No. 699,753. Patented May 13, 1902.

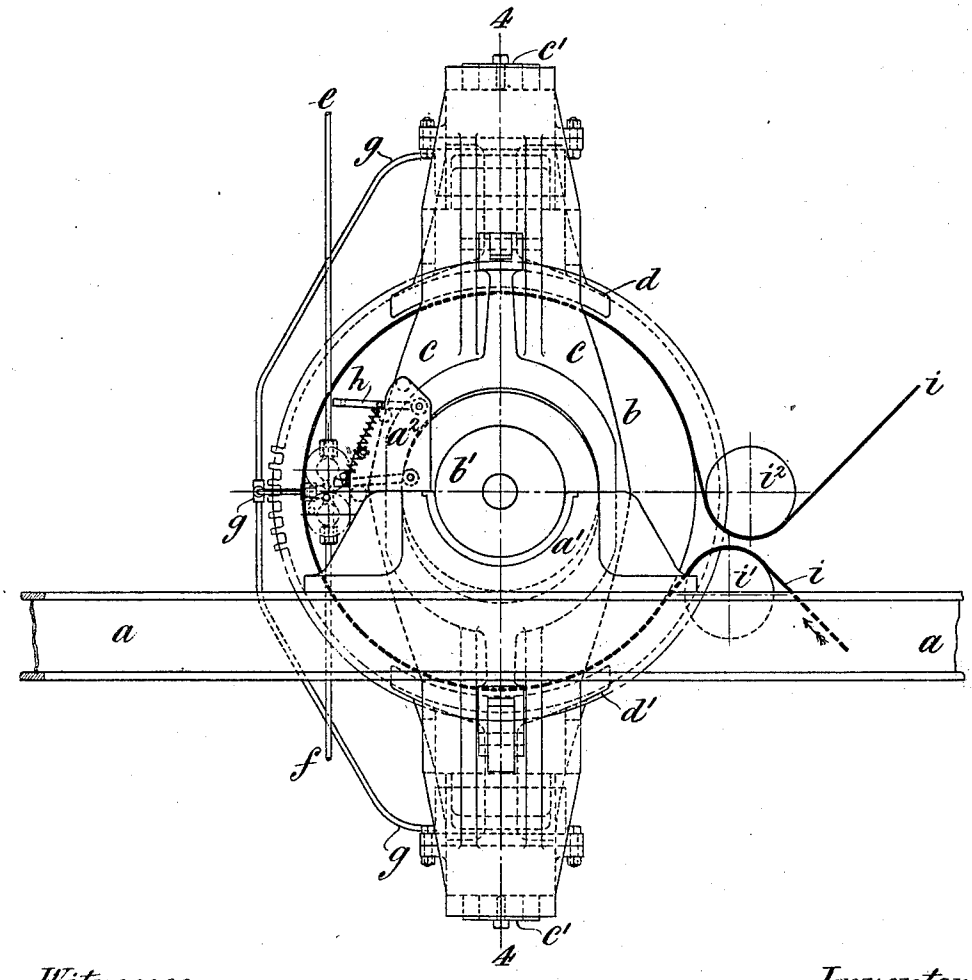
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(Application filed Feb. 27, 1902.)

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Fig. 1.



Witnesses

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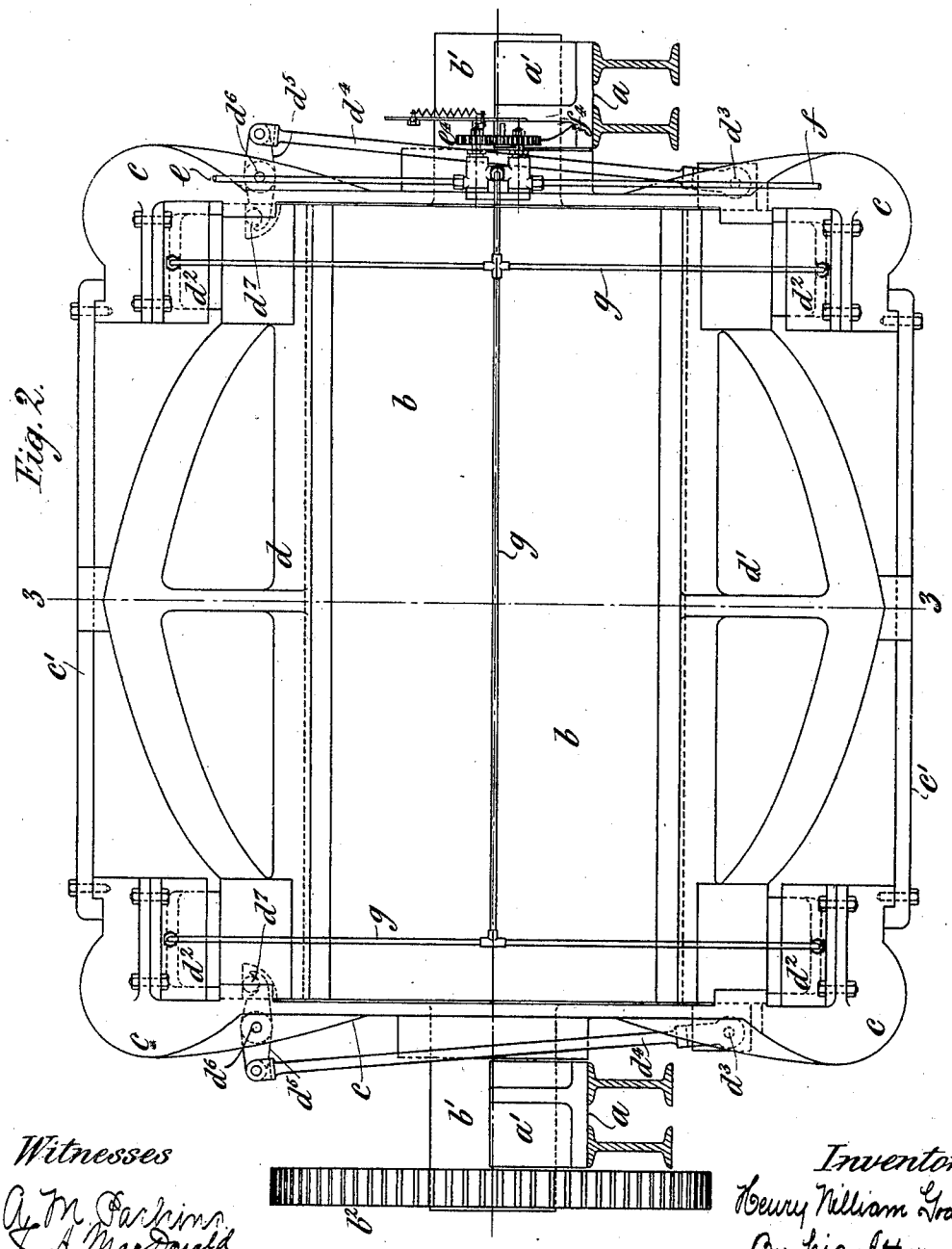
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Fig. 2.



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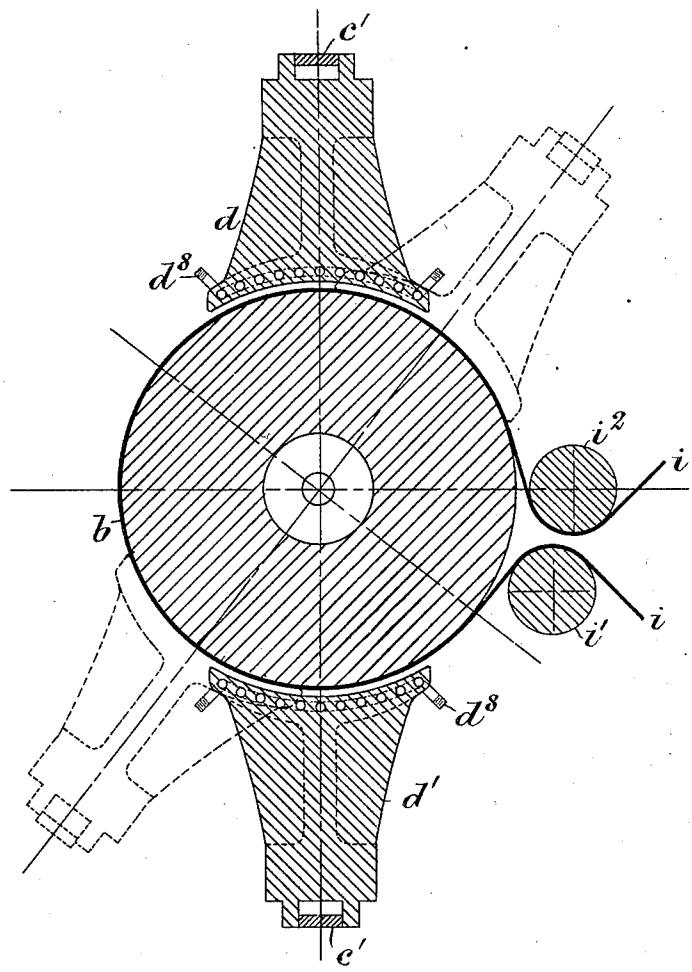
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Fig. 3.



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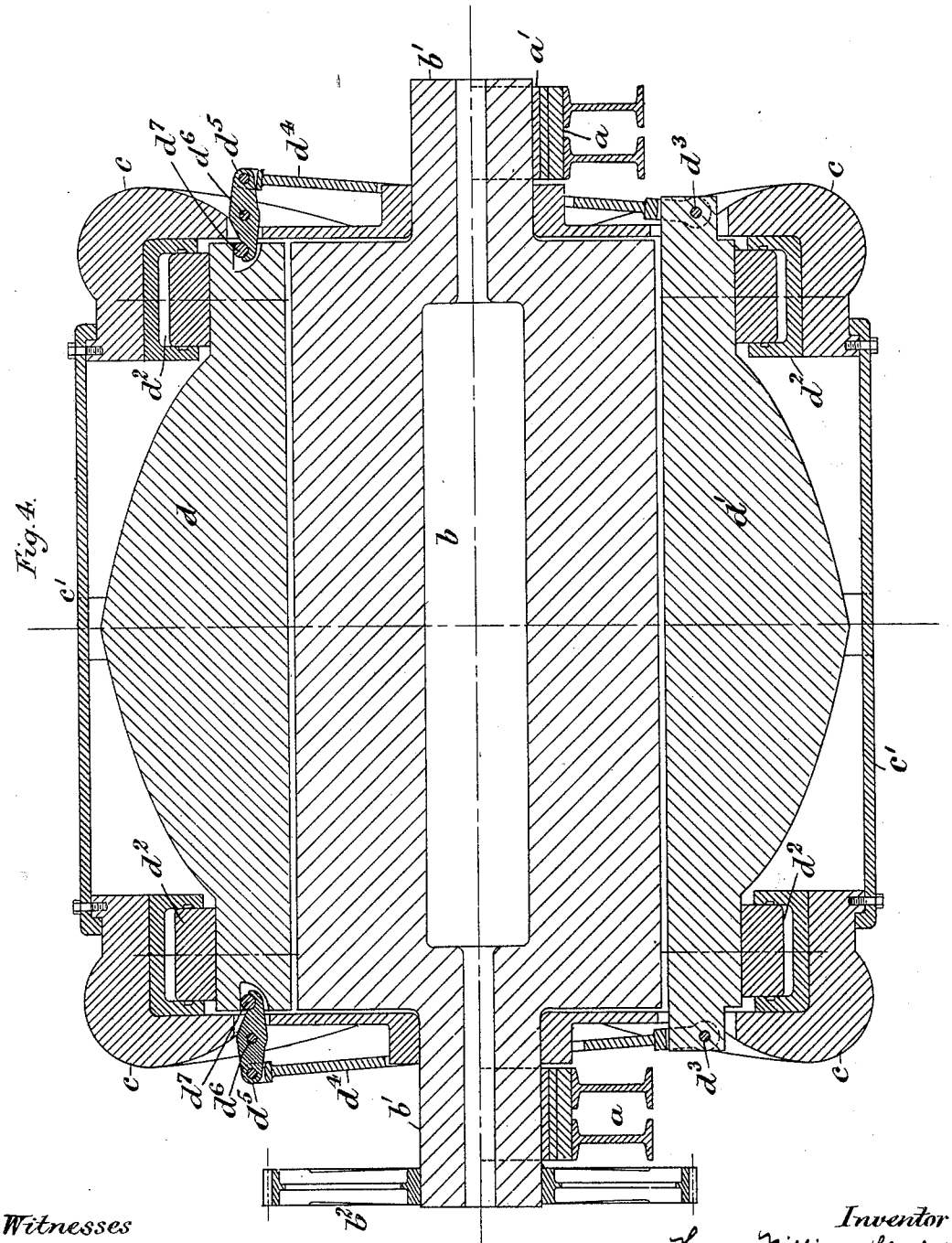
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Application filed Feb. 27, 1902.

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Fig. 4.



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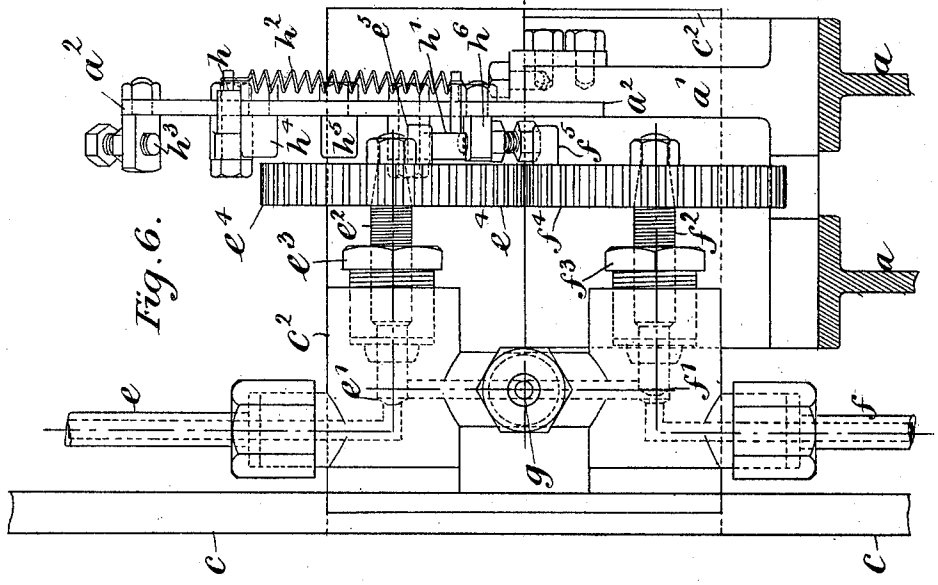


Fig. 6.

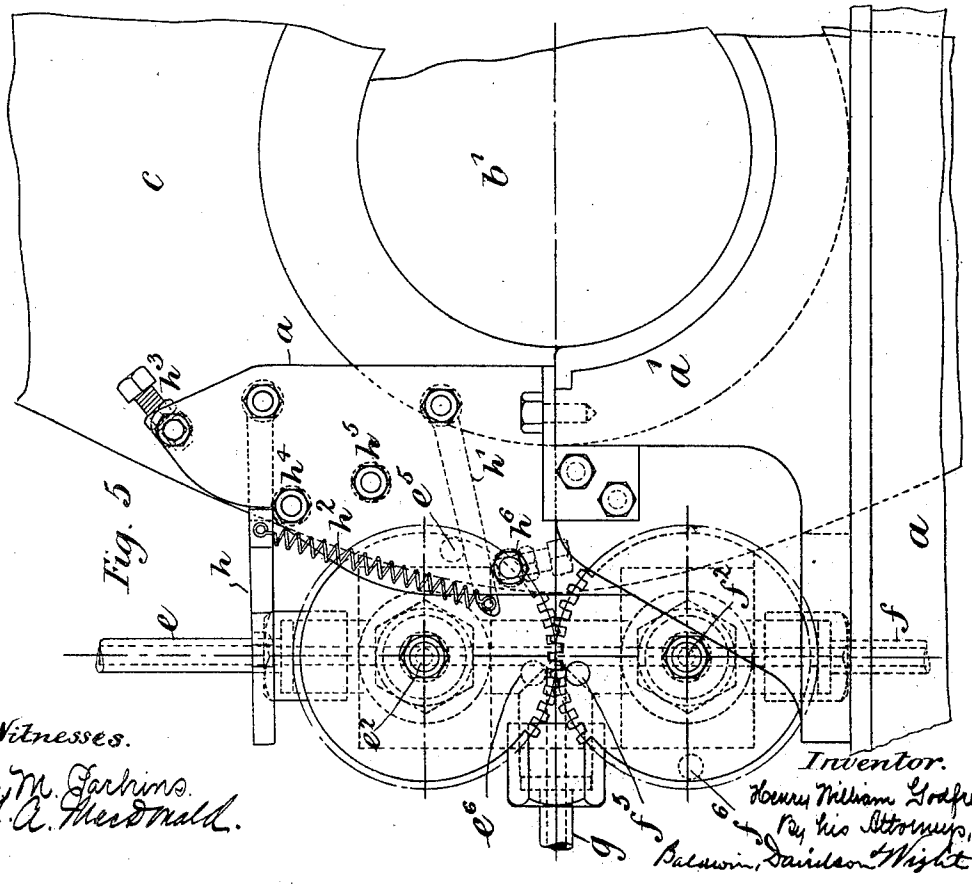


Fig. 5

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UNITED STATES PATENT OFFICE.

HENRY WILLIAM GODFREY, OF STAINES, ENGLAND.

LINOLEUM-PRESS.

SPECIFICATION forming part of Letters Patent No. 699,753, dated May 13, 1902.

Application filed February 27, 1902. Serial No. 95,969. (No model.)

To all whom it may concern:

Be it known that I, HENRY WILLIAM GODFREY, engineer, a subject of the King of Great Britain, residing at Staines, in the county of Middlesex, England, have invented a certain new and useful Linoleum-Press, of which the following is a specification.

According to this invention the linoleum or the like passes around a heated rotating drum, against the surface of which it is pressed by two hydraulic-pressure plates. These plates are connected together and in their normal positions are the one vertically above and the other vertically beneath the axis of the drum; but when water is admitted to them they press the linoleum against the drum and are carried around with it through a small angle. At the end of their travel the supply of water is automatically cut off and the water allowed to escape from the presses. The lower plate is suitably weighted, so that the plates now swing back to their normal position, on reaching which the valves are again operated automatically to admit water. The plates take hold of a new piece of linoleum and are again carried around by the drum. The plates are thus kept continually oscillating, their dimensions and travel being of course so related that no parts of the linoleum shall be missed.

Figures 1 and 2 are front and side elevations of the apparatus. Figs. 3 and 4 are vertical sections on the lines 3 3 and 4 4, and Figs. 5 and 6 are front and side views of the valve mechanism.

a is the framing, carrying in bearings a' the trunnions b' of the drum b, constantly rotated through the toothed wheel b^2. The drum is bored out, as seen in Figs. 3 and 4, so that steam may be supplied to it for heating it. At each end of the drum is a frame c, loosely surrounding the trunnion b', so that it can oscillate upon it. The frames are connected together top and bottom by tie-rods c' and carry two pressure-plates d d', operated by four hydraulic presses d^2. The lower plate d' is made heavier than the upper, so that when the plates cease their grip of the drum the frame c swings back to the position shown in Figs. 1 and 2. Pivoted at d^3 d^3 to the plate d' are links d^4, connected to rocking levers d^5, turning on pins d^6 on the frame c and carrying rollers d^7, bearing against the plate d, so that when the water escapes from the presses the fall of the plate d' lifts the plate d. The plates d d' are concave toward the drum and may, if desired, be fitted with a coil of pipes d^8, as seen in Fig. 3, for cooling purposes.

I will now describe a mechanism for operating the valves which I have found to work well; but I do not limit myself to this arrangement.

e is the main inlet-pipe leading to the valve e'. f is the exhaust-pipe leading from the valve f'. The valves e' f' communicate with the system of pipes g, leading to the four presses d^2, and are operated by screw-threaded stems e^2 f^2, passing through nuts e^3 f^3 on the valve-casing and carrying the pinions e^4 f^4, meshing with one another. The pinions have on them studs e^5 f^5. All these parts are carried by a plate c^2 on one of the oscillating frames c.

On one of the bearings a' is a plate a^2, having pivoted to it two arms h h', connected by a spring h^2, the arm h being suitably cranked, so as not to foul the stud e^5.

h^3 h^4 h^5 h^6 are fixed stops on the plate a^2.

i represents the linoleum, which travels in the direction of the arrow in Fig. 1 over the guide-roller i', around the drum, and under the roller i^2.

The parts are shown at the moment when the valve e' is just about to open. When it has opened, as described below, pressure is admitted to the pipes g, the rams press the plates onto the linoleum around the drum, and the frame and plates swing down to the position shown in dots in Fig. 3. Before this position is reached, however, the stud f^5 comes against the arm h and moves it up, extending the spring h^2, which is not, however, strong enough to move the pinions until they are started by the arm h coming against the stop h^3; but as soon as they are started the spring gives them a good swing around, (owing to the arm h' being against the stop h^5,) lifting the valve f' well off its seat and closing the valve e' hard down. The plate d' now falls and lifts the plate d, and the frame swings back toward the vertical, so bringing the stud e^5

against the arm h' and pulling the arms $h\,h'$ down onto the stops $h^4\,h^6$, so that the pinions are again swung around, opening the valve e' and closing f'. The extreme positions of the pins $e^5\,f^5$ are shown at $e^6\,f^6$.

What I claim is—

1. The combination of a continuously-rotating drum, a frame oscillating upon it, a plate carried by the frame, and means for pressing the plate intermittently against the drum.

2. The combination of a continuously-rotating drum, a frame oscillating upon it, plates carried by the frame, means for pressing the plates intermittently against the drum, and apparatus connecting the plates so that they move in and out together.

3. The combination of a continuously-rotating drum, a frame oscillating upon it, plates carried by the frame, means for pressing the plates intermittently against the drum, a rocking lever pivoted on the frame and bearing against one plate, and a link connecting the lever to the other plate.

4. The combination of a continuously-rotating drum, a frame oscillating upon it, plates carried by the frame, hydraulic presses on the frame acting on the plates, and means for intermittently admitting water to the presses.

5. The combination of a continuously-rotating drum, a frame oscillating upon it, plates carried by the frame, hydraulic presses on the frame acting on the plates, a valve for the presses, and means for automatically operating the valve by the movements of the frame.

6. The combination of a continuously-rotating drum, a frame oscillating upon it, plates carried by the frame, hydraulic presses on the frame acting on the plates, a valve for the presses carried by the oscillating frame, and means carried by the stationary framing for operating the valves.

7. The combination of an oscillating press, a valve moving with the press, a valve-stem operating the valve, a disk on the stem, a stud on the disk, and a spring-arm turning on a stationary pivot and adapted to engage the stud.

8. The combination of an oscillating press, an inlet and an exhaust valve moving with the press, valve-stems operating the valves, pinions on the stems meshing with one another, studs on the pinions, and a spring-arm turning on a stationary pivot and adapted to engage the studs.

9. The combination of an oscillating press, an inlet and an exhaust valve moving with the press, valve-stems operating the valves, pinions on the stems meshing with one another, studs on the pinions, a pair of arms turning on stationary pivots, a spring connecting the arms, and stationary stops for the arms.

HENRY WILLIAM GODFREY.

Witnesses:
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