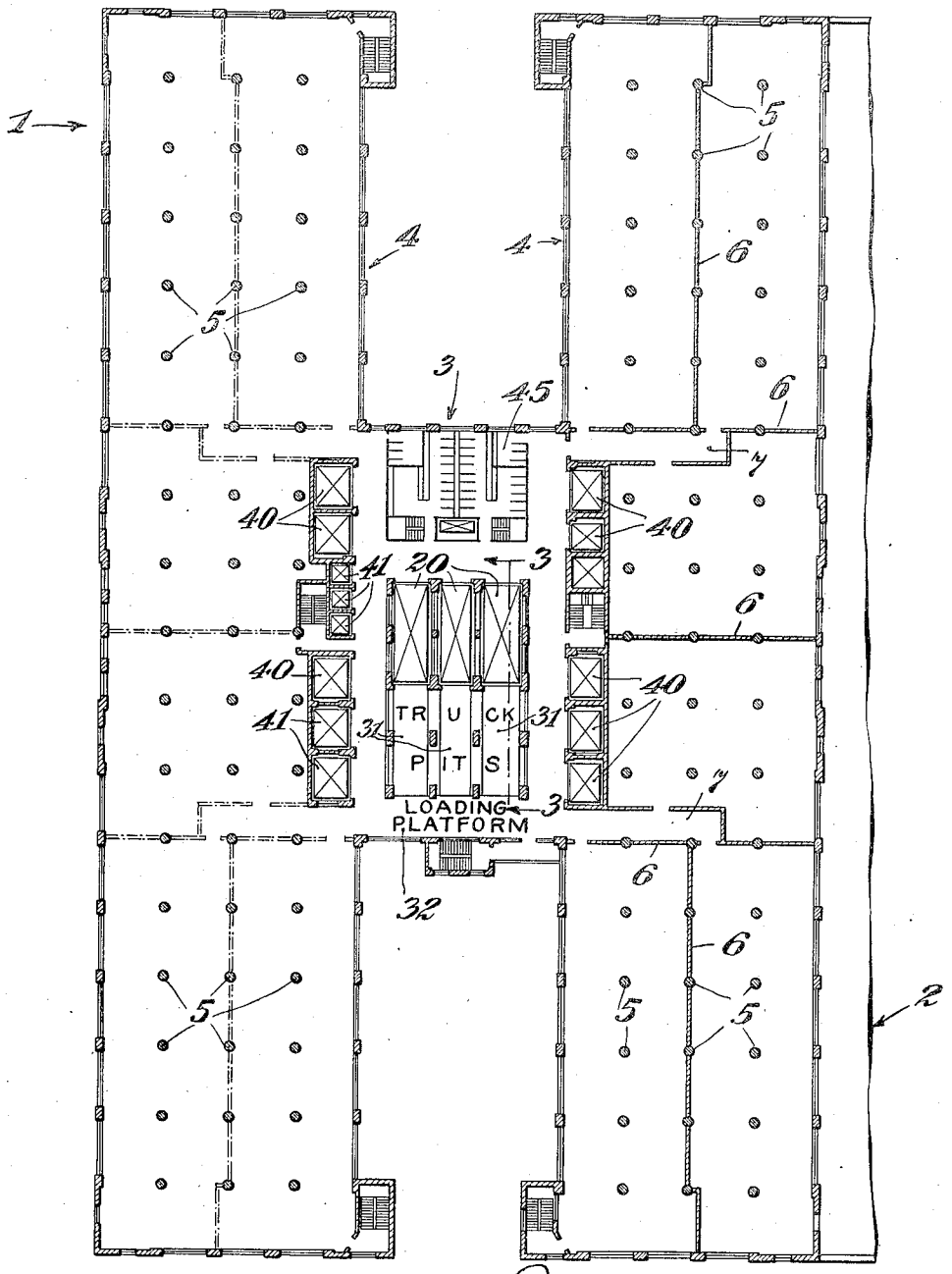
Oct. 8, 1929. R. G. CORY 1,730,645

BUILDING STRUCTURE

Filed Nov. 24, 1928 4 Sheets-Sheet 1

Fig. 1.



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BUILDING STRUCTURE

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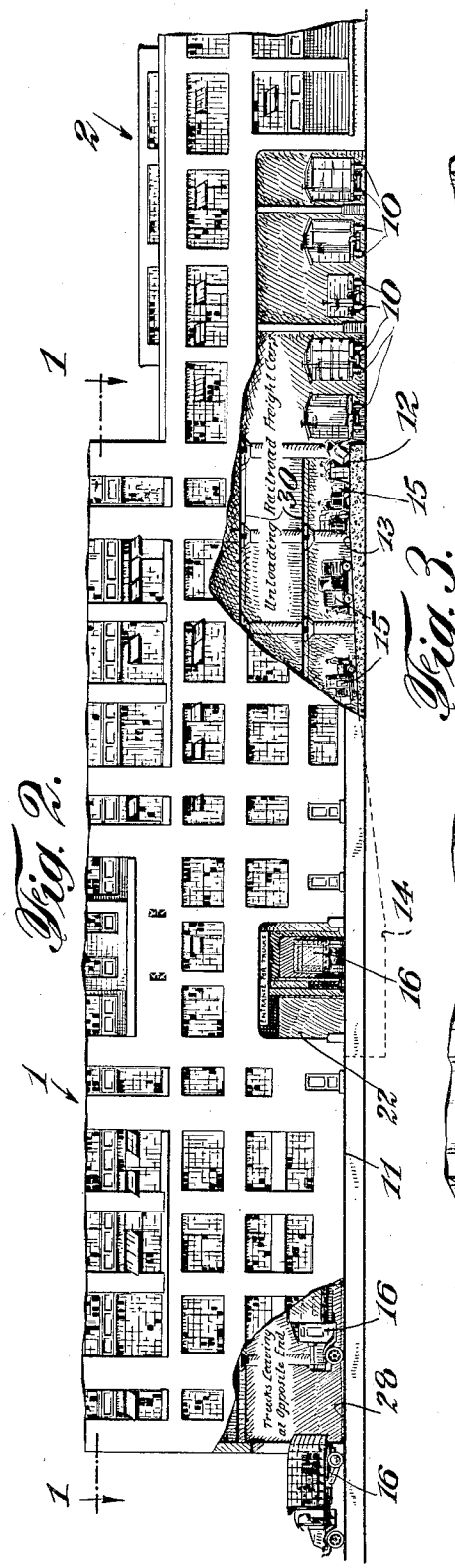

Fig. 2.

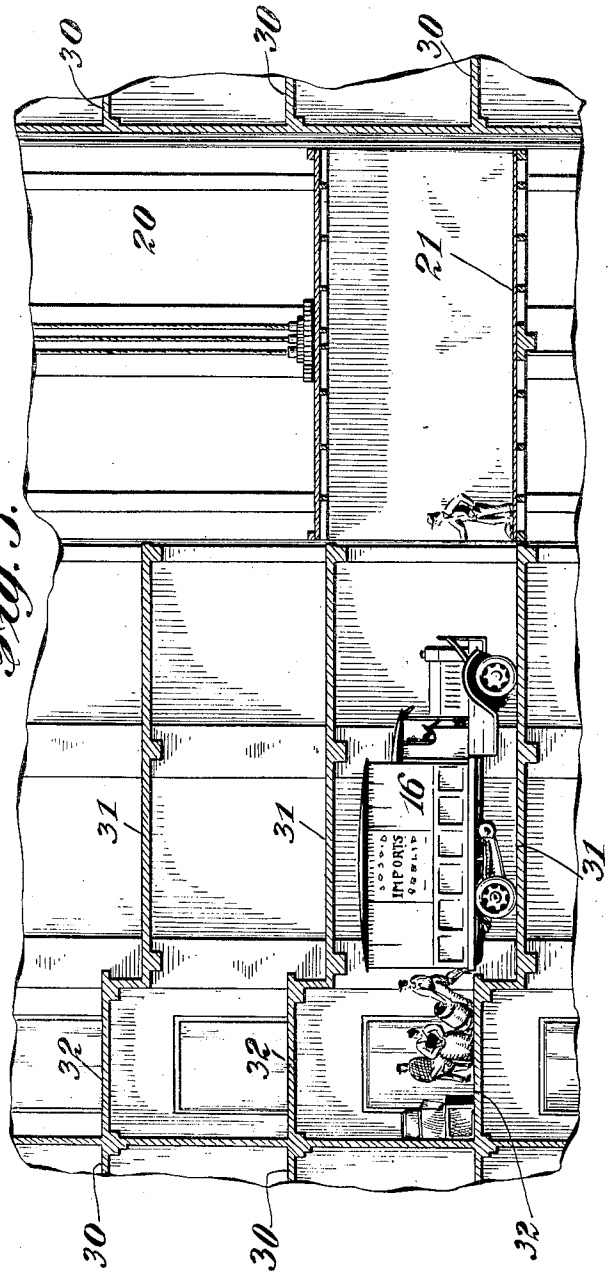

Fig. 3.

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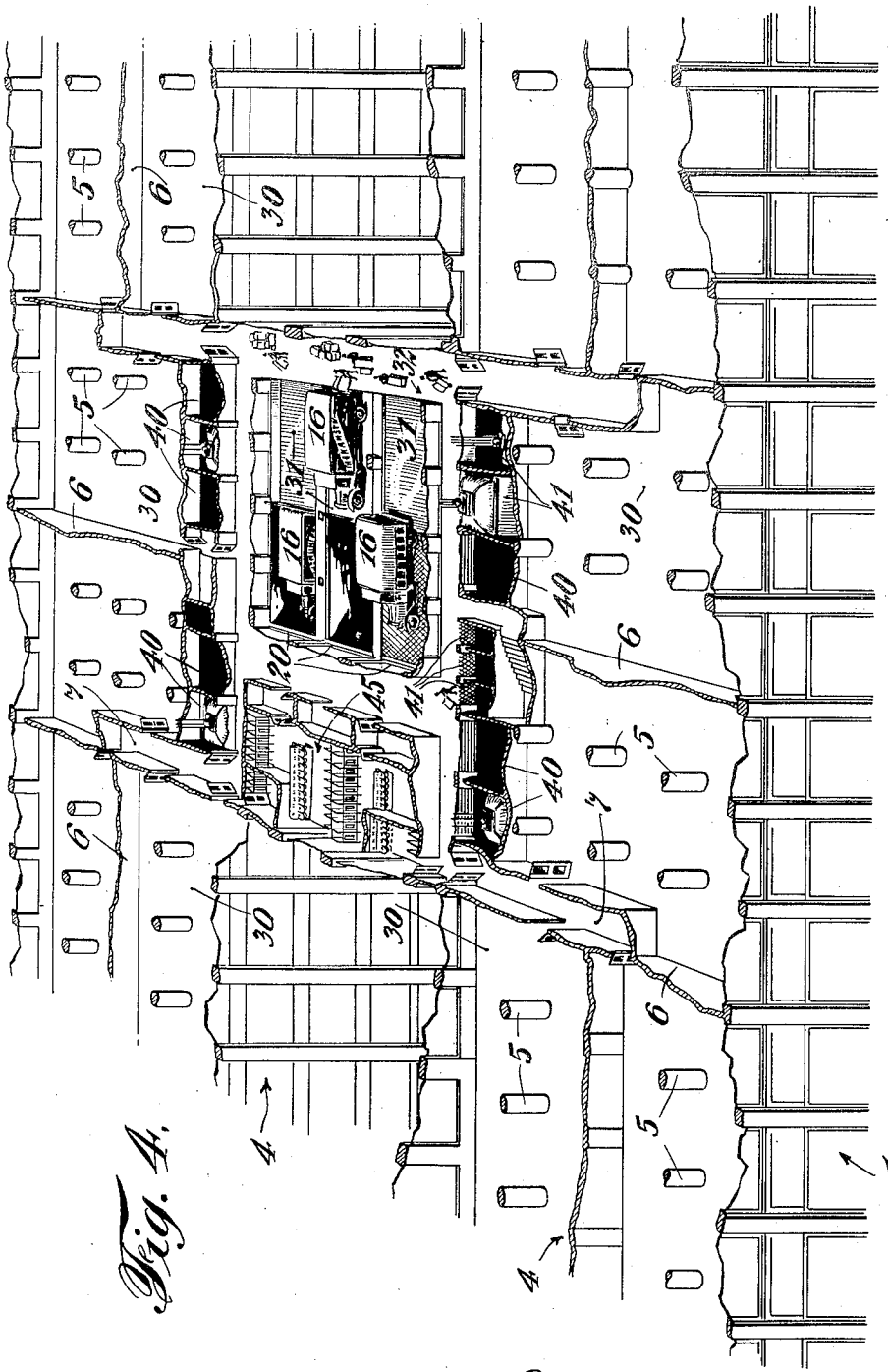

Fig. 4.

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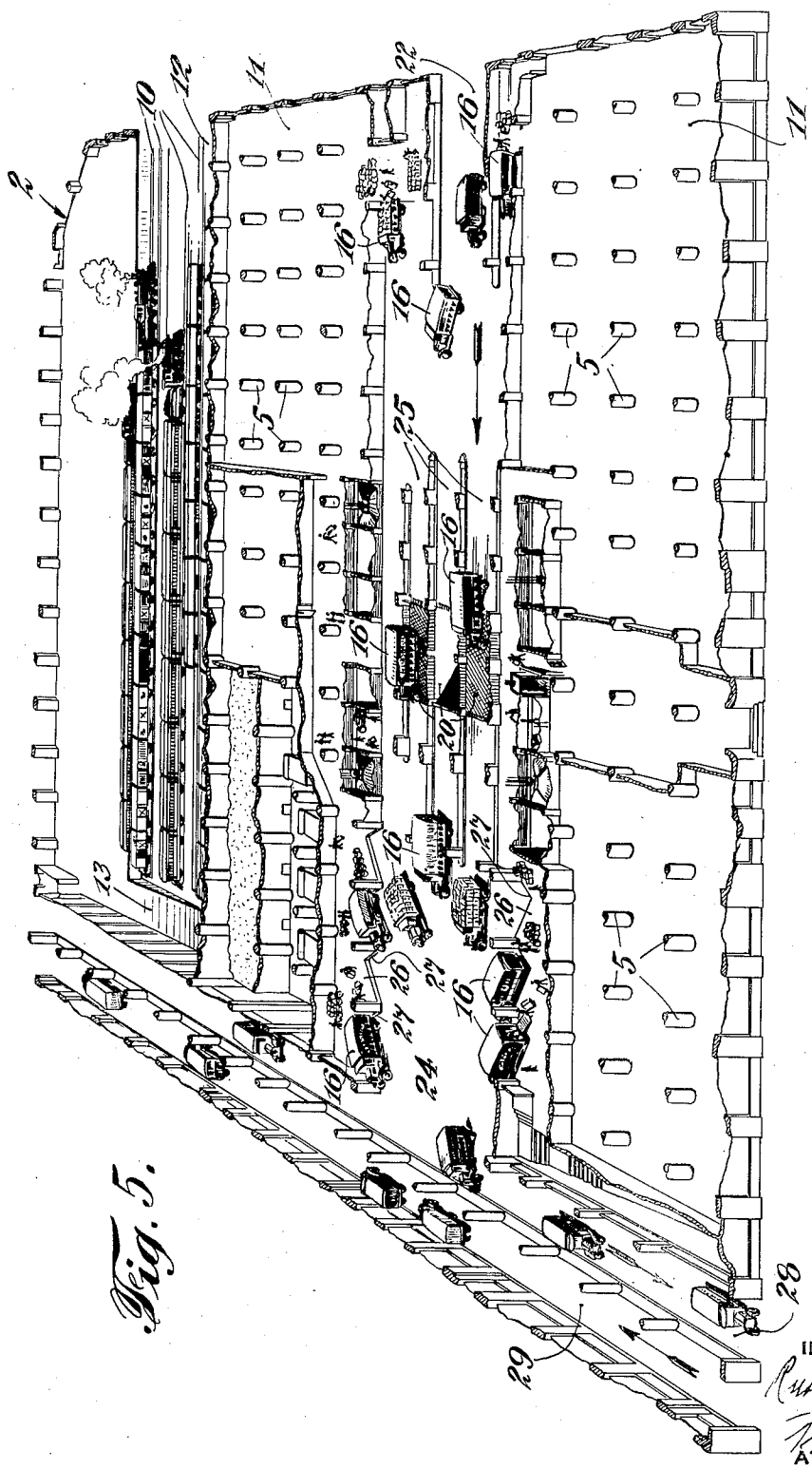

Fig. 5.

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UNITED STATES PATENT OFFICE

RUSSELL G. CORY, OF MONTCLAIR, NEW JERSEY

BUILDING STRUCTURE

Application filed November 24, 1928. Serial No. 321,748.

My invention relates to building structures, and especially to buildings intended for manufacturing, merchandising, storage, and analogous purposes.

The general object is to so construct or arrange a building of indicated character as to facilitate the movement of goods (freight merchandise, etc.) to and from all floors of the building and all tenants or occupants of separate areas of each floor. In realization of this object, the building is so designed that, in respect to convenience and facilities afforded to occupants, each floor is substantially a "ground floor."

A principal structural feature is the provision of elevators capable of carrying motor trucks, with truck landing floors positioned below the main floor levels, at which goods (loading and unloading) platforms are provided; so that the commercial trucks may be run off the elevators onto the landing floors and backed up to the goods platforms, with the truck floors flush with the platforms, goods discharged or received, and again run upon the elevators for movement to other upper floors, or to the "ground" floor; the elevators being available for other truck movements as soon as a truck is discharged on any landing floor.

Another important feature is the provision or arrangement of two adjacent buildings, of suitable or "standard" floor areas, with a central, connecting section or "service building," containing the motor-truck elevators above referred to, also other freight and passenger elevators, toilets, piping for steam, gas and water, electric conduits, etc., so that all parts of the connected buildings, or separate tenants thereof, may have all of the service facilities of the central, service section; thus affording to "small" tenants the conveniences and facilities which are now available only to occupants of entire buildings.

Provision is also made for railroad trackage within the building, convenient loading and unloading of freight cars, and distribution of such freight to and from the cars and throughout the building, by small electric, or "skid" trucks, or otherwise; for proper movement of motor trucks into, through and from the building on a main or "ground" floor; and for goods-handling platforms for motor trucks on such main or ground floor; and the invention also includes various other improved features of structure or arrangement, as sufficiently referred to hereafter.

The characteristics and advantages of the invention are further sufficiently explained in connection with the following detail description of the accompanying drawings, which shows one representative embodiment. After considering this example, skilled persons will understand that many variations may be made without departing from the principles disclosed, and I contemplate the employment of any structures that are properly within the scope of the appended claims.

In the drawings:

Fig. 1 is a plan (in the section-plane 1—1 of Fig. 2) of a typical floor, other than the main or "ground" floor, of a building embodying the invention in one form.

Fig. 2 is a partial side elevation, with parts broken away.

Fig. 3 is an enlarged section detail at 3—3, Fig. 1.

Fig. 4 is a perspective detail of an upper floor.

Fig. 5 is a perspective view of the lower floor.

As best shown in Fig. 1, 1 is practically a duplex building, consisting of individual sections, or buildings 4, separated to provide light and air, and connected centrally by a service structure 3, in which are located all necessary facilities for "service" to all areas of the main buildings 4, or individual tenants thereof; including motor-truck elevators (described hereafter), other freight or passenger elevators, common toilets, piping or conduits for water, (hot, cold, iced, fresh and salt), gas, electricity (direct or alternating, or both) refrigeration, telephone, etc.

In the style of construction illustrated in Fig. 1, the floors are supported on inner columns 5, and any floor may be divided by partitions into any desired number or arrangement of rooms or suites for different tenants or for other reasons, one such sub-

division being indicated by the partitions 6, Fig. 1. Common halls or passages 7 are usually retained, leading from the central portions of the main wing, for service of all occupants, or giving access to all the divisions of the floor.

Any suitable number of railroad tracks 10 may be provided in the structure 2, these tracks usually being located at a level somewhat below that of the main or ground floor 11 so that the car floors are flush with goods platform level 12, and a ramp 13 desirably leads downward and is connected at a basement level 14 with any desired passages, including passages or floor areas leading to basement doors of truck or freight elevators.

The invention contemplates the employment for distribution of goods or freight of certain classes, of small trucks such as are used on docks, in railroad terminals, warehouses, etc., and usually propelled by electric motor and storage battery, and identified for present purposes as "electric" or "skid trucks," some of these being shown at 15, Fig. 2; and also provides for the movement within the building of ordinary automobile trucks which are conveniently identified as "motor trucks", numbered 16 in various views.

Elevators are provided, of dimensions to receive these motor trucks and therefore identified as truck or motor truck elevators; and other elevators are provided, usually of smaller car-floor area, but which preferably will receive the smaller electric or skid trucks, and are identified simply as "freight" elevators.

The motor truck elevator shafts 20 of any suitable number are usually arranged substantially centrally in the main or central wing of the building as best shown in Fig. 1. Fig. 3 shows one of these shafts in vertical section and also a car 21 therein dimensioned to receive any ordinary or full sized motor truck 16. The elevator cars may be operated by individual conductors or from the central station. At the main or ground floor 11 there is a side entrance 22 for motor trucks, (or other street vehicles), this entrance communicating with a central through passage 23 providing for movement of vehicles past the elevators to an exit 24 at the other side and also having divided aisles or lanes 25 leading to the motor truck elevators. The lower or ground floor except for the vehicle areas or passages may be at a level somewhat above such passages, providing goods platforms 26 at the level of the truck floors, and these platforms may be arranged as indented or angular bays or slips 27 to receive motor trucks in diagonal parking positions, such slips or platforms being at either or both ends of the central passage, as desired. At one side of the building a traffic lane or alley 28 may be provided for one-way traffic, the exit 24 communicating with this alley, and if desired another alley 29 may also be provided for one-way traffic in the other direction.

As an important feature of the invention, any or all floors above the main or ground floor are preferably arranged for the efficient handling of motor trucks in the following way: As best seen in Fig. 3, which shows several upper floors 30, for each of these a subfloor 31, otherwise referred to as a truck landing or landing floor, is provided, so located below the main floor level that when a motor truck is at or near the level of a portion 32 of the main floor, this portion (see also Fig. 1) being arranged as a goods platform for the convenient loading and unloading of goods from the trucks with a minimum of delay and inconvenience. From the loading platforms the goods may be distributed throughout the floor in any convenient way, as by hand trucks or by the use of electric or skid trucks. The landing floor 31 is dismensioned to receive a motor truck of ordinary or maximum size, and after the truck has been brought by the elevator car to the level of the landing floor, the truck is run off the elevator and backed up to the goods platform 32, immediately releasing the elevator for further vertical truck movements; and after loading or unloading, the elevator car is brought back to the landing floor and the truck is run back on it. In this way an ordinary motor truck may make a plurality of deliveries or collections within the building in minimum time and with minimum inconvenience, as compared with calling at a number of separate buildings at which freight handling is provided for only at street level, with or without proper loading platforms.

Preferably also one or more batteries of freight elevators 40 are provided, of any required number, these usually being dimensioned to receive the small electrical skid trucks, or hand trucks, and the shafts of these elevators usually go to the basement to receive the skid trucks running to and from the railway loading platforms 12 via the ramp 13. Passenger elevators 41 of any desired number may also be provided, when desired.

Each upper floor also desirably has at a central location, such as 45, wash or toilet rooms designed for common use of all tenants or occupants of the floor.

Truck movement through the lower floor, and to and from the truck elevators, will be directed in accordance with the arrangement of lading floors: Thus, with the arrangement shown, the trucks will move through the lower floor in the direction of the arrow, that is, from right to left, as viewed in Fig. 5; thus the trucks are run onto the elevators in proper positions to be backed onto the landing floors 31; and when returned to the ground floor, proceed forwardly to and out at the exit 24

so that there is no necessity for "turning around" within the building.

I claim:

1. A building structure comprising floors above ground level, a motor truck elevator, and at one or more of said upper floors a truck landing dimensioned and arranged to receive a truck from the elevator and located on a level below the main floor level.

2. A building structure comprising floors above ground level, a motor truck elevator, and at one or more of said upper floors a truck landing dimensioned and arranged to receive a truck from the elevator and located at such position below the adjacent main floor level that a truck on said landing floor has its floor at the approximate level of said main floor.

3. A building structure comprising floors above ground level, a motor truck elevator, and at one or more of said upper floors a truck landing dimensioned and arranged to receive a truck from the elevator and located on a level below the main floor level, the main floor adjacent said landing being arranged as a goods handling platform.

4. A building structure comprising one or more upper floors, an elevator dimensioned to receive a motor truck, and at one or more of said upper floors a truck landing floor arranged to receive a truck from the elevator and located below the main floor level.

5. A building structure comprising one or more upper floors, an elevator dimensioned to receive a motor truck, and at one or more of said upper floors a truck landing floor arranged to receive a truck from the elevator and located at such position below the main floor level that a truck on said landing floor has its floor at the approximate level of said main floor.

6. A building structure comprising one or more upper floors, an elevator dimensioned to receive a motor truck, and at one or more of said upper floors a truck landing floor arranged to receive a truck from the elevator and located below the main floor level, the main floor adjacent said landing floor being arranged as a goods handling platform.

7. In a building structure, a plurality of upper floors, one or more elevator shafts, an elevator car in each shaft dimensioned to receive a motor truck, and for each shaft and floor a truck landing floor at the shaft, dimensioned to receive a motor truck from the elevator car and located at such level below the corresponding main floor level that the truck floor is substantially flush with said main floor.

8. In a building structure, a plurality of upper floors, one or more elevator shafts, an elevator car in each shaft dimensioned to receive a motor truck, and for each shaft and floor a truck landing floor at the shaft, dimensioned to receive a motor truck from the elevator car and located at such level below the corresponding main floor level that the truck floor is substantially flush with said main floor, the main floor adjacent said landing floor being arranged as a goods handling platform.

9. In a building structure of substantially H-plan, a plurality of upper floors, one or more centrally located elevator shafts, an elevator car in each shaft dimensioned to receive a motor truck, and for each shaft and floor a truck landing floor at the shaft, dimensioned to receive a motor truck from the elevator car and located at such level below the corresponding main floor level that the truck floor is substantially flush with the main floor.

10. A building structure comprising floors above ground level, a motor truck elevator, and at one or more of said upper floors a truck landing dimensioned and arranged to receive a truck from the elevator and located on a level below the main floor level, and a truck entrance at ground floor level leading to the elevators.

11. A building structure comprising floors above ground level, a motor truck elevator, and at one or more of said upper floors a truck landing dimensioned and arranged to receive a truck from the elevator and located on a level below the main floor level, and a ground floor having a front and rear entrance and a through passage for vehicles.

12. A building structure comprising floors above ground level, a motor truck elevator, and at one or more of said upper floors a truck landing dimensioned and arranged to receive a truck from the elevator and located on a level below the main floor level, and a ground floor having a front and rear entrance and a through passage for vehicles, to and around the elevators.

13. A building structure comprising floors above ground level, a motor truck elevator, and at one or more of said upper floors a truck landing dimensioned and arranged to receive a truck from the elevator and located on a level below the main floor level, and a ground floor having a front and rear entrance and a through passage for vehicles, and also on said ground floor, goods platforms arranged at the approximate floor level of motor trucks.

14. A building structure comprising floors above ground level, a motor truck elevator, and at one or more of said upper floors a truck landing dimensioned and arranged to receive a truck from the elevator and located on a level below the main floor level, and a ground floor having a front and rear entrance and a through passage for vehicles, and also on said ground floor, goods platforms, arranged at the approximate floor level of motor trucks, said platform being in the form of angular slips for diagonal truck parking.

15. A building for the purpose described, comprising one or more main sections, at approximate ground level one or more railroad tracks, goods platforms at freight car floor level, and a ramp leading down from said platforms to a basement floor of the main building sections to elevator entrances therein.

In testimony whereof I affix my signature.

RUSSELL G. CORY.