No. 647,431. Patented Apr. 10, 1900.

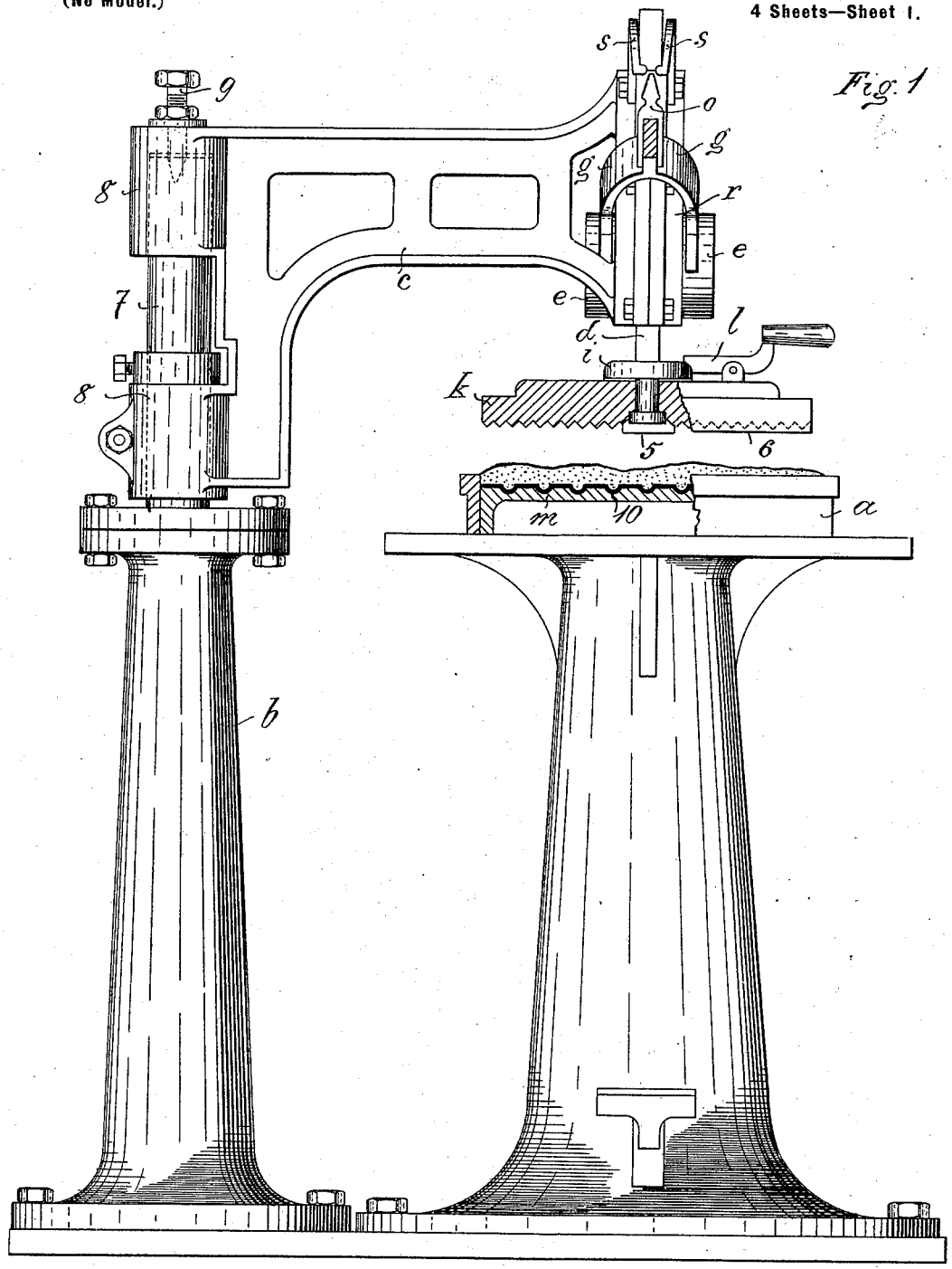
A. WEIL.

TILE MACHINE.

(Application filed Oct. 27, 1898.)

(No Model.) 4 Sheets—Sheet 1.

Fig. 1



Witnesses
Harry A Knight
Herbert Bradley.

Inventor
Abraham Weil
By Knight Bros
Attys.

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Fig. 2

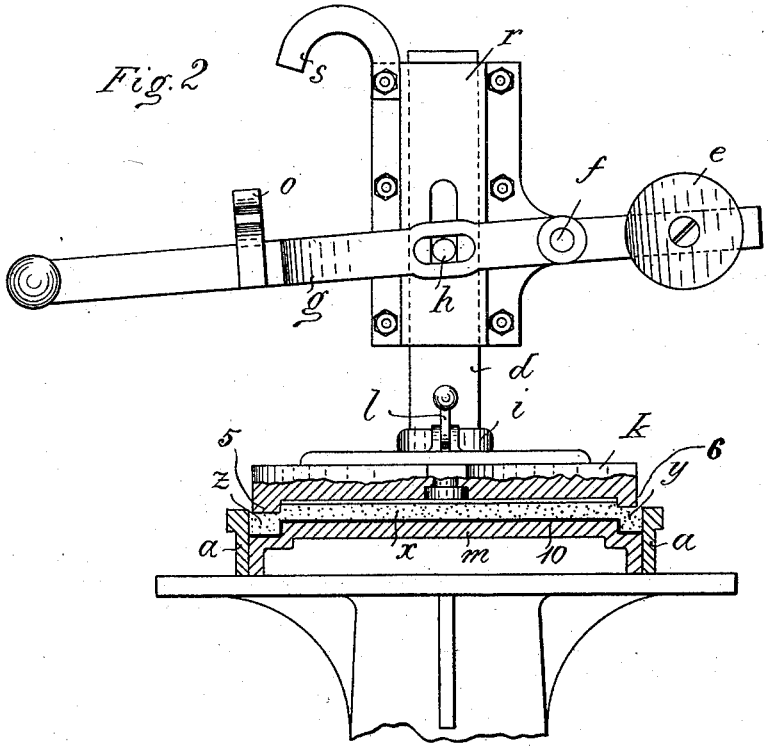
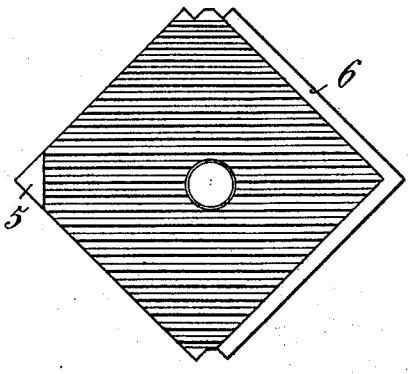


Fig. 3



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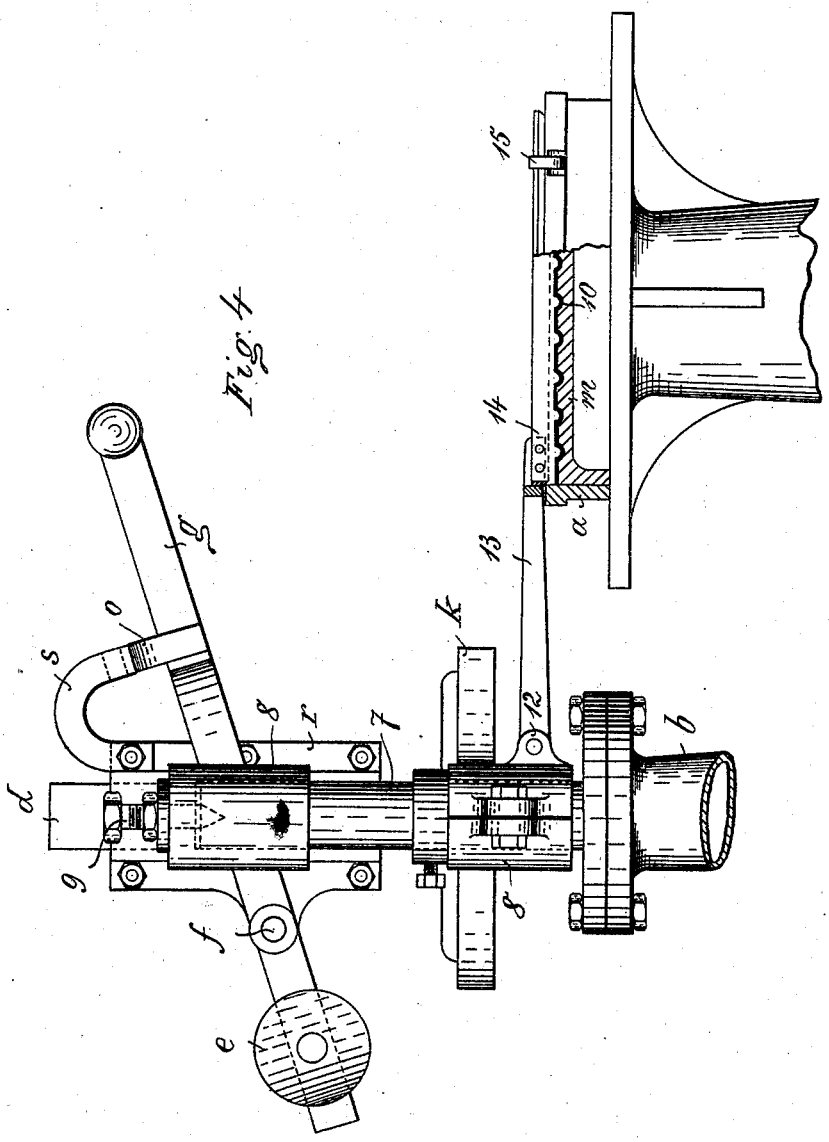
(No Model.) 4 Sheets—Sheet 3.

Fig. 4.



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Abraham Weil
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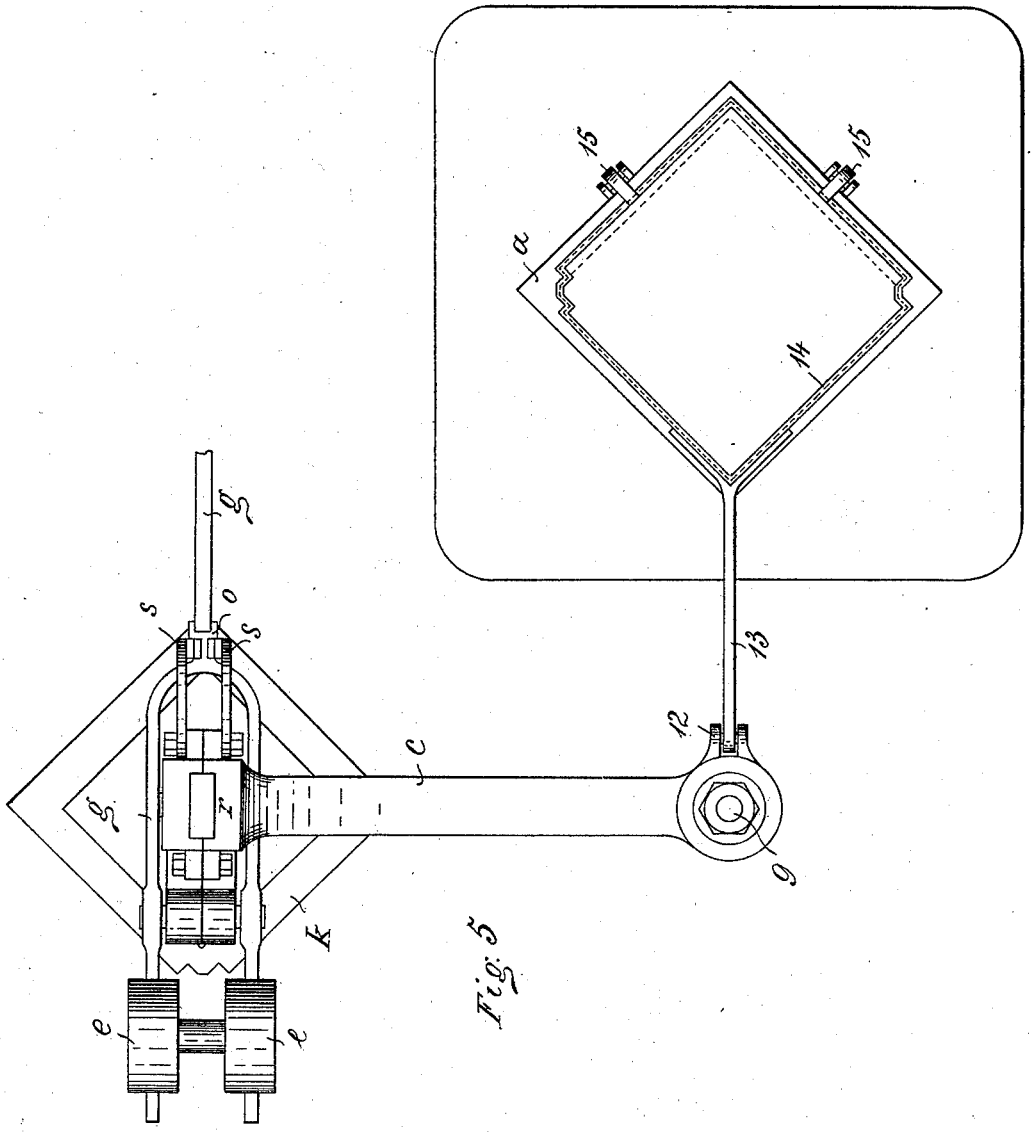

Fig. 5.

Witnesses:
Harry A Knight.
Herbert Bradley.

Inventor
Abraham Weil
By Knight Bros
Attys

UNITED STATES PATENT OFFICE.

ABRAHAM WEIL, OF STEINHEIM, GERMANY.

TILE-MACHINE.

SPECIFICATION forming part of Letters Patent No. 647,431, dated April 10, 1900.

Application filed October 27, 1898. Serial No. 694,732. (No model.)

To all whom it may concern:

Be it known that I, ABRAHAM WEIL, manufacturer, a subject of the Emperor of Germany, and a resident of Steinheim, Westphalia, Empire of Germany, have invented certain new and useful Improvements in Tile-Machines, of which the following is a specification.

This invention has for its object a device for ramming down the cement material in the manufacture of cement roofing-tiles; but before the cement material can be rammed down it must be evenly spread or distributed on the molding-plate, and this can also be effected by this apparatus. Two different forms of construction of this arrangement are shown in the accompanying drawings, in which—

Figure 1 is an elevation, partly in section, of the first form of construction; and Fig. 2, a front view of same with the press depressed, a portion of the apparatus being removed. Fig. 3 is an under view of the press-stamp. Fig. 4 is an elevation, partly in section, of the second form of construction; and Fig. 5, a plan view of the same.

An arm *c* is arranged to swing on a vertical shaft 7, supported on a stand *b*, in the headpiece *r* of which arm the guide-bar *d* of the press-stamp is mounted and adapted to be moved up and down by means of a forked lever *g*, pivoting or swinging on a pin *f*, supported on the headpiece *r*. For this object the guide-bar *d* is connected with the lever *g* by means of a bolt or pin *h*, fixed on the guide-bar and engaging in slots in said lever.

In the form of construction shown in Figs. 1 to 3 the lower end of the guide-bar *d* is provided with a fixed plate *i* and a revoluble press-plate *k*. On the latter a stop-lever *l* is pivotally arranged, which lever holds both plates together by engaging the fixed plate. The under side of the plate *k*, as shown in Figs. 1 to 3, is grooved or ribbed and also provided with overhanging projections 5 and 6. These overhanging projections serve, as shown in Fig. 2, for pressing or stamping the material to a greater extent at the place where the suspension part *z* and the lower or under covering lip or joint *y* of the cement roofing-tile *x* are formed, because at these places the unformed material lies thicker. The forked lever *g* embraces the headpiece of the arm, is provided with counterweights *e*, and carries at its front end a headed catch *o*, which in the highest position of the plate *k* engages in a double snap-spring *s*, mounted on the headpiece *r*, whereby the press-stamp, formed of the parts *d*, *i*, and *k*, is retained in its highest position. If it be desired to release the catch from the snap-spring, the lever *g* is strongly pulled down. In order to enable the arm *c* to be moved or adjusted in height, the upper socket or eye 8 is provided with a screw 9, which bears on the top of the shaft 7, so that this socket acts as a suspension-bearing.

The mode of action of the device shown in Figs. 1 to 3 is as follows: The cement material is scattered on the molding-plate 10, lying on a molding-block *m*, mounted in a bed-frame *a*, and the press-plate *k* is lowered so far by means of the lever *g* that it somewhat presses on the cement material. By then depressing the outer end of the stop-lever *l* the press-plate *k* is released from the fixed plate *i* and is then turned once around, so that the cement material is equally distributed by means of the grooves in the under face of the press-plate. When this has been done, the pressing-stamp *k i d* is several times moved up and down until the cement roofing-tile *x* is formed and rammed firm, and then the lever *g* is raised so high that the catch *o* engages in the snap-spring *s*. Owing to the press-plate *k* being provided with grooves the cement material is also equally rammed firm.

The form of construction shown in Figs. 4 and 5 differs from the first form of construction in that the equal distribution of the material is not effected by means of the press-plate *k*, but by means of another suitable arrangement. In this the press-plate *k* is rigidly connected with the guide-bar *d*, and an arm 13 is arranged on the lower socket or eye 8 at about ninety degrees to the arm *c*, which arm 13 is pivoted on hinge 12 and carries a frame 14. The lower edge of this frame is beveled in order that it may partially engage in the bed-frame *a*. When this form of construction is to be used, the arm *c* is swung into the position shown in Figs. 4 and 5, the frame 14 is clapped down, as shown, on the bed-frame *a*, and both connected by grippers 15, mounted on the bed-frame *a*. The cement

material is then scattered on the molding-plate 10 and spread smoothly over the same and the surplus amount carried away over the frame 14. When this has been done, the frame 14 is raised, the arm *c* is swung into the position shown in Fig. 1, and the cement material is rammed firm, as in the first form of construction.

I declare that what I claim is—

1. A tile-machine comprising a laterally-swinging arm having a headpiece provided with vertical slots, a guide-bar adapted to slide in the headpiece, a press-plate secured to the guide-bar, a forked lever embracing the head-piece and having its arms formed with longitudinal slots, and pivoted to the headpiece, the cross-pin extending through the guide-bar and through the slots in the headpiece and in the arms, counterweights secured on the rear end of the arms, a headed catch secured to the forward arm of the lever, and the double snap-spring with which the headed catch engages, mounted on the headpiece; substantially as described.

2. A tile-machine comprising an arm, a sliding guide-bar working in the arm, a fixed plate secured to the guide-bar, a revoluble press-plate having a lever for engaging the fixed plate and mounted on the guide-bar beneath the fixed plate, a lever pivoted to the arm, and means for connecting the guide-bar with the lever; substantially as described.

3. A tile-machine comprising an arm, a sliding guide-bar working in the arm, a fixed plate secured to the guide-bar, a revoluble press-plate formed with a grooved face and with depending projections, and mounted on the guide-bar beneath the fixed plate, a lever pivoted to the arm, and means for connecting the guide-bar with the lever; substantially as described.

The foregoing specification signed at Berlin, Germany, this 13th day of October, 1898.

ABRAHAM WEIL.

In presence of—
W. HAUPT,
C. H. DAY.