

No. 709,382.

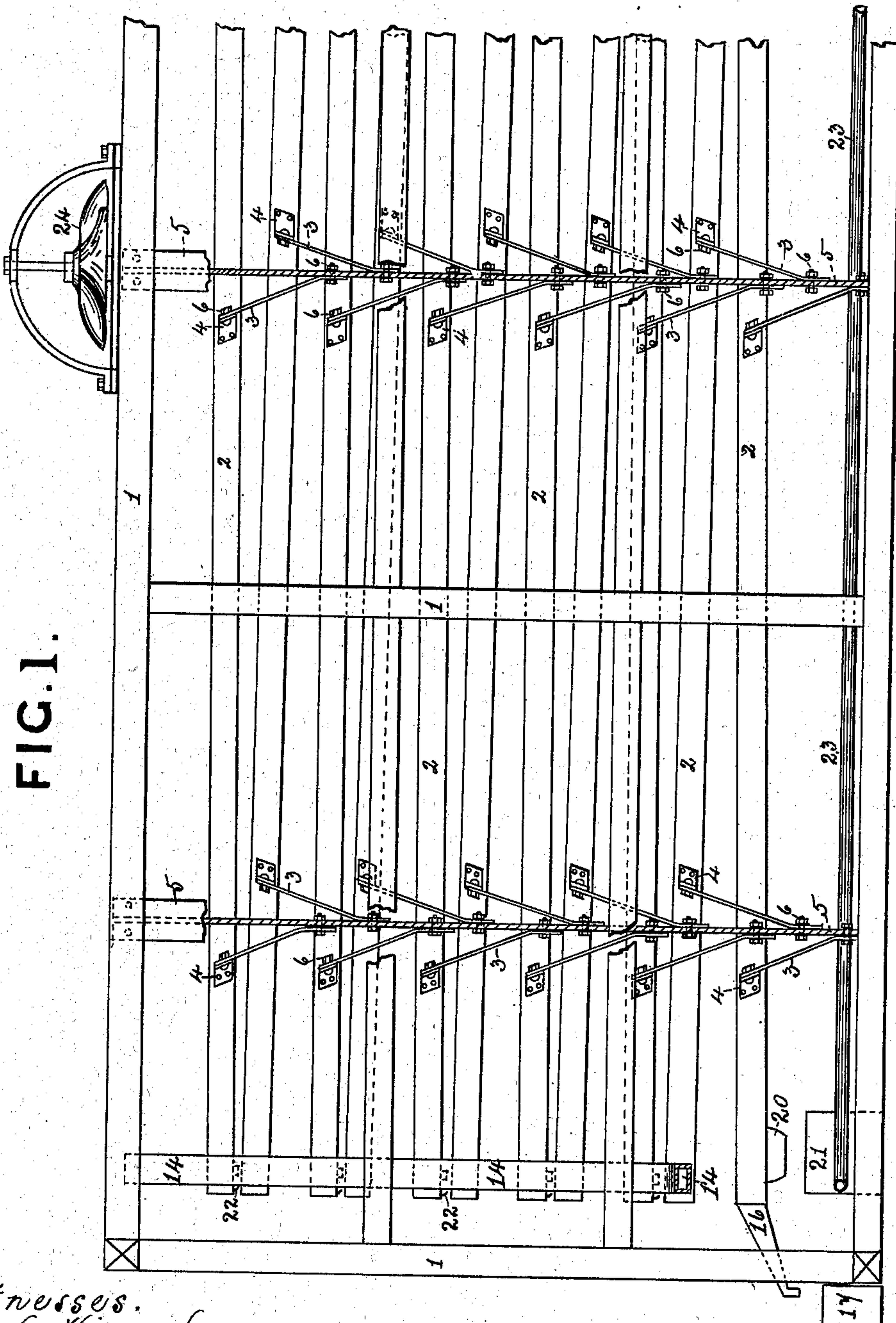
Patented Sept. 16, 1902.

W. L. WHITE.  
SWEETMEAT MACHINE.

(Application filed Feb. 24, 1902.)

(No Model.)

6 Sheets—Sheet 1.



Witnesses.  
Louis E. Kippax.  
Fred H. Rhodes.

Inventor.  
William Lambert White

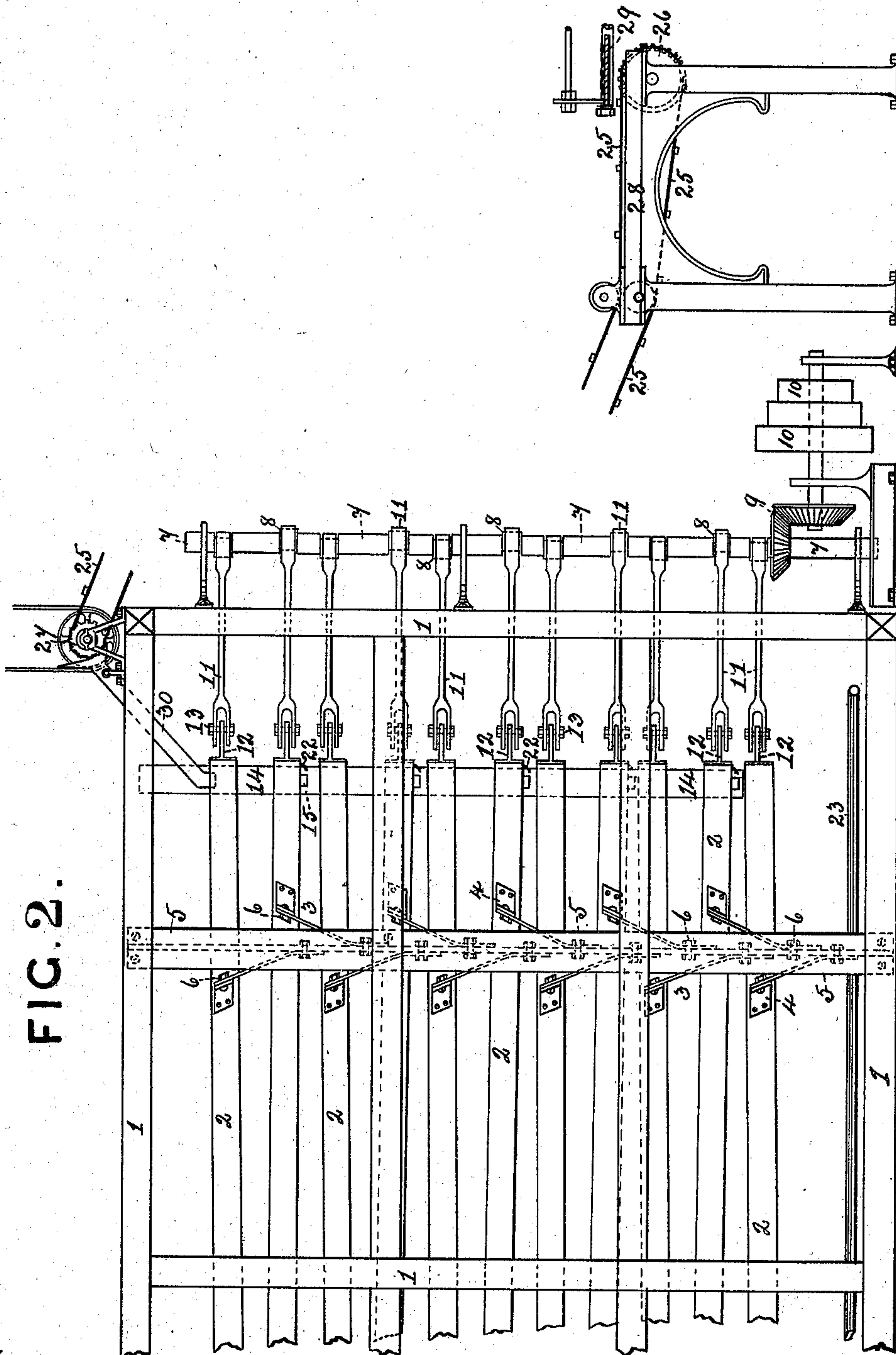
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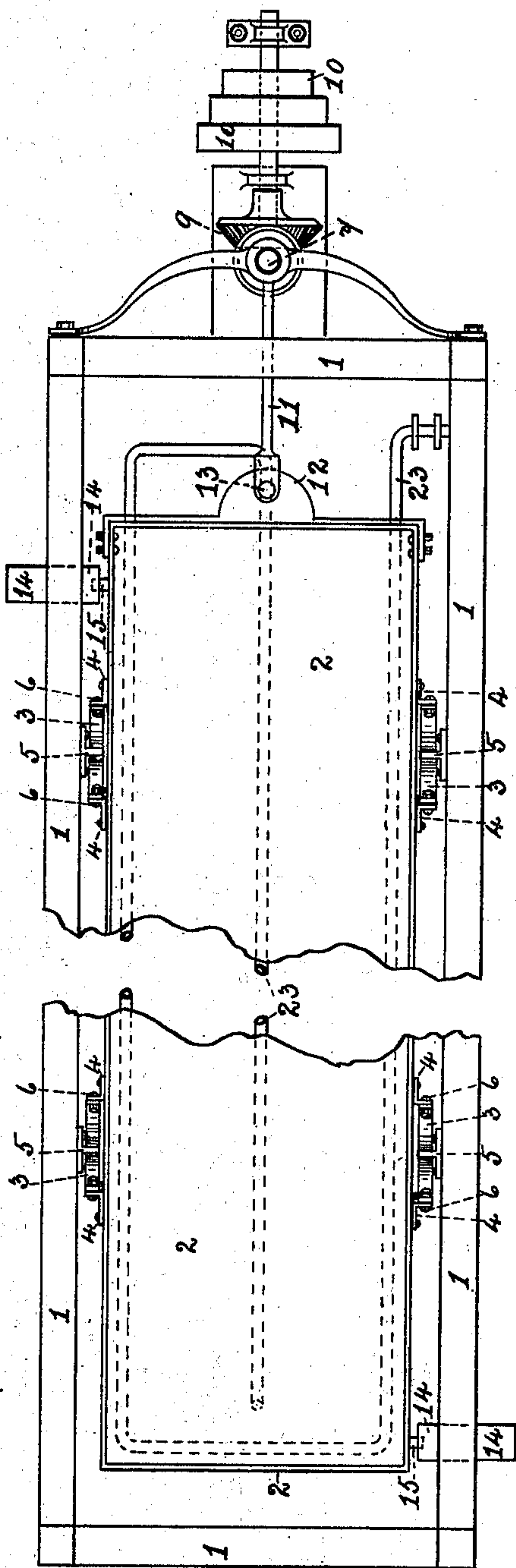
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FIG. 3.



Witnesses:  
Louis E. Kippax.  
Fred H. Rhodes.

Inventor.  
William Lambert White

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FIG. 4.

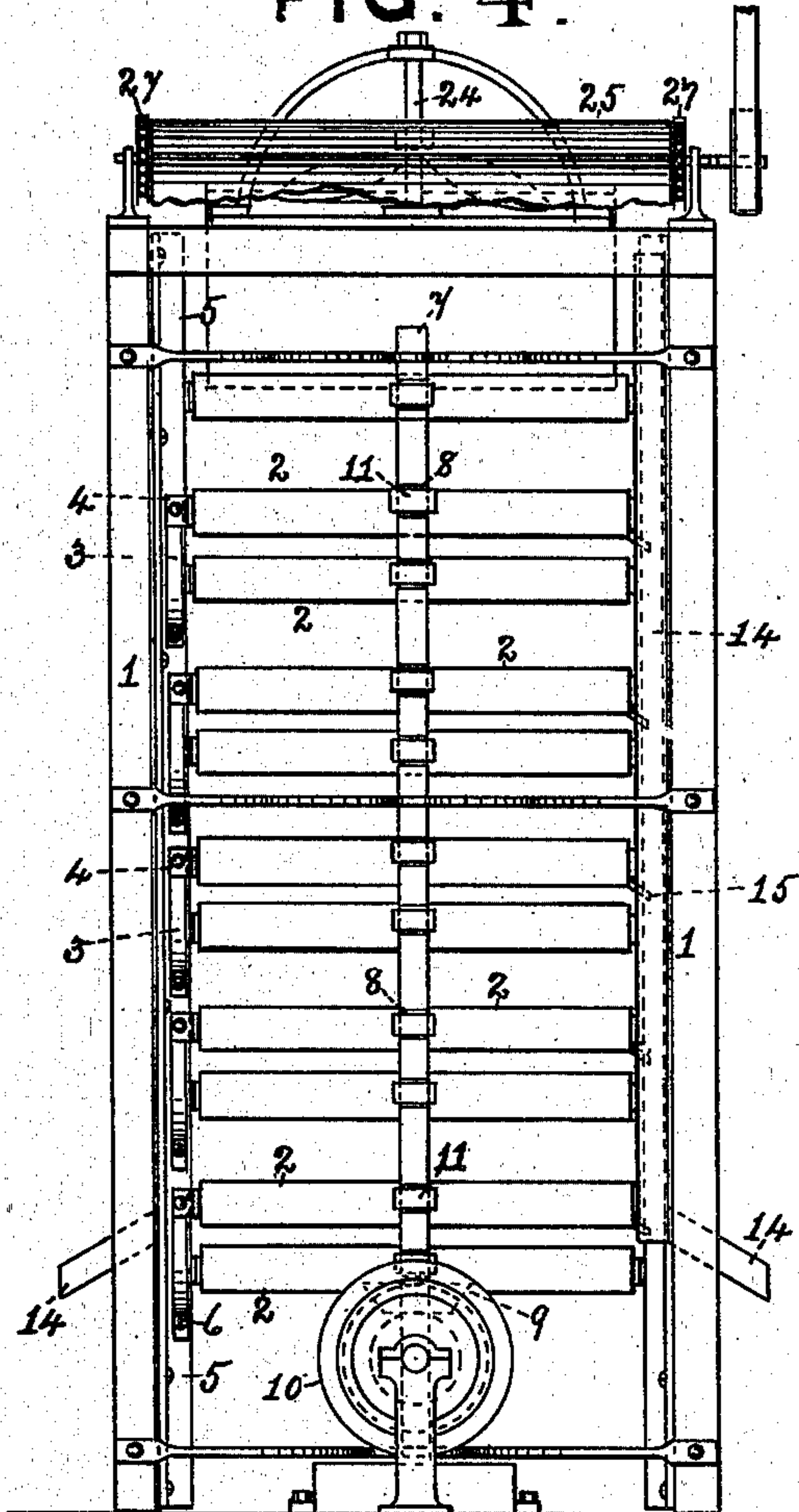


FIG. 5.

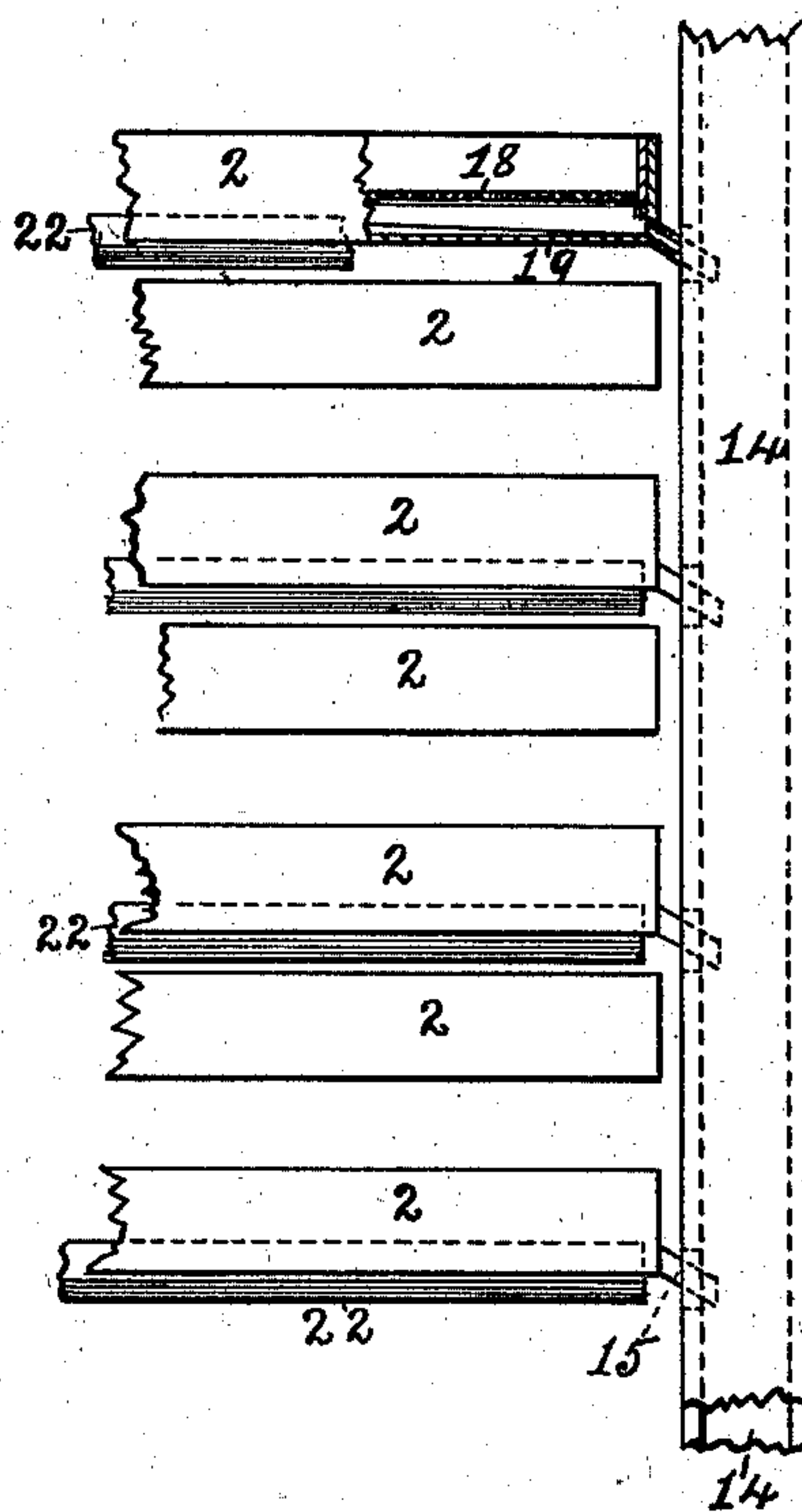
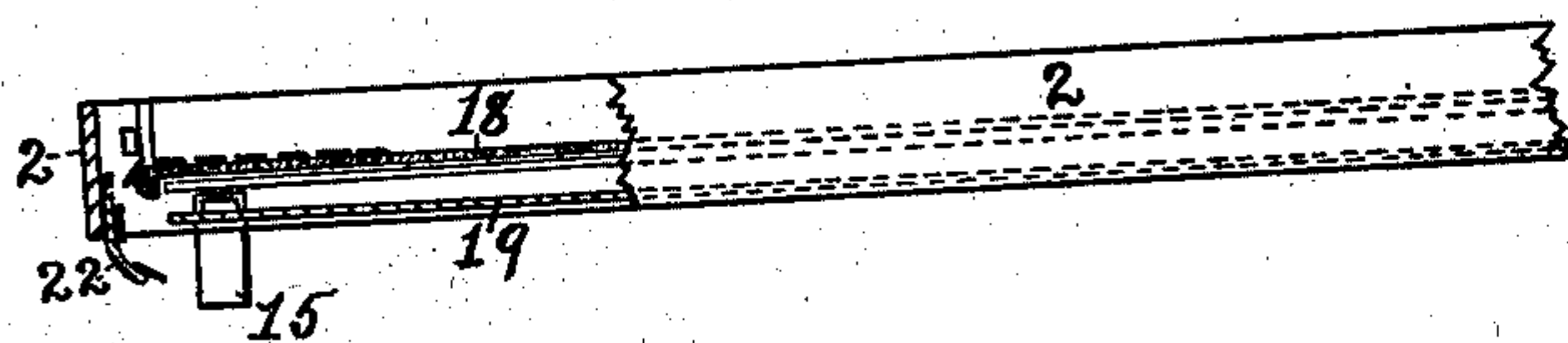


FIG. 6.



Witnesses.  
Louis E. Kippax.  
Fred H. Rhodes.

Inventor.  
William Lambert White



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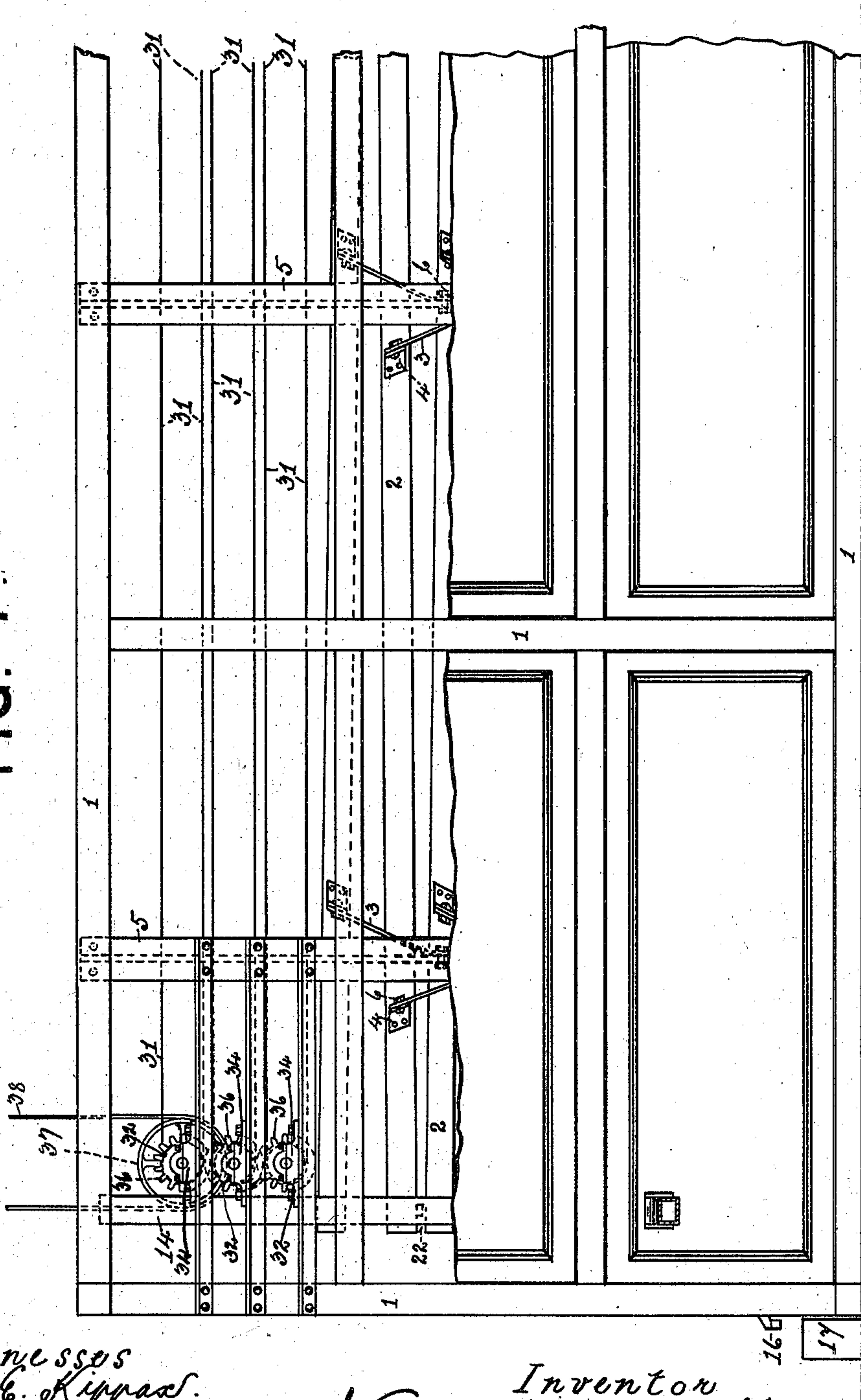
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6 Sheets—Sheet 5.

FIG. 7.



Witnesses  
Louis C. Kippas.  
Fred H. Rhodes.

Inventor  
William Lambert White

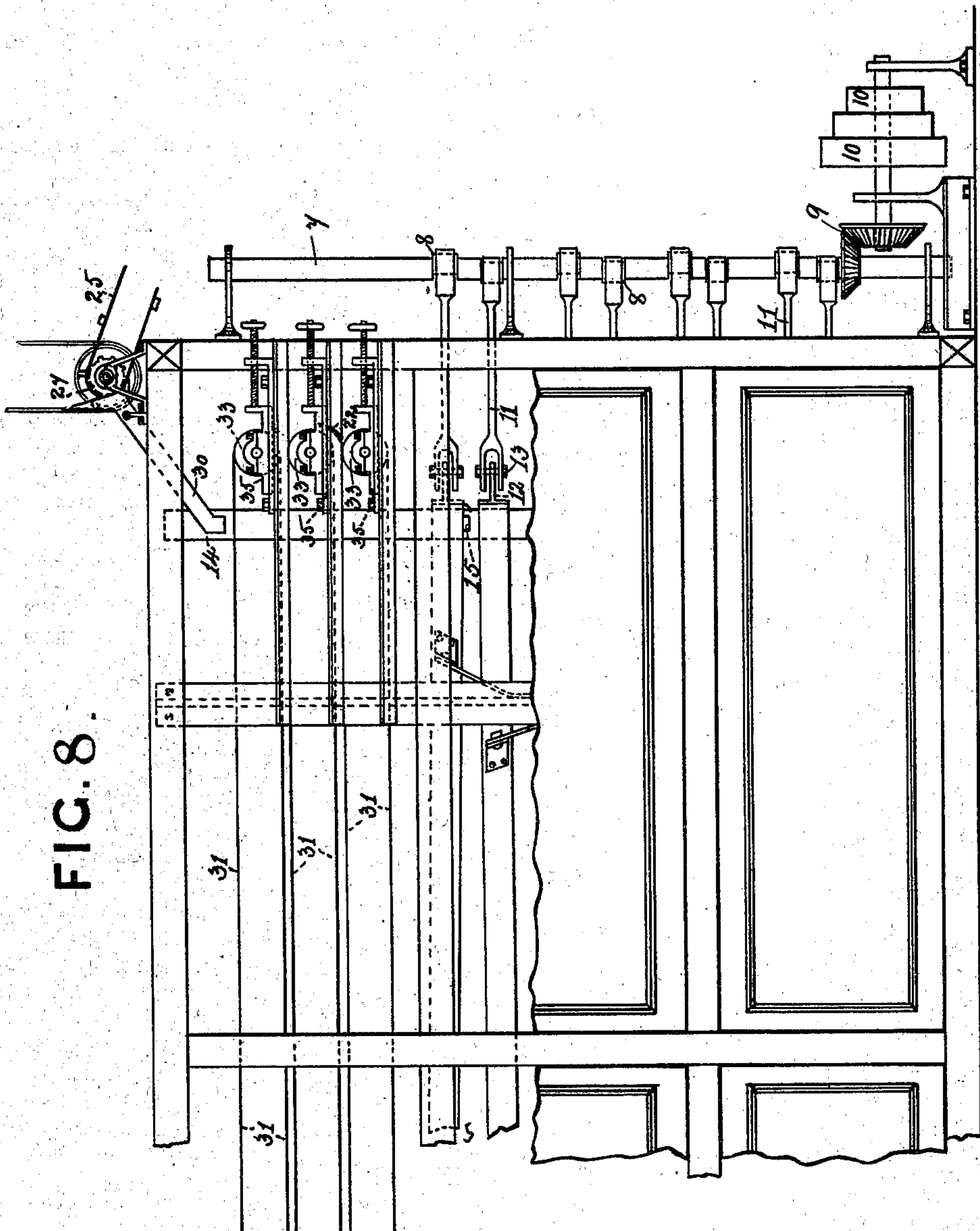
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6 Sheets—Sheet 6.



Witnesses  
Louis C. Kippax.  
Fred H. Rhodes.

Inventor.  
William Lambert White



# UNITED STATES PATENT OFFICE.

WILLIAM LAMBERT WHITE, OF HEDON, NEAR HULL, ENGLAND.

## SWEETMEAT-MACHINE.

SPECIFICATION forming part of Letters Patent No. 709,382, dated September 16, 1902.

Application filed February 24, 1902. Serial No. 95,426. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM LAMBERT WHITE, a subject of the King of Great Britain, residing at Hedon, near Hull, in the county of York, England, have invented new and useful Improved Apparatus for Drying and Cleaning Lozenges or Sweetmeats of a Like Nature, of which the following is a specification.

10 This invention has reference to lozenges or sweetmeats, more particularly of the kind which are cut or formed by cutting, stamping, or shaping machines and have upon their surface a coating of farina, starch, or powder after leaving such machines; and my  
15 said invention has for its object to provide apparatus for removing the starch, farina, or powder from such sweetmeats and to dry the said sweetmeats at one operation and  
20 without the employment of a number of hands for gathering the sweetmeats into trays as they come from the cutting-machine, thereby dispensing with the intermediate process of resting on trays within storing-chambers  
25 for drying such sweetmeats, as is necessary under the system at present in vogue, my apparatus being of such a character that after the sweetmeats have passed through it they come out dried with the coating of powder re-  
30 moved from them, and having a polished surface which imparts to them a highly-finished appearance.

Figure 1, Sheet 1, represents in side elevation part of my improved apparatus, the  
35 paneling of frame being removed. Fig. 2, Sheet 2, is a continuation of Fig. 1, Sheet 1. Fig. 3 represents a plan view, the apparatus being broken to enable it to be shown on one sheet. Fig. 4 represents an end view. Fig.  
40 5 represents a side view of one of the downtakes for receiving the farina from the chutes fixed at the side of the shakers, and also shows parts of seven of such shakers, one of such shakers being partly in section, the  
45 outlets of four being shown within the slots provided for them in such downtake. Fig. 6 represents part of one of the shakers in section, showing the false bottom and the tipping-piece for turning the sweetmeats. Fig.

7, Sheet 5, represents in side elevation a modified form of apparatus in which three belt conveyers are shown as substituted for three of the trays or shakers; and Fig. 8, Sheet 6, is a continuation of Fig. 7. Figs. 5 and 6 are drawn to a larger scale than Figs. 1, 2, 3, 4, 7, and 8.

I construct my improved apparatus as follows:

I place within a suitable frame 1, which has its sides and ends filled in with paneling, canvas, or other suitable material or substance, any suitable number of trays or shakers 2, each of which starting from the top is inclined in an opposite direction to the next under it and each of which is suspended  
65 or supported within the frame by any suitable number of springs, supports, or the like 3, which allow of a backward-and-forward motion of the trays or shakers when in operation. The drawings show springs as  
70 being employed, one end of each spring being fixed to preferably a bracket 4 on the shaker and the other end to a bracket 5, preferably T-shaped in section, fitted to the frame, the method of fixing the springs to  
75 their respective brackets being by means of bolts 6 or other suitable device. At one end of the frame I employ a vertical shaft 7, having a number of cranks 8 and driven by bevel or other suitable gearing 9 from driving-pulleys or the like 10. Connecting-rods  
80 11 run from the cranks 8 of the shaft 7, to the front ends of the trays or shakers, where they are connected to projections 12 by bolts, pins, or the like 13. At or near either end of the  
85 apparatus I employ a downtake 14, which may both be on the same side or opposite sides, as desired, each downtake having a suitable number of elongated inlets into which pass delivery-spouts 15, fitted at the lowest end of the  
90 shakers, the spout on the lowest end of the top shaker passing into the top inlet in the downtake at that end, the spout of each alternate shaker entering an inlet in the same downtake; but the bottom shaker has not  
95 any connection with either downtake, but has a spout 16 at its end for delivering the complete sweetmeats when finished into suit-



able receptacles 17. Each shaker is provided with a surface 18, of canvas or any suitable material formed in suitable lengths, each length being mounted in separate side frames 5 to allow of their removal in sections, each shaker being provided also with a preferably removable bottom 19 underneath the canvas, or the like, of tin or any suitable metal, material, or substance, which has a dished part 10 formed in it leading to the outlet or spout to guide the starch, farina, or powder to such outlet. Neither the canvas surface nor the removable bottom are carried quite to the extreme lower end, a suitable space being 15 left for the sweetmeats to fall through into the shaker beneath, with the exception of the bottom shaker, which, it will be understood, does not require such a space, as the sweetmeats are finished when they pass out at the 20 spout 16. The matter which falls on the bottom of the lowest shaker is delivered through a hopper 20 into a suitable receptacle 21 underneath. Each shaker, with the exception of the bottom one, is provided at its lowest 25 end with a bent strip 22 of any suitable metal, material, or substance for turning over those sweetmeats which have a flat surface, so that they fall into the next shaker on the opposite side to that on which they moved 30 along in the shaker which they last left. Thus as they fall from shaker to shaker they are turned over on each occasion, both sides of the sweetmeats being thereby alternately uppermost as they pass along each alternate 35 shaker, so that one side gets cleaned and polished by frictional contact with the canvas surface as the sweetmeats pass along one shaker and the other side is similarly cleaned and polished as they pass along the shaker 40 next below. A steam or hot-air pipe or the like 23 is run around the inside of the casing, preferably at or near the bottom, for supplying the necessary heat for drying the sweetmeats, and a fan 24 is employed in any suitable 45 position for drawing the heat up and circulating it among the shakers.

The sweetmeats are fed into the top shaker by means of a conveyer 25, which runs over preferably-toothed wheels 26 and 27, mounted 50 on the top of the apparatus and on a frame or platform 28, respectively, such frame or platform fitting up to the delivery end of the cutting-machine. The sweetmeats pass from the cutters or stampers of such machine onto 55 the delivery-plate 29 of the machine, which projects over the conveyer 25, at or near its bottom end, the sweetmeats falling from the delivery-plate 29 onto the conveyer 25, which is straight for a suitable distance to enable 60 broken or irregular pieces to be picked out. The sweetmeats are carried up and delivered by a spout or chute 30 into the top shaker, down which they gradually work until they get to the lowest end, whence they 65 fall through an opening into the shaker next below, first sliding down the turning-piece,

which turns them over. The said sweetmeats thus pass down each shaker from the top one to the bottom one, each shaker having an oscillating motion imparted to it by means of 70 the connecting-rods connected thereto and to the cranked shaft, this oscillating motion, combined with the fact that the shakers slope in opposite directions, causing the sweetmeats to move forward and pass through 75 each succeeding shaker, the sweetmeats out at the delivery end of such bottom shaker being delivered into a suitable receptacle free from the coating of farina, starch, or powder which they had upon them when they left 80 the cutting-machine, thoroughly dried, and having a polished surface which imparts to them a highly-finished appearance. The farina, starch, or powder which has been removed from the sweetmeats passes through 85 the canvas surface onto the bottom of each shaker and is shaken down to each bottom end, where the dished part guides it to the outlet, through which it passes into the down-take, being deposited into a suitable recep- 90 tacle.

In the modification shown at Figs. 7 and 8 three belt conveyers 31 are shown as being substituted for the three top shakers, such belt conveyers running around rollers 32 and 95 33 at opposite ends of the machine and mounted in suitable bearings 34 and 35, respectively, each bearing 35 being preferably adjustable to allow of the belt being tightened if it becomes slack from stretching or any 100 other cause. The three rollers 32 are each provided with a toothed wheel 36, such wheels gearing with each other, the top one or other of such wheels being driven by a pulley 37, by means of a strap 38, from shafting which 105 imparts motion to the other two wheels, the top belt traveling in one direction, the second one in the opposite direction, and the third one in the same direction as the first one. I may employ any suitable number of such belt con- 110 veyers and any suitable number of trays or shakers, or I may dispense with the trays or shakers altogether and employ belt conveyers in their place.

What I claim as the invention, and desire 115 to secure by Letters Patent, is—

1. In a sweetmeat-machine, the combination, with a series of superposed supports for the sweetmeats inclined in opposite directions alternately and provided with false bottoms of textile material which polish the 120 sweetmeats, and means for shaking the said supports; of guides for turning over the sweetmeats as they drop from one support to another, so that the opposite sides of the 125 sweetmeats are alternately dried and polished, substantially as set forth.

2. In a sweetmeat-machine, the combination, with endless traveling conveyer-belts whereon the sweetmeats are dried in the up- 130 per part of the machine, of shaking-supports for the sweetmeats arranged under the said



belts and inclined in opposite directions and  
provided with false bottoms of textile mate-  
rial for polishing the sweetmeats, and guides  
for turning over the sweetmeats as they fall  
5 from one shaking-support to another so that  
the opposite sides of the sweetmeats are pol-  
ished alternately, substantially as set forth.

In witness whereof I have hereunto set my  
hand in presence of two witnesses.

WILLIAM LAMBERT WHITE.

Witnesses:

LOUIS E. KIPPAN,  
FRED H. RHODES.