Title: Machine for Catching Aquatic Subjects in Trenches of Paddy Cum Fish Culture Fields

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Fish harvesting from trenches in paddy cum fish culture is carried out manually in bending posture. This posture leads to discomfort, physical strain, and injuries to the farmers. Furthermore, the feet of the farmers are buried in the soil. Therefore, the farmers are exposed to various health risks, and it also reduces the efficiency of the harvesting process. The manual harvesting requires more time and therefore a large number of farmers are involved in harvesting of fish in paddy cum fish culture. The number of farmers harvesting fish in this culture depends on field size and fish density. In order to overcome these issues, a user-friendly fishing gear needs to be developed to improve farmers' comfort and enhance harvesting efficiency.

The Fishing gear as shown in Fig. 1 includes a frame body (100), a conveyor assembly (200), plurality of perforated buckets (300), a collection basket (400), a height adjustment assembly (500), and a belt adjustment assembly (600). The frame body (100) is formed of two vertical stands (102, 104), an apron (106), two side stretch bars (108), and four angle brace bars (110). The conveyor assembly (200) includes an endless (closed loop) belt (202), four rollers (204, 206, 208, 210), a L-shaped handle (212) for manual mode of operation, and/or a power system (700) for automatic mode of operation. The buckets (300) are attached to the belt (202) for picking/lifting the aquatic subjects from the trenches formed in agricultural fields. The collection basket (400) is used to receive the picked aquatic subjects from the perforated baskets (300). The height adjustment assembly (500) is adapted to adjust height of the stands (102, 104) as per requirements of operator height and/or target land surface. The belt adjustment assembly (600) is adapted to maintain required level of belt tension for smooth functioning.
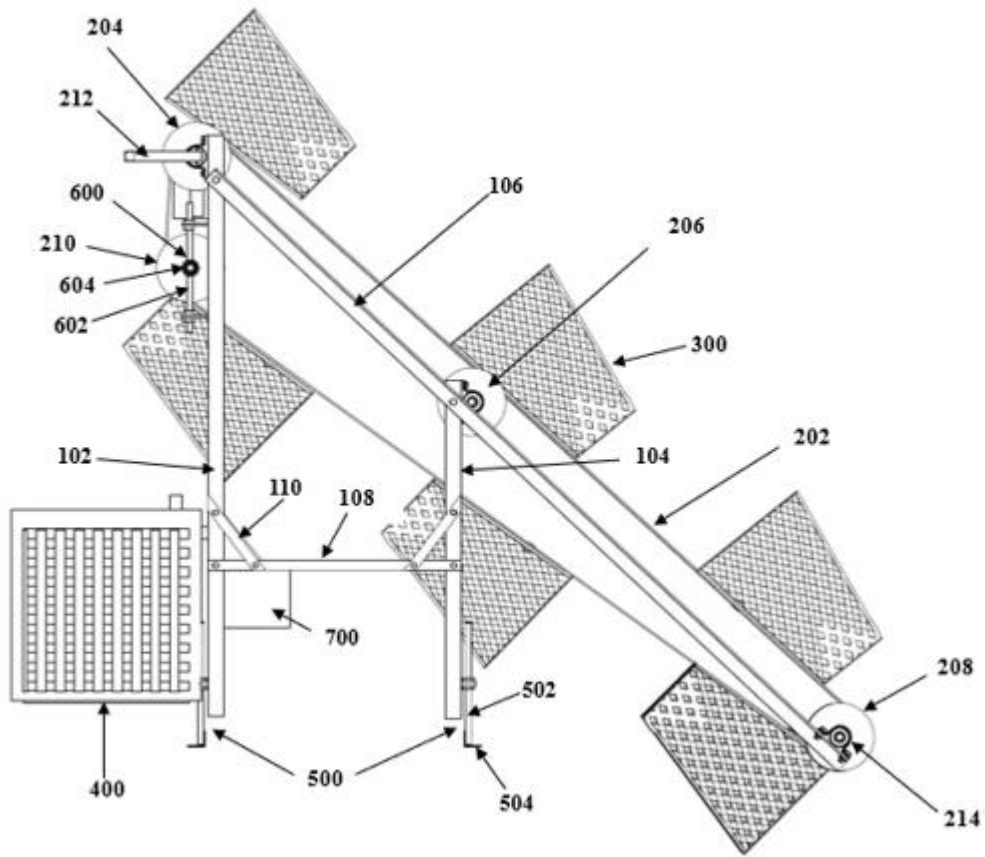
Fig. 1: Developed fishing gear