United States Patent

Rhodes

[15] **3,701,258**

[45] **Oct. 31, 1972**

[54] **BUOYANT PULLEY LOCATING AND ANCHORING DEVICE FOR AN OIL MOP**

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[22] Filed: **Feb. 16, 1971**

[21] Appl. No.: **115,328**

[52] **U.S. Cl.** .....**61/1 F**, 210/242, 210/DIG. 21, 254/195

[51] **Int. Cl.** **E02b 15/04**

[58] **Field of Search** .....61/1 F; 210/242, DIG. 21; 74/230.01, 230.8; 24/115 E; 254/195, 196; 242/84.1 R, 96; 160/370

[56] **References Cited**

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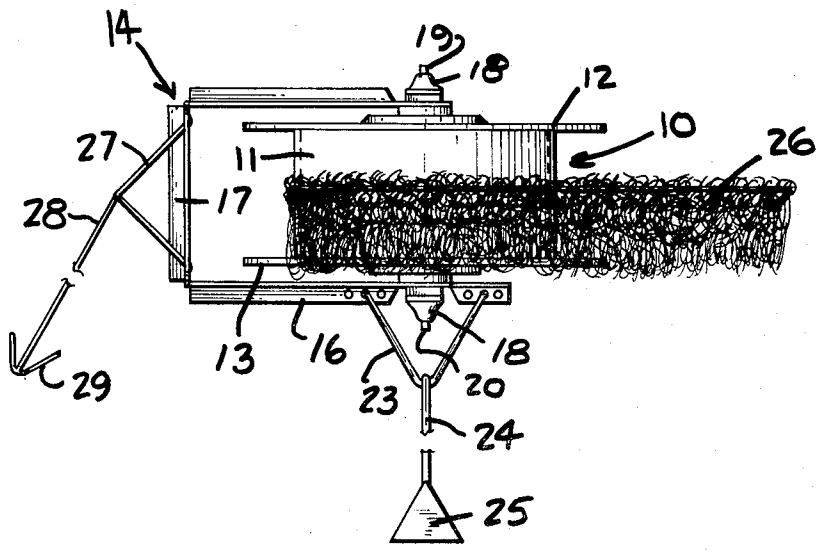
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[57] **ABSTRACT**

The present disclosure is directed to a buoyant pulley for use with an oil mop for positioning the pulley and locating same to maintain the pulley in substantially the desired height in the water and at substantially a horizontal attitude against the pull of the endless oil mop passing about the pulley.

3 Claims, 3 Drawing Figures



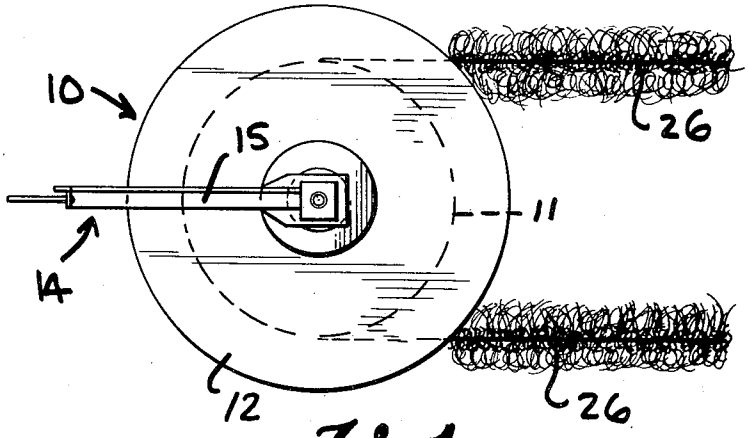


Fig 1

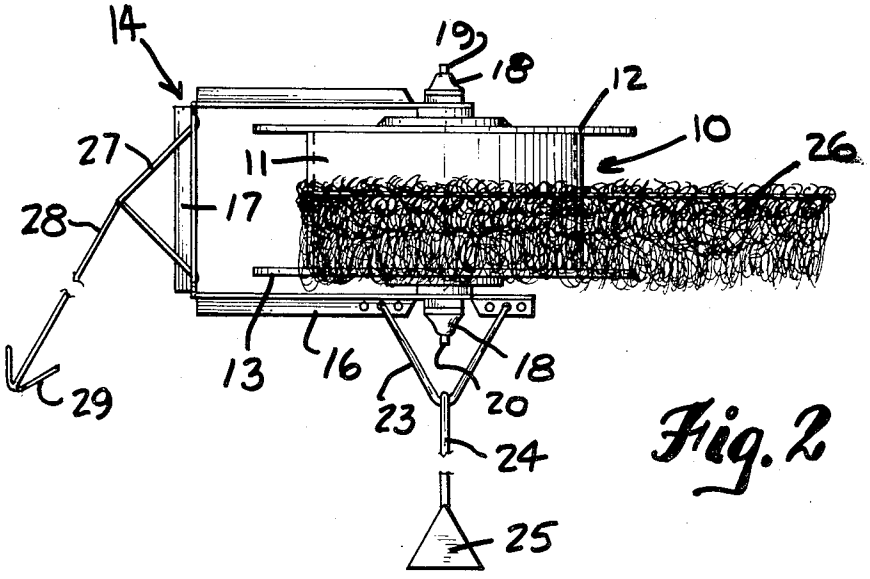


Fig. 2

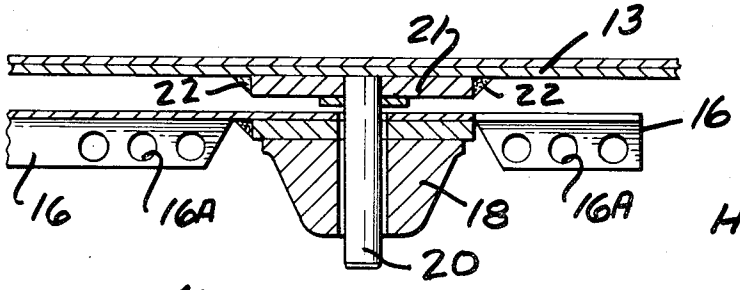


Fig. 3

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BUOYANT PULLEY LOCATING AND ANCHORING DEVICE FOR AN OIL MOP

An object of the present invention is the provision of a buoyant pulley for use with an endless oil mop as shown and described in my copending application entitled An Oil Mop and Method of Using Same, filed July 6, 1970, Ser. No. 52,448, and more particularly to means for positioning a buoyant pulley at the optimum level in the water to assure proper contact between the endless oil mop and oil floating on the surface of the water as well as stabilizing the horizontal attitude of the buoyant pulley incident to the pull of the mop passing about the pulley.

A further object of the present invention is the provision of a U-shaped frame for rotatably mounting a buoyant pulley whereby one of the legs of the U-shaped member is immersed in the water and has a weight means connected to properly position the pulley in a horizontal plane and wherein the bottom joining the two legs of the U-shaped member has an anchor cable secured thereto to resist pulling or cocking of the pulley from the horizontal incident to forces set up by the pull of an endless oil mop passing about the pulley.

With the foregoing and other objects in view, the invention will be more fully described hereinafter, and will be more particularly pointed out in the claims appended hereto.

In the drawings, wherein like symbols refer to like or corresponding parts throughout the several views.

FIG. **1** is a top plan view of the buoyant pulley locating and anchoring device of the present invention with an endless oil mop passing thereabout.

FIG. **2** is a side elevational view of FIG. **1** showing the weight and anchor means.

FIG. **3** is a fragmentary vertical section taken through the pulley rotary mount in the U-shaped frame taken at an enlarged scale.

Referring now to FIG. **2** of the drawings, **10** designates generally a buoyant pulley having a buoyant drum **11** with top and bottom flange plates **12** and **13**. The pulley drum and flanges are of all metal welded construction to define an air-tight floatable structure. A U-shaped frame is shown generally at **14** having arms **15** and **16** being joined by a base **17**. Proximate the free ends of arms **15** and **16** are bearing blocks **18** for rotatably journaling spindles **19** and **20** which are secured to the top and bottom flange plates **12** and **13** by plates and weldments **21**, **22**. The spindles **19** and **20** permit the pulley **10** to freely rotate relative to the U-shaped member **14**.

The arm **16** has openings **16A** therethrough through which a V-shaped member **23** is secured and to which is secured a weight line **24** having a weight **25** at the end thereof. The amount of the weight **25** is dependent upon the buoyant characteristic of the pulley **10** and weight of the oil mop **26**, which is a long endless length of oil mop which is processed as shown in my above identified copending application.

The base **17** of the U-shaped member **14** has an angular member **27** extending therefrom. An anchor cable **28** having an anchor **29** at the unattached end thereof is secured to the member **27**. The anchor and cable locates the pulley **10** and resists the forces exerted upon same by the oil mop **26** which passes about the pulley **10**.

When the pulley **10** is weighted and anchored the endless mop **26** from its other end may be swung about the anchored pulley end **10** to recover oil from a cleared area up to any unobstructed distance using the anchor point of pulley **10** as the center of a circle about which the endless length of oil mop **26** may be rotated horizontally as the radius.

What I claim is:

1. In an oil removal apparatus in which an endless mop like structure is floated on the surface of the water in contact with the oil, a buoyant pulley-like support for said mop comprising:

a. a substantially U-shaped support frame,

b. a buoyant pulley having a buoyant chamber and top and bottom flanges about which the oil mop is adapted to pass,

c. spindle means extending off the top and bottom flanges on said buoyant pulley centrally thereof and being journalled for rotational support proximate the free ends of said U-shaped support,

d. weight anchoring means connected to one of said U-shaped arms to maintain the pulley in a substantially horizontal floating attitude, and

e. a second means connected to said U-shaped member for maintaining an anchor point at an angle to the weight anchoring means to resist pull imposed by the oil mop to keep the buoyant pulley horizontal.

2. A device as claimed in claim **1** wherein said first means is a weight mass connected to the immersed U-shaped member.

3. A device as claimed in claim **2** wherein said second means is an anchor and line for locating the U-shaped member.

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