

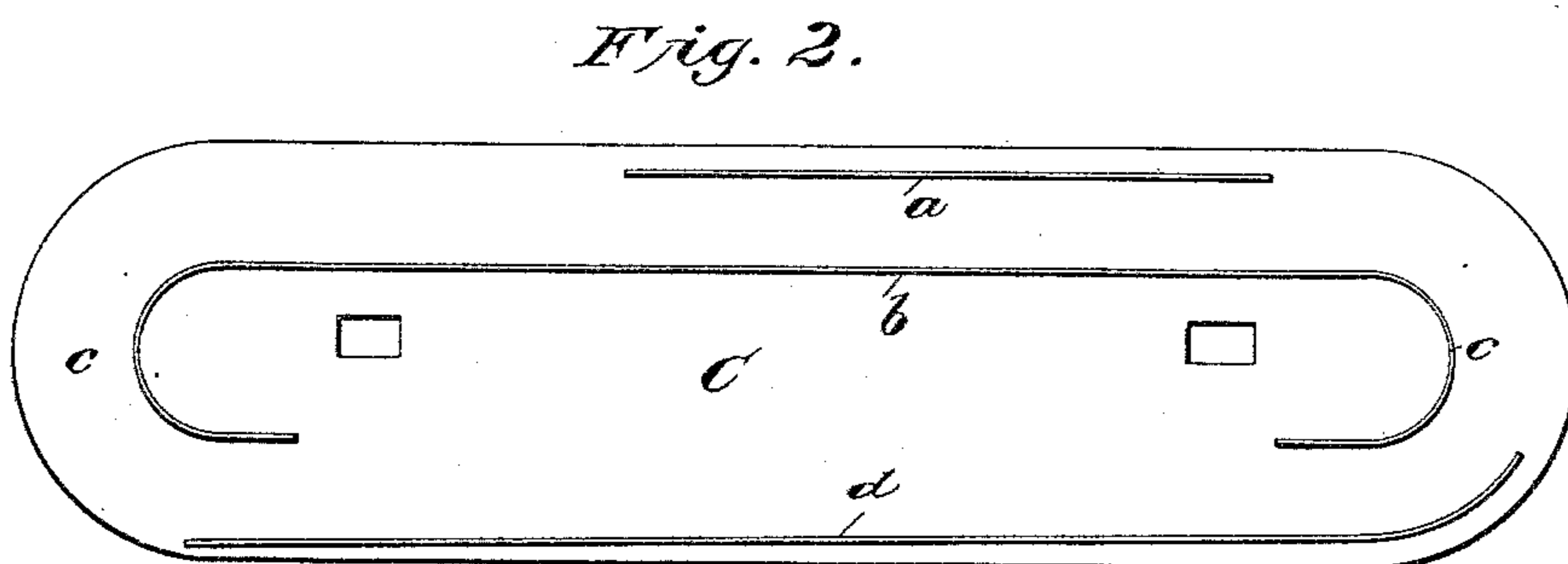
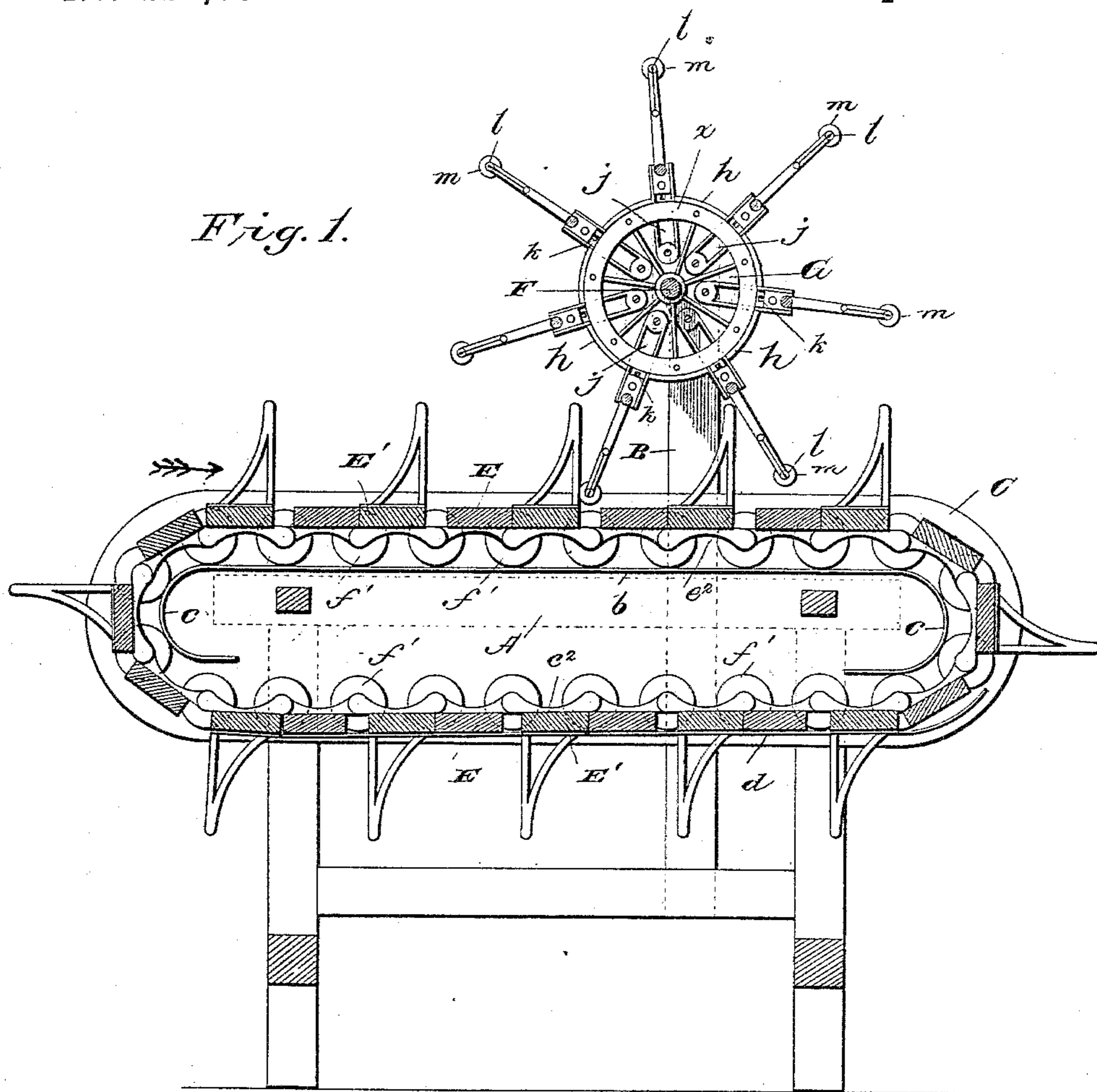
(No Model.)

2 Sheets—Sheet 1.

J. BENSING.
TILE OR BRICK CUTTING TABLE.

No. 411,638.

Patented Sept. 24, 1889.



Jacob Bensing.

Inventor

Witnesses
L. S. Elliott,
W. Johnson

By his Attorneys

(No Model.)

2 Sheets—Sheet 2.

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Fig. 3.

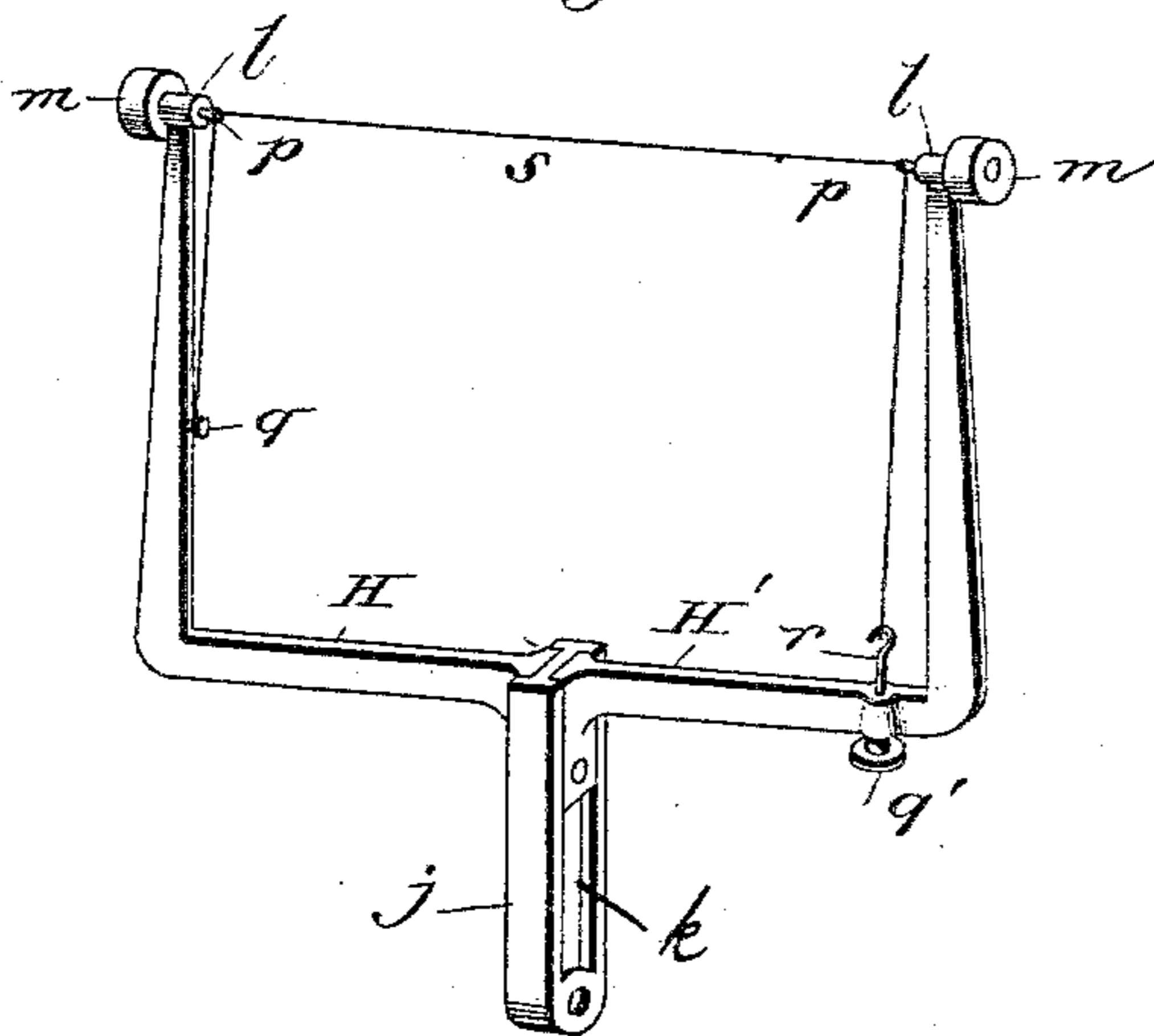


Fig. 4.

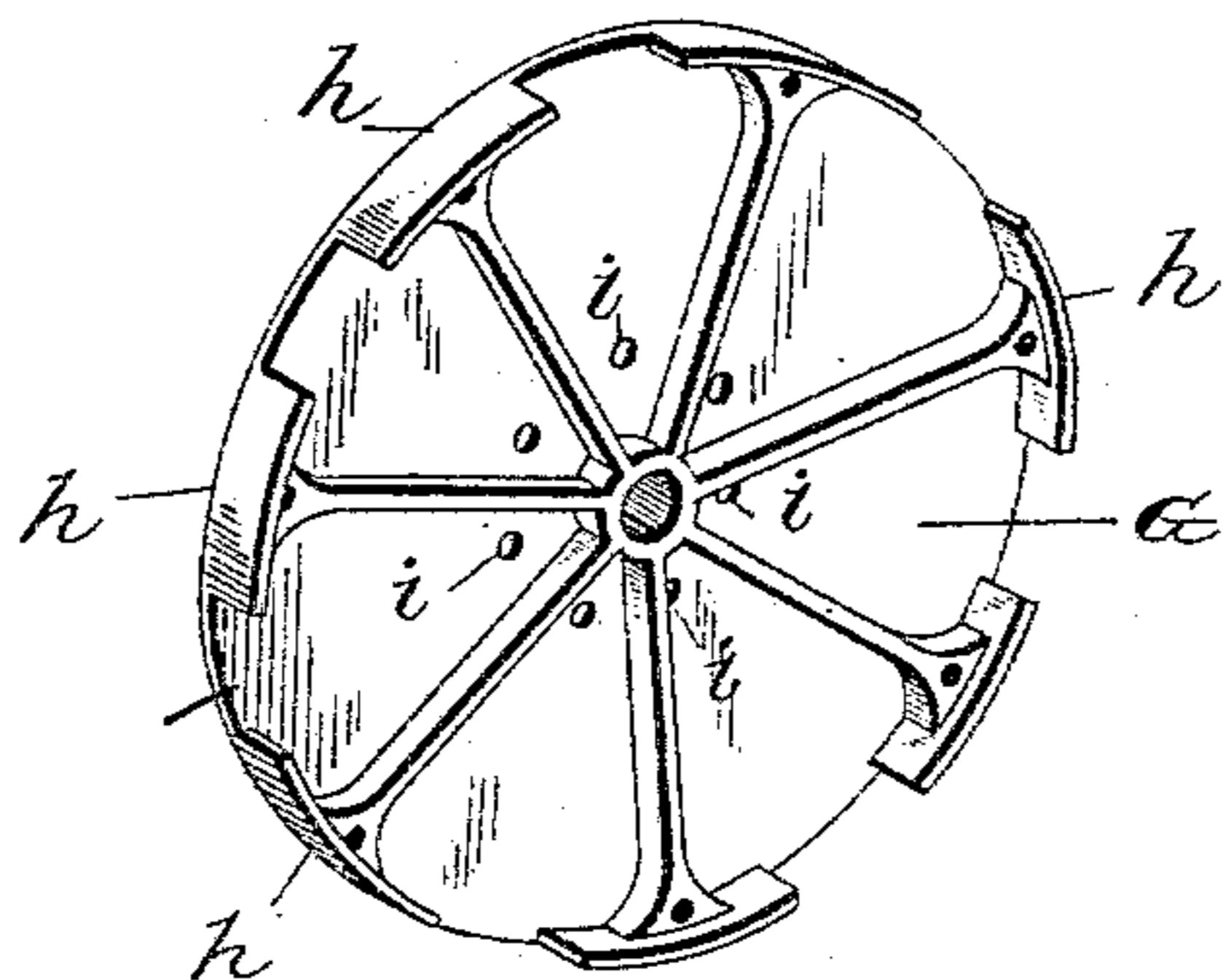


Fig. 5.

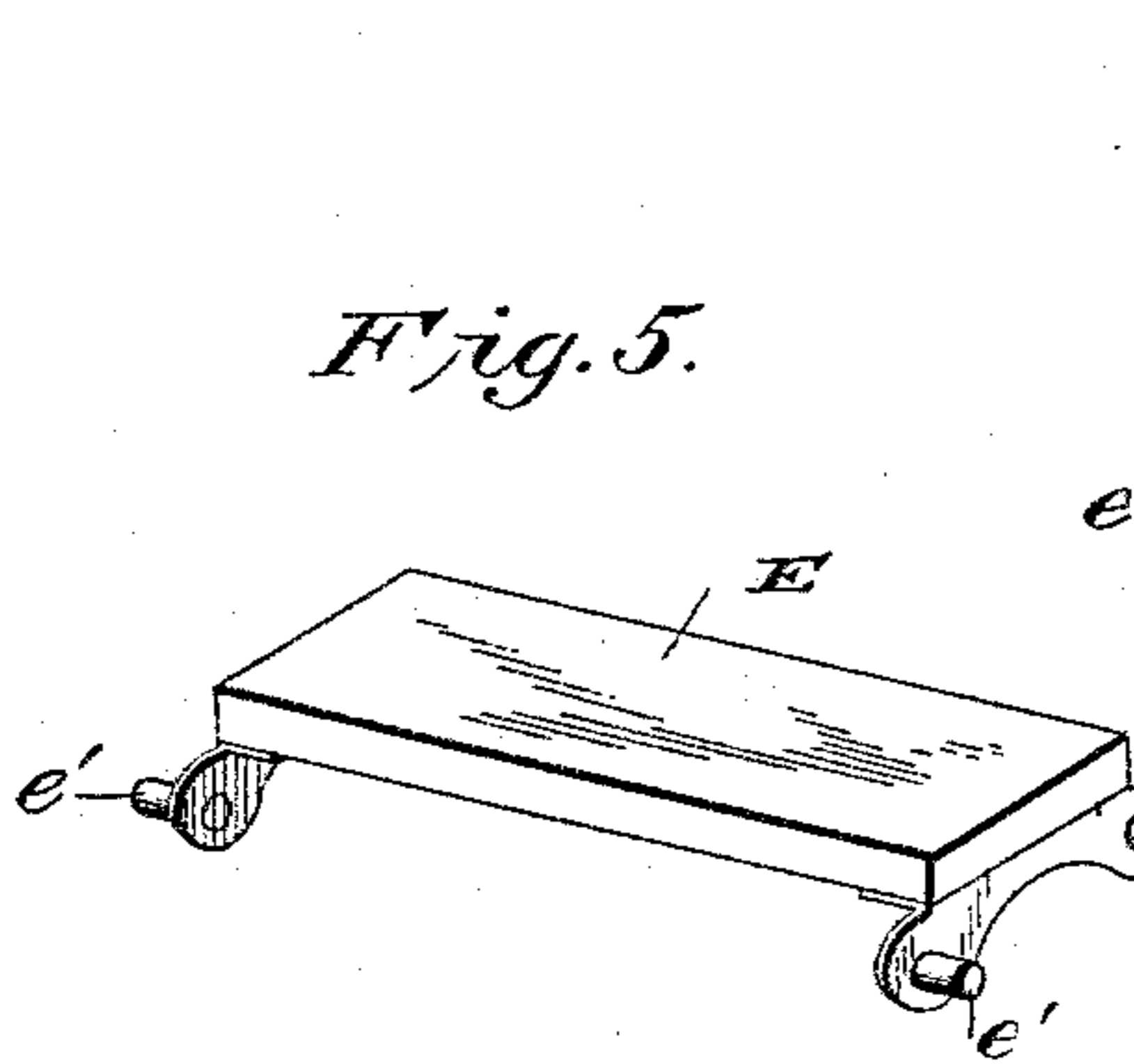
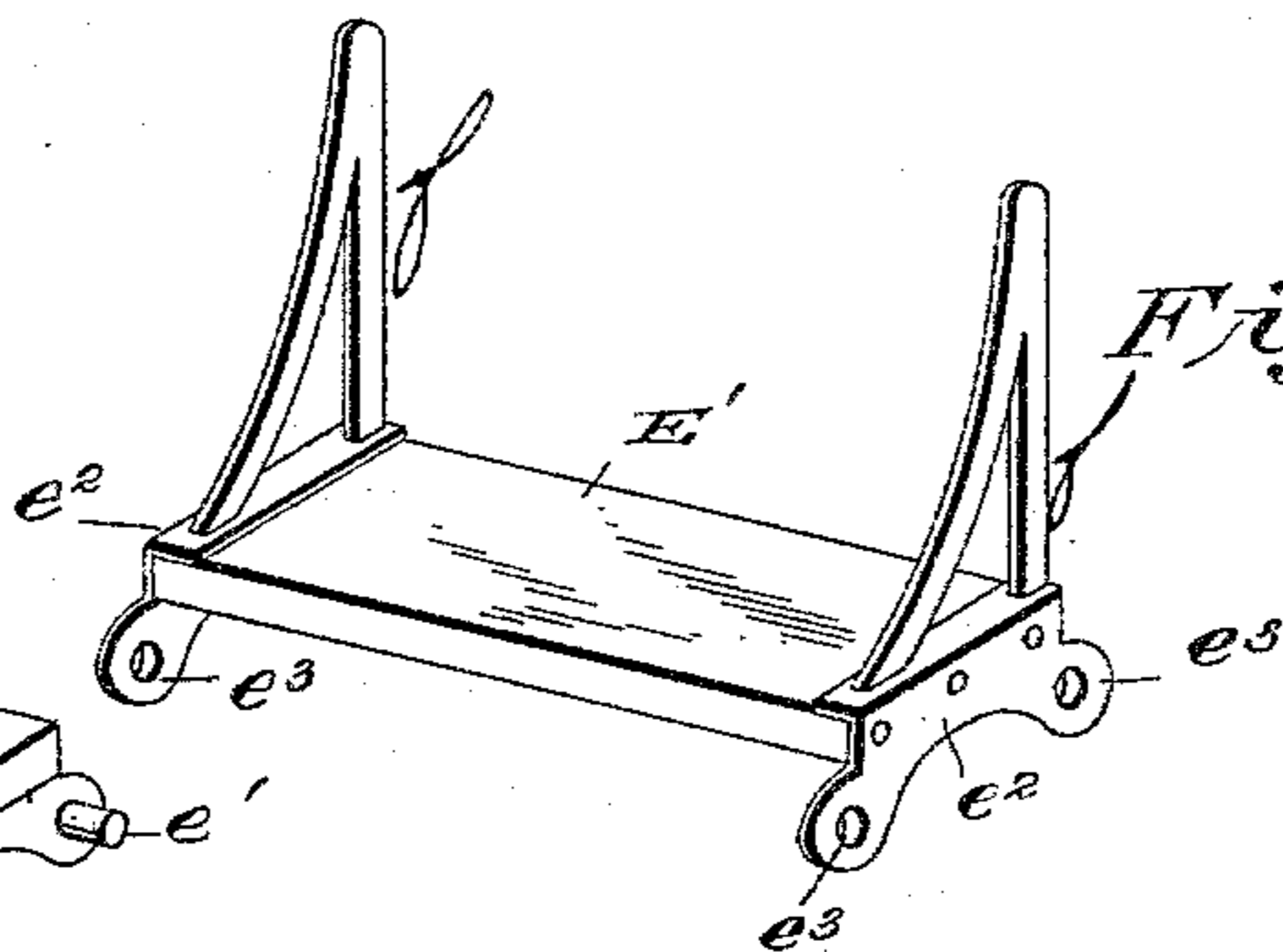


Fig. 6.



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UNITED STATES PATENT OFFICE.

JACOB BENSING, OF MALINTA, OHIO.

TILE OR BRICK CUTTING TABLE.

SPECIFICATION forming part of Letters Patent No. 411,628, dated September 24, 1889.

Application filed July 11, 1889. Serial No. 317,165. (No model.)

To all whom it may concern:

Be it known that I, JACOB BENSING, a citizen of the United States of America, residing at Malinta, in the county of Henry and State of Ohio, have invented certain new and useful Improvements in Tile or Brick Cutting Tables; 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 has reference to tables provided with devices adapted to cut a strip of clay into bricks or tiles; and the said invention consists in the improved construction hereinafter described and set forth, whereby the general character of the machine is simplified and its arrangement of parts such that they will work freely and the parts prevented from becoming clogged.

In the accompanying drawings, forming part of this specification, Figure 1 is a vertical longitudinal section of a machine embodying my improvements. Fig. 2 is a detail view of one of the side sections of the frame. Fig. 3 is a detail view of one of the arms of the cutter-frame. Fig. 4 is a detail view of the central portion of the cutter-frame, and Figs. 5 and 6 are detail perspective views of sections of the endless carrier.

The supporting-frame of the machine consists of suitable vertical and horizontal timbers, including upper horizontal side bars A and vertical side standards B B. Secured to the inner side of the bars A are horizontal metal side plates C C, which are each provided on its inner side with upper horizontal flanges a, lower parallel flange b, the ends c of the latter being curved, as shown in Fig. 2, and a lower horizontal flange d, one end of which is curved concentric with the adjacent curved end c of the flange b. An endless carrier is employed, and consists of a series of transverse blocks E E', the former being provided on its under side, at each end, with a casting e, consisting of a curved portion having its ends provided with outwardly-extending journals e'.

The blocks E' have secured at each end a casting e², curved and having its ends perforated to form eyes e³, adapted to engage the journals e' to establish a hinged connection between the blocks, and forming a flexible carrier throughout. Each casting e² is provided on its upper side with a vertical metal standard f. It will be noticed that the hinged connection of the blocks E E' is such that each pair of said blocks is a slight distance from the pair at either side thereof. An anti-friction roller f' is mounted on the outer end of each journal e'.

The relative length of the carrier is such that it extends around the flanges of the side plates, so that its rollers f' will bear upon the flanges of the same, the movement of said belt occasioning the rollers of each section to successively pass between the upper flanges a b, so as to be positively guided thereby, thence around the curved end and onto the curved end face of the flange d, and finally along the latter. The curved end c of the flange b and the corresponding curved portion of the flange d serve to positively guide the rollers as they pass to the flange d.

On one side of the bars B B, and at the upper end thereof, are located metallic journal-boxes, in which are mounted the ends of a transverse shaft F, centrally upon which is keyed a disk G, having marginal horizontal lugs h, located on one side. A circular series of perforations i are formed in the disk. A series of metallic sockets j are each adapted to be located radially on the side of the disk and be braced between two of the lugs, and the inner end of each arm is perforated to permit its attachment to the disk by means of a bolt engaging one of the perforations in the disk. The socket is an open one, and said socket between said walls is provided with an elongated slot k.

A cutter-frame is designed to be attached to each socket, and each cutter-frame consists of two metallic sections H H', each of which is of substantially the same construction, consisting of a right-angle portion having its outer terminal provided with a horizontal journal l, upon which is mounted an anti-friction roller m. At the inner end the section is provided with a tongue in the socket

and adjustably secured therein by means of a bolt and nut operating in connection with the slot in the same, and which enables the regulation of the position of the cutter-frame
 5 relative to the disk. Each of these sections H H' is provided at its inner side, near the lower end thereof, with a hook *p*, and a button *q* is located on the section H, while a thumb-nut *q'* is seated in a threaded bearing
 10 in the section H', and is provided with a hook-extension *r*. A wire *s* is connected at one end to the button *q*, then passes to the hook *p* below the same, thence across the frame to the second hook *p*, and is finally con-
 15 nected to the extension *r*. By this arrangement the wire forms the cutter and can always be maintained rigid through the adjusting devices described.

As the strip of clay is fed onto the end of
 20 the endless carrier the latter moves in the direction indicated by the arrow, Fig. 1, and as the strip approaches the cutter one of the frames of the latter is operated so that its wire *s* will pass through the strip and into
 25 one of the spaces between the blocks of the carrier, and thereby severing a section from said strip. The frame is in an oblique position when it contacts with the clay strip, and as it passes through said strip it assumes and
 30 passes beyond a vertical position, after which the wire ascends from the carrier. The several cutter-frames are so positioned that as one is beginning to ascend from the carrier the wire of the succeeding frame is about en-
 35 tering the strip. This arrangement not only regularly and evenly spaces the cutting, but serves to automatically revolve the cutter devices by the movement of the standards with the carrier.

40 From the foregoing it will be apparent that the device is not only of simple and durable construction, but that it dispenses with the complicated driving devices heretofore employed. The anti-friction rollers on the cut-
 45 ter-frames facilitate their easy movement relative to the endless carrier.

The arrangement of blocks and the cutting-wires is such that a portion of the clay usually forced by the descending cutter upon the
 50 belt is pushed through the spaces between said blocks and can in no way clog either the carrier or the cutter.

An annular plate *x* is secured on the side of the disk G, within the flanges of the same,
 55 and serves to lock the shanks of the cutter-frame against lateral play.

I claim—

1. The combination, with the supporting-frame, of the endless carrier composed of
 60 hinged connecting-blocks having spaces, as described, separated, and a rotating device having a series of radial cutter-frames provided with cutters adapted to register with said spaces, substantially as set forth.

65 2. The combination, with the supporting-

frame carrying the horizontal flanged portions at each side, of an endless carrier consisting of hinged blocks and having spaces, as described, rollers journaled on said blocks to engage said flanges, and a revoluble device
 70 provided with a series of cutter-frames, each having a cutter adapted to register with the spaces between the blocks, substantially as set forth.

3. The combination, with the supporting-frame and revoluble device having the radial
 75 cutter-frames, of an endless carrier composed of a series of blocks E E', the blocks E having castings secured to their under sides and provided with journals, the blocks E' provided
 80 with castings on their under sides and perforated to engage said journals to form a hinged connection, substantially as set forth.

4. The combination, with the supporting-frame having the side flanges and revoluble
 85 device carrying the radial cutter-frames, of an endless carrier composed of a series of blocks E E', the blocks E having castings secured to their under sides and provided with
 90 journals, the blocks E' having castings secured to their under sides and perforated to engage said journal, and rollers mounted on the projecting ends of the latter to engage said flanges, substantially as set forth.

5. The combination, with a supporting-
 95 frame, of the revoluble device having the radial cutter-frame, and an endless carrier consisting of hinged blocks, every alternate block being provided on its upper side, at each end, with a vertical casting, substantially as set
 100 forth.

6. The combination, with the supporting-frame and endless carrier, of a yoke-shaped
 105 cutter-frame provided with oppositely-located hooks, and a wire secured to the frame at one side engaging said hooks and connected at its other end to an adjustable thumb-screw, substantially as set forth.

7. The combination, with the supporting-frame and endless carrier, of a transverse
 110 shaft, a disk mounted thereon and provided with horizontal marginal lugs and a series of inner perforations, a series of sockets bearing between said lugs and secured by a bolt engaging one of said perforations, and cutter-
 115 frame connected to said sockets, substantially as set forth.

8. The combination, with a supporting-frame and endless carrier, of the disk and
 120 socket secured thereto, and cutter-frames, each comprising independent sections having inner tongues embracing and bolted to said sockets, substantially as set forth.

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

JACOB BENSING.

Witnesses:

JAMES P. RAGAN,
 GEO. RUSSELL.