July 8, 1958 L. N. SMITH 2,842,082

BOAT DOCK

Filed April 2, 1956 2 Sheets-Sheet 1

Fig 1

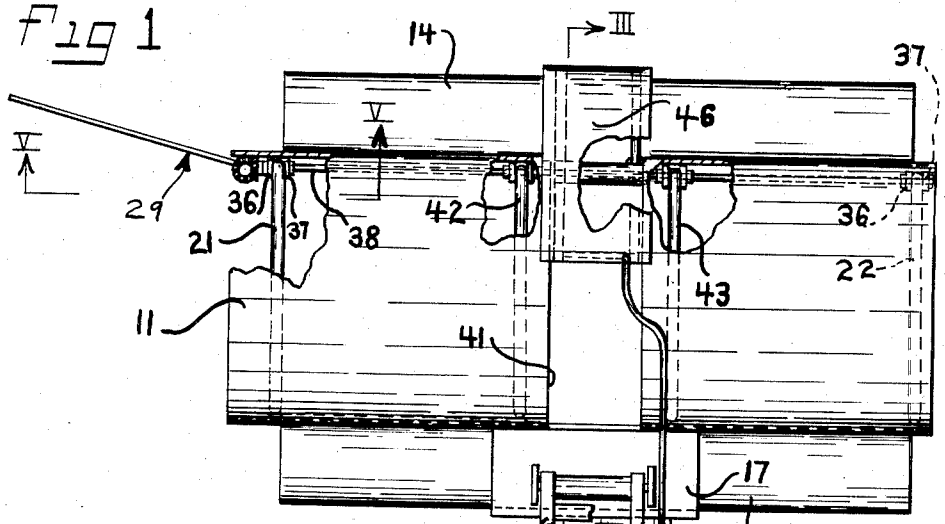
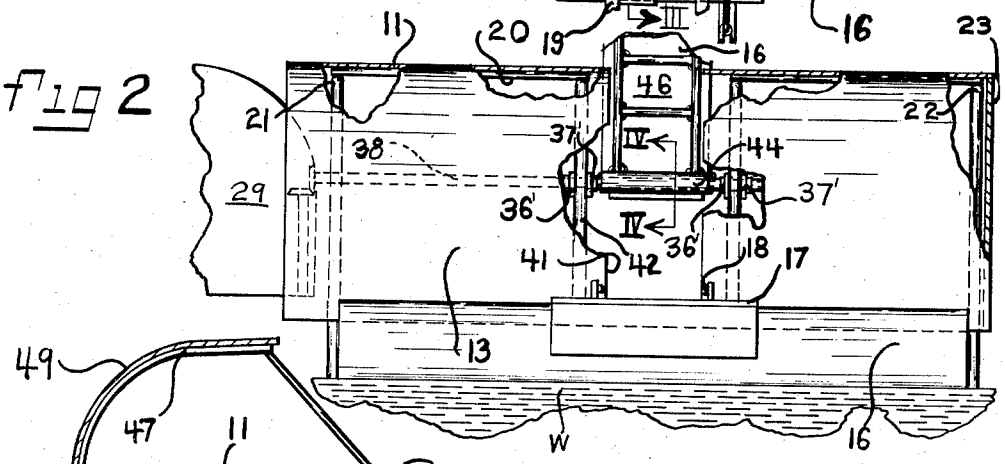


Fig 2



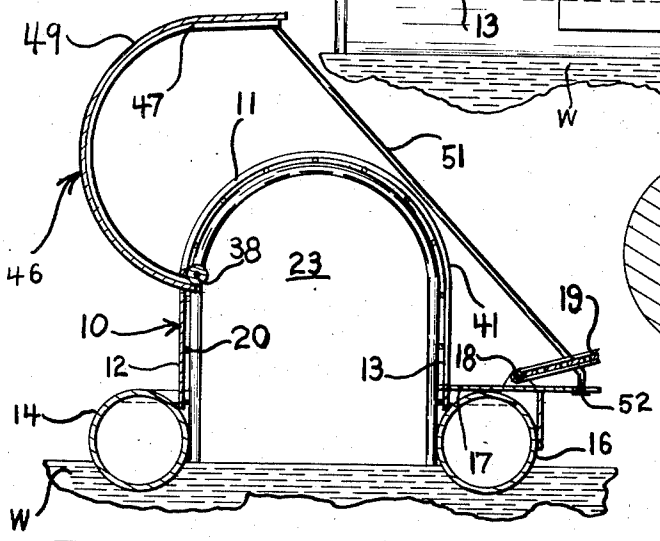


Fig 3

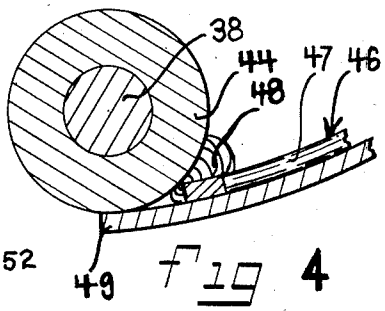


Fig 4

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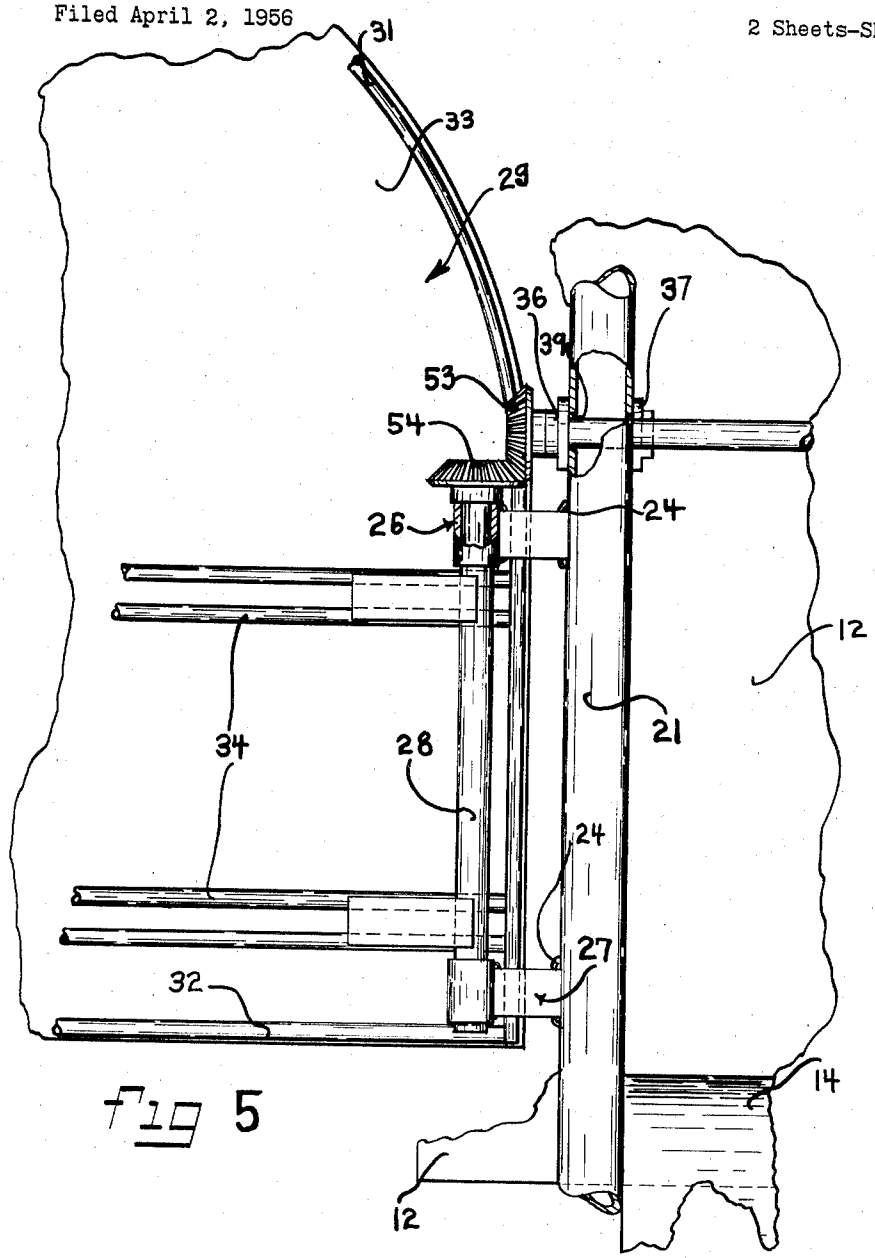


Fig 5

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United States Patent Office

2,842,082

Patented July 8, 1958

2,842,082

BOAT DOCK

Lucius N. Smith, Montverde, Fla.

Application April 2, 1956, Serial No. 575,583

6 Claims. (Cl. 114—.5)

This invention relates to a boat dock and is an improvement over that shown in my co-pending application Serial No. 489,612, filed February 21, 1955 and entitled Floating Boat Dock.

An object of my invention is to provide a boat dock having a side door and an end door, the side door being located for entering and leaving a boat positioned within the dock, together with means operatively connecting the side door to the end door whereby the end door is opened and closed in response to opening and closing the side door.

Another object of my invention is to provide a boat dock of the character designated having buoyant means for supporting the dock, whereby the dock automatically adjusts itself to variations in water level and may be readily installed without having to provide underwater supporting means.

A further object of my invention is to provide a boat dock which can be constructed of a minimum height and still provide ample means for a person to enter and leave the boat while the same is docked.

A still further object of my invention is to provide a boat dock of the character designated which shall be simple of construction, economical of manufacture, and one which is particularly adapted for housing large boats.

Heretofore in the art to which my invention relates, various forms of boat docks have been devised. However, the boat docks with which I am familiar have been unsatisfactory for housing large boats due to the fact that the covers must be excessively large for receiving the boats and entrance must be provided, both for docking the boat and for a person to enter the boat.

In accordance with my invention, I provide an enclosure having side walls and a roof. An end door is pivotally connected at one side to one end of the enclosure and an opening through one side and the roof is provided for entering and leaving the boat. A side door for the opening is pivotally connected at its upper end to the enclosure on the side opposite the opening. The side door is operatively connected to the end door whereby the end door opens and closes automatically as the side door is opened and closed.

A boat dock illustrating features of my invention is shown in the accompanying drawings forming a part of this application, in which:

Fig. 1 is a plan view of the dock, partly broken away and in section;

Fig. 2 is a side elevational view, partly broken away and in section;

Fig. 3 is a sectional view taken generally along the line III—III of Fig. 1;

Fig. 4 is an enlarged fragmental sectional view taken along the line IV—IV of Fig. 2; and,

Fig. 5 is an enlarged fragmental sectional view taken generally along the line V—V of Fig. 1.

Referring now to the drawings for a better understanding of my invention, I show a boat enclosure indicated generally at **10** comprising a substantially semi-cylindrical

roof portion **11** and adjoining side walls **12** and **13**. The enclosure **10** is supported by elongated buoyant members **14** and **16** which are secured to the lower ends of the side walls **12** and **13** and positioned outwardly thereof, as shown in Figs. 1 and 3. Mounted on the buoyant member **16** is a platform **17**. Pivotally connected to the platform **17** by means of a hinge pin **18** is one end of a walkway **19**. The other end of the walkway **19**, not shown, is hingedly connected to a suitable support on the adjacent bank which borders the water indicated at W.

Opposite ends of the side walls **12** and **13** are connected to each other and to the roof **11** by means of upwardly bowed arcuate frame members **21** and **22**. Preferably, longitudinally extending reinforcing members **20** are positioned between the arcuate frame members and the roof and side walls, as shown in Fig. 3. The end of the enclosure adjacent the arcuate frame member **22** is closed by an end wall **23**, as shown in Figs. 2 and 3.

Secured to the arcuate frame member **21** by any suitable means, such as by welding at **24** are forwardly extending bearing brackets **26** and **27**. See Fig. 5. Mounted for rotation in the bearing brackets **26** and **27** is a vertical shaft **28** which is secured rigidly to one side of an end door indicated generally at **29**. The door **29** comprises an upwardly bowed arcuate frame member **31** which is connected at its bottom by a horizontal frame member **32**. An end panel **33** is secured to the members **31** and **32**, as shown. Suitable braces **34** are secured to the sides of the arcuate member **31** and to the vertical shaft **28** whereby the shaft is connected rigidly to the end door **29**.

Extending longitudinally of the enclosure **10** and mounted for rotation in suitable bearings **36** and **37** is a shaft **38**. Preferably, the shaft **38** extends through openings **39** provided in the arcuate frame members **21** and **22**, as shown in Fig. 5 and the bearings **36** and **37** are secured to opposite sides of the arcuate frame members.

The side wall **13** and roof **11** are cut away, as shown in Figs. 1 to 3 to provide an opening **41** which defines an entrance for the enclosure. The opening **41** is positioned directly opposite the walkway **17**, as shown in Figs. 1 and 2, whereby a person may enter a boat within the enclosure. Positioned within the enclosure **10** and secured to the longitudinally extending members **20** adjacent each side of the opening **41** are upwardly bowed arcuate frame members **42** and **43**, having bearings **36'** and **37'** mounted thereon for receiving the shaft **38**.

Rigidly secured to the shaft **38** opposite the opening **41**, by any suitable means such as a sleeve member **44** is a side door **46** which, when moved to lowered position, overhangs the roof and side wall **13**. The side door **46** comprises tubular members **47** which are secured to the sleeve member **44** as by welding at **48**. Secured to the outer surface of the tubular members **47** is a cover **49** for the side door **46**. As shown in Figs. 1 and 2, the tubular members **47** are positioned inwardly of the opening **41** whereby the cover **49** moves into contact with the roof **11** and side wall **13** when moved to lowered or closed position. Hingedly connected to the free end of the door **46** is a bar member **51** which is employed to raise and lower the side door **46**. As shown in Fig. 3, the lower end of the bar **51** passes through a suitable opening in the walkway **17** and a stop member **52** is provided at the lower end of the bar to limit upward movement thereof.

Secured to the end of the shaft **38** outwardly of the arcuate frame member **21** is a bevel gear **53** which meshes with a bevel gear **54** mounted on the upper end of shaft **28**. See Fig. 5. The shafts **28** and **38** are thus operatively connected to each other whereby upon

movement of the side door 46 toward raised or open position, the door 29 moves to open position. In like manner, when the side door 46 is moved to lowered or closed position, the end door 29 also moves to closed position.

From the foregoing, it will be seen that I have devised an improved boat dock which is particularly adapted for receiving large boats. By providing a side door which is operatively connected to the relatively large end door, the end door is opened in response to opening the side door, thereby providing sufficient light for a person to enter the boat and at the same time permitting the boat to move outwardly of the enclosure.

In actual practice, I have found that my improved boat dock is satisfactory in every respect and may be manufactured and installed with a minimum expenditure of time and materials.

While I have shown my invention in but one form, it will be obvious to those skilled in the art that it is not so limited but is susceptible of various changes and modifications without departing from the spirit thereof, and I desire, therefore, that only such limitations shall be placed thereupon as are specifically set forth in the appended claims.

What I claim is:

1. In a boat dock, an enclosure having side walls and a roof, means for supporting said enclosure over a body of water, an end door pivotally connected at one side to one end of said enclosure, there being an opening in a side wall of said enclosure defining an entrance for said enclosure, a side door hingedly connected at its upper end to said enclosure and overhanging said opening in said side wall, means for raising and lowering said side door relative to said side wall, and means operatively connecting said end door to said side door whereby said end door is opened in response to raising said side door and is closed in response to lowering said side door.

2. In a boat dock, an enclosure having side walls and a roof, means for supporting said enclosure over a body of water, an end door pivotally connected at one side to one end of said enclosure, there being an opening in said side wall and roof defining an entrance for said enclosure, a side door pivotally connected at its upper end to said enclosure and overhanging said opening, means for raising and lowering the free end of said side door, a shaft secured to the pivoted end of said side door and extending longitudinally of said enclosure, and means operatively connecting said end door to said shaft whereby said end door is opened in response to raising said side door and is closed in response to lowering said side door.

3. In a boat dock, an enclosure having side walls and a substantially arcuate roof, means for supporting said enclosure over a body of water, an end door pivotally connected at one side to one end of said enclosure, there being an opening at one side of said enclosure defining an entrance thereinto, a side door overhanging said entrance, a shaft extending longitudinally of said enclosure and secured to the upper end of said side door, means for raising and lowering the free end of said side door whereby the shaft is rotated, and a gear connection between the shaft and the pivoted side of the end door whereby the end door is moved to opened position in response to raising said side door and is closed in response to lowering said side door.

4. A boat dock as defined in claim 3 in which the gear connection comprises a bevel gear mounted at the pivoted side of the end door, and a second bevel gear mounted on the shaft and in mesh with the first mentioned gear.

5. In a boat dock, an enclosure having side walls and a substantially arcuate roof, arcuate frame members supporting said enclosure over a body of water, an end door pivotally connected at one side to one end of said enclosure, there being a continuous opening in said roof and one side of said enclosure defining an entrance therefor, a side door overhanging said entrance, a rotatable shaft extending longitudinally of said enclosure and secured to the upper end of said side door, there being openings in said arcuate frame members for receiving said shaft, bearing members mounted on said arcuate members and supporting said shaft, means for raising and lowering the free end of said side door whereby the shaft is rotated, and means operatively connecting said end door to said shaft whereby said end door is opened and closed in response to raising and lowering said side door.

6. A boat dock as defined in claim 5 in which the means operatively connecting the end door to the longitudinally extending shaft comprises a vertical shaft rigidly secured to the pivoted side of the end door, a bevel gear mounted on said vertical shaft, and a second bevel gear mounted on said longitudinally extending shaft in mesh with the first mentioned bevel gear.

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