

(Model.)

3 Sheets—Sheet 1.

J. W. JONES.

MACHINE FOR CUTTING GREEN CORN FROM THE COB.

No. 251,235.

Patented Dec. 20, 1881.

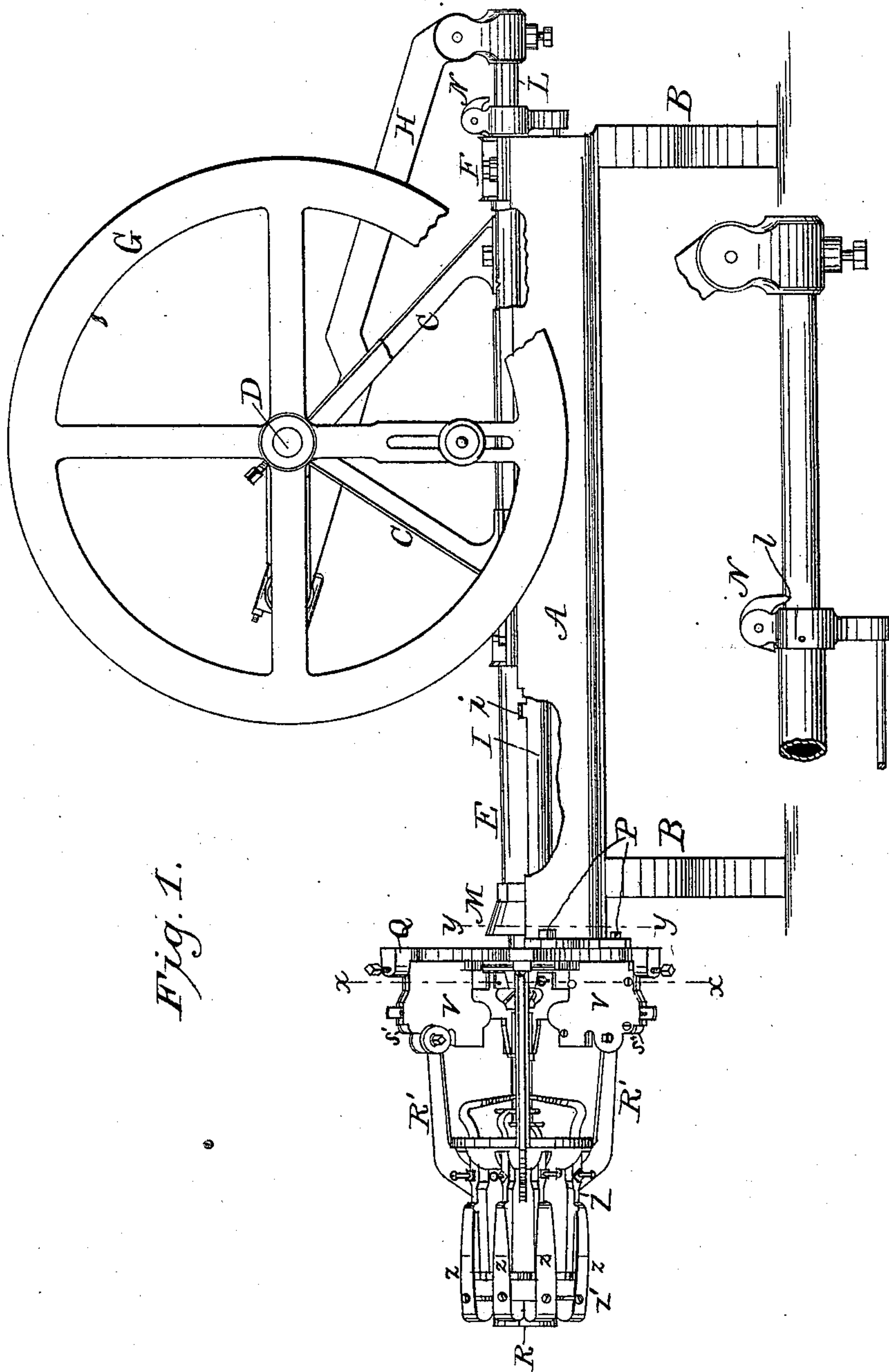


Fig. 1.

Witnesses:
A. M. Burnham
B. L. Jarmey

Inventor:
John Winslow Jones
By his Atty Daniel Breed

(Model.)

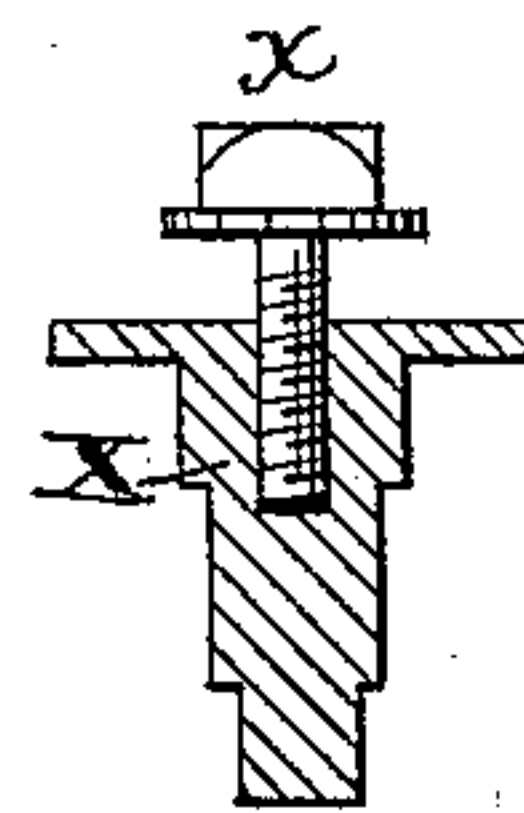
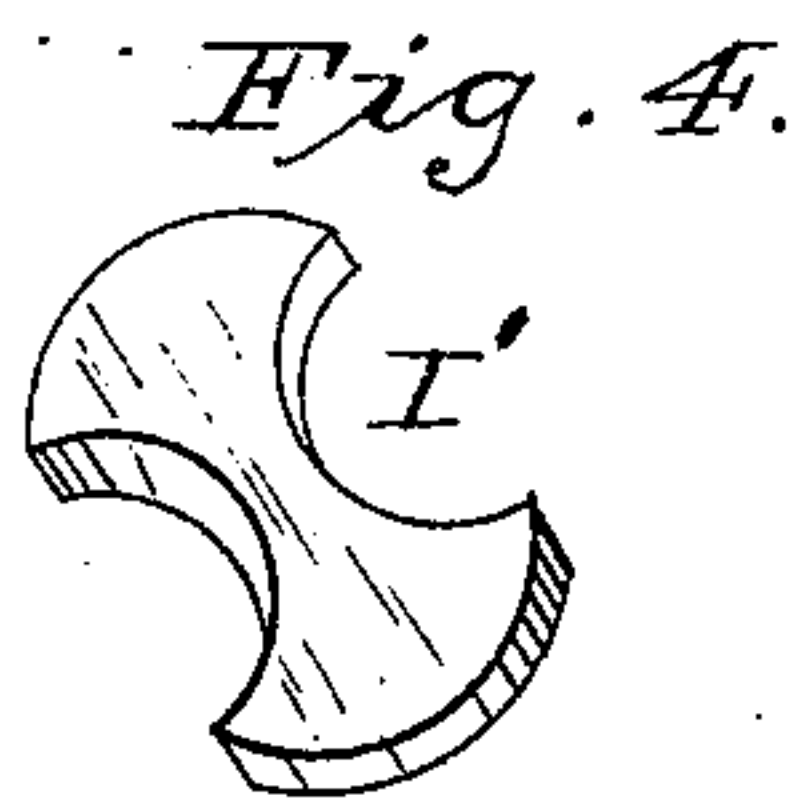
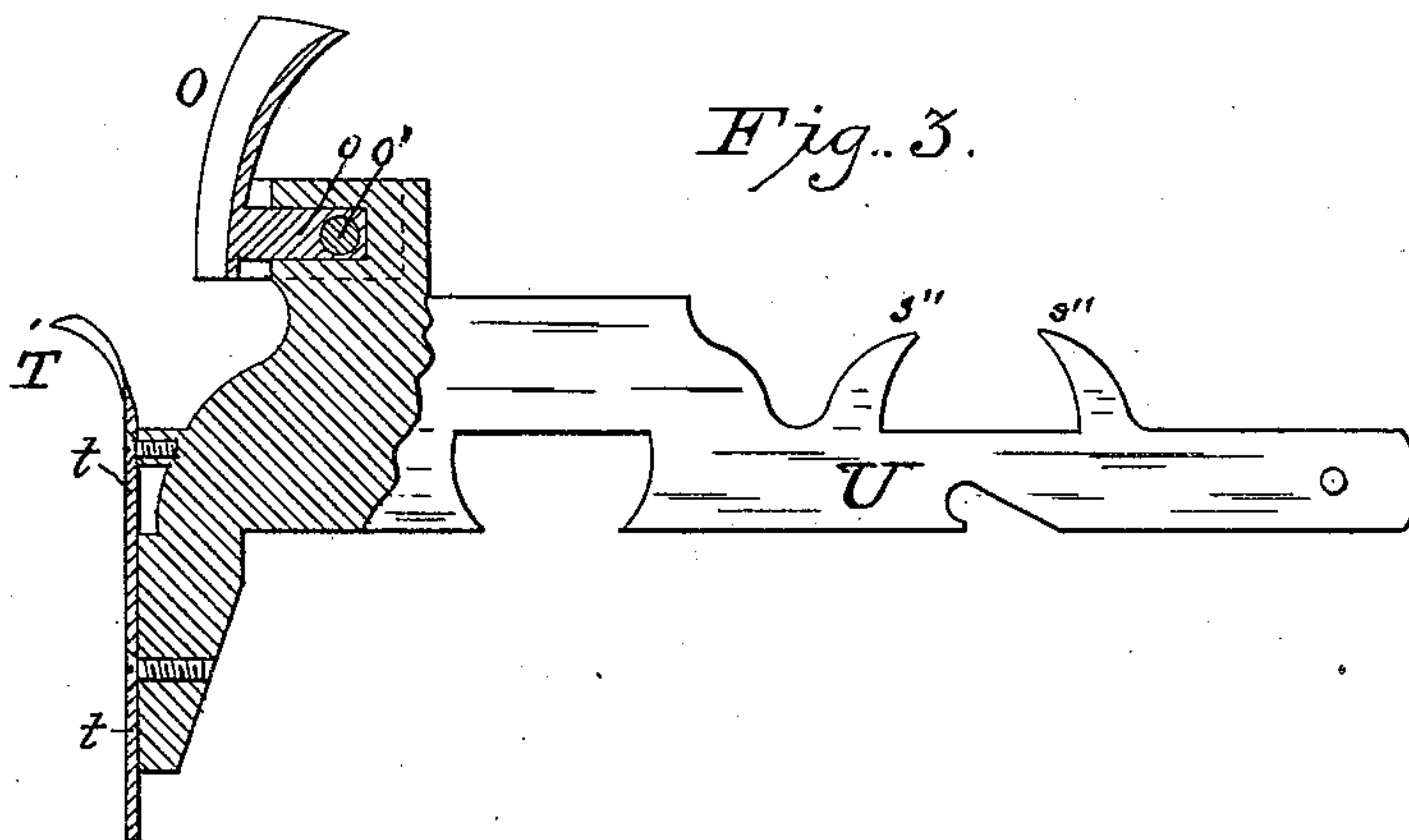
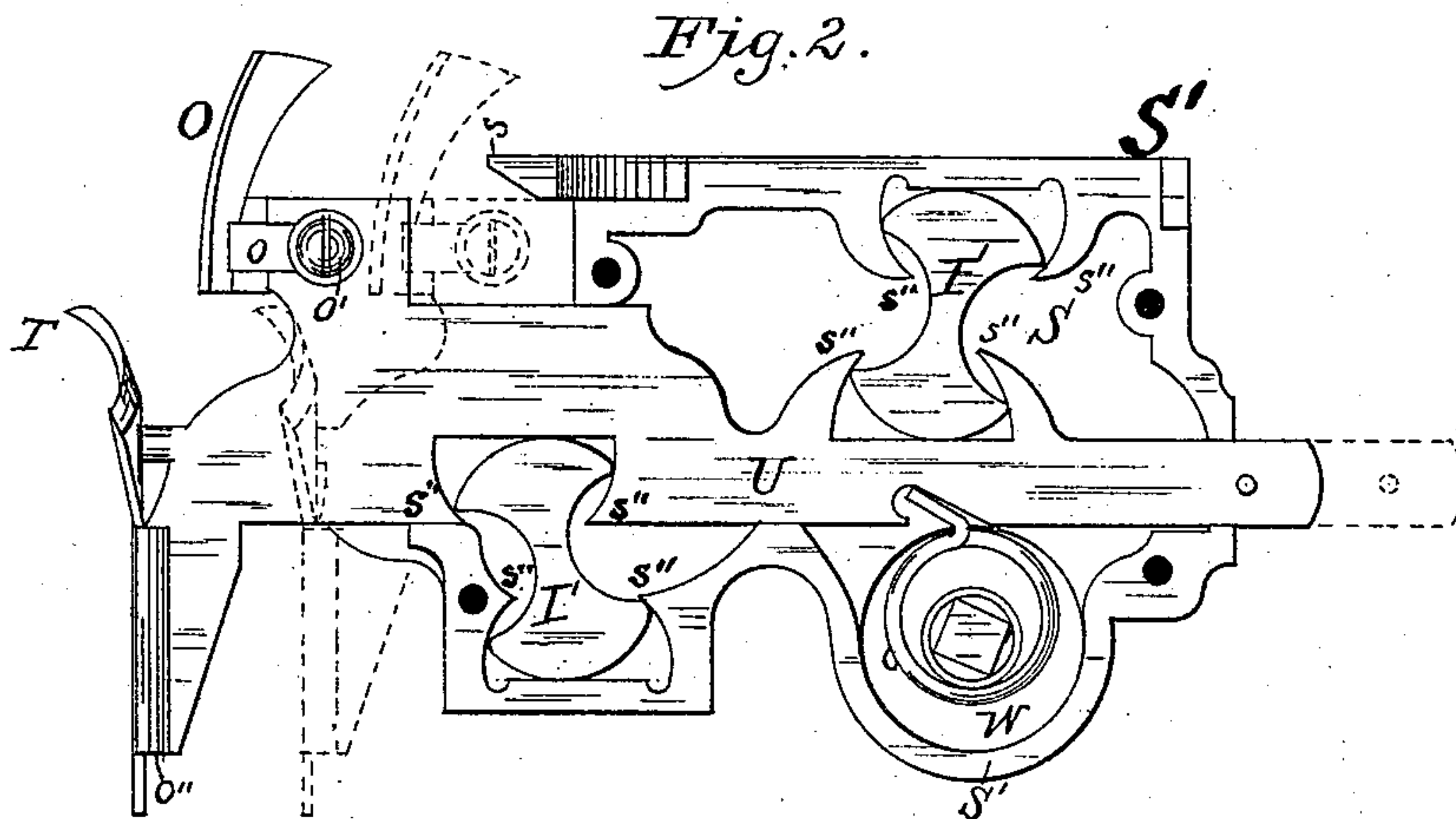
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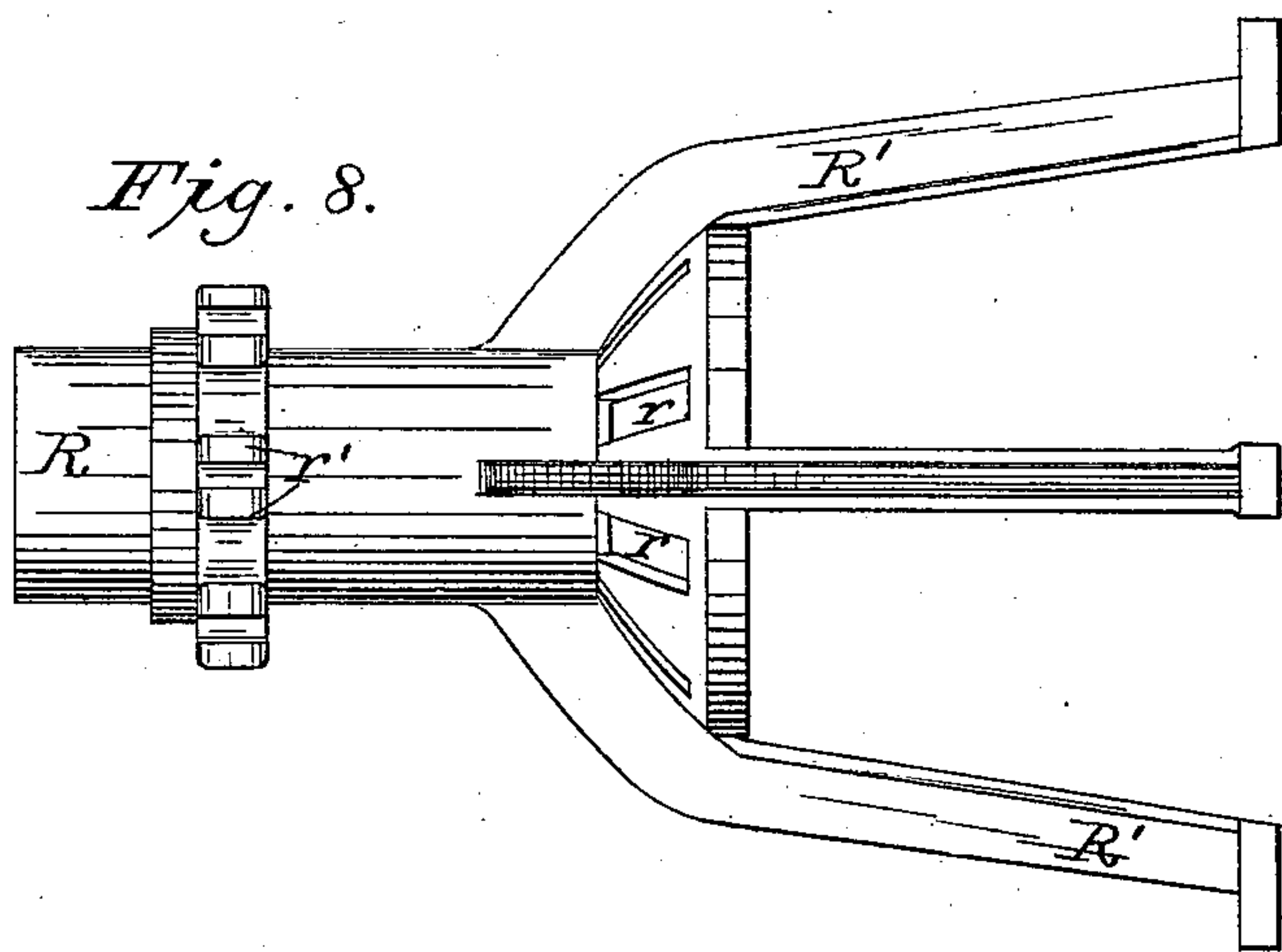
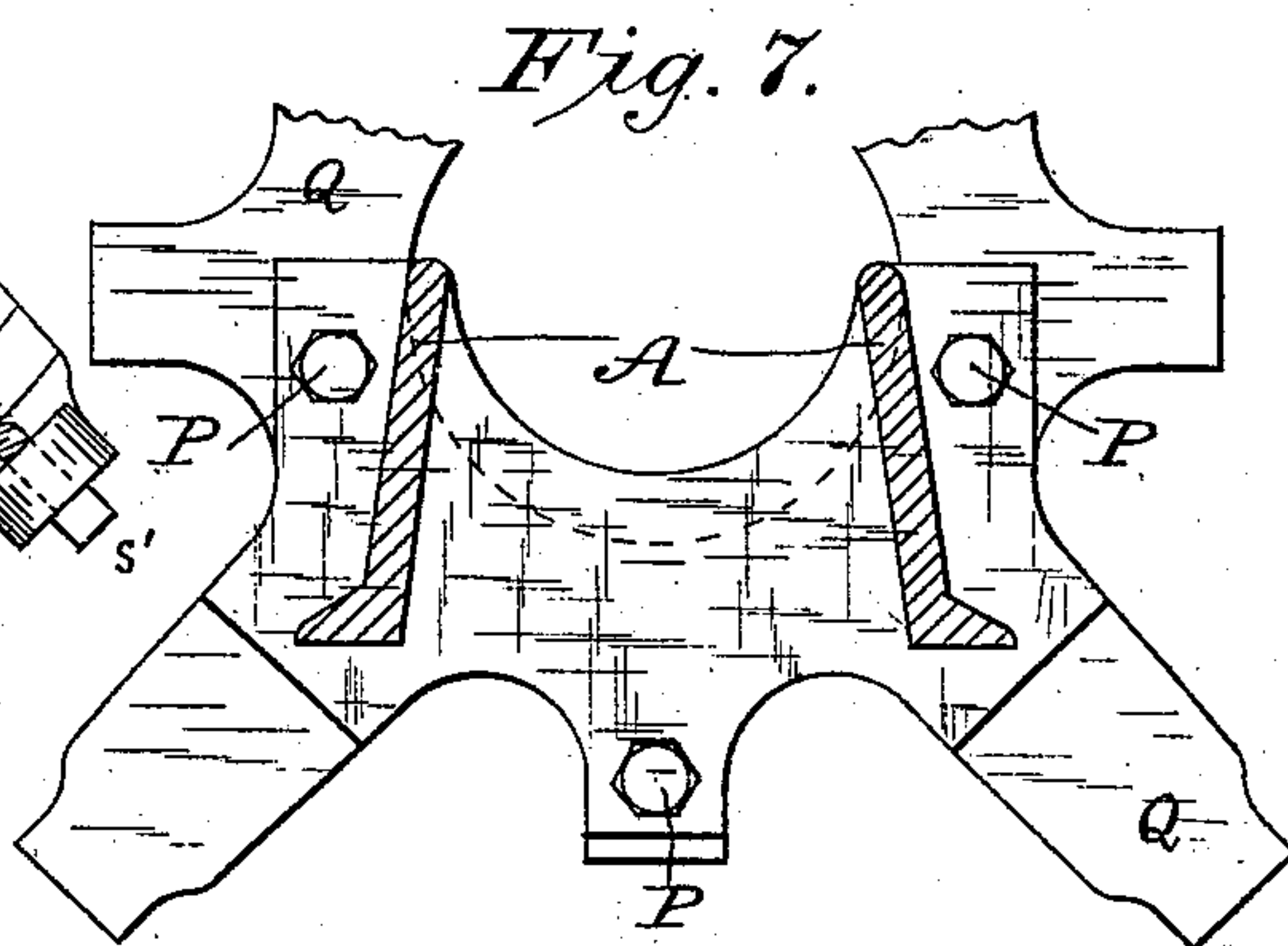
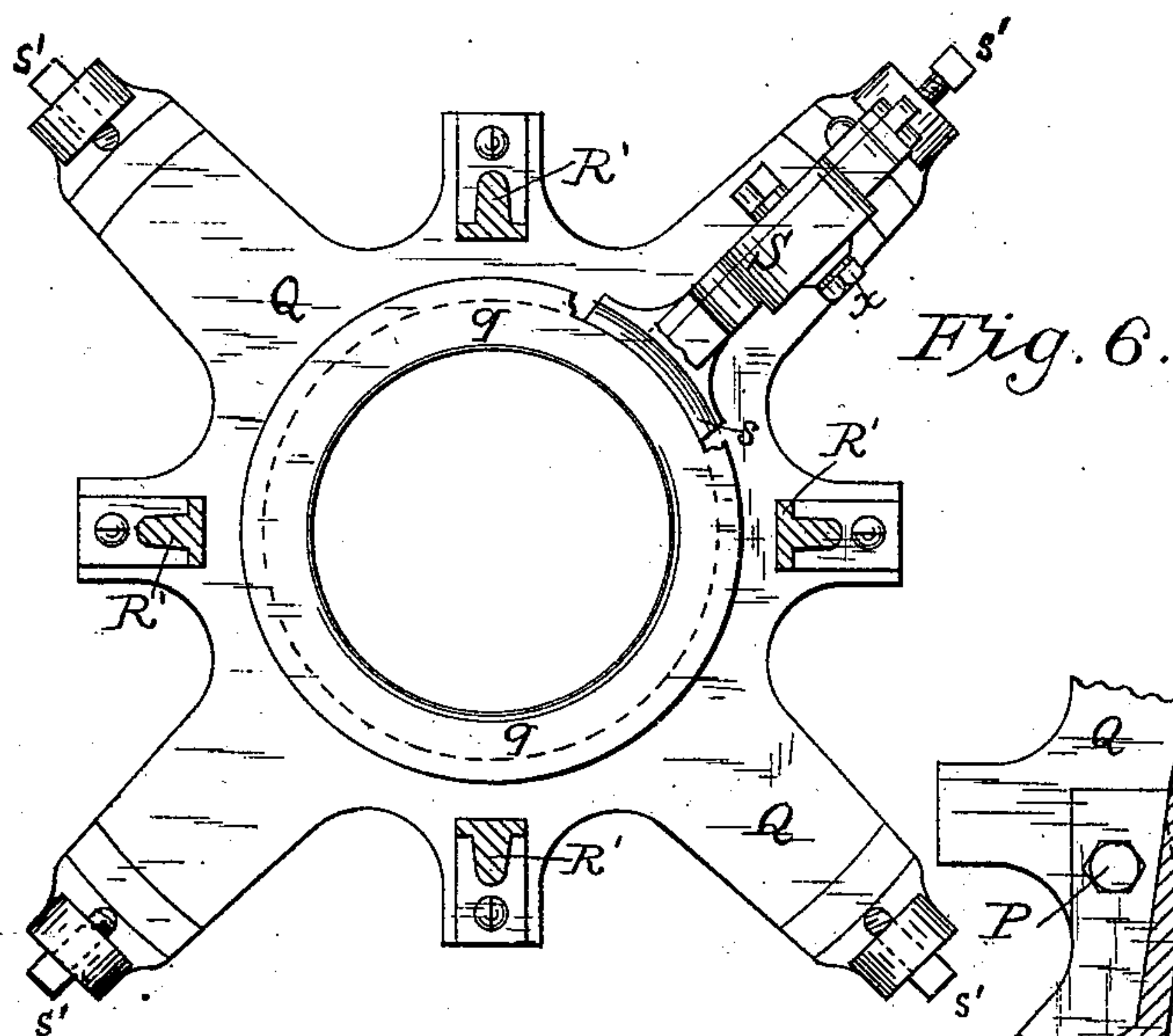
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UNITED STATES PATENT OFFICE.

JOHN WINSLOW JONES, OF PORTLAND, MAINE.

MACHINE FOR CUTTING GREEN CORN FROM THE COB.

SPECIFICATION forming part of Letters Patent No. 251,235, dated December 20, 1881.

Application filed August 29, 1881. (Model.)

To all whom it may concern:

Be it known that I, JOHN WINSLOW JONES, a citizen of the United States, residing at Portland, in the county of Cumberland and State of Maine, have invented certain new and useful Improvements in Machines for Removing Green Corn from the Cob; 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, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

My invention consists of certain improvements in machines for removing green corn from the cob, which will be fully set forth and understood by the following description and claims.

In the accompanying drawings, Figure 1 is a side view of my improved machine. Fig. 2 is a detached view, showing the sliding bar that carries the adjustable knives and guiding-jaws and the devices connected therewith. Fig. 3 is a view showing the sliding bar separate from the case in which it slides. Fig. 4 is a detached view of a segmental guide or anti-friction roller. Fig. 5 is a view of the spring-keeper and set-screw; Fig. 6, a section through the line *x x*, Fig. 1; Fig. 7, a section through the line *y y*, Fig. 1; Fig. 8, detached view of the cutter-head.

The frame of my machine consists of a heavy casting, A, supported on pedestals B B, and crowned by pillow-blocks C C, having bearings for the horizontal shaft D. This casting A has a central trough, in which the piston E works in slide-bearings F, motion being given to the piston by means of the crank-wheel G and connecting-rod H. On the left hand the central trough is interrupted and a short trough or hopper, I, substituted, the same having lugs *i* to support it.

The piston is double, having an outer or hollow piston, E, and an inner and longer solid piston, L, pivoted to the connecting-rod H. The outer piston carries a head, M, having a cup-shaped cavity to fit the butt-end of the ear of corn, and by thus embracing the same it prevents the ear from slipping from the grasp of the piston. A pawl, N, locks the two pis-

tons together, so that both move forward with the ear of corn until the piston-head M is close to the guiding-jaws O of the cutter-head, when the said pawl N strikes the rear of the bearing F, thus tilting the pawl out of the notch of the central solid piston, which continues to advance between the jaws O, thus pushing the cob and traveling completely through the cutter-head, when the cob falls from the machine and the piston recedes for another stroke.

The cutter-head is fastened to the frame or casting A by bolts P, and has two principal castings—first, the flange or plate Q, and the central tube, R, provided with arms R', which are bolted to the plate Q, as seen in Fig. 1. The plate Q has four radial projections for the set-screws *s'*, and also a large central and circular opening, as shown in Fig. 6. Heretofore the flange Q and tube R have been cast in one piece, and which cannot be made perfectly true, and they will also warp, which tends to interfere with the working of the operating parts of the machine. By making or casting the tube and plate separate, and subsequently milling and securing them together, they can be made truer and cheaper, while obviating the defects above referred to when cast in one piece. Around this central opening is an annular groove and sharp-edged lip, *q*; and corresponding lips *s* on plates S fit into said annular groove in plate Q, and are secured in position by the adjusting-screws *s'*, all as seen in Fig. 6.

The guiding-jaws O and spiral-edged knives T are mounted on a sliding bar, U, Fig. 3, and said jaws have a projection, *o*, held in a slot of the bar and fastened by a set-screw, *o'*. Said knives are inserted into dovetailed grooves *o''* and held in place by two screws, *t*, as seen in Fig. 3. This bar U slides in a box consisting of the plate S, having two flanges thereon, as shown at S', Fig. 2, and the smooth plate V. It is pushed forward by means of the coiled spring W, the tension of which may be increased or diminished by turning the stem or spring-keeper X and set-screw *x*, Fig. 5. Thus the jaws O press against the ear of corn by a yielding pressure, and will recede more or less to admit larger or smaller ears of corn, as required, said jaws serving to gage the depth to which the knives T cut the kernels of corn. The pressure of the ear of corn, when forced

between the series of guiding-jaws O, tends to create great friction upon the sliding bar U, and to relieve this friction I employ anti-friction segments I', which swing or rock with the motion of the sliding bar, as indicated in Fig. 2, these segments being secured in position by curved lips s' s' on the plate S and bar U.

The central tube, R, has a dish-shaped rim, with a series of radial slots, r, therein, and also a series of lugs, r', to which the heels of the scrapers Z are pivoted, while the shanks of the scrapers work in the radial slots. There are two sets of these scrapers arranged in pairs, one set of four scrapers being placed in advance of the other set, so as to completely scrape the cob and remove the tips of the kernels left by the spiral-edged knives T, already described. These scrapers Z are pressed against the cob by means of plate-springs z, which have very broad heels, resting on the central tube, R, and held thereto by means of screws z', which also serve to increase or diminish the tension of the springs.

I do not wish to be understood as claiming, broadly, the sliding and yielding bars carrying the cutting-blades and guiding-jaws, nor the arrangement of scrapers, as they form the subject-matter of previous applications filed by myself.

Having described my invention, what I claim is—

1. The combination of the anti-friction segments I' with the sliding bar U, having the lips s'', knives and guiding-jaws attached thereto, and the plate S, having similar lips, s'', substantially as and for the purposes set forth.

2. The combination of the sliding bar U with the coiled spring W, engaging said bar, spring-keeper X, and set-screw x, substantially as set forth.

3. The combination of the plate S, with flanges thereon, and lips s'', and the plate V, forming a box to contain the sliding bar U, having lips s'', the anti-friction segments I', and spring W, all arranged to operate in the manner and for the purposes set forth.

4. In a machine for removing green corn from the cob, the flange or plate Q, having the central opening and radial projections, and also the annular lip and groove q, in combination with plates S, fitted to said annular groove, and adjusting-screws s', for securing them in position, substantially as herein shown and described.

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

JOHN WINSLOW JONES.

Witnesses:

L. C. YOUNG,
DANIEL BREED.