July 18, 1967 KOSUKE MATSUKATA 3,331,465

HOUSE WITH MOBILE LADDER GATE

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Fig. 2

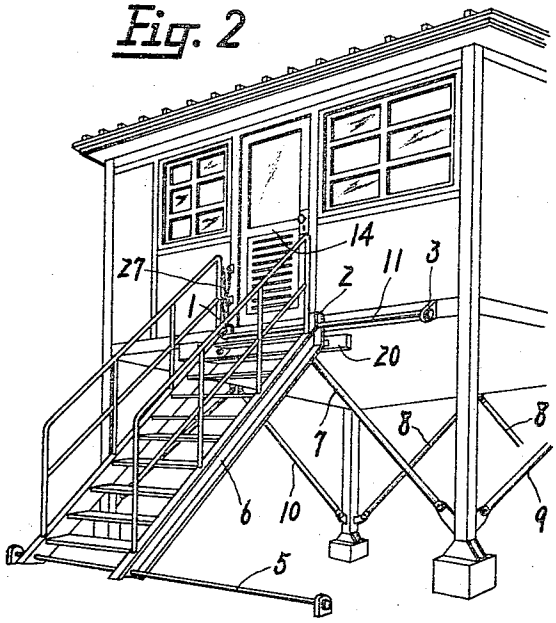


Fig. 1A

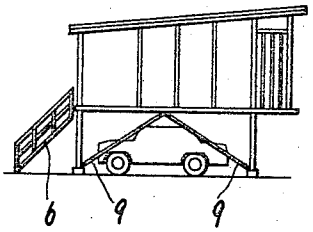


Fig. 1B

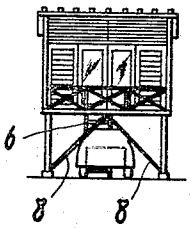
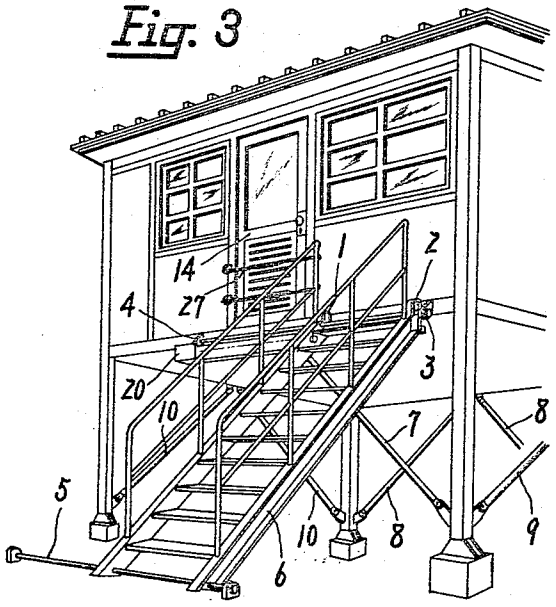


Fig. 3



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Fig. 4

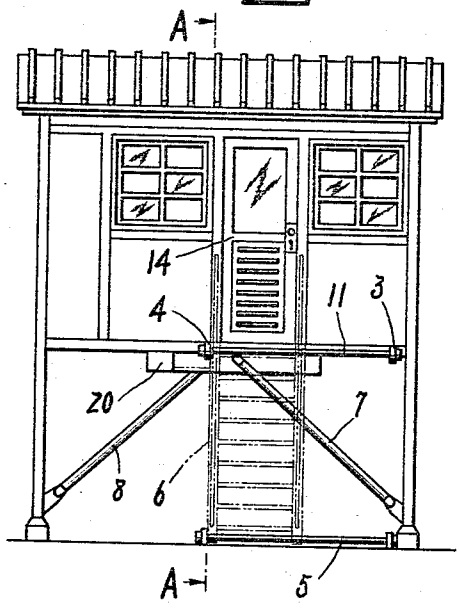


Fig. 5

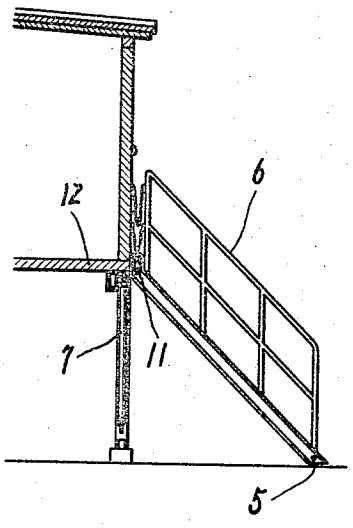


Fig. 6

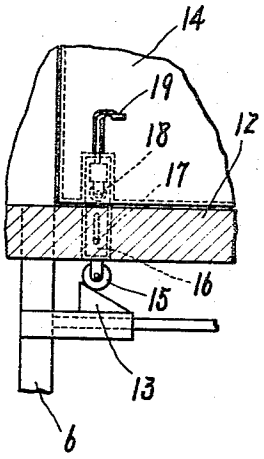


Fig. 7

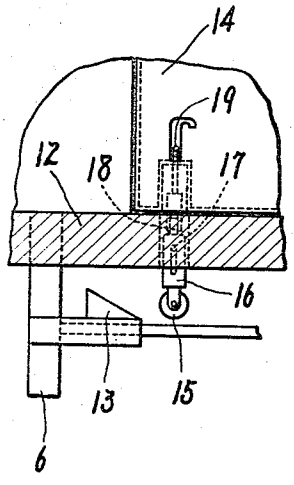
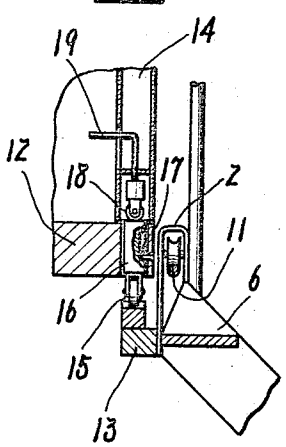


Fig. 8



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HOUSE WITH MOBILE LADDER GATE

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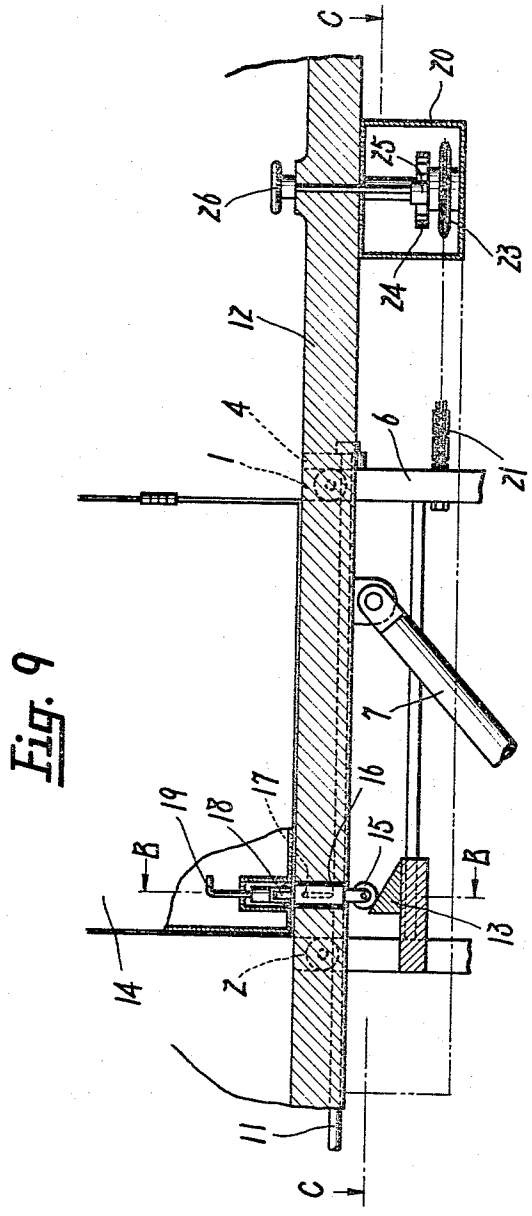


Fig. 9

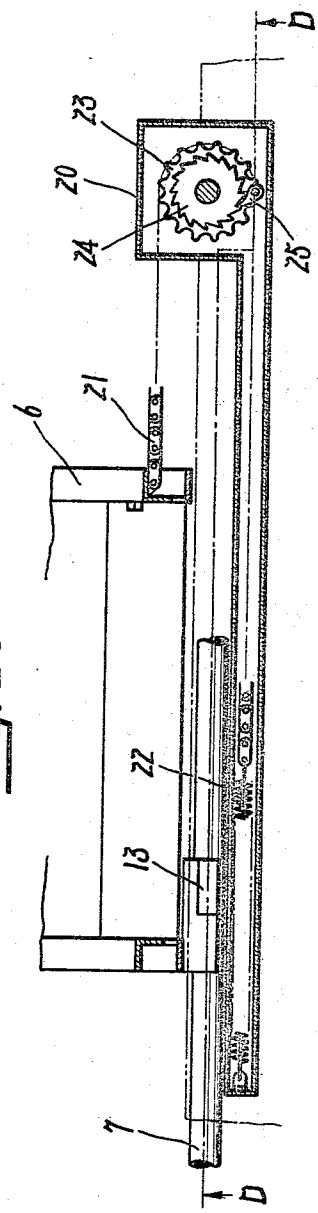


Fig. 10

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HOUSE WITH MOBILE LADDER GATE

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4 Claims. (Cl. 182—77)

ABSTRACT OF THE DISCLOSURE

A building structure comprising a platform, pillars supporting said platform above the ground at a height sufficient to allow a vehicle to be positioned beneath the platform, an enclosed building on said platform, at least two of the pillars being spaced laterally sufficiently to permit the vehicle to move between them, means associated with the remaining pillars for blocking movement of the vehicle between the remaining pillars, said building having a door therein above the space between said at least two pillars, a stairway slidably mounted on said platform and extending to the ground and slidable from a position in alignment with said door and blocking said space between said at least two pillars to a position out of alignment with said door and away from said space, door locking means movably mounted between said platform and said door and engaged by said stairway for unlocking when said stairway is in alignment with said door, and stairway locking means coupled to said stairway and operable from within said building for locking said stairway against movement.

This invention relates to improvements to a house located in lonely country with a motor car garage, especially to a housing having motor car garage space which can be kept under close surveillance of the occupant of the house with heavily constructed step ladder and entrance door of the house.

A mobile house with motor has been used in the past for those enjoying countryside life away from city noises and congestion. Various conveniences were provided for especially prepared mobile house parks. However, because at such parks the occupants of mobile houses can not be widely separated from neighbours and nuisances resulting from the presence of neighbours have begun to be felt, they are looking for independent houses with all conveniences and which are also guarded for safety of occupants and their cars. Those city workers who wish to spend a quiet weekend undisturbed by close neighbours, are now going to have their own second houses built on their own ground and which are modest in size and located in a suburb or town sufficiently far from neighbours and yet near enough to their own cities.

Under such circumstances, a new type of house meeting fresh requirements for self-sufficiency, economy and security all combined is now required. In the first place, self-sufficiency including such usual accommodations as kitchen, bath and sanitary equipment must be provided with comfortable room for sitting and sleeping during the use. The last and most important requirement for such house is security for the occupant and his motor car which transports the occupant from and to his working center at the end of a short stay.

For the last requirement, it is convenient to have the rooms placed above the motor garage so highly elevated that no intruder can peep in through the windows from outside unless he climbs the wall of the structure. If a car is placed underneath the rooms under full surveillance, and made easily approachable by the occupant, no special trunk case for containing clothes and utensils for a short stay is necessary for the car's storage space can serve the same purpose. More important is the security of the car which must be maintained during the night. This surveillance of the car is fully realized in this invention by use of mobile ladder to the living quarters integrated with the entrance door so that with enclosure fences on all sides except one around the ground underneath the living quarters, the ladder provides last an obstacle for the remaining opening and prevents removal of the car from the garage unless the living quarters is entered from outside. The garage section can be further used if required as covered shade to enjoy the intimacy of wild life if suitably fenced. Besides, due to the fact the floor of living quarters is elevated, this allows easy inspection and close attendance from beneath of wiring and pipe lines installed in the floor when required.

The present invention shall now be described with reference to the drawings which illustrate an embodiment of the invention.

FIGURE 1A of the drawings is a side view of a house according to the present invention with a car garaged underneath the living quarters.

FIGURE 1B is the front view of house with car.

FIGURE 2 is a rear perspective view of the house showing a mobile lock ladder positioned in front of the closed entrance door to the living quarters.

FIGURE 3 is another perspective view of the house showing a mobile lock ladder removed to allow the car to enter the garage section.

FIGURE 4 is a front view of the entrance door closed showing the ladder drawn in chain lines.

FIGURE 5 is a side view of the house and ladder sectioned at line A—A of FIGURE 4.

FIGURE 6 is a detail, partly in section, of the entrance door closing elements when the ladder is positioned opposite to the entrance door.

FIGURE 7 is a view similar to FIG. 6 showing the door closing elements when the inclined stop members of the ladder has moved away from the closing elements and the door is locked.

FIGURE 8 is a transverse sectional view of the door closing elements as shown in FIG. 6.

FIGURE 9 is a sectional front view of the entrance door closing elements and the stop member viewed from inside the living quarters and taken on line D—D of FIG. 9.

FIGURE 10 is a sectional plan view of the entrance door closing elements taken on line C—C of FIG. 9.

Reference is now made to FIGS. 1A and 1B. Living quarters are elevated above the enclosed open space underneath, spacious enough to allow the motor car to be garaged and the occupant to walk comfortably. Three sides between the corner pillers supporting the living quarters are fenced by a wall or inclined struts **8**, **9** and **10** to prevent the car from being removed. At the remaining side, mobile ladder **6** is positioned in association with one inclined strut **7** shown in FIGURE 2 so that the car can be moved into the space underneath the living quarters and be garaged and locked inside if necessary.

As seen in FIGURE 2, in front of the entrance door **14**, mobile ladder **6** is positioned for use of the occupant when the living quarters are used. The latter **6** can be moved along horizontal rod **11** which is fixed to the main structure by fittings **3** and **4** and can not be detached from the main structure. The bottom end of the ladder has holes through which horizontal rod **5** anchored to ground extends. Inclined strut **7** is fixed between one of the pillars and the floor structure of the living quarters and not only strengthens the whole structure against the weight of ladder but also constitutes enclosing means for the car in garage.

As seen in FIGURE 3, when ladder **6** is removed to the other end along horizontal rods **11** and **5** away from the

door **14** when a car is going to be led into the garage section, chain **27** the ends of which are fixed to the main structure and the ladder hand rail, is stretched out to protect occupant from falling out to the ground in case the door **14** is opened by mistake or otherwise while ladder **6** is away from in front of door **14**. Under normal circumstances when the door is closed, another safety device for the occupant is provided as described in detail in connection with FIGURES 6 through 10.

FIGURES 4 and 5 show how sufficient opening is provided to enable a car to enter the space beneath the building. Inclined strut **7** and horizontal upper rod **11** for supporting the mobile ladder **11** and horizontal lower rod **5** are shown.

FIGURES 6 and 7 are taken in a direction from inside the living quarters. The safety device associated with door **14** and ladder **6** will now be described. Closing elements enclosed in the body of door **14** and slidable vertically inside the door **14** have a roller **18** on the bottom thereof. Hand lever **19** on the closing elements can be manipulated when the roller is to be lifted. When door **14** is closed, and roller **18** is above a recess in the floor in which sliding element **16** is contained with roller **15** on the bottom thereof. When door **18** is closed the roller **18** falls into the recess when sliding element **16** with its roller **15** can move down freely. Lifting elements **13** having an inclined surface is mounted on the inner side of the ladder near the top thereof, and the inclined surface thereof comes into contact with roller **15** when ladder **6** is moved along the rods **5** and **11** towards door **14**. As roller **15** is raised along inclined surface **13** and reaches its extreme position, the top surface of sliding element **16** comes to the level of the floor and roller **18** and the entrance door **14** is free to move. Door **14** can now be opened. When ladder locking handle **26** is released by mistake when door **14** is closed and ladder **6** is allowed to move to the other end, roller **15** slides down the inclined surface of lifting element **13** and roller **18** of door **14** falls into the recess of floor and the door is kept closed. In case of emergency such as fire, hand lever **19** may be lifted so that roller **18** is lifted out of the recess on the floor and door **14** can be opened even if ladder **6** is not in front of it. This relationship between roller **18** and the level of the floor can be understood from FIGURE 8.

As seen in FIGS. 9 and 10 sprocket chain **21** has one end attached to a point on the inclined side beam of ladder **6** at the other side from the inclined surface lifting element **13**. Pinion **24** which can be locked with latch **25** is coaxially mounted with sprocket pinion **23**. Latch **25** has a rod extending through the floor to handle **26** above the floor which can release latch **25** from pinion **24** when necessary. The other end of sprocket chain **21** is connected to spring **22** which is in turn fixed to the main structure. These means are almost completely enclosed in a well protected case **20** located under the floor of structure. Therefore, they are guarded against any outsiders. Besides, any movement of the massive structure of ladder **6** easily informs the occupant of anything happening to it although an electric alarm system can be used if required. Thus this locking system protects the car against any car robbery quite efficiently. Further when ladder **6** is not in proper end position, closed door **14** can not be opened unless hand lever **19** of door is purposely lifted up. This protects the occupant from falling out to the ground, when ladder **6** is not in readiness for his use.

Thus, the occupant of this house can protect his car and himself with one key at his disposal while his car is always at his disposal and within his easy approach.

What I claim is:

1. A building structure comprising a platform, pillars supporting said platform above the ground at a height sufficient to allow a vehicle to be positioned beneath the platform, an enclosed building on said platform, at least two of the pillars being spaced laterally sufficiently to permit the vehicle to move between them, means associated with the remaining pillars for blocking movement of the vehicle between the remaining pillars, said building having a door therein above the space between said at least two pillars, a stairway slidably mounted on said platform and extending to the ground and slidable from a position in alignment with said door and blocking said space between said at least two pillars to a position out of alignment with said door and away from said space, door locking means movably mounted between said platform and said door and engaged by said stairway for unlocking when said stairway is in alignment with said door, and stairway locking means coupled to said stairway and operable from within said building for locking said stairway against movement.

2. A building structure as claimed in claim **1** and further comprising at least one chain connected between one side of the building adjacent the door and the stairway and which extends across the door when the stairway is moved out of alignment with the door.

3. A building structure as claimed in claim **1** in which said door locking means comprises a latch member vertically slidable in said door and having a roller on the lower end thereof, and an actuating member slidably mounted in said platform, the upper end of which is engaged by said roller on the latch member, and an inclined surface on said stairway engaging the lower end of said actuating member to raise said actuating member and latch member until the roller on the lower end of said latch member is just level with the top of the platform when said stairway is in alignment with said door.

4. A building structure as claimed in claim **1** in which said stairway locking means comprises a sprocket wheel mounted on said platform, a sprocket chain around said wheel and coupled to said platform and said stairway and movable to rotate said sprocket wheel when said stairway moves, and a toothed wheel on said sprocket wheel and a latch member engageable with the teeth on said toothed toothed wheel to block rotation of said sprocket wheel, and a latch moving member connected to said latch and extending into said building.

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