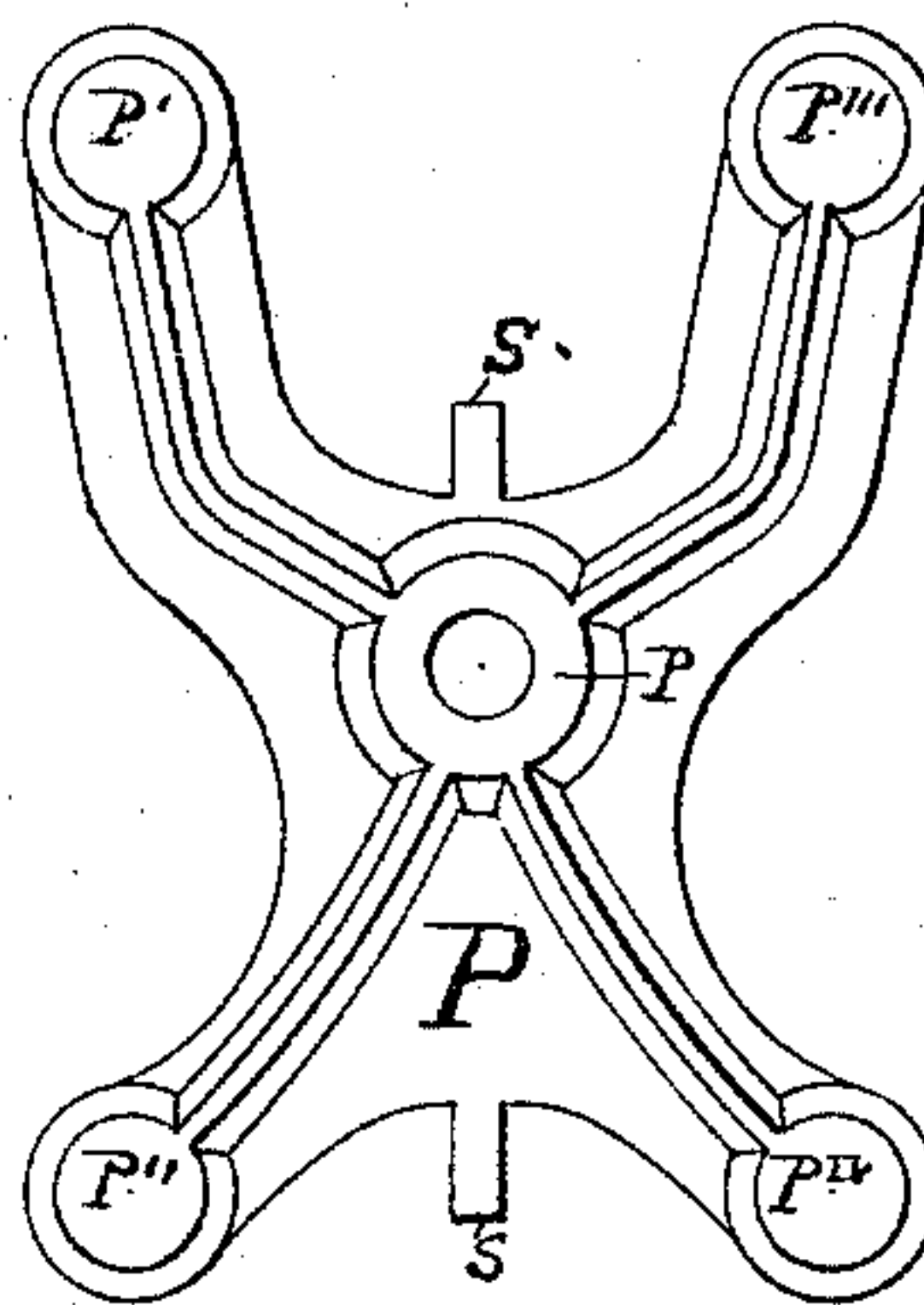
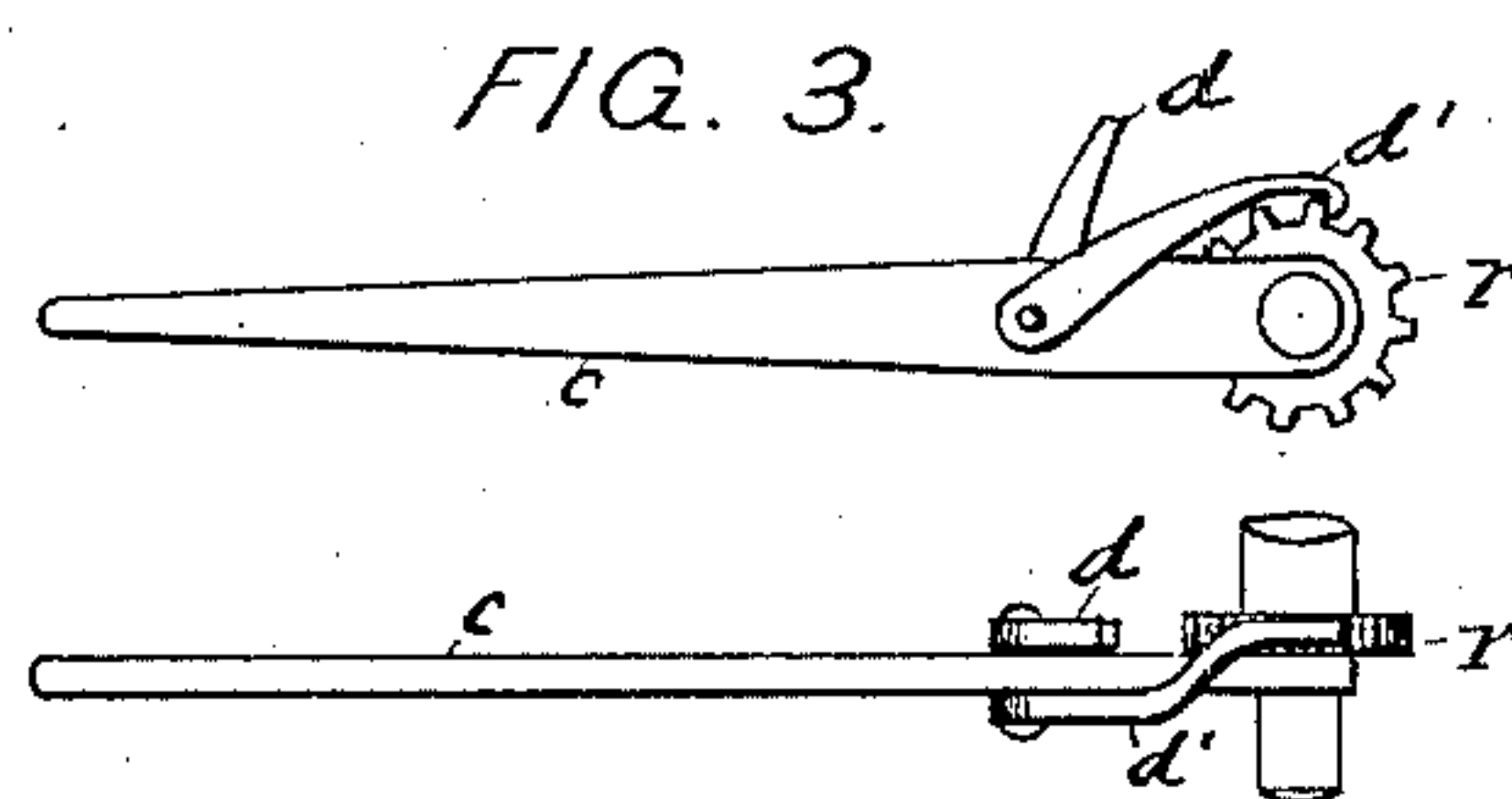
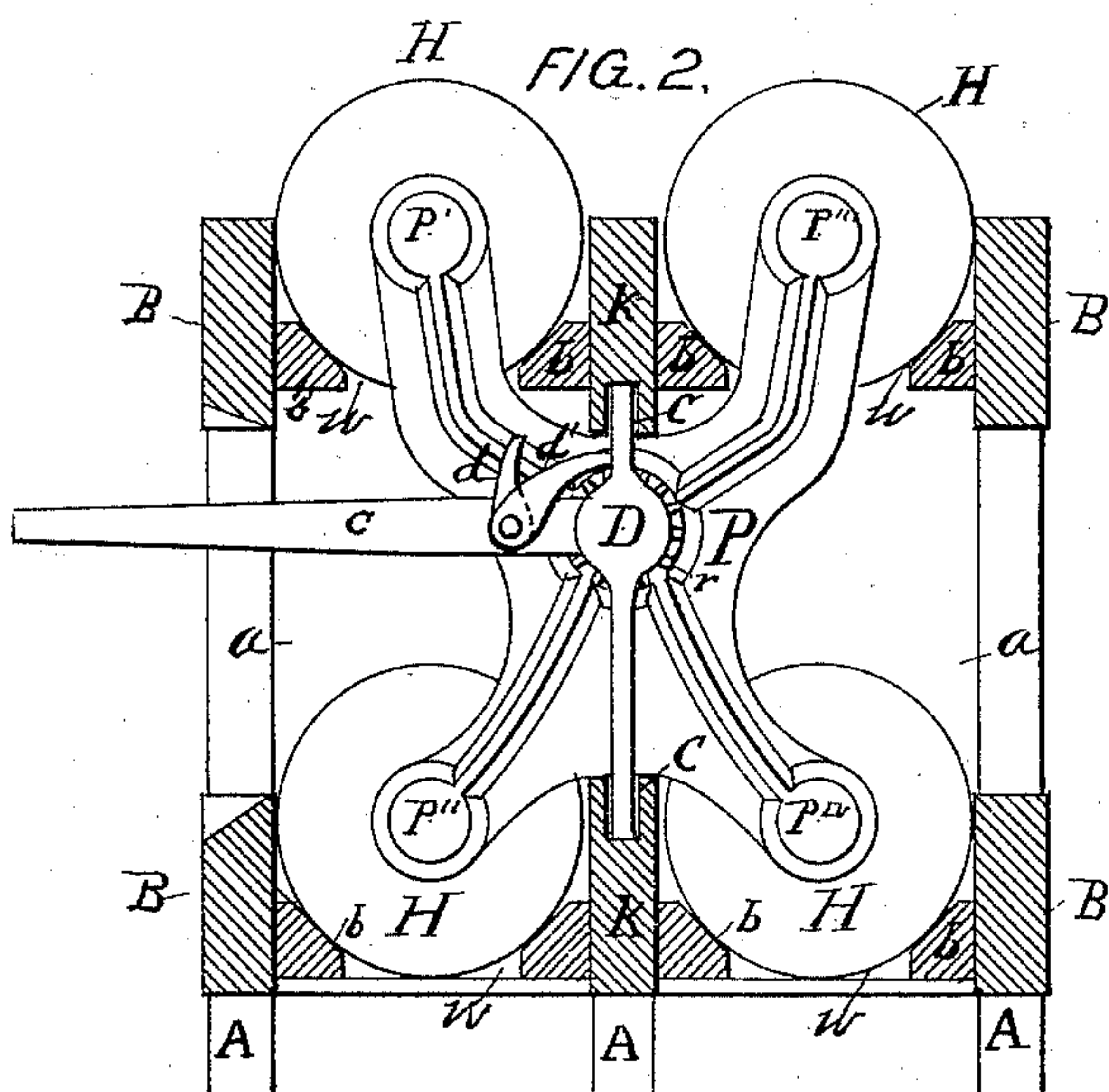
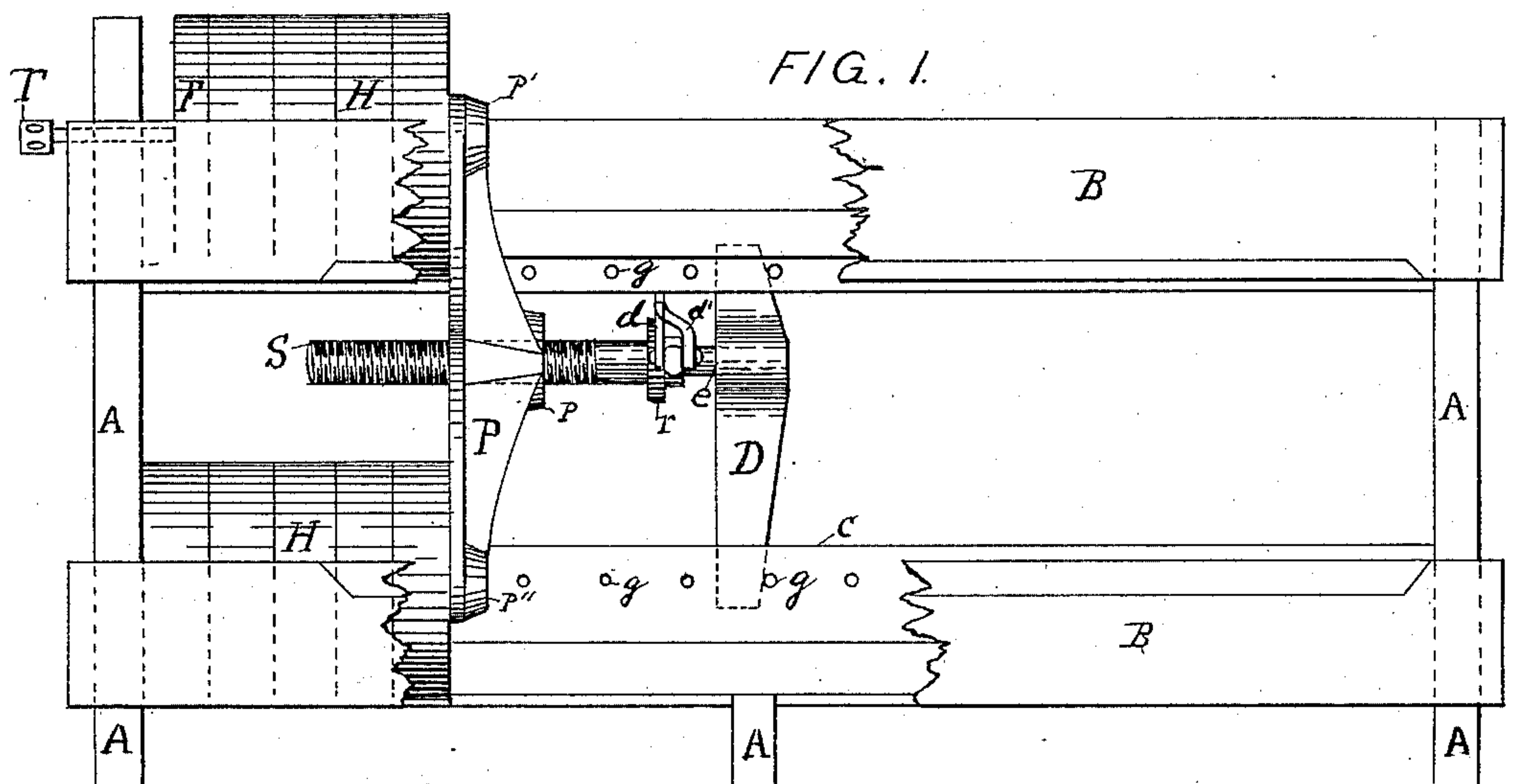


(No Model.)

G. W. HEY.
CHEESE PRESS.

No. 277,839.

Patented May 15, 1883.



WITNESSES

J. H. Gibbs
H. A. Cahill

INVENTOR.

George W. Hey.

UNITED STATES PATENT OFFICE.

GEORGE W. HEY, OF SYRACUSE, NEW YORK, ASSIGNOR OF ONE-HALF TO
CHARLES H. DUELL, OF SAME PLACE.

CHEESE-PRESS.

SPECIFICATION forming part of Letters Patent No. 277,839, dated May 15, 1883.

Application filed April 13, 1883. (No model.)

To all whom it may concern:

Be it known that I, GEORGE W. HEY, of Syracuse, in the county of Onondaga, in the State of New York, have invented new and
5 useful Improvements in Cheese-Presses, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

My improvement relates to the class of
10 cheese-presses termed "gang-presses," in which several cheese-hoops filled with curd are simultaneously pressed in a horizontal gang, and it is more specifically designed for pressing what are termed "Young America" cheeses. These
15 consist of small cheeses pressed in hoops—usually seven inches in diameter by ten in depth. The presses for this class of cheese heretofore in use are horizontal, and usually of sufficient
20 length to press twenty hoops at one operation, and several of these presses were required to press the curd coagulated and prepared in a single vat.

The object of my invention is to provide a
25 simple, compact, and effective press which has in itself capacity to receive and press at once any desired number of hoops without increasing the floor-space occupied by the press; and to this end the invention consists in providing a press-frame having ways for the reception of
30 separate tiers of hoops arranged side by side and above, and a platen adapted to move centrally and in a horizontal plane, the said platen having radiating arms, which bear against and transmit the pressure of the screw or other
35 pressing mechanism to the follower of the hoops and effect the pressing of the cheese.

It also consists in providing the platen with a central hub, through which the pressing-screw passes, and combining the same with an
40 adjustable head-block, whereby economy in space is secured, as the screw comes between the upper and lower tiers of hoops, and bears against the adjusting head-block, and the press-frame is only required to be of sufficient
45 length to receive the multiple of the desired number of hoops, with the addition of space enough to put in the head-block.

It consists, also, of the platen itself, of the press-frame, and in the detail construction, ar-
50 rangement, and combination of the various

parts, all as hereinafter described, and pointed out in the claims.

In specifying my invention reference is had to the accompanying drawings, forming a part of this specification, in which like letters in- 55
dicate corresponding parts in all the figures.

Figure 1 is a side elevation, showing my press arranged as a quadruplex gang. Fig. 2 is a vertical cross-section, taken back of the adjustable head-block, showing the construe- 60
tion of the frame and the ways upon which the hoops are supported, the platen, the central guide-channel, and the reversible pawl and ratchet which actuate the pressing-screw; Fig. 3, detached details of the reversible pawl and 65
ratchet, and Fig. 4 a detached view of the platen.

The press-frame is composed of upright standards A A and horizontal timbers B B, which are bolted together. A central channel 70
in the frame is composed of timbers K K, Fig. 2, which are provided with grooves or rabbets C C, in which the platen and head-block are guided centrally as the hoops are pressed, or for adjustment to press less than the full num- 75
ber of hoops for which the press is designed. Skids *b b b b* are bolted to the frame-work, and form ways *w w w w*, upon which the separate tiers of cheese-hoops H H are supported.

The letter P represents the platen, which 80
transmits the power of the pressing mechanism to the hoops. This platen is preferably constructed as shown in Fig. 4, and may be made of metal, or other suitable material pos-
85 sessing the requisite strength. The platen has a central hub or boss, *p*, through which the pressing-screw S passes, and arms P' P'' P''', &c., corresponding to the tiers of hoops, which radiate from the center *p*, and bear against the
90 followers of the hoops when the platen is in place in the press-frame. Tongues or guides *s s*, Fig. 4, are provided, and they slide in the central channels, C C, of the press-frame, and serve to keep the platen central when pressure is applied. 95

It will be observed that the screw S is carried by the platen, the rear end of the screw being sustained in a recess, *e*, Fig. 1, in the ad-
100 justable head-block D. The head-block D is constructed as shown in Figs. 1 and 2, and 100

slides horizontally in the channels C, and is sustained at any desired point in the length of the press by means of stout metal pins or handspikes, which pass through holes *g g*, Fig. 1, in the timbers K K.

The pressing-screw is actuated by means of a pawl and ratchet, as shown in Figs. 1 and 2. The construction of the pawl and ratchet is shown in the detached detail view, Fig. 3, two dogs, *d d'*, being provided to alternately engage the ratchet-wheel *r*, according to the way it is desired to actuate the screw, the short dog *d* serving to put on pressure, and the long bent dog *d'* serving to reverse the action of the screw to allow the adjustment of the platen and head-block, or to remove the hoops from the press.

In order to allow an odd number of hoops in any tier of the gang and equalize the pressure, I provide tension or take-up screws T, Fig. 1, which pass through the press-frame in line with the centers of the hoops. These screws bear against a circular disk or block, and can be adjusted to equalize the pressure, as desired, by setting the screw up until the tier bears evenly against the coinciding arm of the platen P. The press-frame is provided with openings *a a*, Fig. 2, in its sides, which permit the placing and removal of the lower tiers of hoops.

The cheese-hoops H H are of the usual form employed, and are bandaged and filled with curd and placed upon the ways *w w*. When the press is filled the pressure is applied by means of the pawl and ratchet, which are actuated by the handle *e*, which projects out from the press-frame through the opening *a*, Fig. 2. As the curd is compacted the head-block is moved forward in the channels C, and held in position by the pins or handspikes, as previously described.

It will be seen that no extra length of press-frame is required for the screw, as the screw is sustained in the platen and projects in between the tiers of hoops.

It will also be observed that the platen and head-block can be moved or adjusted so as to press any desired number of hoops less than the full quota for which the press is designed by simply distributing the hoops in the various tiers and equalizing them with the screw T, so that all of the arms of the platen bear against the followers, and then applying pressure, as before described.

The number of tiers of hoops may be varied, the only requisite being accessibility for ease of handling. I do not therefore limit myself

to a quadruplex gang, as shown in the example of my invention herein set forth; neither do I desire to limit myself to the pressing mechanism shown, as toggle-joints, levers, and stationary screws can be successfully substituted for the screw herein illustrated and described.

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

1. A gang-press having a platen provided with arms which bear against the followers of several series of cheese-hoops supported in the press-frame, and operated by suitable pressing mechanism to simultaneously press said series of hoops.

2. A gang-press having a platen carrying the pressing-screw, and provided with arms bearing against the followers of cheese-hoops, arranged in separate tiers within the press-frame, and combined with an adjustable head-block, substantially as specified.

3. The combination of a platen adapted to bear against the followers of separate tiers of cheese-hoops, a press-frame provided with quadruplex ways and a central guide-channel, and a pressing-screw, substantially as described.

4. The platen P, having central hub or boss, *p*, and arms *p' p''*, radiating from the center, and guides or slides *s s*, substantially as and for the purpose specified.

5. The combination of the platen P, constructed as described, with a screw, S, and pawl and ratchet, said pawl consisting of the dogs *d d'*, adapted to engage with and reverse the action of the screw, substantially as described.

6. A gang-press frame composed of the ways *w w*, central guide-channel C, and having side openings, *a a*, for the admission and removal of the lower tier of hoops, substantially as specified.

7. The within-described gang-press, composed of the platen, press-screw, frame, adjustable head-block, and the tension or take-up screw T, or its equivalent, substantially as and for the purpose specified.

In testimony whereof I have hereunto signed my name, in the presence of two attesting witnesses, at Syracuse, in the county of Onondaga, in the State of New York, this 11th day of April, 1883.

GEORGE W. HEY.

Witnesses:

W. A. CAHILL,
FREDERICK H. GIBBS.