

(No Model.)

R. AVENARIUS.
MOLDING BOX FOR ARTIFICIAL STONE.

No. 525,325.

Patented Sept. 4, 1894.

Fig. 2.

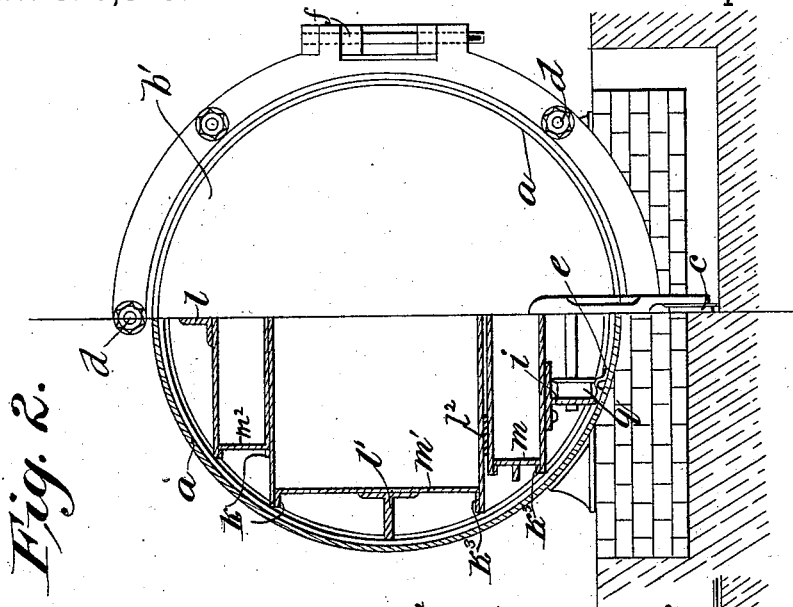
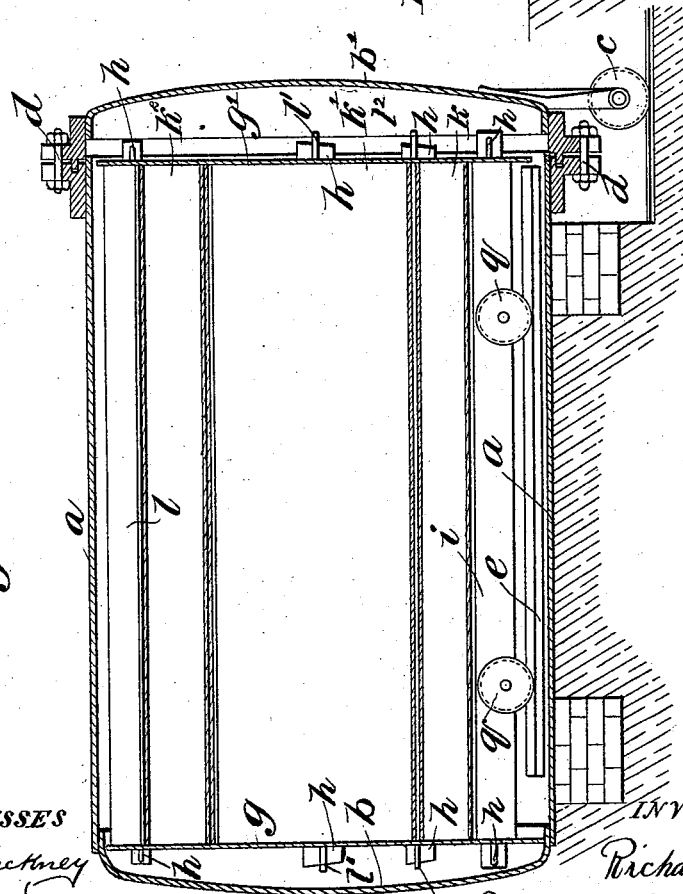


Fig. 1.



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RICHARD AVENARIUS, OF GAUALGESHEIM, GERMANY.

MOLDING-BOX FOR ARTIFICIAL STONE.

SPECIFICATION forming part of Letters Patent No. 525,325, dated September 4, 1894.

Application filed August 28, 1893. Serial No. 484,251. (No model.) Patented in Switzerland March 8, 1893, No. 6,676; in Germany June 12, 1893, No. 73,690; in France July 25, 1893, No. 231,761; in Belgium July 28, 1893, No. 105,887, and in England August 5, 1893, No. 4,182.

To all whom it may concern:

Be it known that I, RICHARD AVENARIUS, a subject of the Emperor of Germany, and a resident of Gaualgesheim-on-the Rhine, in the Grand Duchy of Hesse, Germany, have invented new and useful Improvements in Apparatus for the Manufacture of Artificial Sandstone, (for which I have obtained Letters Patent as follows: in Germany, No. 73,690, dated June 12, 1893; in France, No. 231,761, dated July 25, 1893; in Belgium, No. 105,887, dated July 28, 1893; in England, No. 4,182, dated August 5, 1893, and in Switzerland, No. 6,676, dated March 8, 1893,) of which the following is a specification.

This invention relates to an apparatus for making artificial stones under pressure in a mold and under the influence of steam and hot water, and more particularly to the chamber wherein the molds are put, to the means for introducing and removing the molds in the chamber, and the construction of the molds themselves.

The object sought by the invention is to secure an easy management of the molds and so enable the workman to fill the molds by layers, laid in directly, so that the parts of the mixture composing the artificial stone may not get unmixed. The latter is often the case, if the material is filled into a mold of considerable height by throwing it in through its mouth.

To this end the invention consists of a horizontal cylindrical shell having one removable end, a carriage carrying the mold on rails into the cylindrical shell and a molding box built up out of several horizontal parts.

This apparatus is to be employed in carrying out well known processes for manufacturing artificial stone, under which the constituents of the stone to be manufactured are placed in a liquid or semiliquid condition in suitable molds and these molds are placed into closed chambers and with their contents are there subjected either to the action of suitable chemicals or to the heat and pressure of steam which influences are apt to produce expansion of the material to be treated and consequent displacement of the parts constituting the mold boxes, unless such

boxes are properly secured and wedged in their positions. As the valved pipe connections for supplying to and discharging from the interior of such a chamber such chemicals or steam are to be of common and well known construction, no reference is made to the same hereinafter.

In order that my invention may be more fully understood I have caused to be appended hereunto one sheet of drawings marked with letters of reference indicating like parts in the various figures.

Figure 1 shows the cylindrical shell into which is put the movable molding-box or boxes. Fig. 2 is partly a front view and partly a section of the same.

The cylinder end *b* is fast and the end *b'* rendered movable, while the interior of the cylinder *a* is furnished with rails which facilitate the running in and out of the molding boxes. The cylinder end *b'* moves on the hinge *f* and is secured in position by means of bolts *d*, and for the purpose of supporting its weight, when being opened, is furnished with wheel *c*. In the present instance three separate molding boxes are combined together which are closed toward the cylinder ends *b*, *b'*, by means of the plates *g*, *g'*. The sides of the lowest box are marked *m*, *k*, *m*, *k*, those of the one above *m'*, *k'*, *m'*, *k'*, and those of the third, *i. e.*, the uppermost box, *m*², *k*², *m*², *k*². The side of the lowest box has fastened thereto the rails *i* which serve for the reception of an axle furnished with wheels *q*, adapted to travel along rails *e* secured to the lower interior surface of the cylindrical shell. The said rails *i* are longer than the sides *m*, *k*, or *m'* *k'* and *m*², *k*², of the molding boxes and project on each side thereof, which extensions are formed with slots into which keys, *h* are driven for the purpose of fastening the bottom plates *g*, *g'*, against the end edges of the molding boxes. In addition to the rails *i* are arranged a top guide bar *l*, and intermediate guide bars *l'*, *l'*, which also project through slots in the ends *g*, *g'*, the respective parts having also slots furnished with keys *h*, *h* by means of which the ends *g* *g'* are secured in position.

*l*² *l*² are longitudinal tie pieces interposed

between the central and the lower box and also extending through ends g and g' and provided in the same manner with keys h, h .

The proper relative position of the sides in 5 m, k, m', k', m^2, k^2 is insured by employing externally on the box sides k, k', k^2 , projections or lugs k^3 which entirely prevent the sides m, m', m^2 moving outward.

Having now described my invention, what 10 I claim as new, and desire to secure by Letters Patent, is—

1. In an apparatus for making artificial stone, the combination with a cylindrical steam chamber, of a molding box, a carriage 15 bearing the same and guide bars or rails placed above and underneath such carriage and such box, substantially as set forth.

2. In an apparatus for making artificial stone, the combination with a cylindrical 20 steam chamber, of a molding box mounted on a suitable carriage, and guide bars or rails placed above and underneath and sidewise from such box, substantially as set forth.

3. In an apparatus for making artificial

stone, the combination with a number of 25 molding boxes, of detachable end plates g, g' covering the ends of adjoining boxes, a closable cylindrical steam chamber, and means for guiding the molding boxes and for confining the same in position within such chamber, 30 substantially as set forth.

4. In an apparatus for making artificial stone, the combination with a cylindrical steam chamber, of a system of molding boxes, built of readily exchangeable loose top, bot- 35 tom and side plates, which are held together by strong plates g, g' formed with slots and positioned opposite the ends of such chamber, and strengthened by longitudinal tie pieces passing through the said plates and drawn 40 tight by keys, substantially as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

RICHARD AVENARIUS.

Witnesses:

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