

(12) **United States Patent**  
Tews

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(54) **FLOATING MANURE AGITATOR WITH MULTIDIRECTIONAL AGITATOR NOZZLES**

(71) Applicant: **James Timothy Tews**, Winona, MN (US)

(72) Inventor: **James Timothy Tews**, Winona, MN (US)

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**B01F 5/10** (2006.01)  
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**B01F 15/00** (2006.01)

(52) **U.S. Cl.**  
CPC ..... **B01F 5/0225** (2013.01); **B01F 5/025** (2013.01); **B01F 5/0218** (2013.01); **B01F 5/0243** (2013.01); **B01F 5/10** (2013.01); **B01F 13/0049** (2013.01); **B01F 15/00305** (2013.01); **B01F 2215/0001** (2013.01)

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See application file for complete search history.

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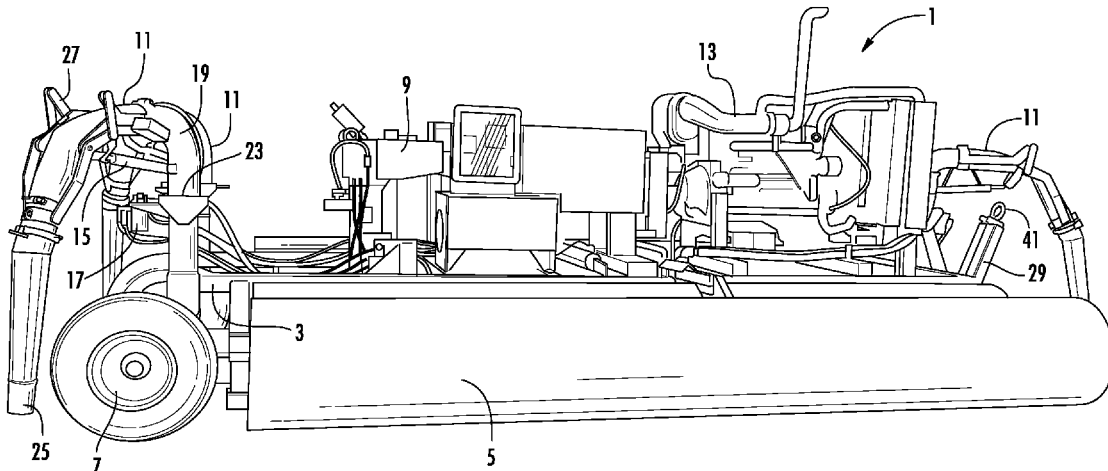
*Primary Examiner* — Tony G Soohoo

(74) *Attorney, Agent, or Firm* — Schroeder & Siegfried, P.A.

(57) **ABSTRACT**

An aquatic floating manure agitator vessel including a plurality of remotely controlled above-surface agitator nozzles which are visibly positioned on the vessel and hydraulically movable about multiple axes to facilitate effective pond agitation and directional control of the floating agitator. The floating agitator includes a vertically adjustable hydraulic undercarriage and hitch mechanism to facilitate ease of maneuverability during launching and removal of the floating agitator, and for probing the pond bottom for excess sludge build-up. The floating agitator also includes hydraulically folding side wings or pontoons mounted on each side of the vessel to further enhance ease of maneuverability and storage of the vessel.

**19 Claims, 7 Drawing Sheets**



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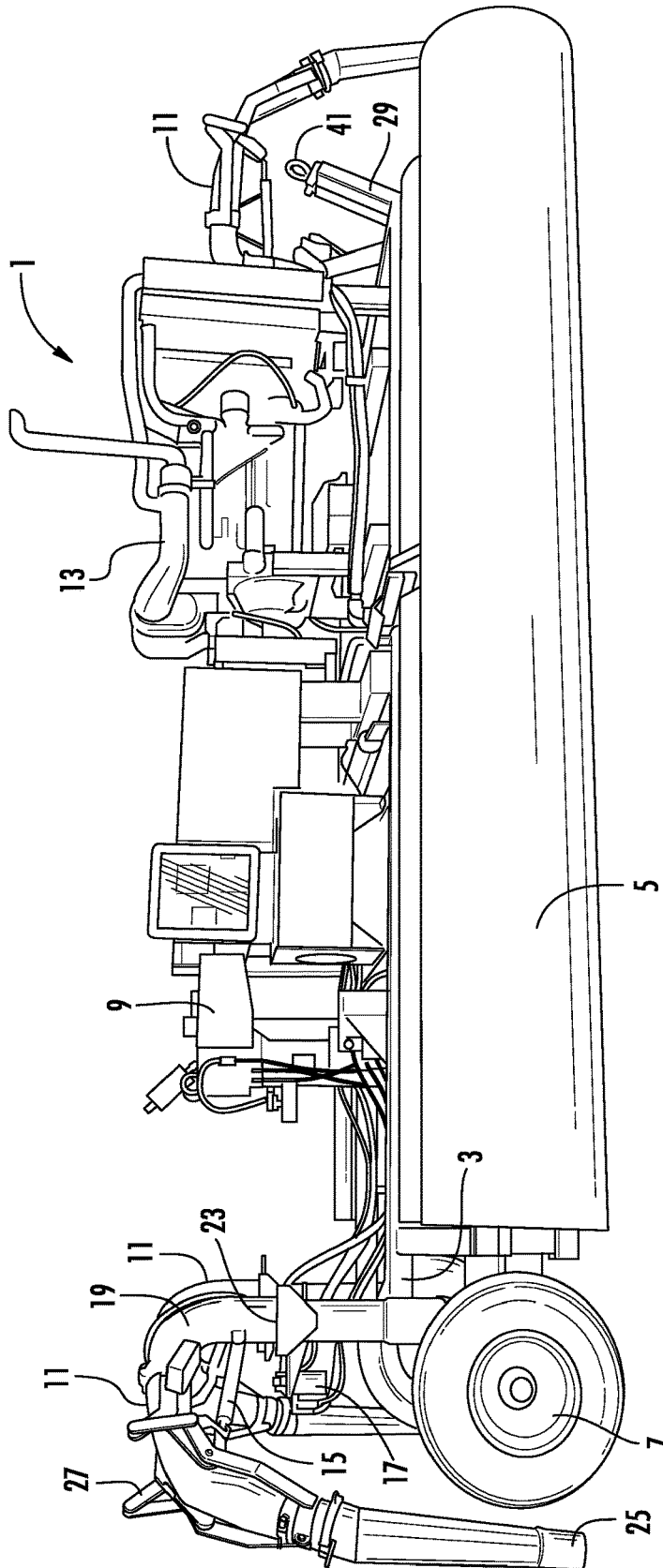


FIG. 1

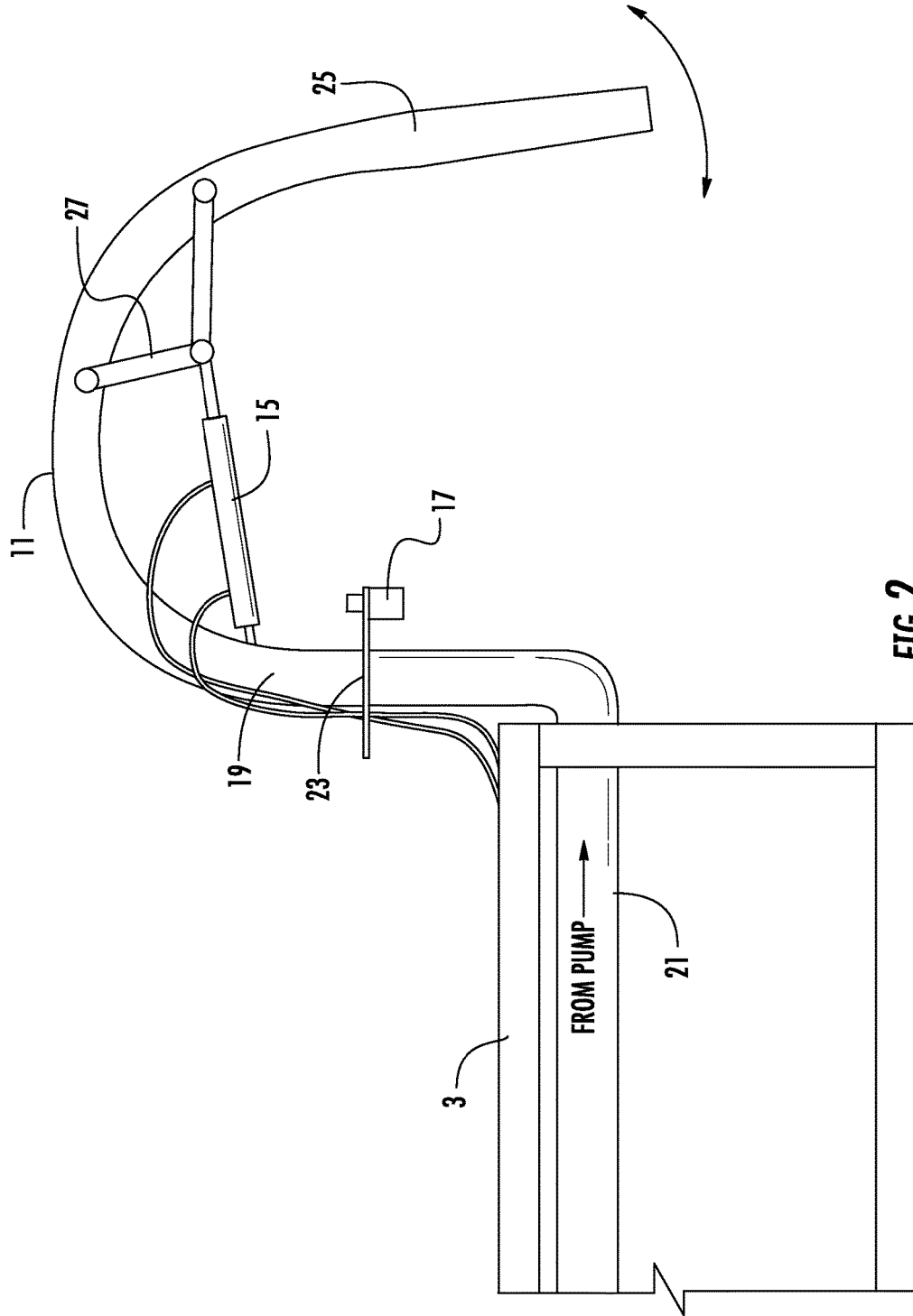


FIG. 2

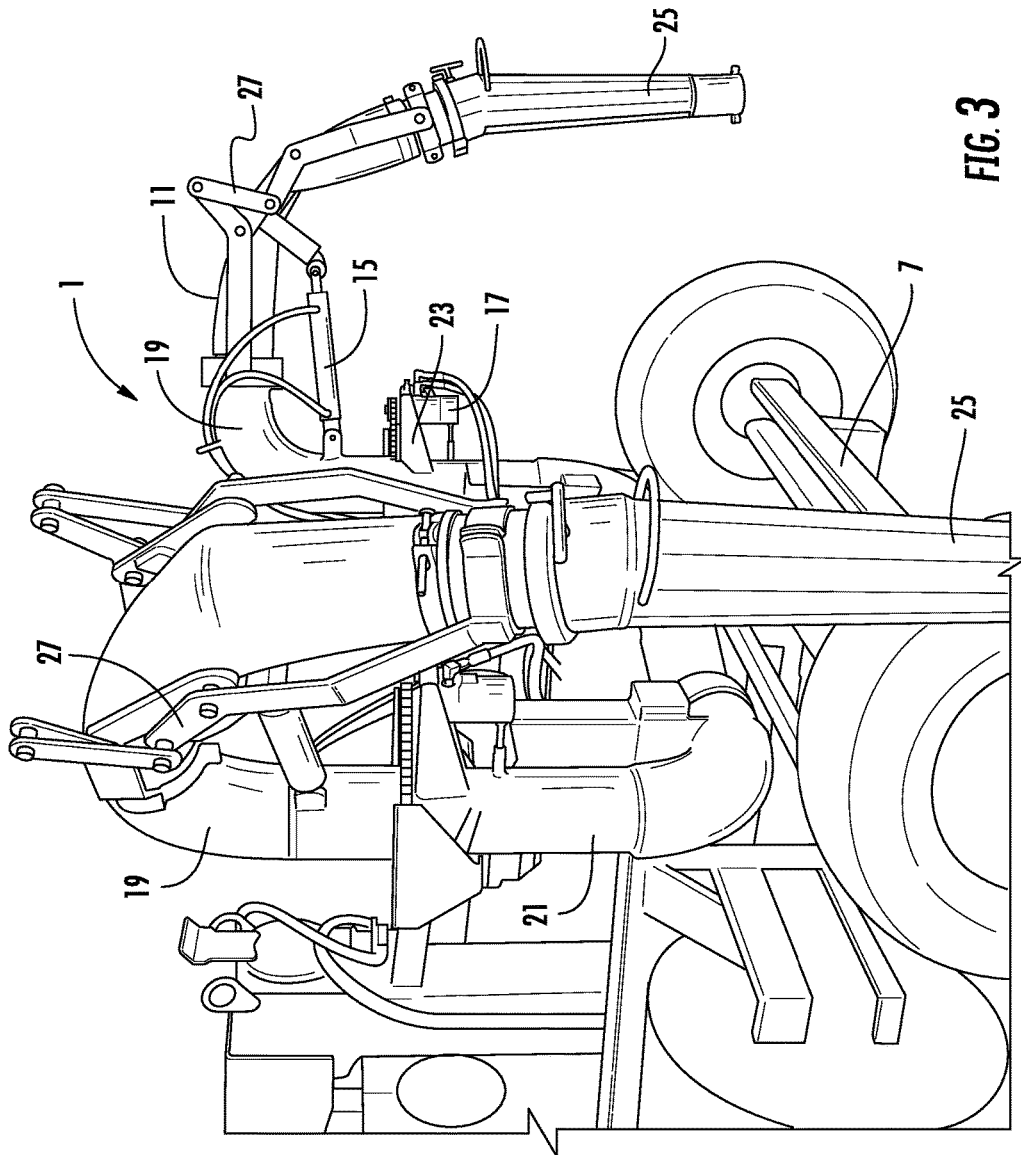


FIG. 3

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