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M. C. TUNISON ET AL

GARAGE

Filed July 26, 1923

2 Sheets-Sheet 1

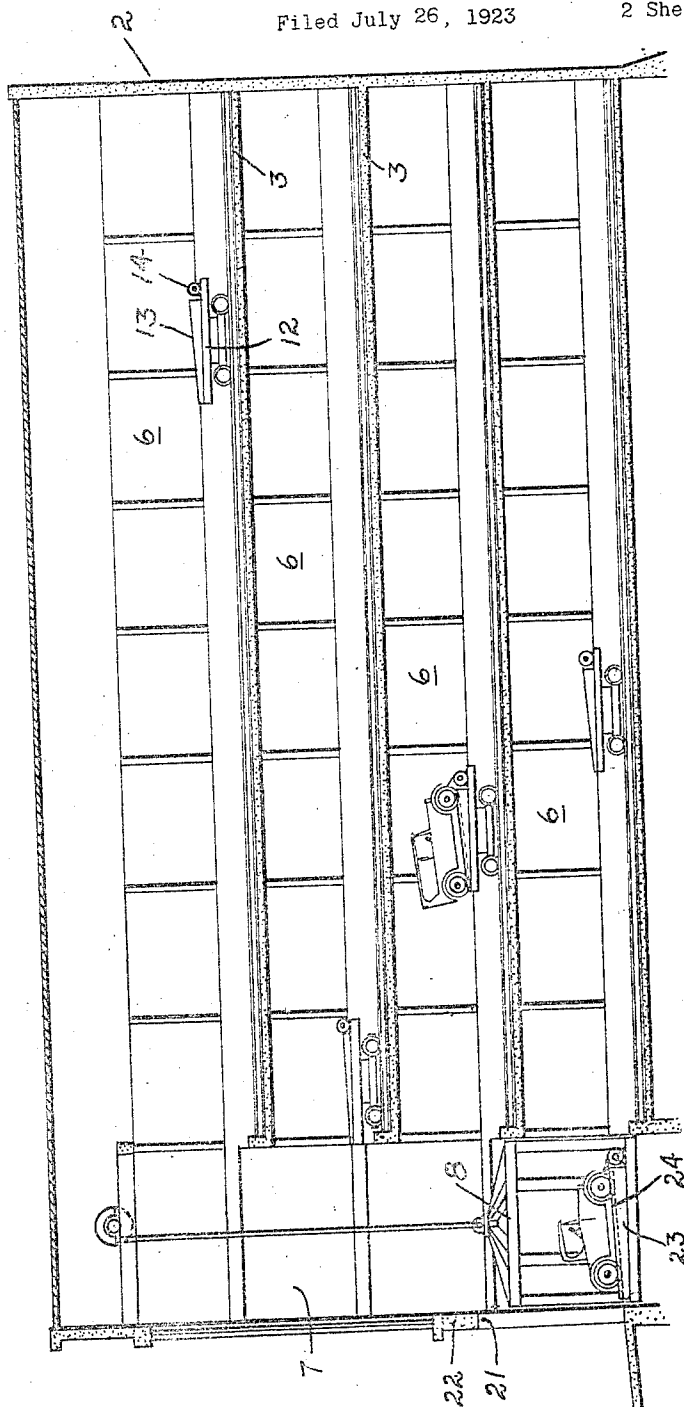


Fig. 1

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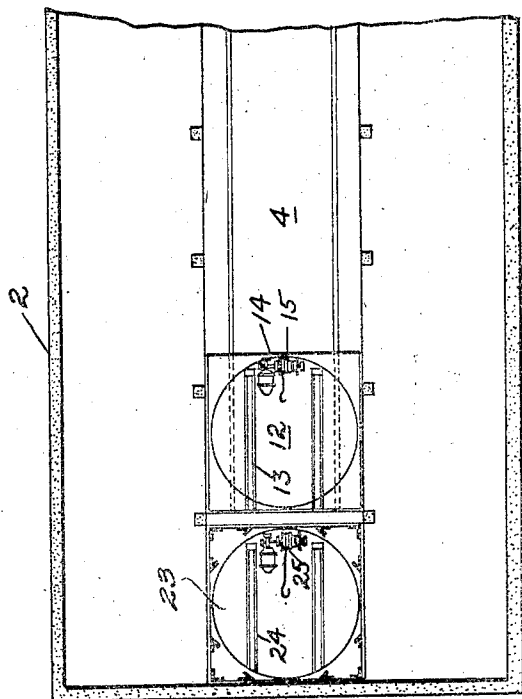


FIG. 3

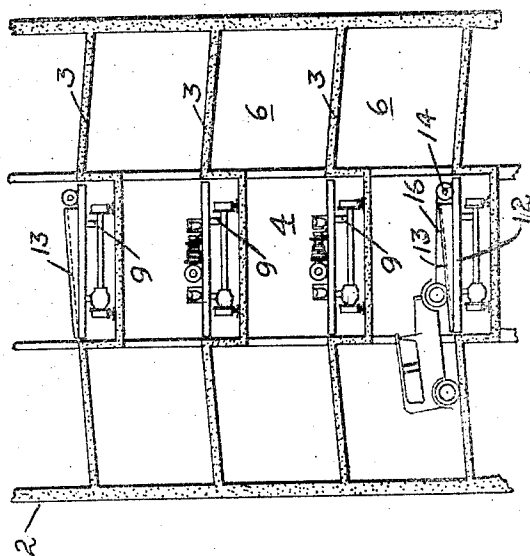


FIG. 2

INVENTORS

S. J. NUNN

AND

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UNITED STATES PATENT OFFICE.

MURRAY C. TUNISON AND SAMUEL J. NUNN, OF LOS ANGELES, CALIFORNIA, AS-
SIGNORS TO NUNN & TUNISON, A FIRM COMPOSED OF SAID TUNISON AND NUNN.

GARAGE.

Application filed July 26, 1923. Serial No. 853,874.

To all whom it may concern:

Be it known that we, MURRAY C. TUNISON and SAMUEL J. NUNN, citizens of the United States, and residents of the city of Los Angeles, county of Los Angeles, in the State of California, have invented a new and useful Garage, of which the following is a specification.

Our invention relates to a garage in which automobiles may be stored on a plurality of floors, and relates more particularly to garages of this type in which the insertion and removal of the automobiles is effected with the aid of an elevator mounted in a fixed shaft and cooperating with horizontally movable trucks operating on each floor.

An object of the invention is to provide a garage of the character described in which the automobiles may be quickly turned or positioned so as to enable them to be inserted or removed from their respective stalls in the most expeditious manner without necessitating a large turning area or requiring the use of the power of the automobile.

The invention possesses other objects and features of advantage, some of which, with the foregoing, will be set forth in the following description of the preferred form of our invention which is illustrated in the drawings accompanying and forming part of the specification. It is to be understood that we do not limit ourselves to the showing made by the said drawings and description, as we may adopt variations of the preferred form within the scope of our invention as set forth in the claims.

Referring to said drawings:

Figure 1 is a vertical longitudinal section of a garage constructed in accordance with our invention.

Figure 2 is a vertical transverse section of the garage.

Figure 3 is a floor plan of a portion of the garage.

Briefly expressed the garage in its present form comprises a plurality of floors each

of which is provided with a row of stalls at opposite sides of a horizontal longitudinally extending passage. At one end of the passages is an elevator which is mounted in a fixed shaft and is adapted for raising and lowering the automobiles from one floor to another. Each floor is provided with a truck which operates in the associated passage between the stalls and is adapted to receive the automobile from the elevator and carry it to its stall or vice versa. Mounted on each truck and preferably on the elevator are revoluble platforms which enable the automobiles to be positioned in their stalls in a manner most favorable for the removal or withdrawal without requiring large turning areas. The floors of the revoluble platforms as well as the floors of the stalls are inclined so that the automobiles may be moved from the elevator to the trucks and from the latter to the stalls by gravity. Removal of the automobiles from their stalls to the trucks and from the trucks to the elevators is effected by power-operated towing means carried on the platforms.

A detailed description follows:

The garage comprises a rectangular structure 2 having a suitable number of floors each of which is provided with a longitudinal corridor or passage 4 extending substantially from the front end of the building to the rear thereof. At each side of the passage is a row of stalls 6, the latter being preferably, but not necessarily, divided from each other by suitable partitions or other visible separating means. Arranged at the forward end of the building and mediately of the adjacent stalls of the opposite rows of stalls, is a vertical shaft 7 in which is mounted an elevator 8 for transporting the automobiles from one floor to another.

Each floor is provided with a truck 9 which is arranged to move longitudinally in the passage and cooperate with the elevator so that the automobiles may be transported from the elevator to their stalls and vice versa. Mounted on each truck is a revolu-

ble platform or turntable 12 on which the automobile is adapted to rest when positioned on the trucks. By means of the turntables, the automobiles after being moved thereon from the elevator, may be readily
 5 turned so that when placed in a stall, whether said stall is at one side or the other of the passage, the forward end of the automobile may invariably face the passage,—
 10 as is the requirement in many municipalities. This feature of our invention is also advantageous in that it makes it practical to withdraw the automobiles from their stalls and place them upon the trucks by the use
 15 of a towing device as will be explained more fully hereinafter.

The flooring of the stalls is sloped downward from the passage, and the tracks 13 on which the automobile rests when positioned
 20 on the trucks, is inclined similarly. In this manner as shown in Figure 2 the automobiles can be moved from the truck into the stalls without the use of any power save gravity. Preferably carried on the turntables is a towing device 14 comprising a
 25 motor actuated drum 15 on which is wound a cable 16 having at its outer end a suitable tool such as a hook for ready attachment to the automobile. Owing to the fact that the
 30 rear end of the automobile usually has no readily accessible portion to which the cable may be attached, the fact that the automobiles are caused when positioned in the stall to face forward, enables the operator to attach the cable to the front axle of the auto-
 35 mobile, which in all makes is readily accessible. To thus withdraw the automobile from its stall it is merely necessary to position the truck opposite the stall, revolve
 40 the turntable so that the lower ends of the tracks lie adjacent the stall, secure the cable to the axle, and then rotate the tow drum until the automobile rests entirely upon the
 45 tracks of the turntable. To then remove the automobile from the building, the truck is moved to the elevator and the automobile is transferred to the elevator and lowered thereon to the ground floor. The automobile
 50 may then be removed through the entrance and exit opening 21 preferably provided in the front wall 22 of the garage. In order that the automobile may be discharged through opening 21 at the most desirable
 55 angle, a turntable 23 may be also provided on the elevator. The turntable 23 is provided with inclined tracks 24 and towing means 25 similar to that on the trucks, thereby enabling the operator to move the
 60 automobile on or off the elevator without using the power of the automobile.

The trucks are preferably power driven so that they may be readily moved to and from the elevator.

We claim:

65 1. In a garage, a plurality of floors each

having a row of stalls at different sides of a passage, an elevator communicating with said passage, trucks associated with the respective floors and movable horizontally
 70 from one end of said passage, revoluble platforms mounted on the elevator and trucks, and power operated means exclusive of the automobile for drawing an automobile on one of said platforms.

2. In a garage, a plurality of floors each
 75 having a row of stalls at different sides of a passage, a truck associated with each floor and movable horizontally in the passage, an elevator adapted to cooperate with each
 80 truck, power operated means to move an automobile on one of said last two mentioned elements and revoluble platforms mounted on said trucks.

3. In a garage, a plurality of floors each
 85 having a row of stalls at opposite sides of a passage and provided with flooring sloping downwardly from said passage, an elevator communicating with said passage, trucks associated with the respective floors and movable horizontally in said passage from the
 90 elevator to the other end thereof, and a revoluble platform on said trucks inclined at an angle substantially corresponding to the slope of said flooring.

4. In a garage, a plurality of floors each
 95 having a row of stalls at opposite sides of a passage and provided with flooring sloping downwardly from said passage, trucks associated with the respective floors and movable horizontally from one end of said passage to the other, revoluble platforms on
 100 said trucks having inclined tracks, and means carried on said platform for drawing an automobile from one of said stalls to and upon said truck.

5. In a garage, a plurality of floors each
 105 having a row of stalls at opposite sides of a passage, an elevator communicating with each floor passage, a truck movable horizontally in each passage, revoluble platforms on the elevators and trucks, and power-operated means carried on said platforms for
 110 drawing an automobile thereon.

6. In a garage, a plurality of floors each
 115 having a row of stalls at opposite sides of a horizontally extending passage and provided with flooring sloping downwardly from said passage, an elevator communicating with one end of each of said passages, a truck arranged in each passage and movable from the elevator to the other end of
 120 the passage, revoluble platforms on the elevator and trucks and provided with tracks sloped similar to said flooring, and means carried on said elevator and trucks for drawing
 125 an automobile thereupon.

7. In a garage, a plurality of floors each
 130 having a row of stalls at opposite sides of a horizontally extending passage and provided with flooring sloping from said pas-

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sage, an elevator communicating with one
end of each of said passages and positioned
mediately of the adjacent stalls of the op-
posite rows, a truck arranged in each pas-
5 sage and movable from the elevator to the
other end of the passage, revoluble plat-
forms on the elevator and trucks and pro-
vided with tracks sloped similar to said

flooring, and power-operated means carried
on said platforms for drawing an automo- 20
bile thereupon.

In testimony whereof, we have hereunto
set our hands at Oakland.

SAMUEL J. NUNN.
MURRAY C. TUNISON.