No. 792,222. PATENTED JUNE 13, 1905.

J. P. JÖRGENSEN.

ROLLER PRESS FOR MANUFACTURING CEMENT BRICKS OR THE LIKE.

APPLICATION FILED JAN. 30, 1905.

4 SHEETS—SHEET 1.

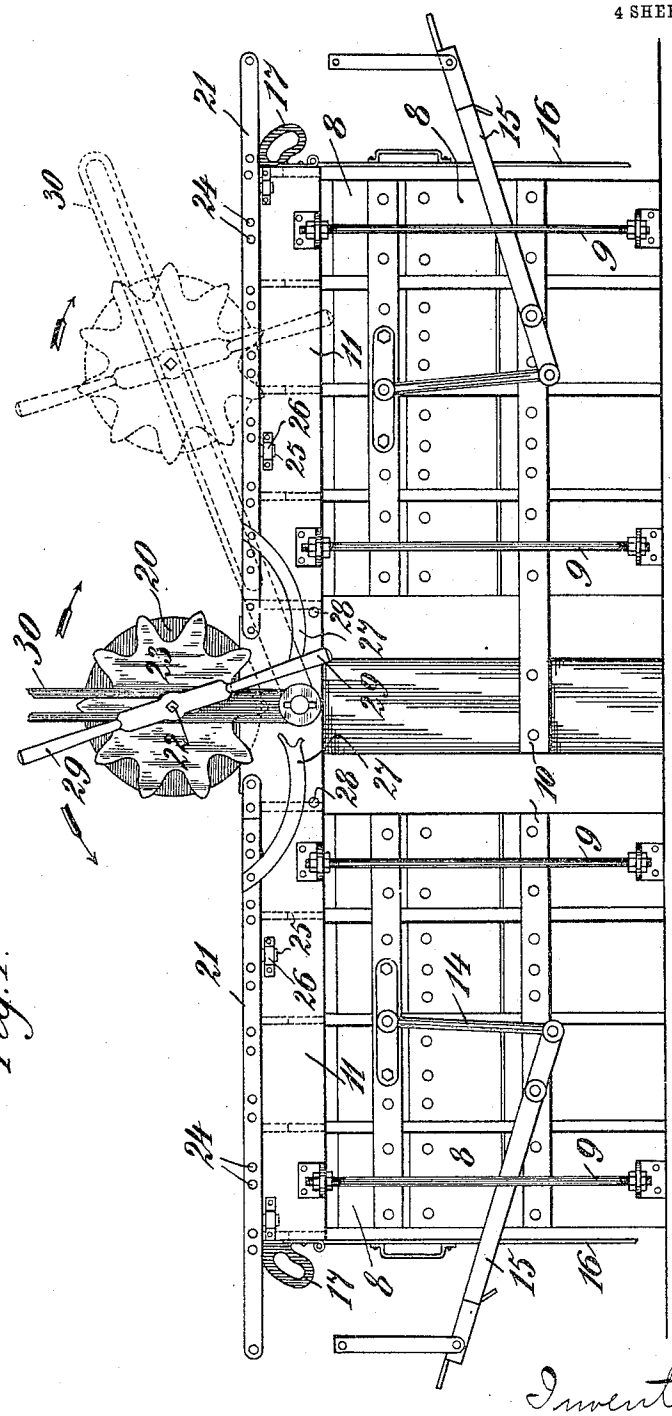


Fig. 1.

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4 SHEETS—SHEET 2.

Fig. 2.

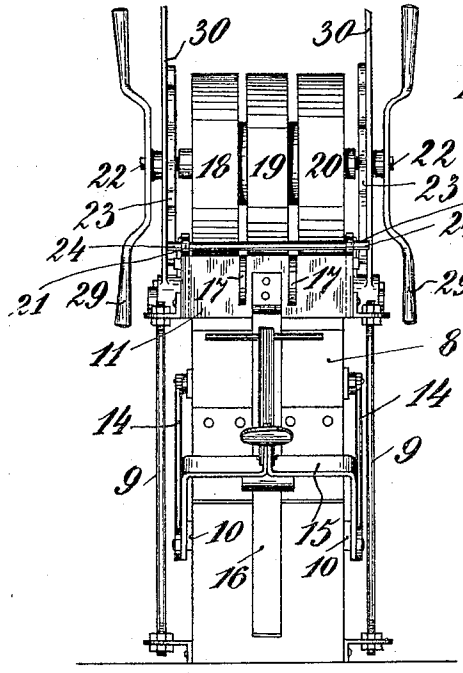
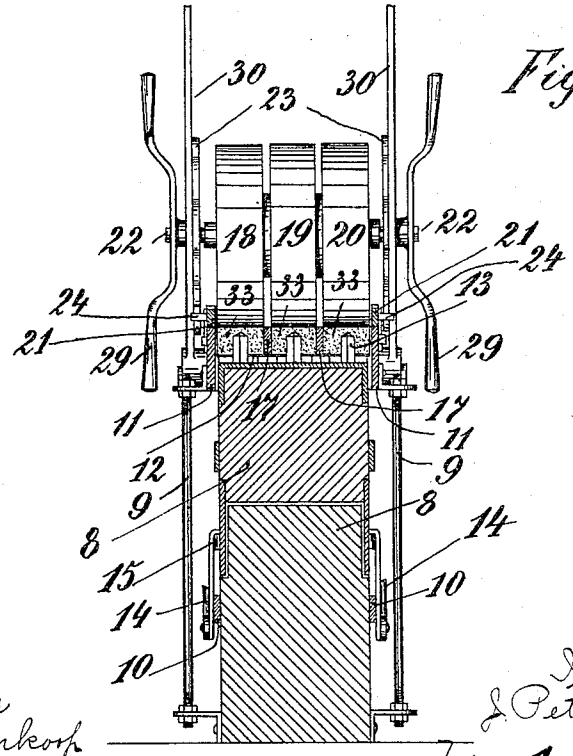


Fig. 4.



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4 SHEETS—SHEET 3.

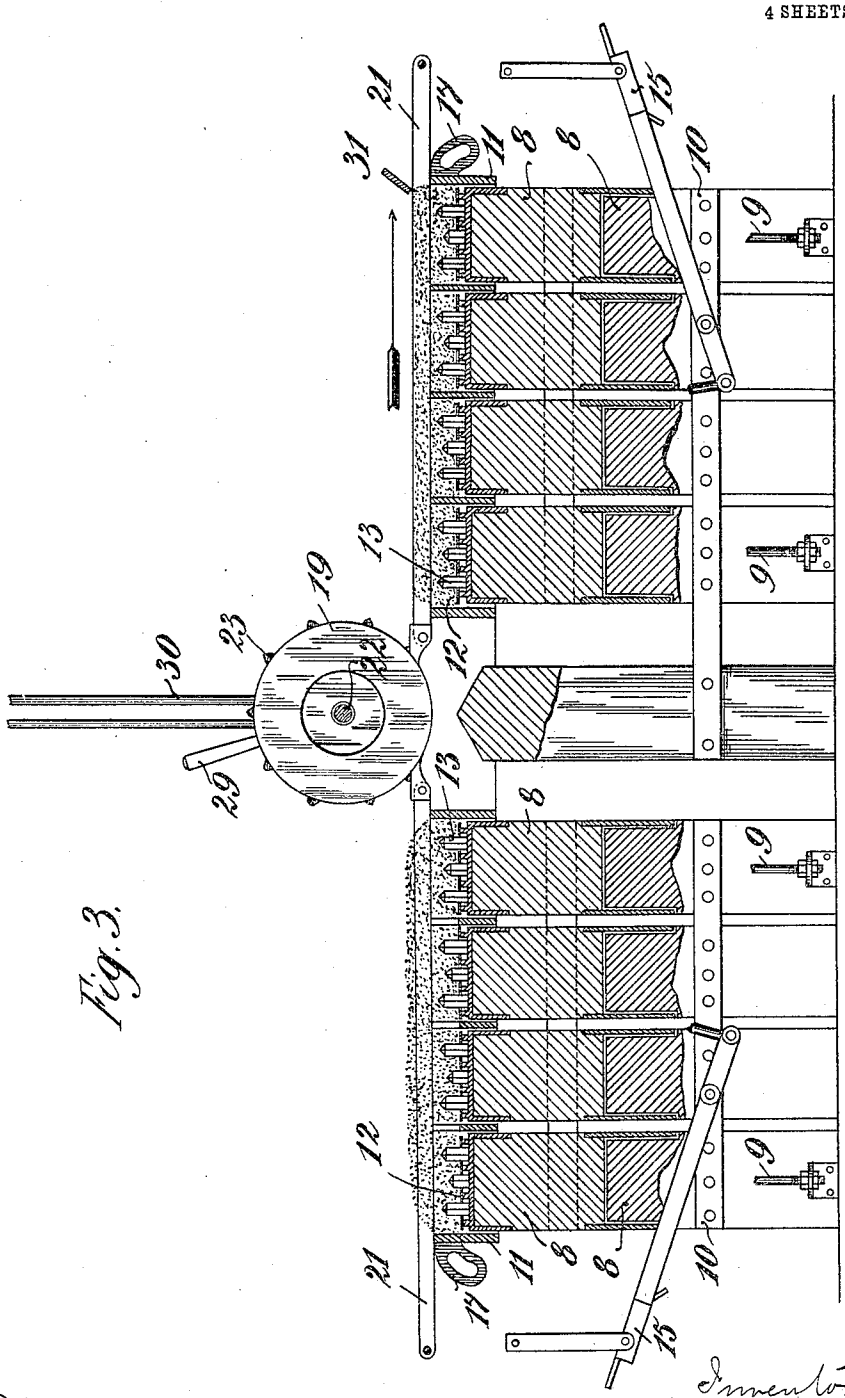


Fig. 3.

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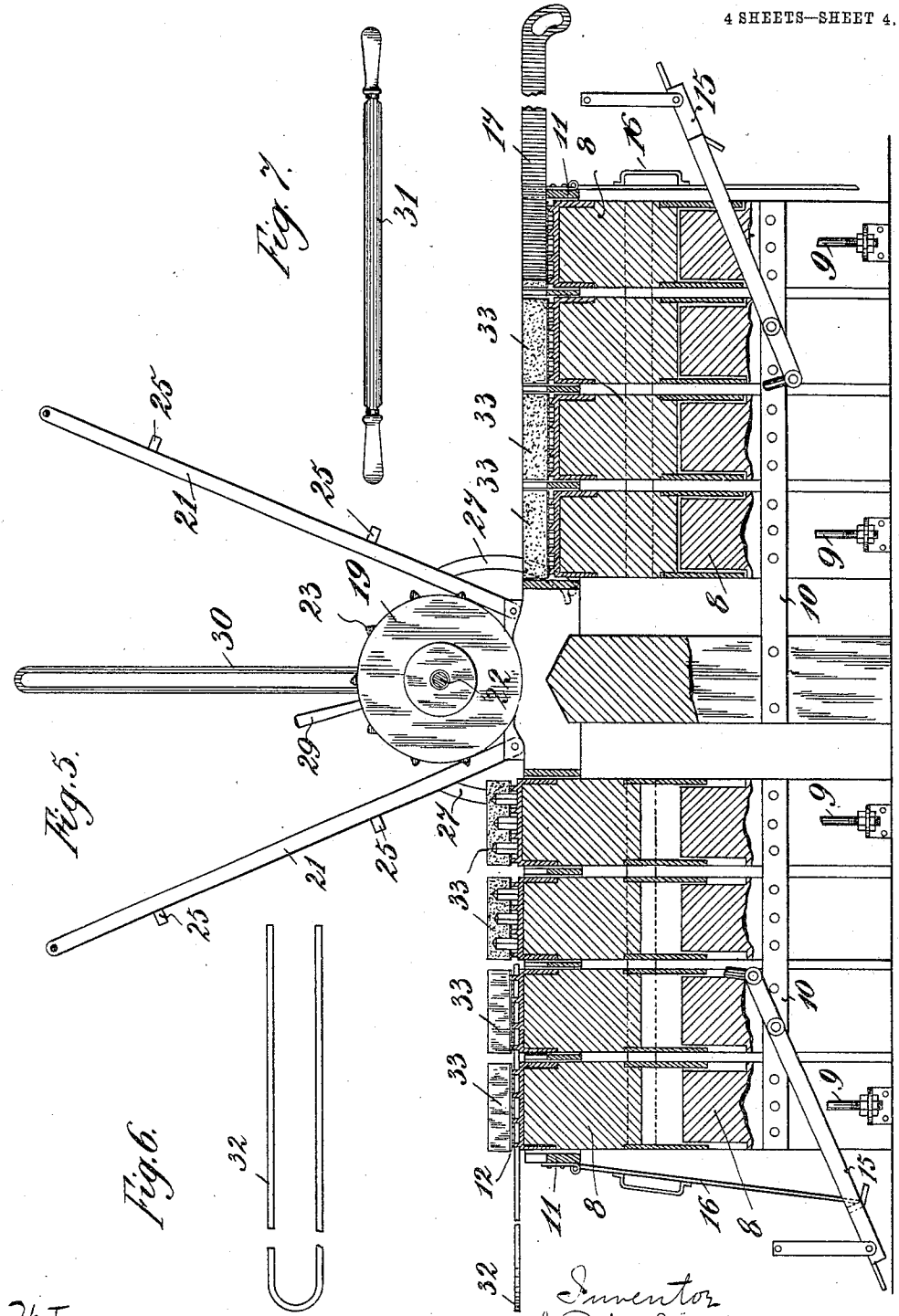
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4 SHEETS—SHEET 4.



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UNITED STATES PATENT OFFICE.

JÖRGEN PETER JÖRGENSEN, OF WEDEL, GERMANY.

ROLLER-PRESS FOR MANUFACTURING CEMENT BRICKS OR THE LIKE.

SPECIFICATION forming part of Letters Patent No. 792,222, dated June 13, 1905.

Application filed January 30, 1905. Serial No. 243,448.

To all whom it may concern:

Be it known that I, JÖRGEN PETER JÖRGENSEN, a subject of the German Emperor, and a resident of Wedel, Holstein, Germany, have invented certain new and useful Improvements in Roller-Presses for Manufacturing Cement Bricks or the Like, of which the following is a specification.

This invention has for its object a roller-press for manufacturing bricks, flagstones, and other slabs of a mixture of sand and cement.

The drawings show a form of construction of this roller-press in Figures 1 and 2 in a side and front view, and in Figs. 3, 4, and 5 in a longitudinal and cross-section, while Figs. 6 and 7 show two details in a side view.

Similar numerals refer to similar parts throughout the several views.

The roller-press is supposed to be a twin press, and for this reason the rollers have their bearings in the middle. Each half of the press is intended for twelve stones. The frame of the press is composed in the usual manner of blocks 8, arranged side by side and consisting of an upper and lower half. The lower halves are united with each other by means of slats 10 and through bars 9 with the frame 11 of the mold, while the upper halves carry the molding plate or plates 12 and are in case hollow stones are to be manutured provided with the corresponding core-bars 13. The upper halves of the blocks serve at the same time to eject the stones, for which reason they are connected, through draw-bars 14, with the treadle-lever 15, which latter can be held back in its lowest position by means of a support 16. The longitudinal partition-walls 17 can be taken out. All this is known and is only mentioned to make the whole more intelligible, but with the explicit remark that these parts may also be of an entirely different construction without changing the essential features of the invention.

The frame of the mold must be so constructed or extended that the rollers can find on it a resting-place on the outside of the openings of the frame during the filling of the mold, the treatment of the material, or the ejection of the stones. In the form of construction illustrated in the drawings this resting-place is provided in the middle between the two halves of the twin press. The rollers 18, 19, and 20, which may be composed of several parts, are of a width corresponding with the breadth of a stone, and they can consequently roll between the partition-walls 17 and the auxiliary frames 21. They are held at a certain distance from each other by means of corresponding naves or interposed disks. The two outer rollers 18 and 20 are fixed on the shaft 22, while the middle roller 19 is provided with a large bore, so that it can freely move up and down toward the other rollers. The spur-wheels or toothed wheels on the shaft 22 are of such a shape that their engagement is not interfered with when the rollers are shifted vertically. The engagement with the frame can be effected by means of pins 24 projecting from the frame 11 of the mold or on the auxiliary frame, as shown in the drawings, with which engage the teeth of the wheels 23. The auxiliary frames can be made to engage, by means of cams 25, with corresponding bows or openings 26 in the frame of the mold for the purpose of regulating their relation with the latter. The auxiliary frames are arranged oscillatingly and can be retained in their highest position by swinging arms 27, resting against projections 28 on the frame of the mold.

The shaft 22 is provided at both ends with cranks or handles 29. The connecting-links 30 surround the shaft in order to limit, as already mentioned, the extreme positions of the rollers.

The working of the roller-press is as follows: When the rollers are in the middle position, the auxiliary frames 21 are turned down and the mold-frames filled. The loose material projecting above the auxiliary frames is struck off by means of a slat 31, as illustrated on the right of Fig. 3. When this has been done, the rollers are passed to and fro over the material, as shown by the position of the same indicated in Fig. 1 by dotted lines. The connecting-links 30 follow the movements of the rollers. Ordinarily one to-and-fro movement of the rollers is suffi-

cient for pressing the material. When the pressing is finished, the auxiliary frames are moved into the position shown in Fig. 5 and the bricks are smoothed in the usual manner by means of a slat, such as shown in Fig. 7, whereupon the partition-walls 17 are drawn out. (See right side of Fig. 5.) The treadle-lever 15 is moved downward and secured in this position by the support 16 in order to be able to remove the ready bricks with their mold-plates. Underneath the mold-plates a U-shaped bow 32 may eventually be pushed in order to be able to bring back the upper halves of the blocks 8 into their original position without lowering the bricks at the same time. In this way there will be prevented a non-intended lowering of the bricks by moving the support 16, by which they might easily be broken. When the bricks 33 have been removed, the process is repeated in the above-described manner after the insertion of new mold-plates.

What I claim as my invention, and desire to secure by United States Letters Patent, is—

1. In a press for manufacturing bricks, slabs and other plates, the combination of molds divided into compartments, with oscillatingly-arranged frames for the molds, a to-and-fro-moving shaft with several press-rollers, which roll over the molds, but between the frames, a toothed wheel fastened on the said shaft and which engages with bolts or pins on the said frames, an ejector for lifting the bricks out of the molds, substantially as set forth.

2. In a press the combination of molds divided into compartments, with oscillatingly-arranged frames for the molds, a to-and-fro-moving shaft with several press-rollers, two connecting-links oscillating on the frame of the press and which surround and guide the said shaft, a toothed wheel fixed on the said shaft engaging with bolts or pins on the mold-frames, an ejector for lifting the bricks out of the molds, substantially as set forth.

3. In a press the combination of molds divided into compartments, with oscillatingly-arranged frames for the molds, pins on these frames which engage with holes on the molds, and thus unite the frames with the molds, a to-and-fro-moving shaft with several press-rollers, two connecting-links oscillating on the frame of the press and which surround and guide the said shaft, a toothed wheel fixed on the said shaft, engaging with bolts or pins on the mold-frames, an ejector for lifting the bricks out of the molds, substantially as and for the purpose set forth.

In testimony whereof I affix my signature in presence of two witnesses.

JÖRGEN PETER JÖRGENSEN.

Witnesses:
E. H. L. MUMMENHOFF,
OTTO W. HELLMRICH.