Feb. 23, 1965 W. H. MEYER 3,170,583

CAR-TOP BOAT LOADER AND CARRIER

Filed Sept. 15, 1961 3 Sheets-Sheet 1

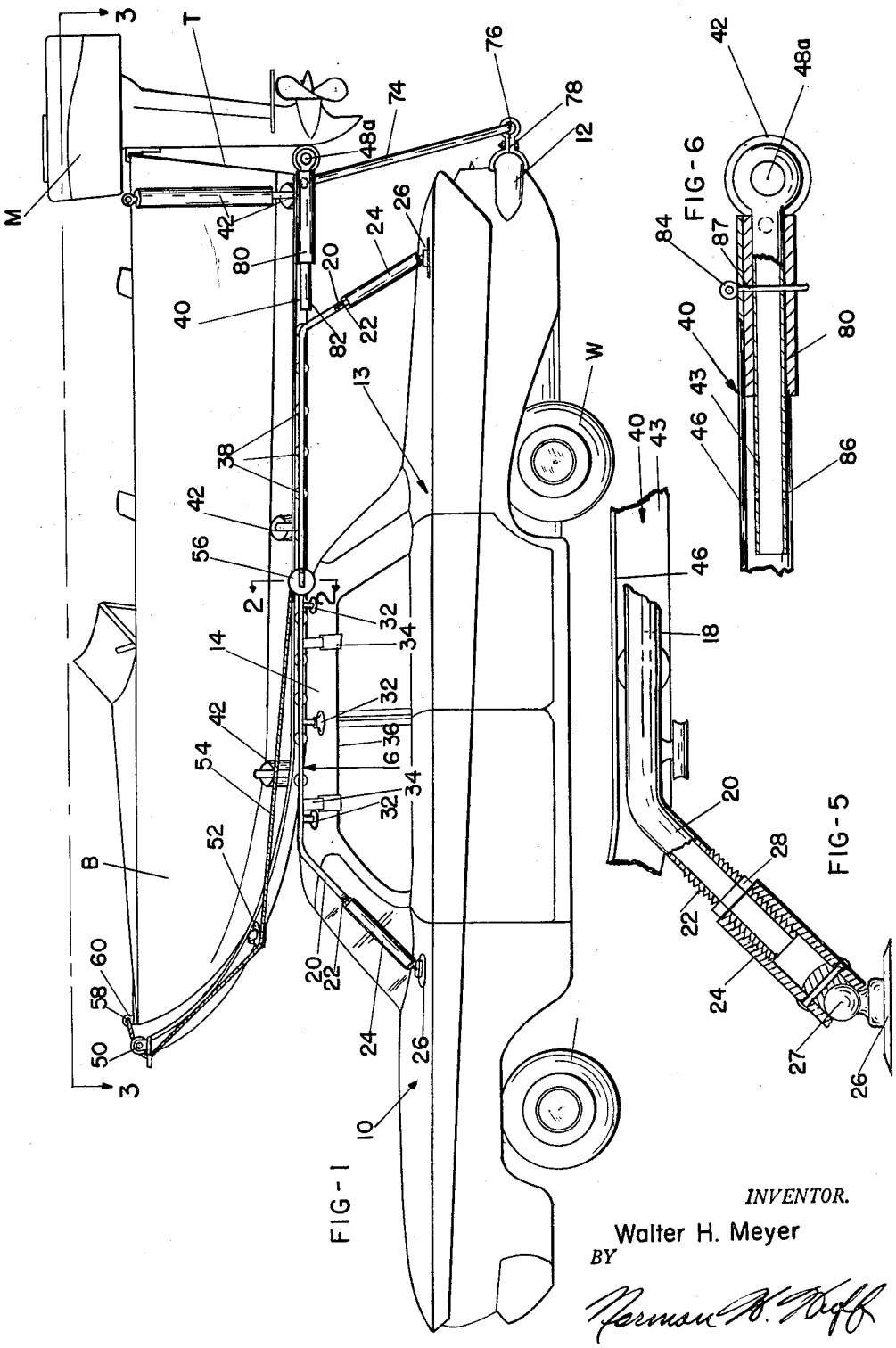


FIG-1

FIG-6

FIG-5

INVENTOR.

Walter H. Meyer

BY

Norman B. Hoff

Feb. 23, 1965 W. H. MEYER 3,170,583

CAR-TOP BOAT LOADER AND CARRIER

Filed Sept. 15, 1961 3 Sheets-Sheet 2

FIG-2

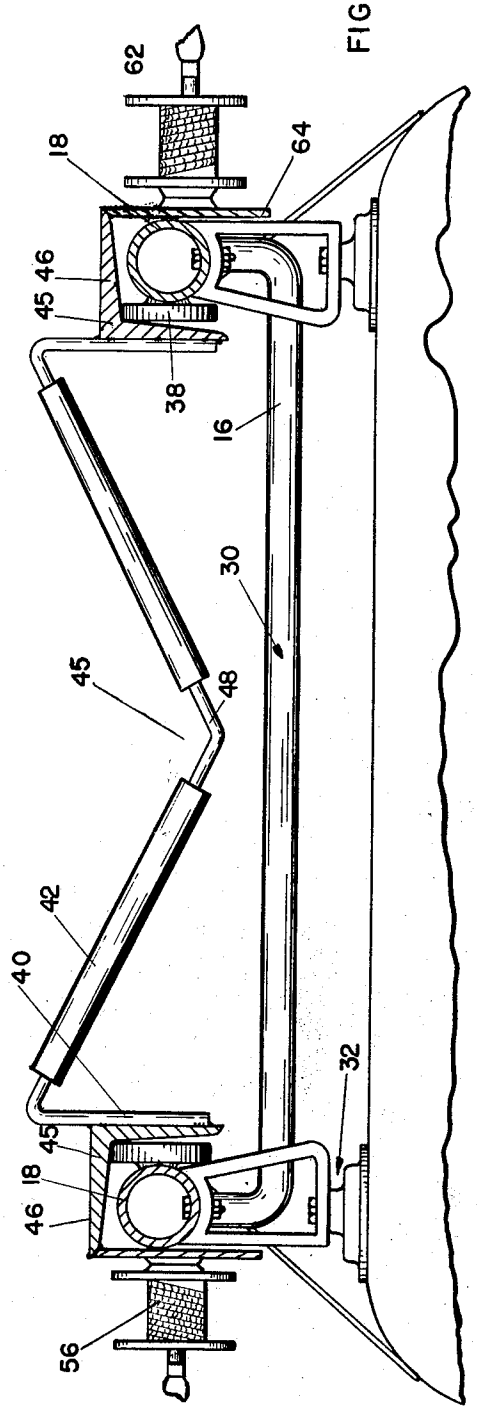
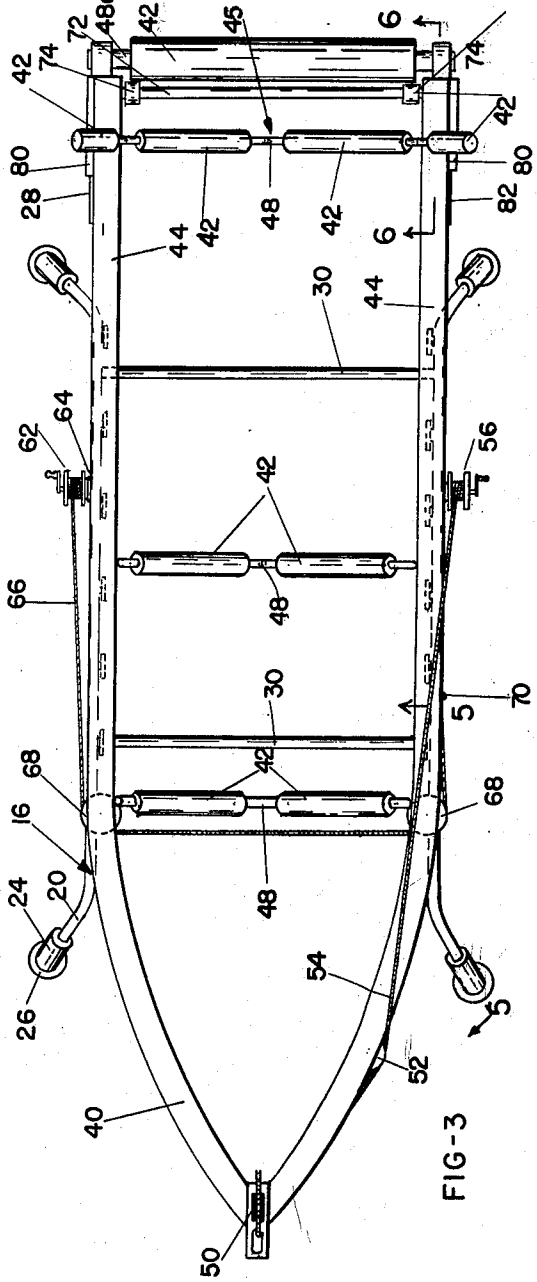


FIG-3



INVENTOR.

Walter H. Meyer

BY

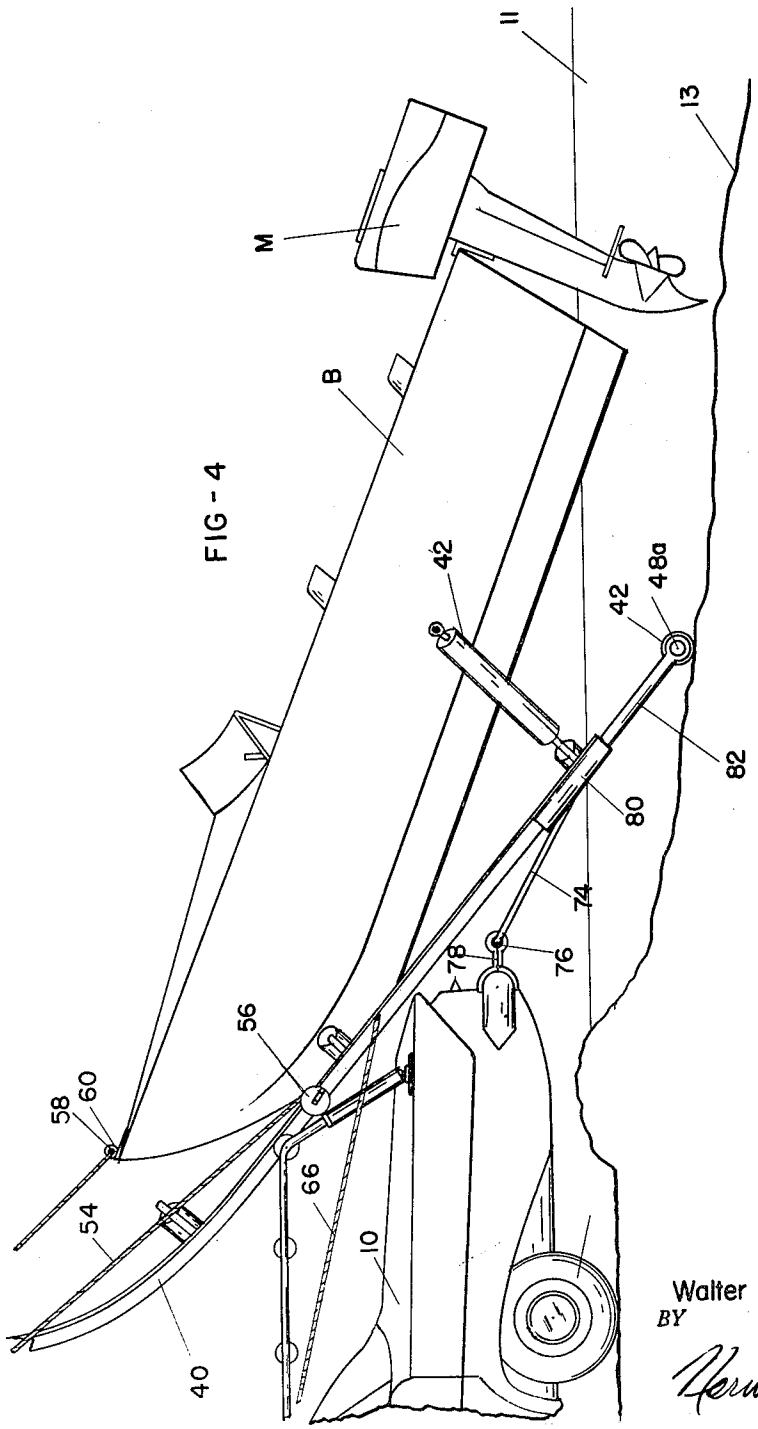
Norman H. Ehrlich

Feb. 23, 1965 W. H. MEYER 3,170,583

CAR-TOP BOAT LOADER AND CARRIER

Filed Sept. 15, 1961 3 Sheets-Sheet 3

FIG - 4



INVENTOR.

Walter H. Meyer

BY

Herman D. Ruff

United States Patent Office 3,170,583 Patented Feb. 23, 1965

3,170,583

CAR-TOP BOAT LOADER AND CARRIER

Walter H. Meyer, 730 E. Bridgeport, Spokane, Wash.

Filed Sept. 15, 1961, Ser. No. 138,377
5 Claims. (Cl. 214—450)

My present invention relates broadly to conveying means and particularly to a car-top carrier.

The use of boats and analogous equipment is prevalent in the United States where there are boats of varying sizes owned by families and transported from home to public and private waters for sport recreation.

Many boats are carried upon trailers. Often a boat is loaded and unloaded with respect to a trailer while in the water. The loaded boat-trailer is then drawn from the water by the towing vehicle. However, many other boats, predominantly of the smaller light-weight classification, are carried upon carriers upon the top of a vehicle to preclude the necessity of drawing a trailer. While this mode of transporting boats is highly desirable, there are certain drawbacks to so doing not the least of which is the physical effort required to load and unload the boat with respect to the carrier.

There are a few combined loaders and carriers but to my knowledge each of these requires considerable physical effort of the one loading or unloading the boat.

A principal object of the present invention is to provide a car-top boat loader and carrier which requires a minimum amount of physical effort to be expended upon the part of the person loading or unloading the boat to or from the car-top carrier.

It is yet another object of the present invention to provide a car-top carrier having a unique fixed frame upon which the lading may be supported.

It is yet another object of the present invention to provide a boat loader and carrier which is adjustable and adaptable to be mounted upon various automobiles having different body configurations, within limits.

Another object of the present invention lies in the provision of a car-top loader and carrier which has a first frame fixed to the body of the automobile and a floating frame constituting a cradle for a boat which floating frame is provided with powered means for mounting a boat on the cradle and also means for shifting the floating frame alternately between the loaded position and the unloading position.

These and other objects and advantages will become apparent during the course of the following specification when considered in conjunction wtih the accompanying drawings where a preferred physical embodiment of the present invention is disclosed.

It is to be understood however that the drawing are exemplifying only and are not intended to limit the scope of the invention beyond that expressly stated in the appended claims and as required by the prior art.

Throughout the several views of the drawings like numerals are employed to designate like parts and:

FIGURE 1 is a vertical side elevation of a vehicle supporting the improved boat loader and carrier and having a boat mounted thereon;

FIGURE 2 is a lateral fragmentary cross section taken substantially at the plane indicated by line 2—2 of FIGURE 1, but omitting the boat;

FIGURE 3 is a plan view of the car-top boat loader and carrier taken substantially on the plane indicated by line 3—3 of FIGURE 1 but omitting the boat, and vehicle;

FIGURE 4 is a side elevation partially broken away for convenience of illustration and showing the car-top boat loader and carrier with its floating frame in the unloading position;

FIGURE 5 is a fragmentary view partially in section and upon an enlarged scale and detailing an adjustable support; and

FIGURE 6 is an enlarged fragmentary section taken on the plane indicated at line 6—6 of FIGURE 3.

Having reference to the drawings now in greater detail, I have shown a conventional automobile **10**, which includes mobilizing wheels W and conventional front and rear bumpers **12** and showing one of a number of body styles **13**.

Above the roof **14** the body **13** supports a first frame **16** which includes a laterally spaced pair of longitudinally extending tubular rails **18—18** which have their front and rear terminal portions **20—20** bent downwardly and externally threaded at **22**. Internally threaded sleeves **24** are threadedly engaged upon the threads **22** of the terminal end portions **20** and by means of relative rotation are adjusted so that the lower feet **26**, which are associated with the sleeves by means of ball and socket joints **27**, may be adjusted to rest upon the body **13** of the vehicle **10** and support the device. A lock nut **28** is provided to secure the relative position of each sleeve **24** upon its terminal end portions **20**.

Means such as rigid cross members **30** are welded or otherwise secured to the side rails **18**, thus forming a rigid unitary first frame **16** mounted above the roof **14** of the vehicle **10**. Plural additional supports **32** carry the rails **18** at spaced locations as needed and/or desired. As is conventional, straps **34** may be employed to secure the carrier to a rain trough or lateral edge **36** of the roof **14**.

Each of the rails **18** is provided with plural rollers **38** in a common vertical plane to support and mobilize the floating frame **40**, which is provided with rubber rollers **42** arranged in a conventional manner to form a cradle **45** for supporting the boat B having an outboard motor M secured to the transom T thereof.

The floating frame **40** also has a pair of side rails **44—44** which are coincident to the side rails **18** of the first frame **16** and which are angular in cross section as particularly seen in FIGURE 2 of the drawings. Vertical flanges **43** guide the movements of the frame **40** while horizontally extending flanges **46** are adapted to rest upon the rollers **38** and thus mobilize frame **40** for movements longitudinally of the vehicle. Rails **44** are rigidly united by means of the bars **48**, which journal the rollers **42** forming the cradle for the boat.

As seen in FIGURES 1 and 3 of the drawings, the floating frame **40** is shaped to conform somewhat to the configuration of the prow of the boat and has a cable sheave **50** at the forward end thereof. There is also an idler pulley **52** secured to the frame to guide the movements of the boat loading and unloading cable **54** which is wound about a hand-operated winch **56** mounted upon and carried by the floating frame **40**. The cable **54** is reeved to effect loading and unloading of a boat by winding and unwinding the cable with the winch **56**. The hook **58** is applied in the eye **60** on the boat and as the winch **56** is

operated to unwind the cable 54, the boat may be removed rearwardly from the floating frame 40. As the winch is operated in the opposite direction, the boat is drawn onto the floating frame 40 until it comes into its position of rest on the cradle 45, comprising all of the rollers 42 in their relative positions.

A second winch 62 is welded or otherwise secured at 64 to the floating frame 40 and has its cable reeved to effect forward movement of the floating frame 40 and control rearward movement thereof by passing forwardly around a pair of laterally disposed idlers 68 journaled on the first frame 16 and thence rearwardly to the point 70 where it is secured to the floating frame 40.

Journal bar 72 is secured at the rearward end of the floating frame 40 and pivotally mounts the upper ends of brace bars 74 which extend downwardly to a journal 76 where they pivotally associate with the vehicle body 13. The journals 76 are seen to have clamps 78 which secure to the bumper 12 and thus support the brace bars 74 to effect arcuate movement in a vertical plane of the rearward portion of the frame during forward and rearward movements of the floating frame 40. While I have shown a pair of laterally spaced bars which work very acceptably and provide access to the trunk of the car, obviously a single brace bar may be employed if desired.

Winches 56 and 62 may be fastened one on each side as shown or for convenience both may be on the same side.

Sleeves 80 are welded or otherwise secured at the rearward ends of the side rails 44 and receive reciprocal arms 82 which carry a cross shaft 48*a* to which a roller 42 is mounted. Means such as pins 84 and aligned apertures 86 and 87 in the sleeve 80 and reciprocal arms 82 provide for adjustments of the rearward roller 42 from the position shown in FIGURES 1, 3 and 6 to the position shown in FIGURE 4.

In operation the vehicle 10 is backed to the edge of the body of water 11 or to the incline of a beach 13 and the winch 62 is operated to unwind its cable 66, while rearward pressure is applied to the floating frame 40. After the brace bars 74 pass over center, the weight of the boat and floating frame will cause it to move by gravity to the unloading position shown in FIGURE 4. This movement is controlled by the speed of rotation permitted by the winch 62. When the floating frame 40 is lowered as much as desired, the winch 56 is operated to release cable 54 thus allowing the boat B to move by gravity from the boat loader and carrier into the water 11 or onto the beach 13. When the boat is removed on the beach and will not float away from the carrier, the vehicle may be driven forwardly to lower the keel to the beach level preparatory to sliding the boat into the water.

In loading the boat B the opposite sequence is used wherein the cable 54 is hooked into the eye 60 and the cable 54 is wound in by means of the winch 56, thus drawing the boat onto the floating frame 40. Then the winch 62 is actuated to draw the floating frame 40 to the load carrying position shown in FIGURE 1.

Thus it will be seen that the physical labor required is limited to the operation of the winches, which, it is contemplated, may be electrified if desired.

What I desire to secure by Letters Patent of the United States is the following:

1. A car-top boat loader and carrier, comprising: a first frame adapted to be removably fixed upon a car and having substantially parallel side rails with terminal end portions; the terminal end portions of said side rails being angled downwardly for support upon the automobile body at points removed from the roof; a floating frame adapted to receive a boat and having side rails associated with said first-named side rails for relative rectilinear movements of said floating frame; means on said first frame for selectively moving said floating frame between a loaded position and an unloading position, and other means independent of said first means for selectively loading and unloading a boat with respect to said floating frame.

2. A car-top boat loader and carrier, comprising: a first frame for fixing above the top of a car and having substantially parallel side rails with down-turned terminal end portions constituting supporting legs for resting upon an automobile body at points removed from the roof thereof, selectively adjustable feet on the ends of said terminal end portions for adjusting to and resting upon a car body; a floating frame adapted to receive a boat and having side rails associated with said first-named rails for rectilinear movements of said floating frame between a loaded position and an unloading position; means for selectively moving said floating frame into said positions alternately, and means for loading and unloading a boat with respect to said floating frame.

3. A car-top boat loader and carrier, comprising: a first frame having laterally spaced rigidly interconnected tubular parallel side rails for support upon the body of a vehicle at points removed from its roof; a series of rollers journaled on each rail in a vertical plane; a floating frame constituting a boat cradle and having rigidly interconnecting angular parallel side rails mounted upon said rollers for rectilinear movements of said floating frame with respect to said first frame; a rigid support bar pivotally connected to said floating frame at its rearward end for pivotally securing to a vehicle body to effect arcuate movements in a vertical plane of the rearward end of said floating frame during rectilinear movements of its forward end with respect to said first frame; a cable winch on said first frame and having its cable reeved to effect forward movement of said floating frame and control rearward movement thereof; and a cable winch on said floating frame and having its cable reeved to effect loading a boat thereon and control removal of a boat therefrom.

4. A car-top boat loader and carrier, comprising:

a first frame having laterally spaced rigidly interconnected tubular parallel side rails for horizontal disposition over the roof of a conventional automobile longitudinally parallel thereto;

terminal end portions on said rails angled downwardly and adapted to be supported upon the fenders of said automobile;

means for releasably securing said frame to said automobile;

a floating frame adapted to receive a boat and carried by said first frame for movements between a loaded position above said automobile and an unloading position at an end thereof;

first means mounted upon said first frame for effecting movements of said second frame to said loaded and unloading positions alternately and according to manual selection; and

other means independent of said first means for loading and unloading a boat with respect to said floating frame when in substantially its unloading position.

5. A boat loader and carrier, comprising:

a vehicle having a body;

a first frame having substantially parallel side rails extending horizontally over the top of said vehicle; and adjustable means on said frame fitting said body and supporting said rails on the body at points removed from the roof;

a floating frame constituting a boat cradle and having its forward portion supported on said first frame for rectilinear movements relative thereto;

a rigid support bar pivotally connected to said floating frame and said vehicle body at their rearward ends and supporting the rearward end of said floating frame, whereby to effect arcuate movement of the rearward end of said float frame in a vertical plane during rectilinear movements of its forward end, thus maintaining separation of the float frame and the vehicle body;

means for selectively moving said floating frame; and other means for loading and unloading a boat with respect to said floating frame.

References Cited by the Examiner

UNITED STATES PATENTS

2,567,104	9/51	Di Fonzo	214—450
2,715,974	8/55	Van Nest	214—450
2,765,940	10/56	Nelson	214—450
3,048,291	8/62	Mabry	214—450
2,937,775	5/60	Funk	214—505
3,048,291	8/62	Mabry	214—450
3,058,636	10/62	Bilbeisi	214—450 X

FOREIGN PATENTS

391,325	4/33	Great Britain.
633,774	12/49	Great Britain.

HUGO O. SCHULZ, *Primary Examiner.*

GERALD M. FORLENZA, *Examiner.*