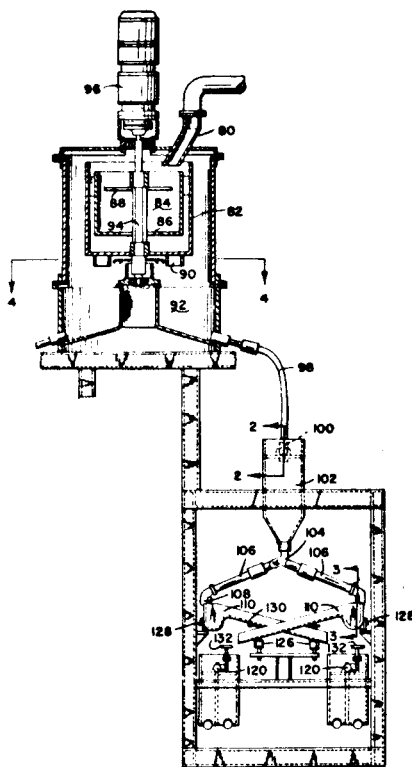


Simplified Sand Sluices Cut Downtime



AFTER entering unit, the slurry hits a baffle and is spun to the lower vessels.

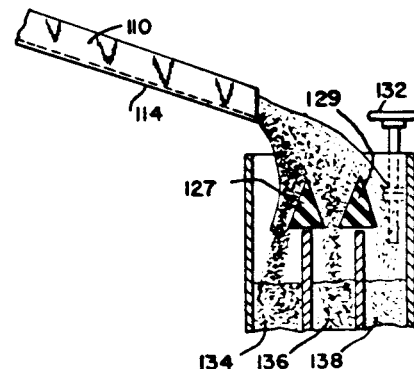
OF THE MANY problems involved in concentrating beach sand deposits, none was more apparent than the need for constant adjustments when a

change occurred in either the character of the slurry or the rate of flow. If the adjustments were made, the plant's speed of operation would normally slow down or come to a halt, but, if the plant maintained its normal production schedule, the product would most-times be inferior. These and other sand deposit problems may be greatly reduced or entirely eliminated by an improved separator designed and patented by Edward A. Hobart.

Hobart's separator keeps the slurry mixed uniformly throughout the system and the only adjustments necessary are at the sluices' discharge ends. In addition, Mr. Hobart said (in U.S. patent 3,000,502) that the separator's individual parts were small enough to reduce greatly the costs of maintenance, repair and shipping.

According to Hobart, the slurry enters the unit through a discharge nozzle (80), hits a baffle plate (88) that maintains a constant mixture, then passes through discharge nozzles (90) into a series of circumferentially spaced chambers (92). The vessels (82) and (84) and the baffle plate are connected and mounted on a drive shaft (94) to "provide for absolutely uniform distribution of a uniform mixture of water and sand to the several compartments."

The compartments each have a discharge conduit (98) which leads to a Y fitting (100), and from there to



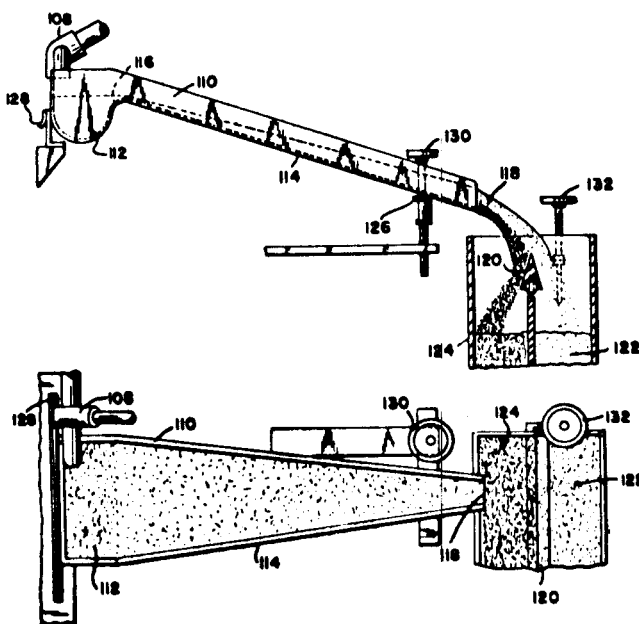
SCREW and handwheels also control the finer separation into three grades.

the 24 hoppers (102). From the hoppers, the slurry is again split and forced to flow into the two separating troughs (110).

At the unit's rougher section, the only two adjustments necessary to maintain the desired flow and degree of separation are (130), a screw and handwheel that varies the angle of inclination of each sluice bank and (120), a pliable blade that tilts to vary the slurry separation.

The other separating sections following the rougher operate with the same simple adjustments. However, the compartments here have two blades instead of one, separating the product into three grades. Each of the hoppers into which the divided slurry falls has a discharge conduit to either deliver the fraction to a wastepile or to a main hopper at the bottom of the entire unit.

Whether the new separator, Mr. Hobart said, is incorporated into a floating barge-type unit or remains stationary, its advantages—speed of operation, easy-to-make adjustments that do not force a downtime, and a guarantee that the slurry is maintained at a uniform mixture—still apply.



AT ROUGHER stage, the only adjustments are two screw and handwheels that tilt the sluice (132) or pliable plate (130).

FROM the chamber (92), slurry drops to 24 hoppers (102).

