Dec. 9, 1952 P. J. FORD ET AL 2,621,098

MOVABLE CONTAINER WITH TELESCOPING DRAWER

Filed Dec. 27, 1948

FIG. 1.

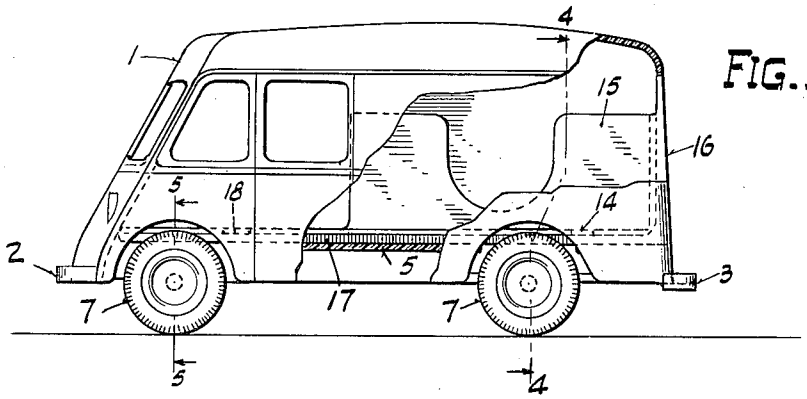



FIG. 2.

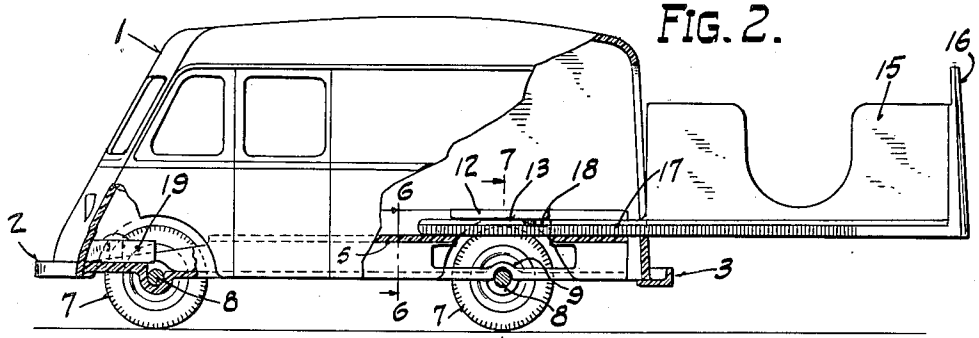



FIG. 3.

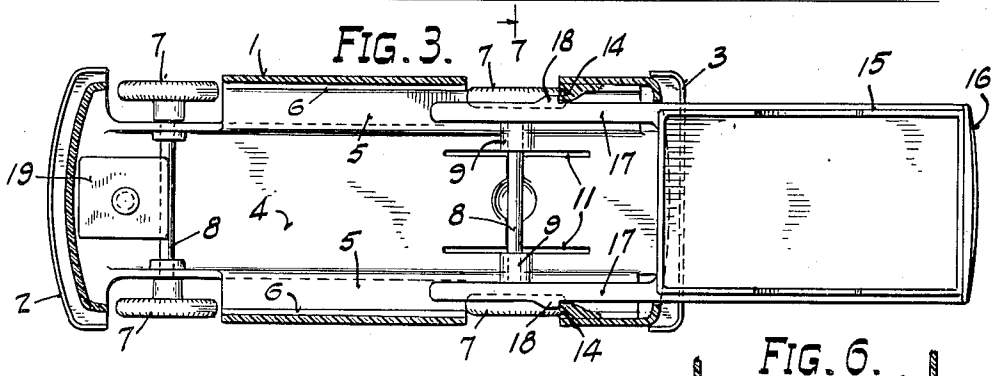



FIG. 4.

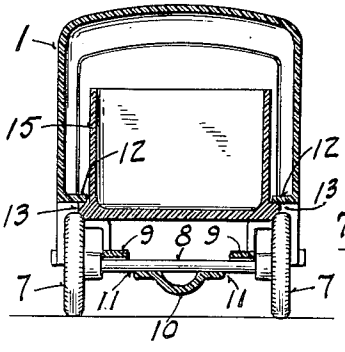



FIG. 5.

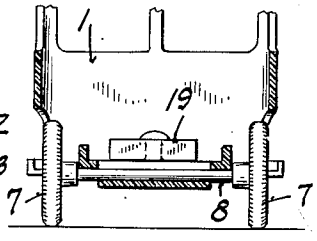



FIG. 6.

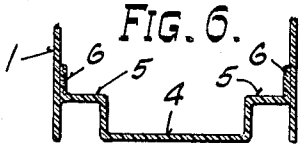
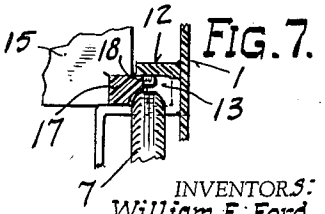



FIG. 7.




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Patented Dec. 9, 1952

2,621,098

# UNITED STATES PATENT OFFICE

2,621,098

## MOVABLE CONTAINER WITH TELESCOPING DRAWER

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Application December 27, 1948, Serial No. 67,296

12 Claims. (Cl. 312—204)

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The invention relates to a movable container with a telescoping drawer adapted to hold various articles or to serve as an ash tray or the like, and has been particularly applied to a miniature truck.

One object of the invention is to provide a movable container with a telescoping drawer for concealing articles such as cigarettes when closed, and outwardly movable to expose the articles for use or to serve as an ash tray or the like.

Another object is to provide a novel means of operation of a receptacle in a movable container whereby the receptacle may be opened or closed by movement of the container upon a surface such as a table top.

Another object is to provide a receptacle drawer in a container like a miniature truck from which articles placed therein can be readily removed.

A further object is to provide a telescoping receptacle drawer in a container like a miniature truck wherein the weight of the drawer when moved outwardly of the container is counterbalanced to prevent tilting of the container.

A further object is to provide a miniature model vehicle which is a duplication of a road vehicle and serves a useful purpose as a container and toy as well as being a work of art.

These and other objects of the invention will appear hereinafter in connection with the following description of an embodiment of the invention illustrated in the accompanying drawing.

In the drawing:

Figure 1 is a side elevational view of a miniature truck illustrating the invention, with parts broken away and sectioned;

Fig. 2 is a view similar to Fig. 1 with the drawer therein in extended position;

Fig. 3 is a horizontal sectional view through the truck in the position of Fig. 2;

Fig. 4 is a section taken on line 4—4 of Fig. 1;

Fig. 5 is a section taken on line 5—5 of Fig. 1 with the top of the vehicle broken away;

Fig. 6 is a detail section taken on line 6—6 of Fig. 2; and

Fig. 7 is a detail section taken on line 7—7 of Fig. 2.

Although the invention can be applied to numerous types of containers, for purposes of illustration the invention is shown as applied to a delivery truck which is a duplication in miniature of a road size vehicle.

In general the truck comprises body section 1 having a curved top which slopes gradually downwardly at the forward end to merge into the cab

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of the truck sloping down to front bumper 2. The rear of body 1 is open for access to the inside and the body of the truck on the sides of the opening extends downwardly on a slight slant to the rear bumper 3. The cab portion of body 1 is provided with suitably shaped openings and markings on the sides and front to simulate the side windows and doors of the truck and the windshield. Likewise, suitable markings on the front of body 1 simulate the engine hood and headlights of a road size truck.

Body 1 of the truck is closed underneath by floor 4 which as particularly shown in Fig. 6 has an irregular contour comprising longitudinally extending side ledges 5 offset upwardly from the base of the floor and having upstanding flanges 6 for securing the floor to the body of the truck and reinforcing the same.

The truck is supported on serrated rubber tired wheels 7 which are secured to the front and rear axles 8. The front axle extends through suitable side bearing portions in the sides of the floor and over the base of the floor 4. Both floor 4 and body 1 are formed to permit the wheels to be inset within the body of the truck. The front axle is free to rotate when the front wheels of the truck are rotated.

The rear axle extends through bearing portions 9 on each side of floor 4 and thence over the base of the floor formed at this location to simulate the differential 10 of a truck. The rear axle is free to rotate when the rear wheels rotate. Longitudinal slots 11 are provided in floor 4 between each bearing portion 9 and differential 10 to impart flexibility to that portion of the floor supporting the rear axle, the use of which will be described hereinafter.

The body of the truck is formed to the general curvature of the rear wheels to permit the rear wheels to be inset therein in line with the front wheels. Ledges 5 and floor 4 terminate at the forward and rear side of each rear wheel so that each rear wheel is inset within its respective ledge 5. Horizontal projections 12 extend from the upper portion of each flange 6 of the floor over the rear wheels a short distance and are spaced upwardly from each wheel to provide a slot 13 between each rear wheel and the corresponding projection 12. The face of each flange 6 at the approach to the rear of the rear wheels turns inwardly to provide thereof the stops 14, the use of which will be described hereinafter.

The drawer 15 provided as the receptacle for the truck has a bottom and four side walls providing an open top for easy access to the inside

of the drawer to remove the contents. The rear wall 16 simulates the back of the truck, and is of a size to close the opening in the rear of the body of the truck when drawer 15 is shifted to position the drawer inside the truck body.

Rails or prongs 17 are formed integrally with the bottom of the drawer and project forwardly from drawer 15 a substantial distance. The length of the rails and drawer is such that the drawer will fit completely inside the truck.

When drawer 15 is assembled inside the truck rails 17 pass through slots 13 formed between the rear wheels and projections 12. Rails 17 are of a thickness greater than the cross-section of slots 13 so that when the rails are forced through the slots, the rear wheels and axle are forced away from the body of the truck either by the body tending to move upwardly or the rear axle and wheels downwardly. This movement is permitted due to slots 11 in floor 4. As a result the rubber tired rear wheels are pre-loaded into substantial frictional engagement with rails 17. The surface of rails 17 engaging the rear tires of the truck is tapered and the frictional engagement of the rear tires and rails is increased by serrations on the tapered surface of the rails and the matching serrations on the rubber tires.

Lugs 18 are provided on the side of each rail toward the forward end thereof. Lugs 18 engage stops 14 of flange 6 when drawer 15 is slipped into the truck in assembly, the lugs and stops being tapered complementarily to permit the lugs to slide over the face of each stop 14, as the rails spring inwardly. Once lugs 18 are over stops 14 rails 17 spring outwardly to normal position with the result that when drawer 15 is moved outwardly lugs 18 engage the forward side of stops 14 to limit the rearward movement of the drawer.

In operation, after drawer 15 is assembled with the truck, opening of drawer 15 is obtained by pressing lightly downwardly on the truck and moving the same rearwardly, thereby rotating the rear wheels in engagement with rails 17 in a direction to drive the rails to the rear of the truck and open the drawer rearwardly. Rails 17 move through slots 13 until lugs 18 engage stops 14. Drawer 15 then has moved to a position substantially completely out of the rear of the truck.

Closing of the drawer is obtained by a similar movement of the truck forwardly to rotate the rear wheels in engagement with rails 17 in a forward direction which moves the drawer forwardly to a closed position. Rails 17 are driven forwardly through slots 13 under the driving force of the tires of the wheels until the forward ends of the rails engage the front wall of the truck to conceal the drawer inside the truck with its back 16 closing the rear opening of the truck.

Drawer 15 is of a width to clear projections 12 when advanced into the truck. The drawer is removable from the truck by springing rails 17 inwardly to clear lugs 18 over stops 14 should it become desirable to completely remove the drawer from the truck.

The weight 19 is secured inside the forward end of the truck to counterbalance the weight of drawer 15 and its contents when the drawer is moved rearwardly to prevent the truck from tipping upwardly in front.

The truck and drawer are molded from a suitable thermosetting plastic of sufficient strength and thickness to stand up in service.

The invention is applicable to many different types and shapes of trucks or other vehicles formed as a duplication in miniature of road size vehicles.

While the invention has been shown as applied to a vehicle, different shaped containers for the drawer may also be constructed to embody the invention.

The invention provides a novel receptacle in a container such as a miniature truck which may be utilized for numerous different retaining purposes.

Various embodiments of the invention may be employed within the scope of the accompanying claims.

We claim:

1. A manually portable container movable over a supporting surface, a receptacle telescoping within said container, and means to drive said receptacle inwardly and outwardly of said container in response to movement of the container in opposite directions over the surface upon which the same is supported.

2. A manually portable container movable over a supporting surface, a receptacle telescoping within said container and having a forwardly extending member, a wheel resiliently supported on the container with respect to the body thereof and adapted to engage the surface supporting said container, and said member being disposed between said wheel and container body and of a cross-section to separate the wheel and body to effect pre-loading engagement with said wheel for moving of said receptacle inwardly and outwardly of the container in response to movement of the container upon said wheel in opposite directions over the supporting surface.

3. A manually portable container movable over a supporting surface, a receptacle telescoping within said container and having an inwardly extending member, a wheel resiliently supported on the container with respect to the body thereof and adapted to engage the surface supporting said container for supporting the container thereon, and said member being disposed between said wheel and container body and of a cross-section to separate the wheel and body to effect pre-loading engagement with said wheel for moving of said receptacle inwardly and outwardly of the container in response to movement of the container upon said wheel in opposite directions over the supporting surface, and a weight secured within the container to counterbalance the weight of the receptacle and the contents thereof upon outward movement of the receptacle to prevent tilting of the container upon said wheel.

4. A container having front and rear wheels for movement over a supporting surface, means for resiliently supporting the rear wheels from the body of said container, a receptacle drawer telescoping within said container and having projecting members disposed between said rear wheels and container body and of a cross-section to spring the body and rear wheels apart to effect pre-loading engagement of the members with said wheels for moving said receptacle drawer inwardly and outwardly of the container upon movement of the container on the wheels thereof in opposite directions over the supporting surface.

5. A container having front and rear wheels for movement over a supporting surface, means disposed to resiliently support the rear wheels from the body of said container, a receptacle drawer telescoping within said container and having projecting members disposed between said rear wheels and container body and of a cross-section to spring the body and rear wheels apart

to effect pre-loading engagement of the members with said wheels for moving said receptacle drawer inwardly and outwardly of the rear end of the container upon movement of the container on the wheels thereof in opposite directions over the supporting surface, and a weight secured within the container at the opposite end from said drawer to counterbalance the weight of the drawer and the contents thereof upon outward movement of the drawer to prevent tilting of the container upon said rear wheels.

6. A miniature vehicle having front and rear wheels for movement over a supporting surface, means for resiliently supporting the rear wheels from the body of said vehicle, a receptacle drawer telescoping within said vehicle and having a pair of projecting prongs disposed between said rear wheels and vehicle body and of a cross-section to spring the body and rear wheels apart to effect pre-loading engagement of the prongs with said wheels for moving said receptacle drawer inwardly and outwardly of the vehicle upon movement of the vehicle on the wheels thereof in opposite directions over a supporting surface.

7. A miniature vehicle having rubber tired wheels for movement over a supporting surface, means for resiliently supporting the rear wheels from the body of said vehicle, a receptacle drawer telescoping within said vehicle and having a pair of forwardly projecting prongs disposed between said rear wheels and vehicle body and of a cross-section to spring the body and rear wheels apart to effect pre-loading engagement with said wheels for moving said receptacle drawer inwardly and outwardly of the rear of the vehicle upon movement of the vehicle on the wheels thereof in a corresponding direction over a supporting surface, and matching serrations in the rear tires and respective prongs to increase the frictional engagement thereof.

8. A miniature vehicle having wheels for movement over a supporting surface, means for resiliently supporting the rear wheels from the body of said vehicle, a receptacle drawer telescoping within said vehicle and having a pair of forwardly projecting prongs disposed between said rear wheels and vehicle body and of a cross-section to spring the body and rear wheels apart to effect pre-loading engagement of the prongs with said wheels for moving said receptacle drawer inwardly and outwardly of the vehicle upon movement of the vehicle on the wheels thereof in a corresponding direction over a supporting surface, and stops to limit the forward and rearward movement of said drawer.

9. A miniature vehicle having wheels for movement over a supporting surface, a slotted floor for resiliently supporting the rear wheels from the body of said vehicle, a receptacle drawer telescoping within said vehicle and having a pair of forwardly projecting prongs disposed between said rear wheels and vehicle body and of a cross-section to spring the body and rear wheels apart to effect pre-loading engagement of the prongs with said wheels for moving said receptacle drawer inwardly and outwardly of the vehicle upon movement of the vehicle on the wheels thereof in a corresponding direction over a supporting surface.

10. A miniature vehicle having wheels for movement over a supporting surface, means for resiliently supporting the rear wheels from the body of said vehicle, a receptacle drawer telescoping within said vehicle and having a pair of forwardly projecting prongs disposed between said rear wheels and vehicle body and of a cross-section to spring the body and rear wheels apart to effect pre-loading engagement of the prongs with said wheels for moving said receptacle drawer inwardly and outwardly of the vehicle upon movement of the vehicle on the wheels thereof in a corresponding direction over a supporting surface, lugs projecting from the sides of said prongs toward the forward ends thereof, and inwardly turned members extending from said body over which said lugs ride upon the assembly of the drawer inside said vehicle and serving as stops engaged by said lugs to limit the rearward movement of the drawer.

11. A container having wheels for movement over a supporting surface, means for resiliently supporting one pair of wheels from the body of said container, a movable receptacle drawer fitting within said container, projections extending from the body of the container over said resiliently supported wheels and spaced therefrom to provide slots therebetween, means projecting from said drawer and extending through said slots and of a vertical thickness greater than the slots to spring the body and wheels apart to effect pre-loading engagement of the projection means with the wheels for moving the receptacle drawer inwardly and outwardly of the container upon movement of the container on the wheels thereof in a corresponding direction over a supporting surface.

12. A vehicle having wheels for movement over a supporting surface, means for resiliently supporting one pair of wheels from the body of said vehicle, a movable receptacle drawer fitting within said vehicle, projections extending from the body of the vehicle over said resiliently supported wheels and spaced therefrom to provide slots therebetween, means projecting from said drawer and extending through said slots and of a vertical thickness greater than the slots to spring the body and wheels apart to effect pre-loading engagement of the projection means with the wheels for moving the receptacle drawer inwardly and outwardly of the vehicle upon movement of the vehicle on the wheels thereof in a corresponding direction over a supporting surface, and said drawer having a back to close the body of the vehicle to thereby conceal the drawer and its contents therein and being open centrally of its sides for ready removal of the contents thereof.

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REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

| Number | Name | Date |
|---|---|---|
| 1,385,811 | Bodenstein | July 26, 1921 |
| 1,910,208 | Gronberg et al. | May 23, 1933 |
| 1,981,246 | Pipe | Nov. 20, 1934 |
| 2,201,148 | Berger | May 21, 1940 |
| 2,401,937 | Kingson | June 11, 1946 |

FOREIGN PATENTS

| Number | Country | Date |
|---|---|---|
| 504,459 | France | July 6, 1920 |
| 579,619 | France | Oct. 20, 1924 |