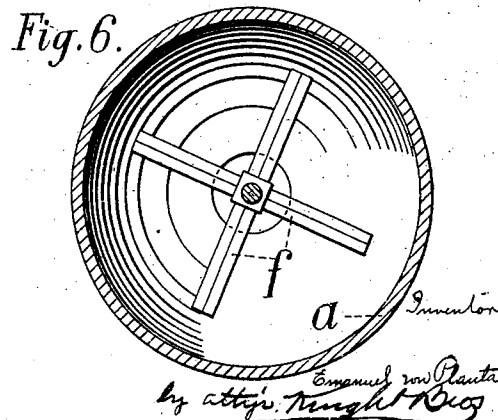
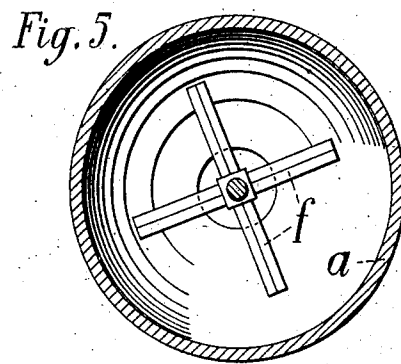
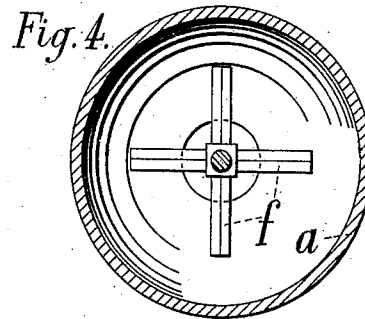
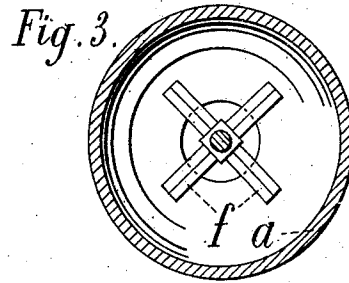
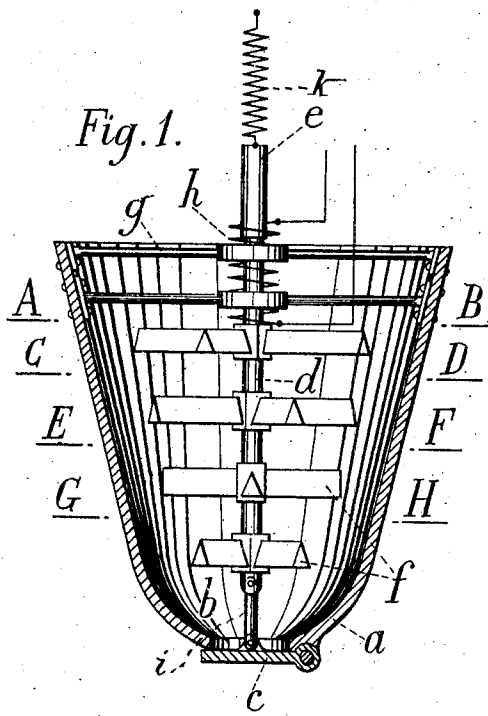


No. 830,525.

PATENTED SEPT. 11, 1906.

E. v. PLANTA.
SANDING DEVICE.
APPLICATION FILED JAN. 30, 1905.



Witness
J. M. Olynkoff
H. White

UNITED STATES PATENT OFFICE.

EMANUEL V. PLANTA, OF BERNE, SWITZERLAND.

SANDING DEVICE.

No. 830,525.

Specification of Letters Patent.

Patented Sept. 11, 1906.

Application filed January 30, 1905. Serial No. 243,376.

To all whom it may concern:

Be it known that I, EMANUEL VON PLANTA, engineer, a citizen of Switzerland, residing at 61 Schwarzthorstrasse, Berne, Switzerland, have invented certain new and useful Improvements in Sanding Devices, of which the following is a specification.

My invention relates to sanding devices or sand-boxes; and the object of the invention is to provide improved means for automatically feeding the sand to the discharge-opening of the sand-box.

In the accompanying drawings, Figure 1 shows a vertical section of a sand-box provided with my improved feeding means. Fig. 2 is a plane view. Fig. 3 is a horizontal section on line G H, Fig. 1, a part of the wall of the sand-box being broken away. Fig. 4 is a view similar to Fig. 3 on line E F of Fig. 1. Fig. 5 is a view similar to Fig. 4 on line C D, Fig. 1; and Fig. 6 is a view similar to Fig. 5 on line A B, Fig. 1.

The sand-box *a*, which preferably has sloping sides, is provided with a discharge-opening *b*, controlled by an outwardly-opening-valve *c*. By means of a link *i* the valve *c* is connected to a non-magnetizable vertical rod *d*, provided at different elevations with several series of arms *f* of upwardly-tapering cross-section. The rod *d* is provided with an extension of magnetizable material projecting through and forming the core of a solenoid *h*, secured to the box by means of cross-rods *g*. The stem *e* is under the action of a spring *k*, preferably secured to the solenoid and tending to force the stem and the rod *d* upwardly to keep the valve *c* closed. As clearly shown in Figs. 3 to 6, the arms *f* of one series are out of alinement with the arms of the adjacent series, and the arms increase in length from bottom to top.

The operation of the device is as follows: When the solenoid *h* is energized, it attracts the core or stem *e* and forces it downwardly against the action of the spring. The rod *d* is consequently drawn downwardly to open

the valve *c*, and the arms *f* force the sand in the box toward the discharge-opening *b*. It is evident that as the arms of one series are out of alinement with the arms of the adjacent series all of the arms will have different paths of travel, and a very efficient agitating and feeding action is thereby obtained. When the solenoid is made inactive, the spring-actuated stem *e* moves upwardly to close the valve *c*, and the tapering form of the arms *f* provides for the arms passing easily through the sand.

Having thus described my invention, what I claim is—

1. A sanding device comprising a sand-box having a discharge-opening, a valve normally closing said discharge-opening, and means for opening said valve; said means comprising a rod connected to the valve and extending through the sand-box, and electromagnetic means for reciprocating said rod.

2. A sanding device comprising a sand-box having a discharge-opening, a valve normally closing said opening, means extending through the sand-box for opening said valve, and arms on said opening means; said arms being arranged in series at different elevations within the sand-box, and the arms of one series being out of vertical alinement with the arms of the adjacent series.

3. A sanding device comprising a sand-box having a discharge-opening in the bottom thereof, a valve normally closing said opening, a reciprocating rod extending through the sand-box and controlling the movement of said valve, and horizontal arms on said rod for feeding the sand in the box to the discharge-opening; said arms being of upwardly-tapering cross-section to facilitate their upward movement through the sand in the box.

The foregoing specification signed at Berne, Switzerland, this 5th day of January, 1905.

EMANUEL V. PLANTA.

In presence of—

FRIEDRICH NAEGELI,
NATHANAËL LEUBA.