

[54] PUMP AND ENGINE ASSEMBLY

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[52] U.S. Cl. 417/426; 417/539

[58] Field of Search 417/238, 426-429,
417/539, 567

[56] References Cited

U.S. PATENT DOCUMENTS

1,596,037	8/1926	Warner	417/567 X
2,651,258	9/1953	Pierce	417/426 X
2,821,698	1/1958	Richardson	417/426 X
3,304,869	2/1967	Blume	417/429
3,364,871	1/1968	Wilson	417/539 X

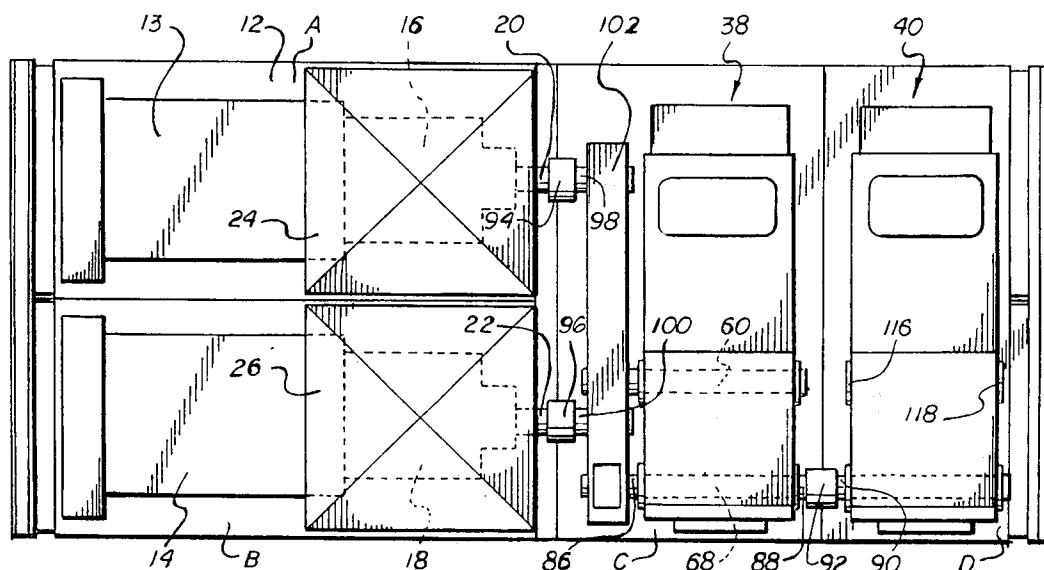
Primary Examiner—Edward L. Roberts

[57] ABSTRACT

A pump and engine assembly according to the present

invention is adapted for skid mounting and incorporates a pair of engines positioned in side to side relationship and having rotary output shafts thereof positioned in substantially parallel relation. A pair of piston type pumps are also positioned in side by side relationship with the fluid ends thereof facing in the same direction and with pump drive shafts arranged in substantially parallel relation with the rotary output shafts of the engines. The pump housing of a first one of the pumps incorporates a pair of shaft receptacles receiving a pair of rotary drive shafts. One of the drive shafts is provided with a pinion gear having meshing gear engagement with the primary gear of the first pump while the second drive shaft extends from opposed sides of the first pump. The second pump is provided with a drive shaft that is adapted to be coupled to the second drive shaft of the first pump. Both drive shafts of the first pump are coupled to respective ones of the output shafts of the engines.

23 Claims, 12 Drawing Figures



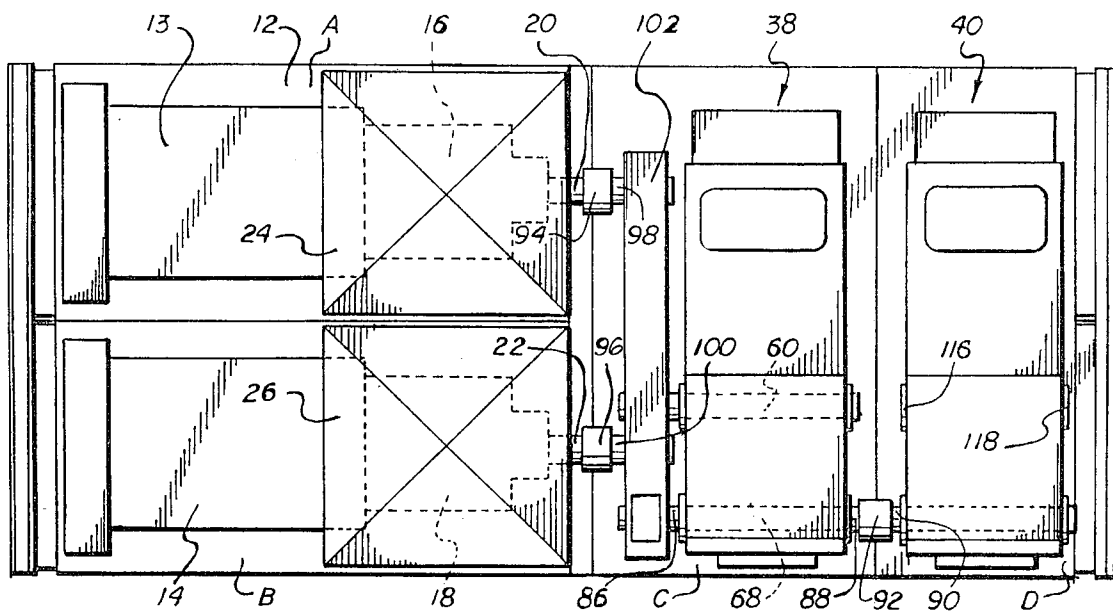


FIG. 1

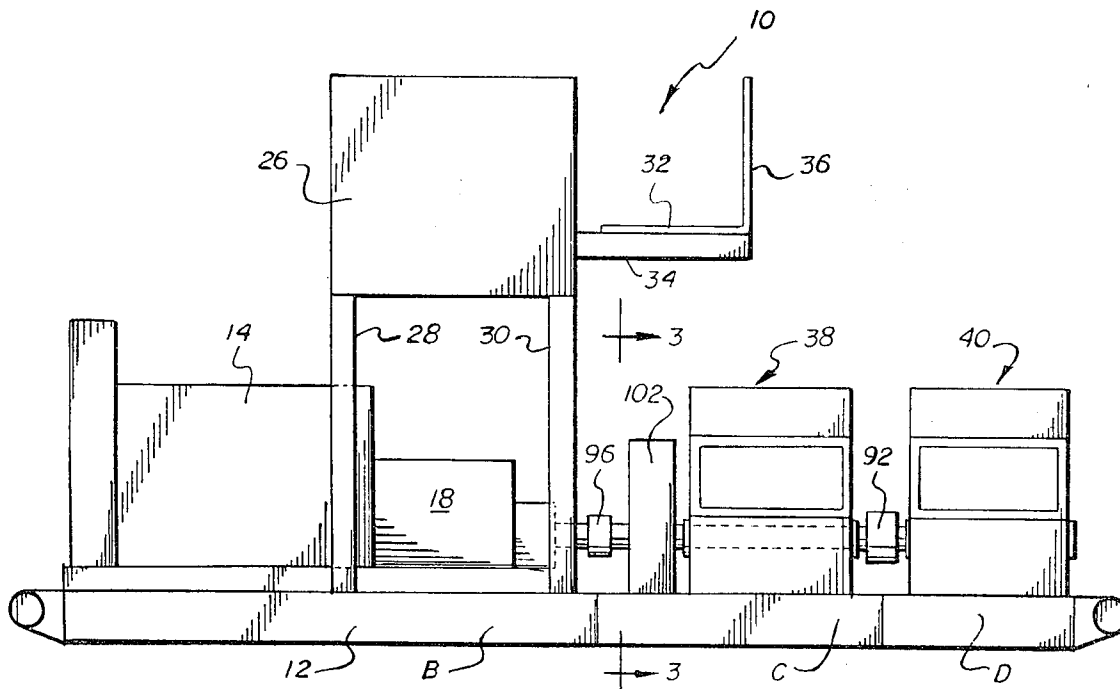


FIG. 2

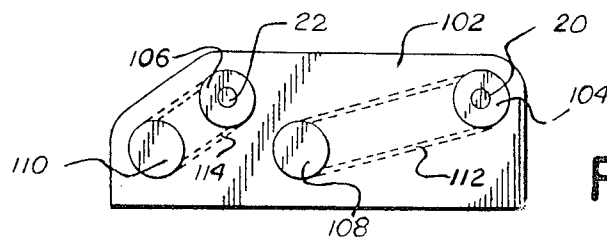


FIG. 3

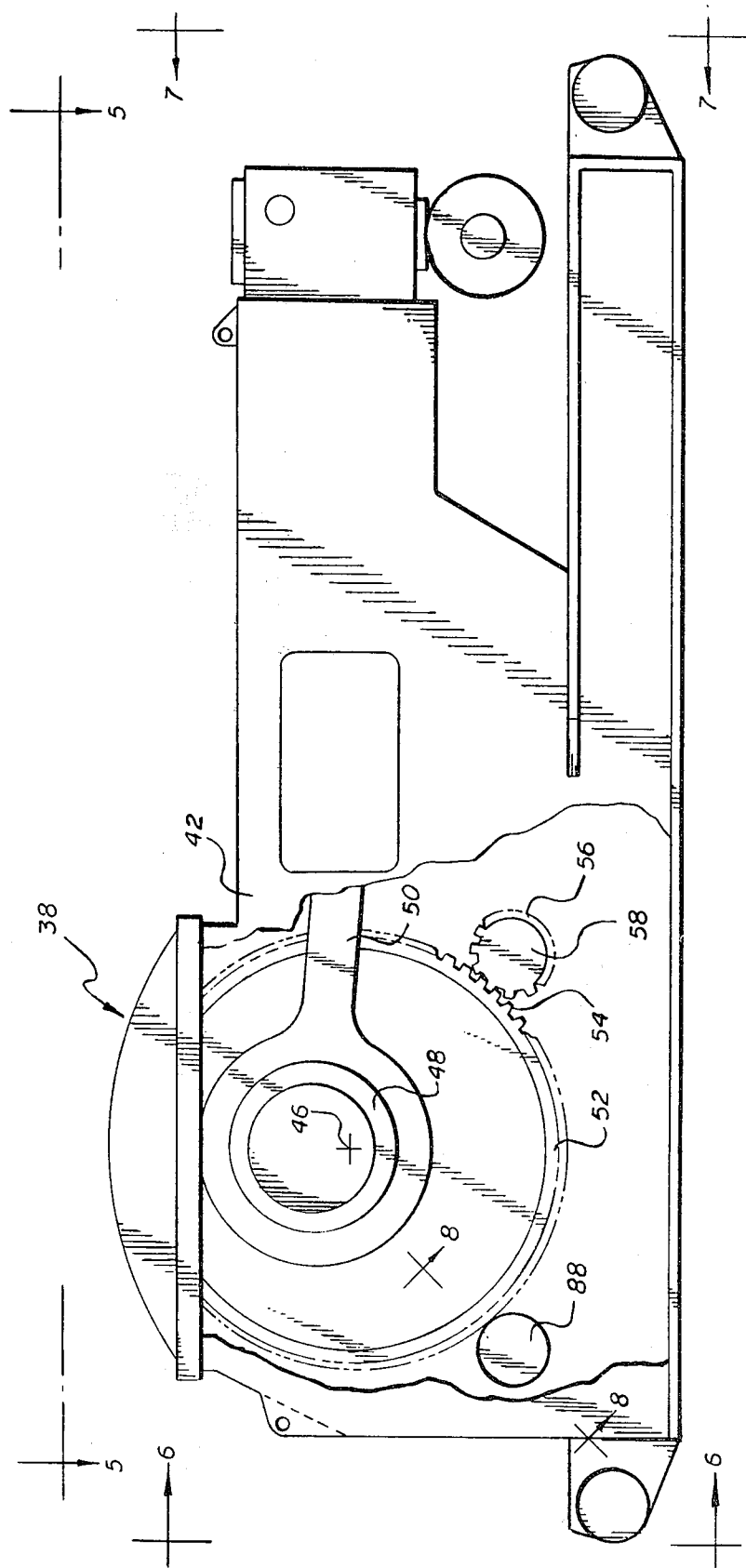


FIG. 4

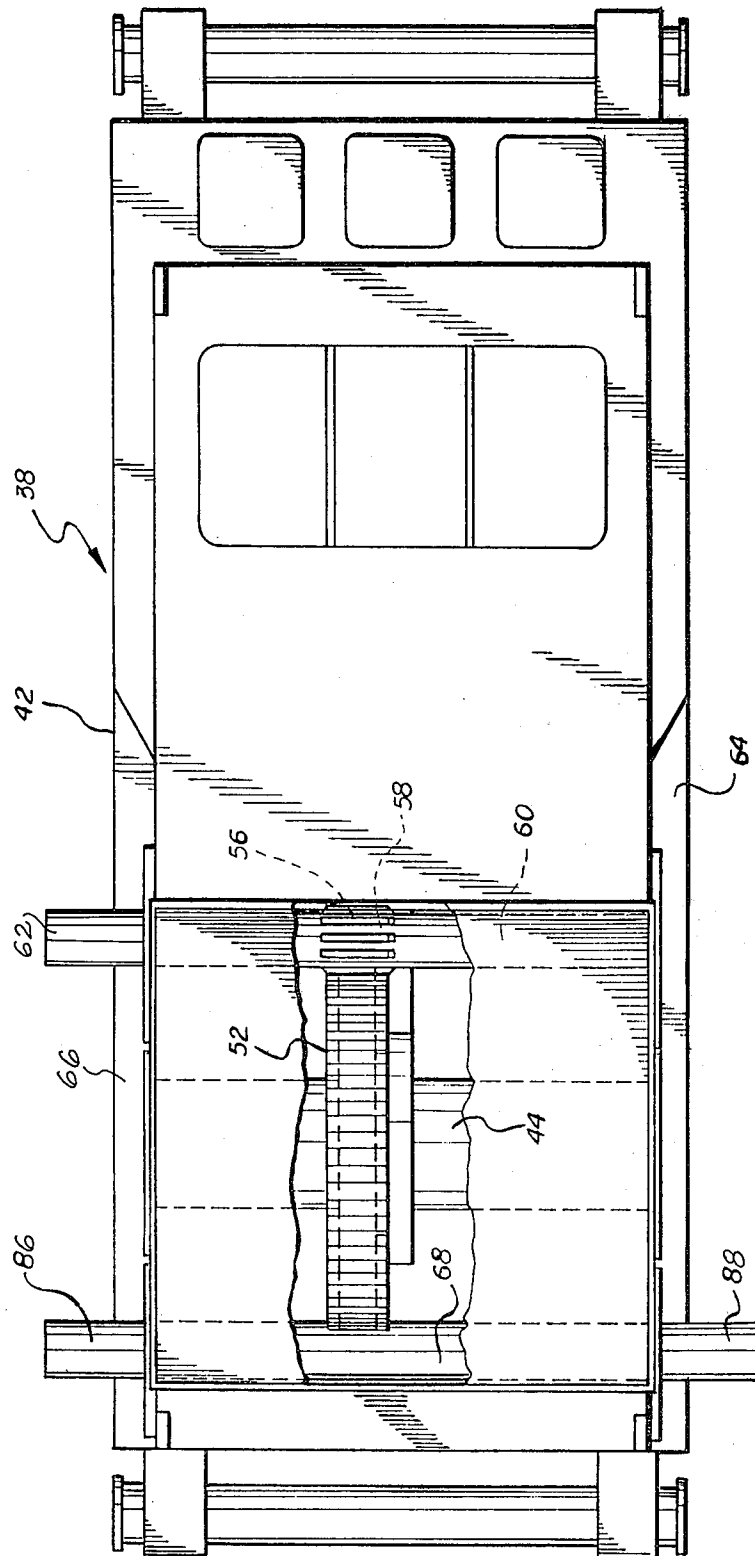


Fig. 5

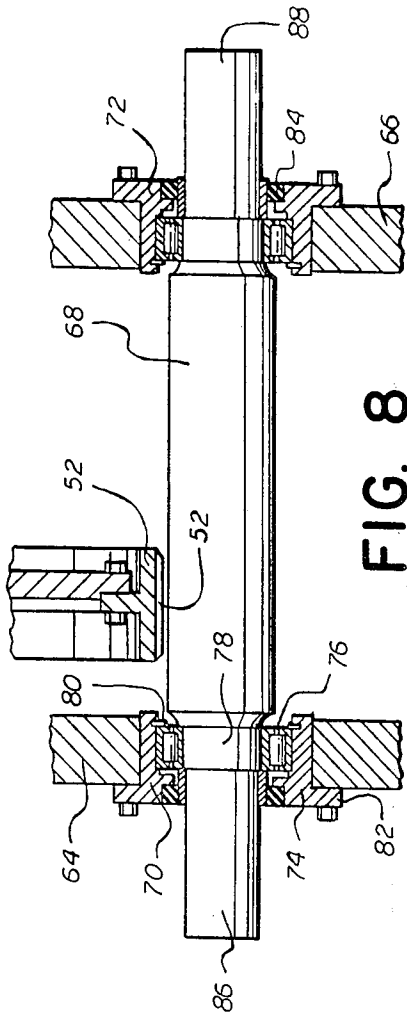


FIG. 8

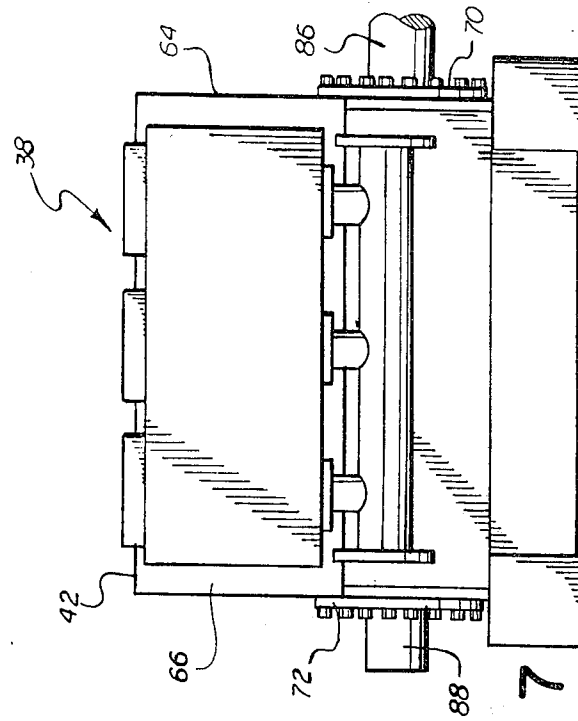


FIG. 7

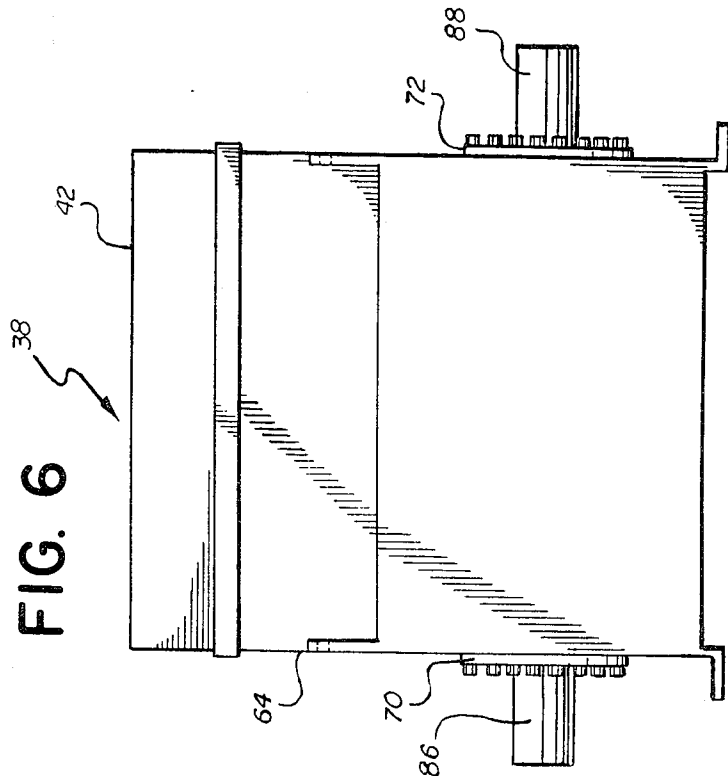


FIG. 6

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