

No. 698,627.

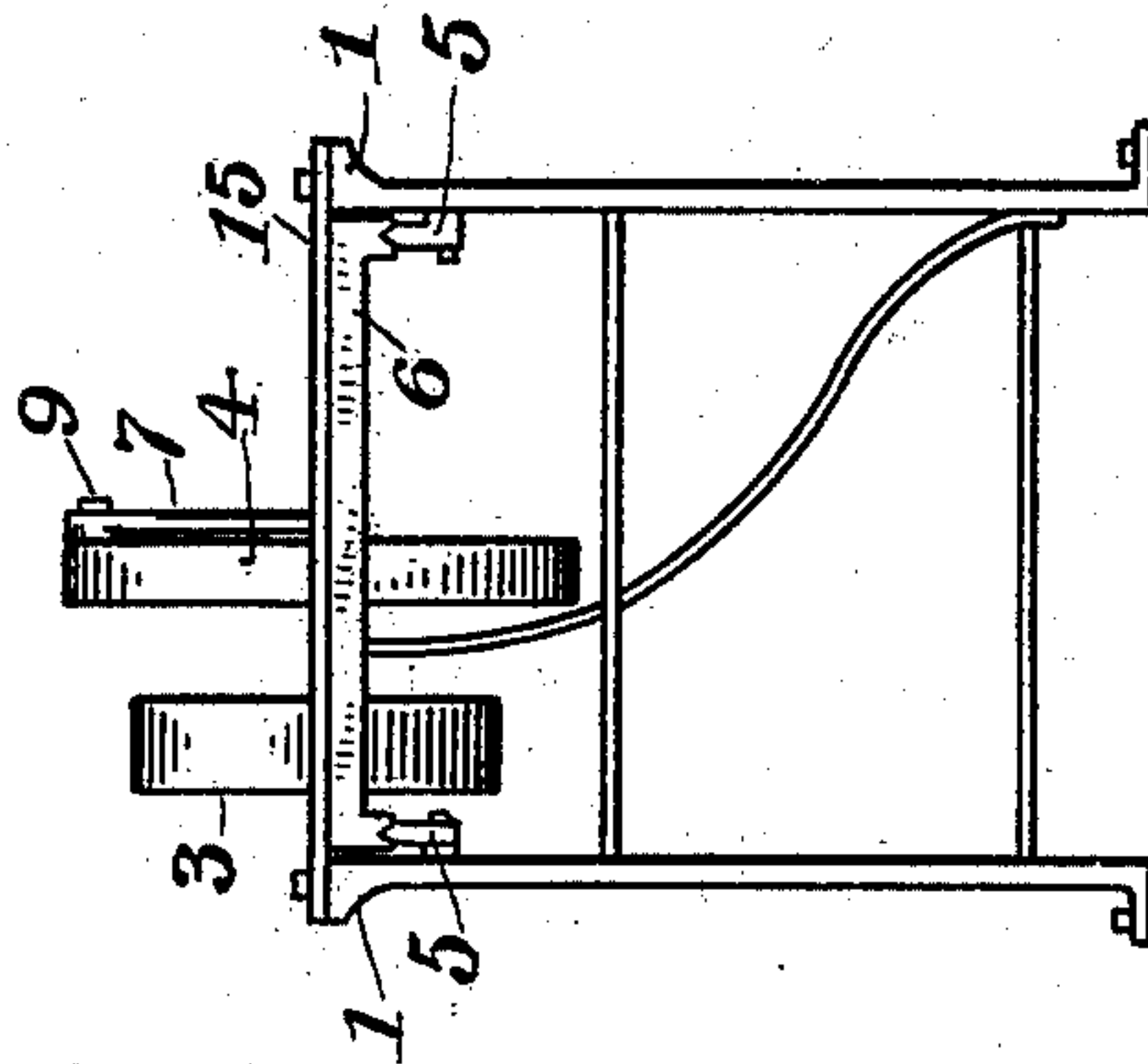
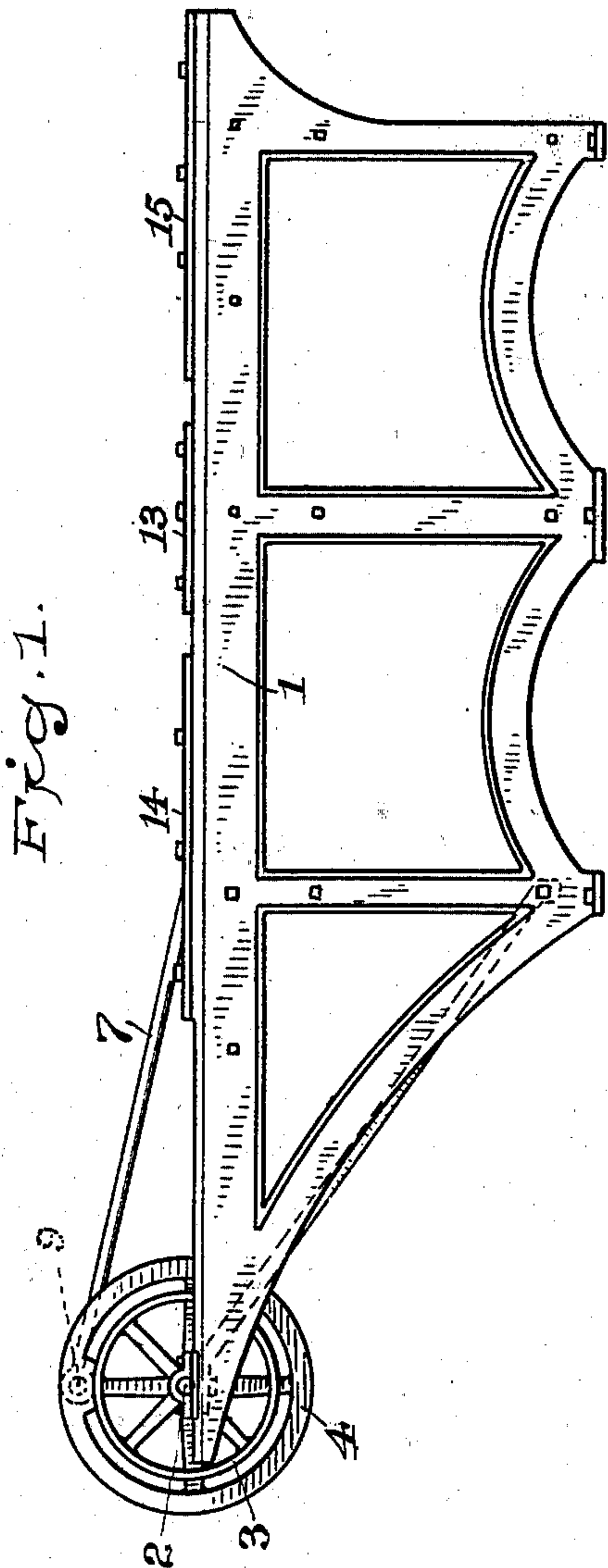
Patented Apr. 29, 1902.

L. H. BROWSELL.
MACHINE FOR CLEANING BRICKS.

(Application filed June 12, 1901.)

(No Model.)

3 Sheets—Sheet 1.



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Fig. 2.

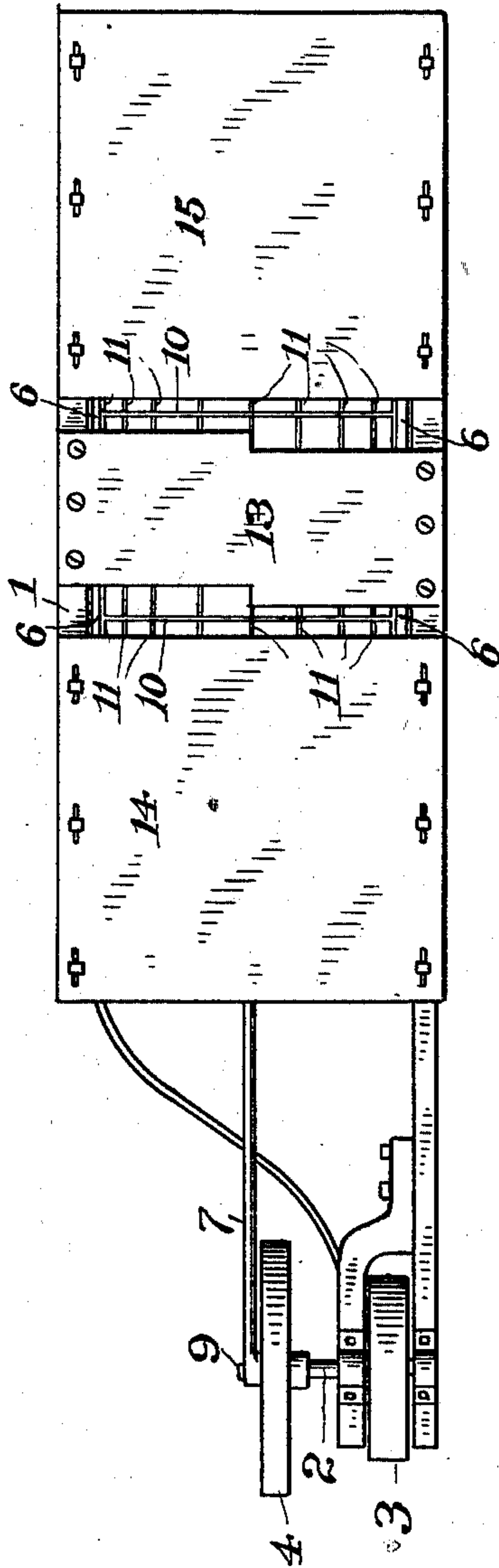


Fig. 4.

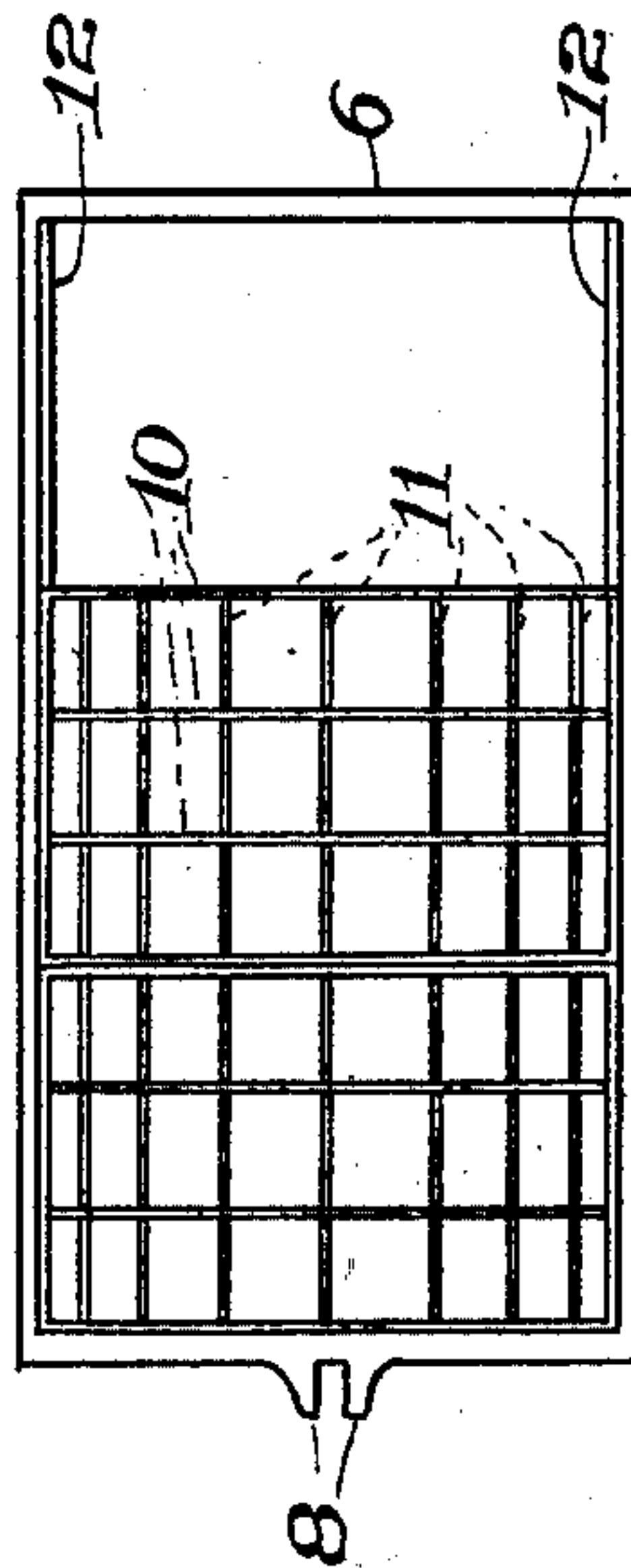
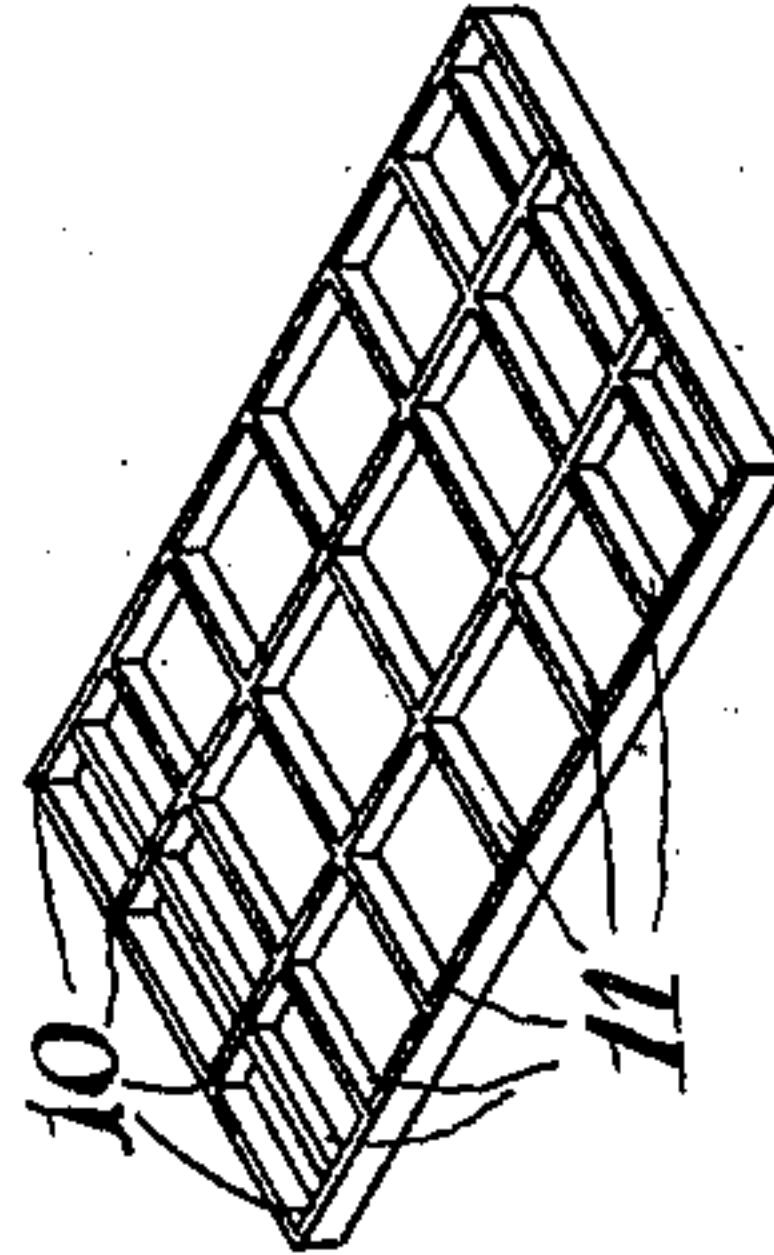


Fig. 5.



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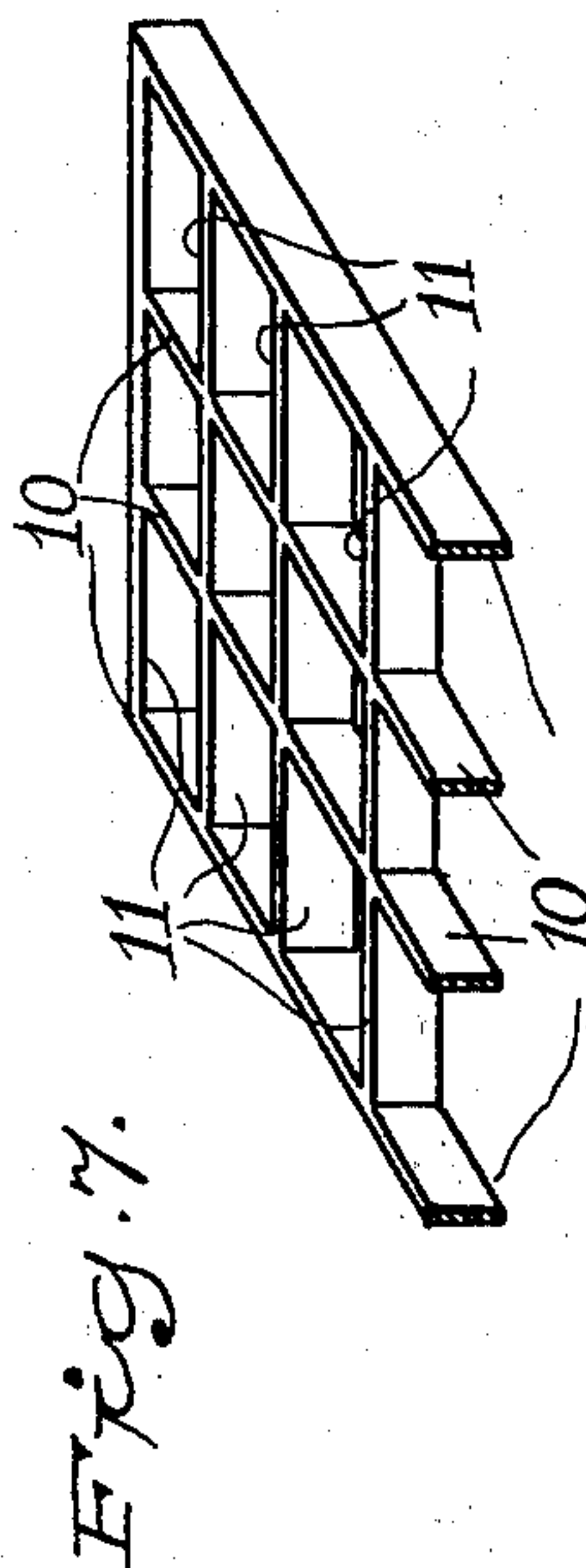
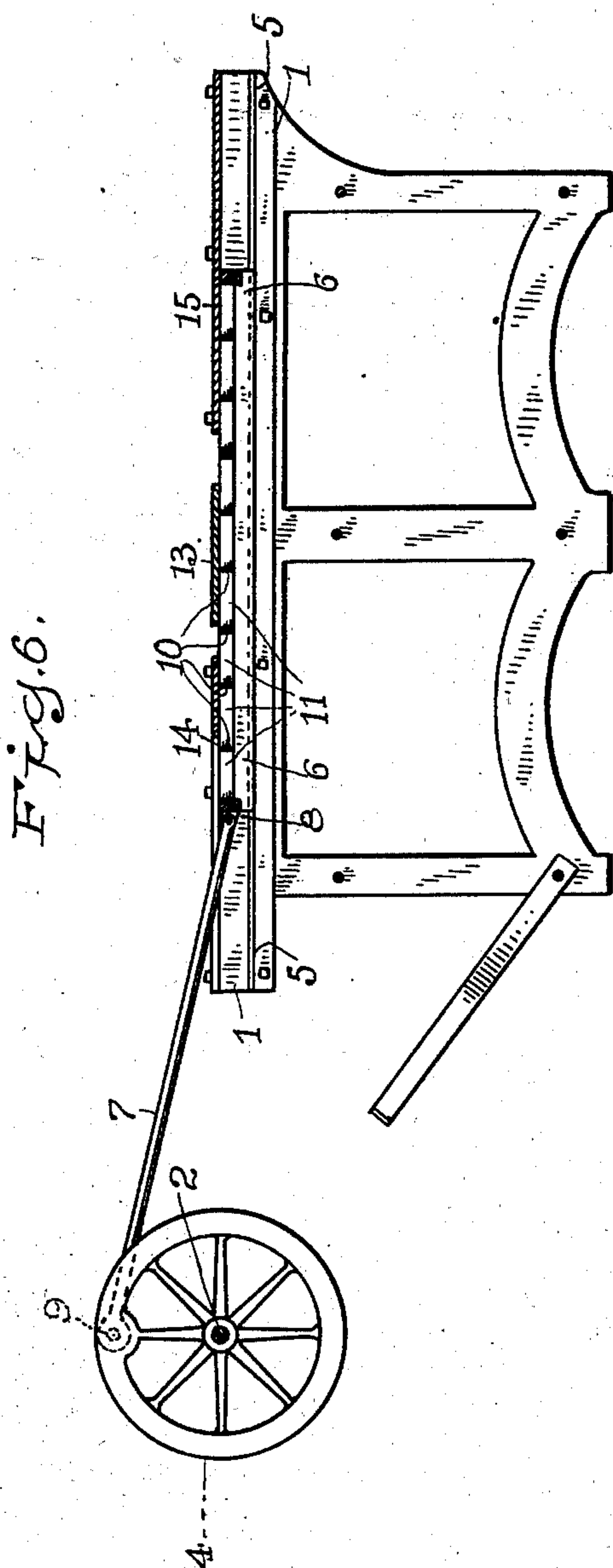
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3 Sheets—Sheet 3.



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UNITED STATES PATENT OFFICE.

LAWRENCE H. BROWNSSELL, OF BREWSTER, NEW YORK.

MACHINE FOR CLEANING BRICKS.

SPECIFICATION forming part of Letters Patent No. 698,627, dated April 29, 1902.

Application filed June 12, 1901. Serial No. 64,313. (No model.)

To all whom it may concern:

Be it known that I, LAWRENCE H. BROWNSSELL, a citizen of the United States, residing at Brewster, in the county of Putnam and State of New York, have invented certain new and useful Improvements in Machines for Cleaning Brick; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to certain new and useful improvements in machines for cleaning bricks, and has for its object to provide a very simple and economical machine for accomplishing this result, and will be best understood from the following description, reference being had to the accompanying drawings, which form a part of this application, and in which—

Figure 1 is a side elevation of my improved machine; Fig. 2, a plan view; Fig. 3, an end view; Fig. 4, a detail plan illustrating the reciprocatory frame which carries the scrapers and cutters. Fig. 5 is a detail perspective showing one of such scrapers and cutters; Fig. 6, a vertical longitudinal section of my improved machine, and Fig. 7 a detail broken perspective showing one of the combined scrapers and cutters on an enlarged scale.

Similar numbers of reference denote like parts in the several figures of the drawings.

Bricks which have once been used are covered with mortar, which adheres to their faces, and these bricks are not available for further use until the mortar has been cleaned off.

Various machines have been contrived for cleaning bricks; but these machines are, for the most part, quite complicated and are, many of them, automatic in their operation, and frequently the bricks have to be passed several times through these machines before the complete cleaning is effected, and also bricks that have only very little mortar adhering to them must be subjected to the same operations as bricks whose faces are covered with considerable mortar. Also while some of the machines heretofore used will certainly remove the mortar from bricks it is also true that such machines will likewise, in many instances, remove the surface of the bricks

themselves, so that the latter will not be uniform.

It is the object of my present invention to provide a machine in which the bricks can be cleaned without disturbing the surface of the bricks themselves, and, moreover, the bricks may be inspected at all times during the operation of cleaning.

Referring to the drawings which illustrate my machine, 1 is any suitable bed, at one end of which is journaled a shaft 2, which carries a power-pulley 3 and a crank-wheel 4.

Secured to the inside of this bed and on opposite sides are tracks 5, and resting on these tracks in such manner as to be capable of free movement is a reciprocatory frame 6.

7 is a pitman whose ends are pivoted, respectively, to lugs 8, extending from one end of the frame and to a crank-pin 9, carried by the wheel 4, so that it will be clearly understood that the revolution of this wheel will effect the reciprocatory movements of the frame.

I employ scrapers and cutters for removing the mortar, which scrapers and cutters are fashioned after the manner of an ordinary grate-bar and are arranged in sections which rest upon a suitable ledge in the frame 6, so that the reciprocation of the latter will carry with it the scrapers and cutters.

10 represents the scraper-bars, and 11 the cutter-bars, which are cast in sections like a grate-bar, each section being placed upon ledges 12 within the frame 6 and on opposite sides thereof.

13 is a gage-plate secured on top of the bed 1 immediately over the frame 6, the opposite sides of said plate being provided with corresponding jogs for the purpose presently to be explained.

14 15 are auxiliary gage-plates adjustably secured on top of the bed 1 and on opposite sides of the plate 13. These plates 14 15 are separated from the plate 13 by spaces which are sufficient to permit of the placing of the bricks at their widest and narrowest diameters snugly between the plates 14 15 and the plate 13 on each side of the latter, as will be clearly understood by reference to Fig. 2. The machine, as shown in the drawings, is so constructed that two men can operate on

it, one at each side, and the wide spaces can be made sufficiently long to allow an operator to place therein two or three bricks end to end, so that one operator can clean the corresponding surfaces of three bricks at one time. The ends of the bricks are cleaned by simply inserting them within the clear spaces between these plates, and in all instances where the bricks are cleaned the operator simply inserts them properly and exerts a pressure upon them with his hands. As the frame 6, which carries the cutters and scrapers, reciprocates the cutters will plow through the mortar, and thereby release and crumble the same, while the scrapers will cleanly remove such mortar. Scrapers alone would not clean the bricks quickly and effectively, since the mortar quickly adheres in very hard lumps, and these scrapers would merely ride over these lumps without removing them; but the provision of the cutters renders the cleaning operation exceedingly quick and effective. My main object in making these scraper and cutter bars in sections is that the breaking of one of these bars can be remedied by simply supplying a new section, and therefore it is not necessary when a scraper or cutter bar becomes broken to supply a whole new system of such bars.

As the edges of the plates 13, 14, and 15 become worn away by contact with the bricks the plates 14 and 15 are merely adjusted a little nearer to the plate 13, so as to compensate for this wear.

It will be observed that the cutter-bars near the sides of the frame 6 are closer together than the middle cutter-bars, and whenever mortar is particularly hard and stubborn the brick may be shifted to the side of the machine, so that more cutters may operate upon the mortar, and this of course will serve to crumble the mortar more quickly, so that it can be removed by the scrapers.

I have shown in the drawings means for reciprocating the frame 6 in straight lines; but of course this frame may be suitably shaped and connected up so as to revolve in a horizontal plane, all of which would be within the range of very ordinary mechanical skill and would be fully within the scope of my invention, and I therefore do not wish to be limited to a straight reciprocation of this frame, since it is merely necessary that the frame should travel beneath the bricks.

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

1. In a machine for cleaning mortar from bricks, the combination of the bed of the machine having secured thereto suitable tracks, the frame resting on said tracks and capable of free movements thereon, the combined cutter and scraper bars which cross each other and are supported within and carried by said frame, the gages secured to the top of said bed immediately above said frame, and means for imparting reciprocatory movements to said frame, substantially as set forth.

2. In a machine for cleaning mortar from bricks, the combination of the bed having suitable tracks secured thereto, the frame resting upon said tracks and capable of free movements thereon, the combined cutter and scraper bars which cross each other and are supported within and carried by said frame, the central gage-plate secured on top of said bed and having corresponding jogs in its opposite edges, the auxiliary adjustable gage-plates bolted on top of said bed on opposite sides of the central gage and separated from the latter by predetermined spaces, and means for imparting reciprocatory movements to said frame, substantially as set forth.

3. In a machine for cleaning mortar from bricks, the combination of the bed of the machine having secured thereto on its inside suitable tracks and having journaled at one end a shaft, the power-pulley and crank-wheel carried by said shaft, the frame resting upon said tracks and capable of free movements thereon, the combined cutter and scraper bars which cross each other and are supported within and carried by said frame, the pitman whose ends are respectively pivoted to said frame and to a crank-pin carried by said wheel, the central gage bolted to the top of said bed and having corresponding jogs in its opposite edges, and the adjustable auxiliary gage-plates also bolted to the top of said bed and normally separated from the central gage-plate by predetermined spaces, substantially as and for the purpose set forth.

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

LAWRENCE H. BROWNSSELL.

Witnesses:

THEODORE B. PHELPS,
MILLS REYNOLDS.