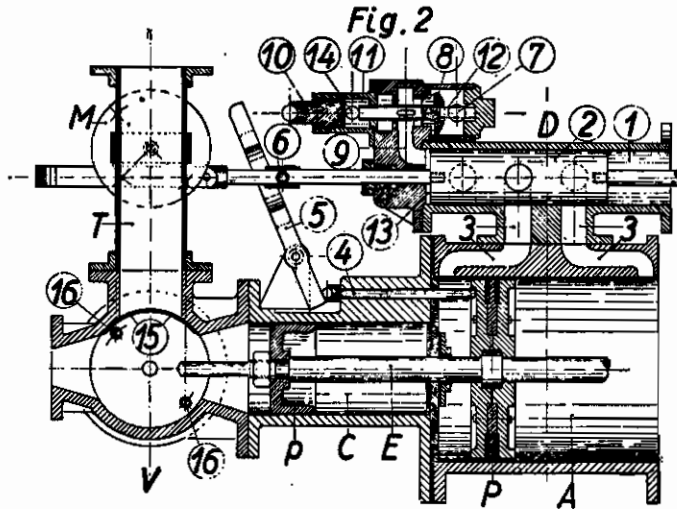
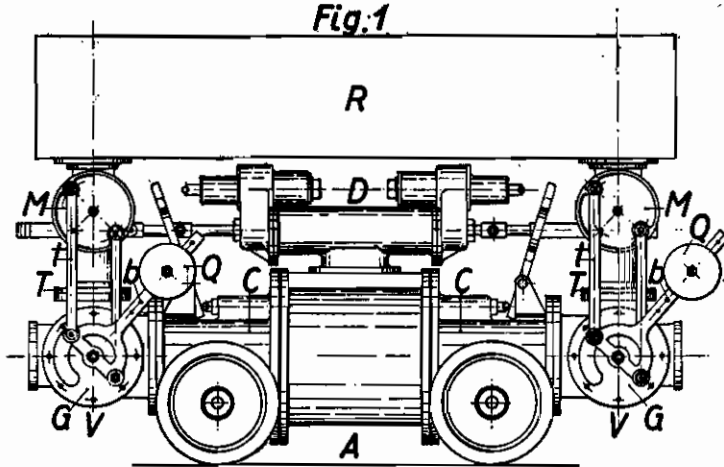


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PRESS OPERATING CONTINUOUSLY FOR
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ALIEN PROPERTY CUSTODIAN

PRESS OPERATING CONTINUOUSLY FOR MORTAR, CONCRETE AND THE LIKE

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The present invention relates to a press actuated with compressed liquids or gases, with continuous operation, adapted for the conveyance and the application of cement, mortars, concrete and the like.

In the accompanying drawing, showing by way of example a press according to the invention.

Fig. 1 shows an outer general view of the press, and

Fig. 2 shows in part a longitudinal section through all the essential elements of same.

The body of the press is formed by a central driving cylinder indicated with A on both the figures, to which are connected two co-axial side cylinders C, the diameter of which is smaller than that of cylinder A. In the smaller cylinders moves an equipment comprising three pistons mounted on a single piston rod E, P being the central piston, and p, p the side pistons.

The distributor D determines both the alternate movement of the central driving piston P, and the movement of the rotary valves V, provided at the exit of the side cylinders C.

Said distributor D comprises a cylinder 1 (Fig. 2) provided on its surface with three pairs of holes (not shown in the figures) two of which are disposed oppositely in the horizontal plane, for the reception and the discharge of the driving fluid, the third pair being disposed on the bottom portion thereof at an angle of 90° with respect to the other two, or in the vertical plane, for providing a permanent communication of the outside thereof with the central cylinder.

The small cylinder 2 for controlling the distributor D, is traversed by three bent channels having a circular cross section, the middle of which has its horizontal hole directed towards the pair of discharge holes, while the two side channels have their openings disposed horizontally and directed in front of the inlet of the fluid; the rear holes of these three channels being aligned and orientated towards the driving cylinder A.

In Fig. 2, the central discharge channel is shown in full lines and the two side channels are shown with broken lines.

To each of the two extreme positions of pistons 2 inside the cylinder 1, correspond on the two faces of the central driving piston P, a charging phase and a discharging phase.

In the position shown in Fig. 2, the right hand face of the piston is in the phase of charge, while the left hand face is in the phase of discharge.

The displacement of piston 2 of the distributor

D, is determined by two forces acting successively on it, the first of said forces being due to the mechanical action of the driving piston P at the end of its stroke, by means of percussor 4, lever 5 and button 6 placed on the rod of the distributor.

The second of said forces is due to the hydraulic or pneumatic action of the driving fluid through the entrance hole 7, mushroom valve 8, and channel 9.

The opening of valve 8 is in its turn produced by the lever 5, which, at a given point of its angular right hand movement, presses on to the percussor 10, against the action of the antagonistic spring 11, until the mushroom valve 8 is lifted against the action of the antagonistic spring 12, thus opening the inlet for the free entrance of the driving fluid on the left hand face 13 of the piston of the distributor.

A special feature of the device above described, consists in the fact that mushroom valve 8 has a tubular rod provided with holes in correspondance with channel 9, so that, during the periods of rest, the fluid contained into the small chamber 13, discharges to the outside through outlet hole 14, so that when the percussor 10 comes into action it closes in its front side the hole of the tubular rod, which produces the isolation of the small chamber.

The longitudinal displacement of the distributor's piston 2, the value of which is equal to the distance between two consecutive openings, is transformed, by means of a connecting rod and of a crank, in a rotatory movement of discs M, which in their turn, by means of the rods T (Fig. 1), produce the rotation through 90° of the rotors of valve V.

These valves V are constructed essentially with a stator drum, fixed to the end cylinder C, provided in its outer portion with three openings, two of which are coaxial with the press, and the third disposed upwards through an angle of 90° with respect to the others. A shutting sector 15, the angular amplitude of which is sufficient to ensure the closing of one opening only, may assume two different positions, disposed at an angle of 90° with respect to each other. In Fig. 2, the position of sector 15 is shown in the position for closing upwards the opening or suction valve, and consequently the position of the valve corresponds to the phase of discharge.

In the other extreme position of the distributor, the shutting sector 15, closes the discharge or delivery opening, and consequently this phase will be the suction phase. The sector 15 is fixed

on two side discs adapted to close the stator tightly, each of which carry two pivots 18, on which the rods *t* are pivoted, and an axis passing through the covers *G* (Fig. 1).

The counterweights *Q*, mounted on the adjustable arms *b* (Fig. 1), are integral with the valve rotors formed as described, said arms being connected through the pivots 18.

These counterweights ensure the displacement of the whole system, and allow the sector, made of steel, and having cutting edges, to break up

or crush any stones, which may eventually prevent the rotation thereof.

With regard to the operation of the press above described, in Fig. 1, *R* indicates a charging hopper communicating with the two suction tubes *T*, which in their turn communicate with valve *V*, operated by the pistons *p*.

The whole machine may be mounted on four wheels, to facilitate its transportation to the construction yard.

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