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OUTBOARD MOTOR

Filed Sept. 12, 1960

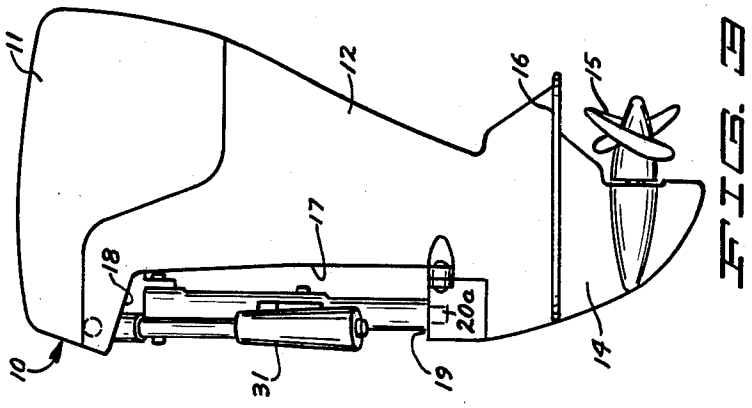

FIG. 3

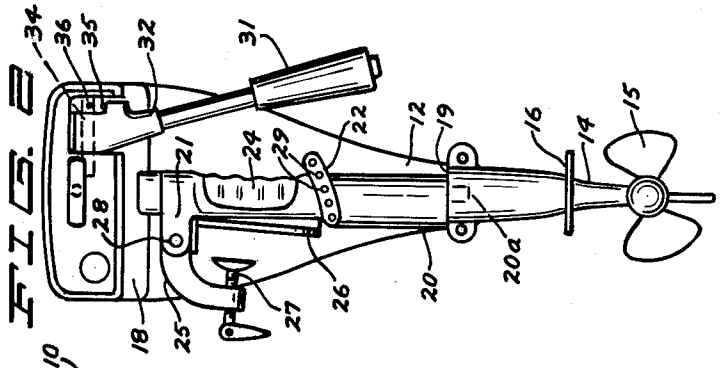

FIG. 2

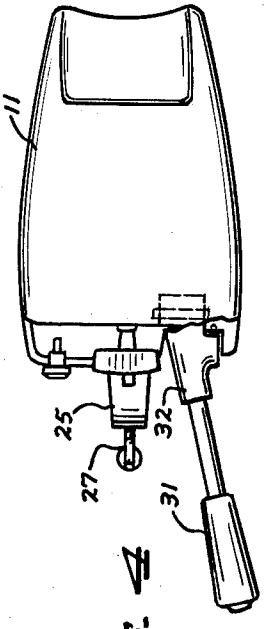

FIG. 4

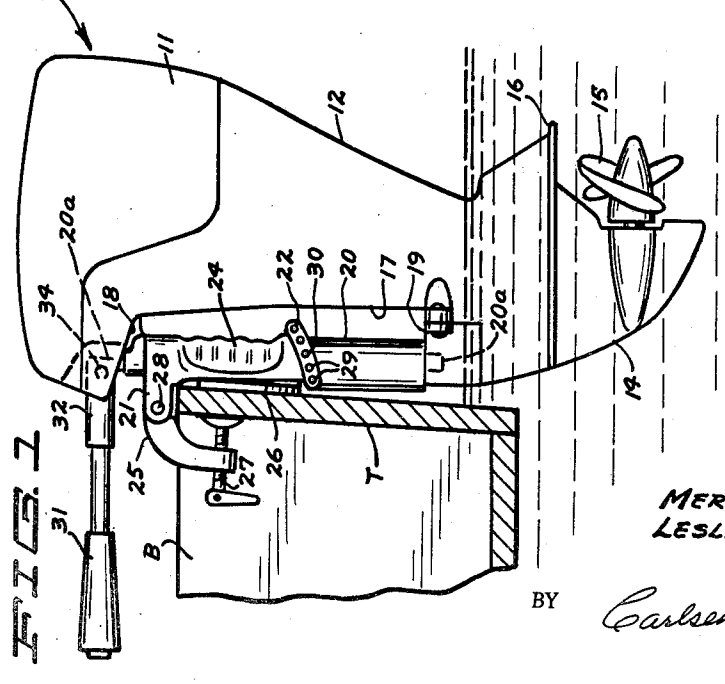

FIG. 1

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OUTBOARD MOTOR

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This invention relates generally to outboard motors and particularly concerns improvements in construction and design to facilitate handling and storage of the motor.

The primary object of the invention is to provide a novel outboard motor construction for a relatively small manually transportable motor wherein certain components of the motor which normally project outwardly beyond the overall configuration of the motor housing during operation can be collapsed against the housing so as to provide a relatively compact unit for storage or transportation when the motor is not in use.

Another object of the invention is to provide an outboard motor wherein a functional part of the motor is formed as a carrying handle and with such handle so located as with respect to the center of gravity of the motor as to allow balanced manual transport and handling thereof.

With these objects in mind the invention broadly comprises an outboard motor having a housing with a forwardly opening recess extending along the front side thereof, a pivot bracket disposed within the recess and rotatably connected to the housing, a boat bracket mounted on the pivot bracket for folding movement about the pivot bracket axis into a stored position within the recess, and a steering handle on the motor and foldable to a collapsed position in the recess, the boat bracket and handle lying on opposite sides of the pivot bracket in the recess. The invention is further characterized by forming a pistol grip handle on the pivot bracket so as to lie directly over the center of gravity of the motor when the motor is dismounted from a boat and positioned with the pivot bracket on top.

The above mentioned and other objects of the invention will be brought to light during the course of the following specification, reference being made to the accompanying drawing, in which—

FIG. 1 is a side elevation of an outboard motor embodying the improved construction and showing the motor mounted in operating position on the transom of a boat.

FIG. 2 is a front elevation of the motor with the boat bracket and steering handle folded into inoperative or collapsed position for storage or transport of the motor.

FIG. 3 is a side elevation of the motor in the condition shown in FIG. 2.

FIG. 4 is a plan view of the motor in operative condition.

Referring now more particularly to the drawings reference characters will be used to denote like parts or structural features in the different views. The motor is designated generally at **10** and is shown in FIG. 1 mounted in conventional operating position on the transom T at the rear end of boat B.

Motor **10** has an outer housing comprising a powerhead shroud or enclosure **11**, a drive shaft housing **12**, and a lower unit housing **14**. A propeller **15** is carried by the lower unit below the anti-cavitation plate **16** and has driving connection through the housings **14** and **12** with the power unit enclosed within the shroud **11**.

At its front side which normally faces the transom T, the housing section **12** has a vertically elongated recess **17** which opens forwardly and sidewardly with upper and

lower walls, respectively denoted at **18** and **19**, facing each other in vertically spaced relation. These walls are provided with aligned bosses which respectively journal the ends **20a** of an elongated pivot bracket or steering column denoted generally at **20**. Bracket **20** is a forwardly opening channel and has integrally formed therewith a bifurcated extension **21** near its upper end, a pair of transversely opposing apertured tilt pin support bars **22** and a handle portion **24** having a pistol grip exterior configuration to facilitate manual engagement.

The front of the member **20** is open for reception therewithin of one end portion of a U-shaped boat bracket or clamp **25**. This bracket has a plate **26** formed on its rear leg for flat engagement against the rear surface of the transom T. The front leg of bracket **25** has an internally threaded aperture for reception and longitudinal adjustment of clamp screw **27** therein, it being obvious that screw **27** may be tightened toward the plate **26** and against the transom T to securely lock the bracket **25** upon the transom. The bight portion of the boat bracket **25** is pivoted between the ears of extension **21** by means of a pivot pin **28** for tilt adjustment of the motor **10** about a transverse axis.

The opening apertures **29** in the bars **22** are aligned for selective reception of a tilt pin **30** which engages a rearwardly opening notch (not shown) in the boat bracket **25** to adjust the position of the motor about pin **28**.

A steering handle **31** is provided for turning the motor about the axis formed by the journaled ends **20a** of the bracket **20**. This handle has a housing **31** at its inner end which is journaled on a cross shaft **34**. A projection on the housing **32** seats a spring-biased detent **35** engageable with socket **36** on the cross shaft to yieldably lock the handle in a forwardly extending or operating position. The handle is foldable between the positions shown in FIGS. 1 and 3 and it will be observed in FIG. 2 that when the handle is in its downward position it is spaced substantially from the handle portion **24** on the pivot bracket.

Bracket **25** is a single clamp and being relatively narrow in width lies substantially within the lateral dimensions of the pivot bracket **20**. Accordingly, when the motor is dismounted and the bracket **20** is turned a quarter turn about its longitudinal axis the member **25** will be moved into the recess area **17**. Similarly when handle **31** is swung downwardly about its hinged connection it will be brought substantially within the recess area on the opposite side of column **20** from bracket **25**. In this condition the motor may be conveniently stored in a minimum amount of space.

Handle portion **24** is so located as to be directly over the center of gravity of the motor when the motor is at rest on its back side. It thus serves as a well balanced handle for one-handed carrying of the motor. The handle **24** is provided with finger grooves as shown and there is sufficient space between this handle and housing **12** to allow convenient gripping and release thereof. Handle **24** is best utilized with the bracket **25** swung to its outer position.

It is understood that suitable modifications may be made in the structure as disclosed, provided such modifications come within the spirit and scope of the appended claims. Having now therefore fully illustrated and described our invention, what we claim to be new and desire to protect by Letters Patent is:

1. In an outboard motor, an elongated motor housing enclosing a motor drive shaft, said housing having a pair of facing bosses spaced longitudinally of the housing, an elongated steering column extending generally parallel to the drive shaft and having its ends journaled in said bosses, a boat bracket pivoted to the steering column for

mounting the housing in upright position on a boat transom with the steering column in substantially vertical position and said steering column having a pistol grip handle formed on the exterior thereof, said handle being located horizontally opposite the longitudinal center of weight of the motor to serve as a balanced carrying handle for the motor when it is dismounted.

2. In an outboard motor, an elongated upright motor housing enclosing the motor drive mechanism including an upright drive shaft, the center of weight of said housing and mechanism being located above the longitudinal center of the housing, said housing having vertically spaced upper and lower forwardly projecting portions forming a forwardly opening recess extending along the front of the housing with the vertical limits thereof located on opposite sides of said center of weight, an elongated steering column extending vertically between said forwardly projecting portions and journaled on the housing

for pivotal movement in the recess about the longitudinal axis of the column, a singular boat clamp pivoted on one side of the steering column, said clamp being formed in an inverted U along a plane in which the longitudinal axis of the steering column lies, and a finger grip formed on the side of the steering column remote from the clamp and in horizontal alignment with said center of weight for balanced manual carrying of the motor by said grip when the housing is turned to a horizontal position with the steering column up and with said column turned about its pivot axis to place the plane of the clamp substantially horizontal.

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