of the same on the line 2-2 of Fig. 1.

Ordinarily electric and other cars are provided with one or more jacks which are carried in the car under the seats, and which have to be carried to either end of the car in case of accident to lift the body from the trucks.

In order to overcome the well-known inconvenience of carrying these jacks in such a manner, and to provide for more efficient operation of the jack for serving this purpose, I have provided means whereby a jack is permanently but movably connected with the bottom of the car, automobile, or the like in such position that it can readily be placed in position for use in case of accident.

In the form of the invention illustrated the bottom of the car is provided, preferably at the front and back, with a hanger-plate 10 having a bearing 11. On this bearing is pivotally mounted a head 12 forming the upper part of the jack. The bottom part 13 of the jack is connected with the head by a screw 14 in any desired way. In the form shown this screw is mounted in the ordinary way in the bottom section of the jack, which has a counter-sunk opening to receive it, and is provided at the top with an annular groove 15, while the head of the jack is provided with one or more pins 16 entering said groove to hold the jack screw in proper position in the head, and permit it to turn therein. When the screw is turned in one direction it is obvious that the head and bottom of the jack will be separated

and the head lifted if the bottom bears on the ground as it is designed to do. If the screw is accidentally turned too far up so that it leaves the screw-threaded opening in the bottom of the jack, the end of the screw will be retained in the counter-sunk opening at the top. This prevents the screw from being entirely disengaged from the jack.

The jack screw may be operated in any desired way, but it is preferably provided with a worm-wheel 17 which is designed to be operated by a worm 18 on a shaft 19. If this shaft is designed to be operated by power a motor 20, which may be operated by electricity, compressed air, or in any other desired way, is mounted on the shaft. The shaft in any event is hung in bearings 21 which depend from the bottom of the car, and consequently the shaft moves with the car body, and the worm remains in mesh with the worm wheel during the operation of the jack.

If it is desired to operate the jack by hand, the shaft is provided with a square end 22, on which a wrench 23 may be placed to operate the shaft. This square end is preferably provided, even when the motor is used, so that it can be operated when the motor is so damaged as to be inoperative.

In order that the jack may get a firm hold on the ground, its lower surface is provided with irregularities or corrugations 24. Furthermore, it will be obvious that if upon the starting of the jack into operation after it is placed in proper position therefor, the car or other vehicle should start to move, there will be a tendency to turn the jack on one of its corners. In order to provide for preventing slipping in case such an action occurs, one corner of the bottom of the jack is provided with additional corrugations or irregularities 25 to permit the same to get a firm hold even when tilted as described by the movement of the vehicle.

For the purpose of holding the jack in position where it will be out of the way during the ordinary use of the car or other vehicle, a bracket 26 is mounted in any convenient position and supported from the car bottom. This bracket is provided with an eye 27, and the bottom of the jack is provided with an eye 28 adapted to come into registration with the eye on the bracket when the jack is tilted up into the position indicated in dotted lines in Fig. 1. The jack is held in this position by means of a pin 29 passing through the eyes. Of course in this position the worm-wheel is drawn away from the worm. When the device is to be used the pin is withdrawn and the jack may be lowered down in proper position for operation as indicated in the drawings. If desired the top surface of the head of the jack may be roughened to secure a better hold on the hanger-plate.

While I have illustrated and described a preferred form of the invention, I am aware that modifications may be made therein within the scope of the invention



as expressed in the claims. Therefore I do not wish to be limited to the particular form shown, but

What I do claim is:—

1. The combination with a railway car, of a lifting jack supported from the bottom thereof and movable to operative and inoperative position, and means supported by the car for operating the jack, said means being operatively connected with the jack when in position to lift the car and disconnected therefrom when not in position.
2. The combination with a vehicle, of a hanger-plate secured to the bottom thereof, a jack movably connected with said hanger-plate, a bracket mounted on the vehicle at one side of the hanger-plate, said bracket having an eye, said jack having an eye adapted to register with the eye of the bracket, and a pin adapted to pass through said eyes and hold said jack up from the ground.
3. The combination with a vehicle, of a hanger-plate carried thereby, a jack pivotally supported by said hanger-plate, said jack comprising a jack-screw having a worm-wheel thereon, a shaft, a motor on the shaft, a worm also mounted on the shaft and adapted to engage said worm-wheel, and bearings supported by the vehicle for said shaft.
4. The combination with a railway car, of a jack supported therefrom, a shaft supported by the car, and a rotary motor on the shaft for operating the jack, said jack being movable to and from the shaft and operatively connected with the shaft by being moved into engagement therewith.
5. The combination with a railway car, of a movable jack, power mechanism for operating the jack carried by the car, and means for connecting said power mechanism with the jack and disconnecting it therefrom controlled by the position of the jack.
6. The combination with a railway car of a jack movably supported therefrom, said jack comprising a jack-screw having a worm-wheel thereon, a motor, a worm connected with the motor and adapted to engage the worm-

wheel, and means on the car for supporting the motor and worm.

7. The combination with a vehicle of a jack movably supported thereby, said jack comprising a head connected with the vehicle, a bottom part, a jack-screw adapted to move the head and bottom part toward and from each other, a worm-wheel on the jack-screw, and means supported by the vehicle for continuously rotating the worm-wheel and jack-screw.

8. The combination with a vehicle, of a jack supported from the body thereof, bearings mounted in fixed position and supported by said body, a shaft mounted in said bearings, and means connected with said shaft for operating said jack.

9. The combination with a vehicle, of bearings fixed to the body thereof, a shaft mounted in said bearings, and a jack movably supported by the body of the vehicle and adapted to be operated from said shaft.

10. The combination with a vehicle of bearings fixed to the body thereof, a shaft mounted in said bearings, a jack movably supported by the body of the vehicle and adapted to be operated from said shaft, and means on said shaft for operating the screw of said jack, said shaft having means connected therewith for operating it either by power or by hand.

11. The combination with a vehicle, of a jack comprising a body and a bottom part, the top part being movably connected with, and supported by, the body of said vehicle, a jack-screw connecting the top and bottom parts thereof, and means for rotating the jack-screw, the bottom part of said jack having a roughened surface on one of its lower corners at an angle to its bottom surface.

In testimony whereof I have hereunto set my hand, in the presence of two subscribing witnesses.

EDWARD J. CARBERRY.

Witnesses:

ALBERT E. FAY,  
C. FORREST WESSON.