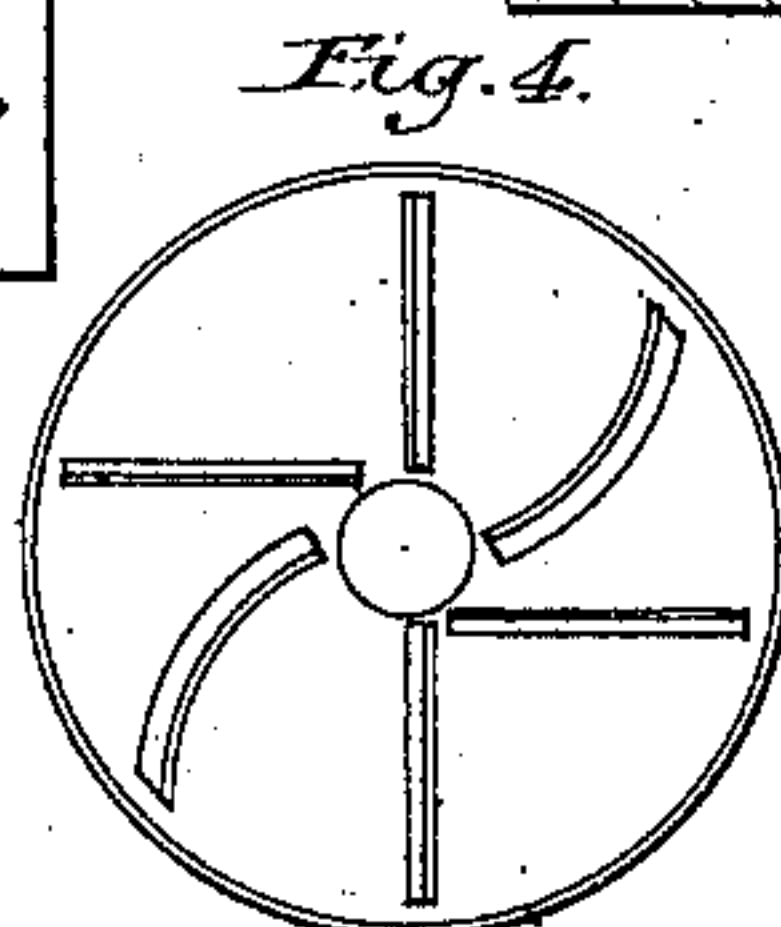
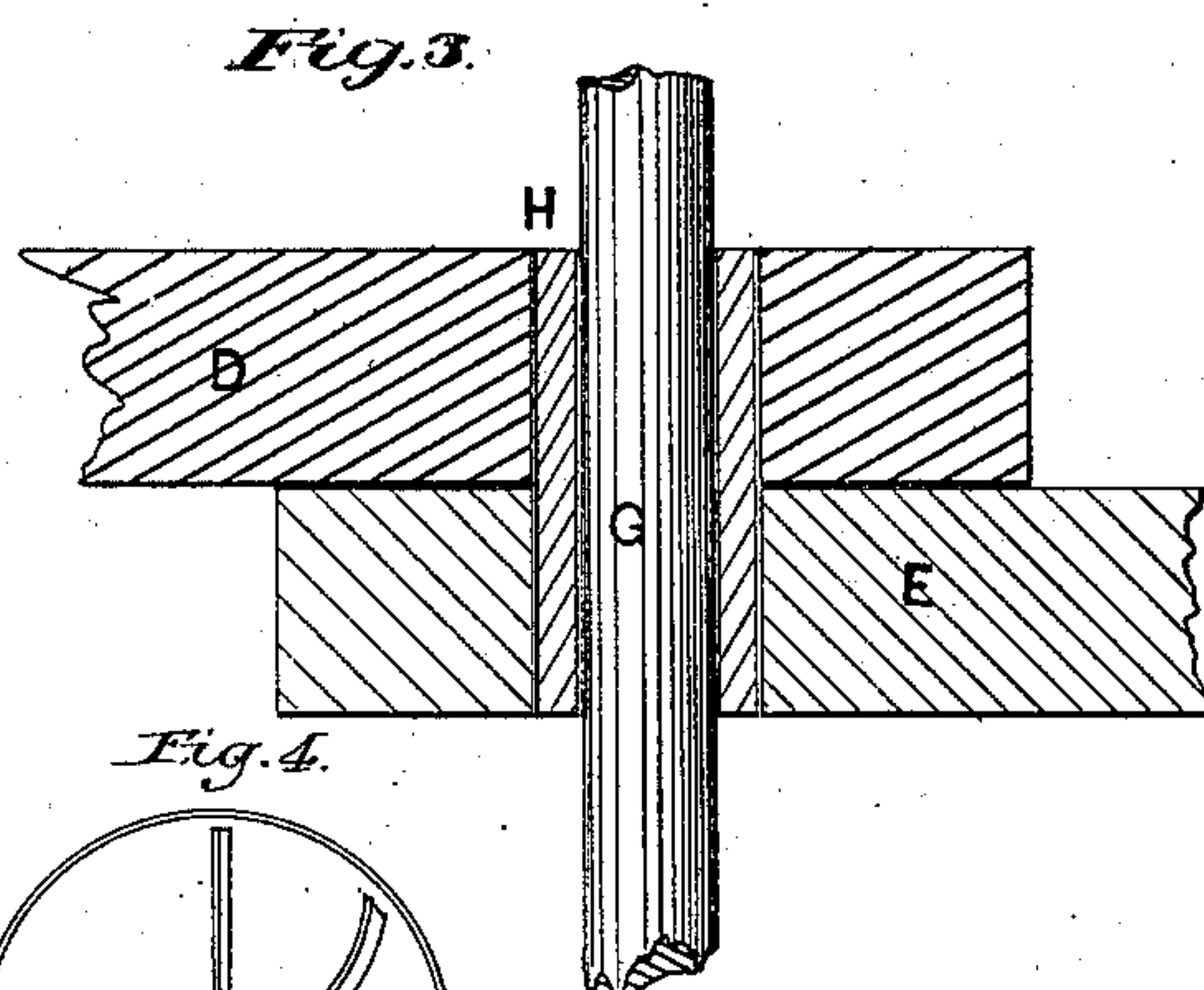
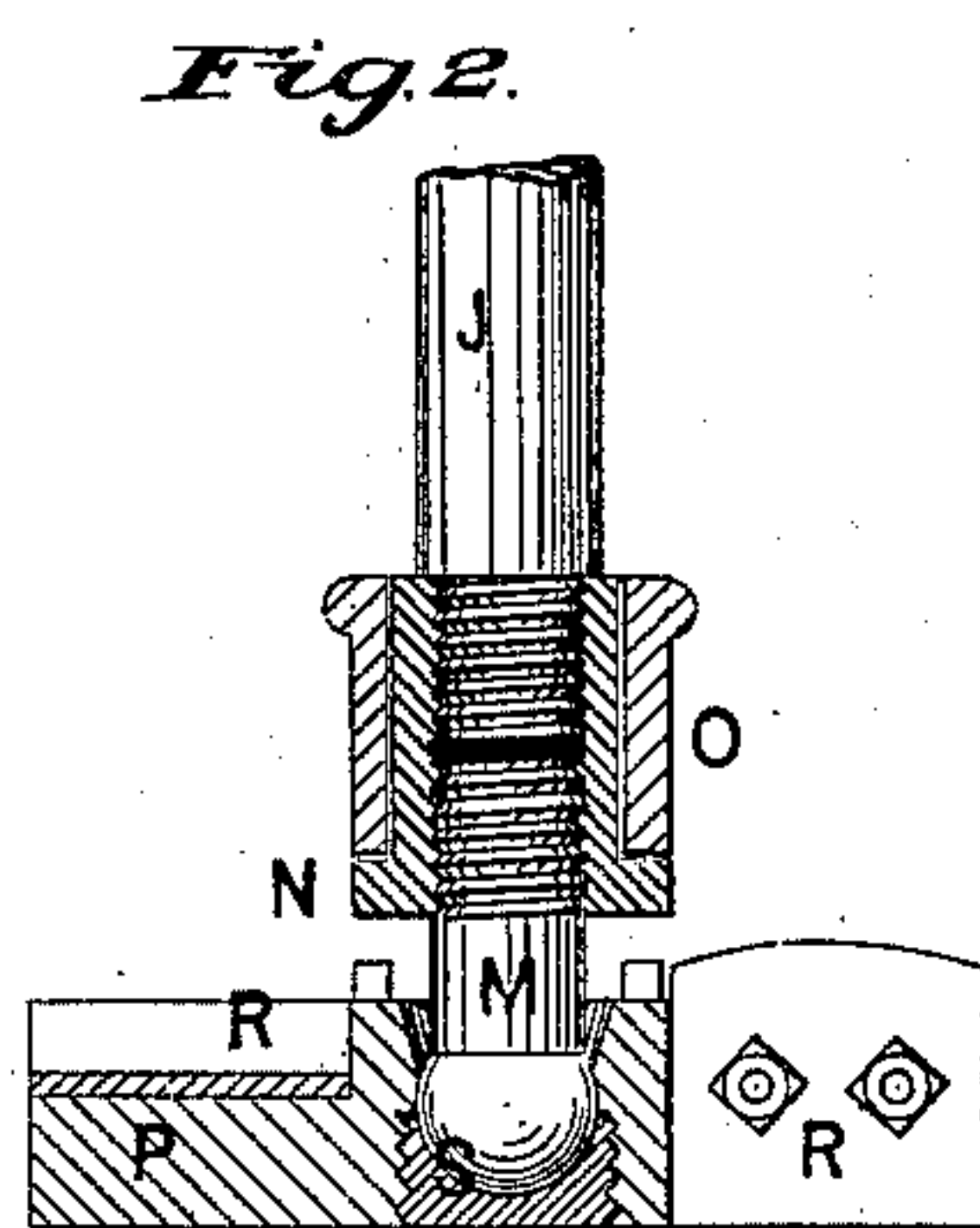
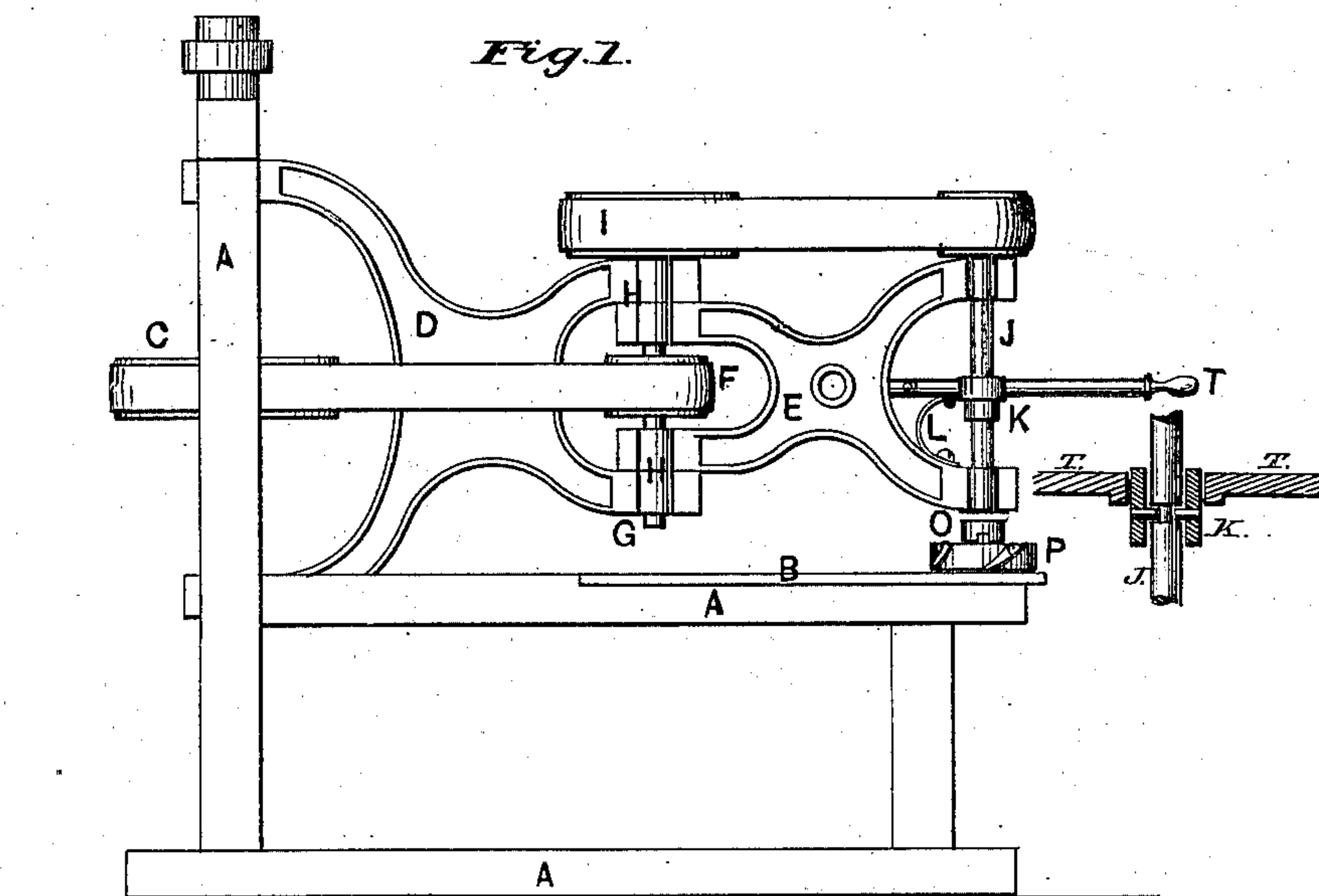


E. B. HOLCOMB & D. A. CLAY.
Hide-Fleshing Machine.

No. 198,941.

Patented Jan. 8, 1878.



Attest:
J. C. House
C. D. Wilson

Inventors:
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UNITED STATES PATENT OFFICE.

EDGAR B. HOLCOMB AND DOW A. CLAY, OF PORT LEYDEN, NEW YORK.

IMPROVEMENT IN HIDE-FLESHING MACHINES.

Specification forming part of Letters Patent No. **198,941**, dated January 8, 1878; application filed April 9, 1877.

To all whom it may concern:

Be it known that we, EDGAR B. HOLCOMB and DOW A. CLAY, both residents of the village of Port Leyden, in the county of Lewis and State of New York, have invented a new and useful Improvement in Machines for Fleshing Hides, in preparing the same for the process of tanning.

Our invention is fully set forth in the following specification, and represented in the accompanying drawings, making part of this our specification.

Figure 1 is a vertical plan view of the machine entire. Fig. 2 is a section of the extension of the tool-shaft J, with the ball-and-socket connection with the cutter-head. Fig. 3 is a section of the joint at the articulation of the first and second frames D and E, showing one of the sleeves through which the second shaft G revolves, the sleeve itself forming the bearing upon which the second frame E rotates. Fig. 4 is an under-side plan view of the cutter-head, showing the arrangements of the cutter-knives and throats.

Similar letters represent similar parts.

A vertical shaft, upon which the pulley C is made secure in the frame A A, receives power and motion through the coupling at the top. Upon this vertical shaft is hung the frame D, allowing of a rotation in a horizontal plane about the shaft as a center and bearing. The opposite end of the frame D is forked, and each of the parts carries a vertical sleeve, H, secured in the same, and which extends inward, and the two are made to form the bearing or support for the frame E, the forked inner end of which has boxes encircling the sleeves H H, and upon which the frame E has a limited horizontal rotation or swinging motion. Passing through the sleeves H H, which act as boxes for the same, is a vertical shaft, G, and to which is secured the small pulley F at the center, and the larger pulley I at the top.

It will thus be seen that the horizontal swinging of the frame E is entirely independent of any strain or direct frictional bearing upon the shaft G.

The shaft J is allowed a little vertical leeway in its bearings in the boxes in the outer ends of the frame E, the weight of the shaft being supported by pins in opposite sides of

the box K engaging in a groove turned in the shaft J. The box K is encircled by a ring in the lever T, and supported by a second set of pins, so connecting the box and ring as to constitute a sort of gimbal-joint. The inner end of the lever T is connected by a hinge-joint with a stud on the frame E between the arms, and has a spring, L, upon its under side, extending from the ring to the upper surface of the lower outer arm of the frame E, the spring L having sufficient strength to sustain the weight of the lever T and the shaft J with its attachments.

The lower end of J has a screw-threaded tenon upon it, to which is attached the screw-coupling N.

P is a heavy head or disk of metal, attached to the lower end of J by means of the extension M and the ball-and-socket joint at S. The piece M passes up through a suitable opening on the under side of the head P, and is firmly secured in the coupling N, the opening beneath being fitted with a screw-plug, the top of which forms a part of the socket of the articulation. The upper side of P, around the extension M, is enlarged sufficiently to permit of a slight vertical rotation or rocking of the head at this joint. Encircling the coupling N is a loose sleeve, O, having vertical openings, which slip down over corresponding projections upon the coupling N, and also allow the sleeve to engage with corresponding lugs upon the upper surface of the head P, and through which the rotary motion of J is imparted to the head.

The head P has two or more openings or throats, running either radially from the ball-and-socket joint at the center, or tangential to the circular opening S; or these may be cut spirally from the center opening out to the circumference of the head. These throats are cut at a bevel to the under surface of the head, and one of the faces of each opening is tapped to receive screws, by which suitable blades R R are secured in position.

B is the table, so arranged that when the apparatus is at its normal position, the head P may be swung about an inch or so above the top surface of the same. This table may be so supported from the floor as to be accessible at all sides.

So far as we know, the difficult task of removing the superfluous fleshy portions with which all hides, as found in the market, are more or less encumbered has been confined or limited to hand labor, all attempts heretofore to accomplish the same by the aid of machinery having proved ineffectual and abortive; but in the machine above described we think we have been enabled to meet and overcome very many, if not most, of the difficulties presented in the operation of fleshing hides by machinery.

The operation of our invention is this: Motion being imparted to the driving-shaft with the pulley C, the same is conveyed by belt to pulley F, which, in turn, gives motion to the shaft G, with its larger pulley I. This motion is duly conveyed to the shaft J, and thus, through the coupling and sleeve O, engaging the lugs, to the head P, the latter revolving with a rapid motion over the bed B. The arrangement of the frames D and E at their articulation H H and upon the vertical shaft G allows all needed latitude for horizontal change of position of the shaft J and head P, while retaining unchanging perpendicularity for the motion of the shaft J, the motion of which and its relative position is controlled by means of the box K, lever T, and spring L.

Let a green or wet hide be spread upon the table B, with the grain (or hair) side down. The rapidly-revolving shaft J, with its head of knives P R, is swung over the same, and the lever T depressed sufficiently to bring the lower side of the head upon the hide. The action of the rapidly-revolving knives has the effect, from their shearing cut, to speedily remove all loose or fleshy portions from the upper side of the hide, and leave the same clean and evenly trimmed and ready for tanning.

Although the ball-and-socket connection of the head P with the shaft J gives some freedom in its horizontal position, yet its swift revolution determines it in a perfectly horizontal plane when unobstructed, and this very construction gives the head the freedom to adapt itself to any varying thickness of the hide or unevenness of surface of the same.

We disclaim any novelty in the general arrangement of the two frames D and E, as essentially the same are found in the subject-matter of a patent, No. 103,463, issued to Chas. and F. E. Holmes, of Boston, on May 24, 1870.

What we claim as novel, and desire to secure by Letters Patent, is—

1. In combination with the frames D and E, the boxes or sleeves H H, within which the shaft G revolves, all substantially as and for the purpose described.

2. The combination, with the frame E, of the lever T, collar K, shaft J, and supporting-spring L, substantially as and for the purpose set forth.

3. The combination, with the vertical shaft J, of the cutter-head P, with its knives or scrapers arranged radially, tangentially, or spirally from the central opening to the periphery, the head P being connected to the lower end of the shaft J by a ball-and-socket joint, and provided with a screw-coupling and sleeve-clutch, all substantially as and for the purpose stated.

EDGAR B. HOLCOMB.
DOW A. CLAY.

Witnesses:

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