

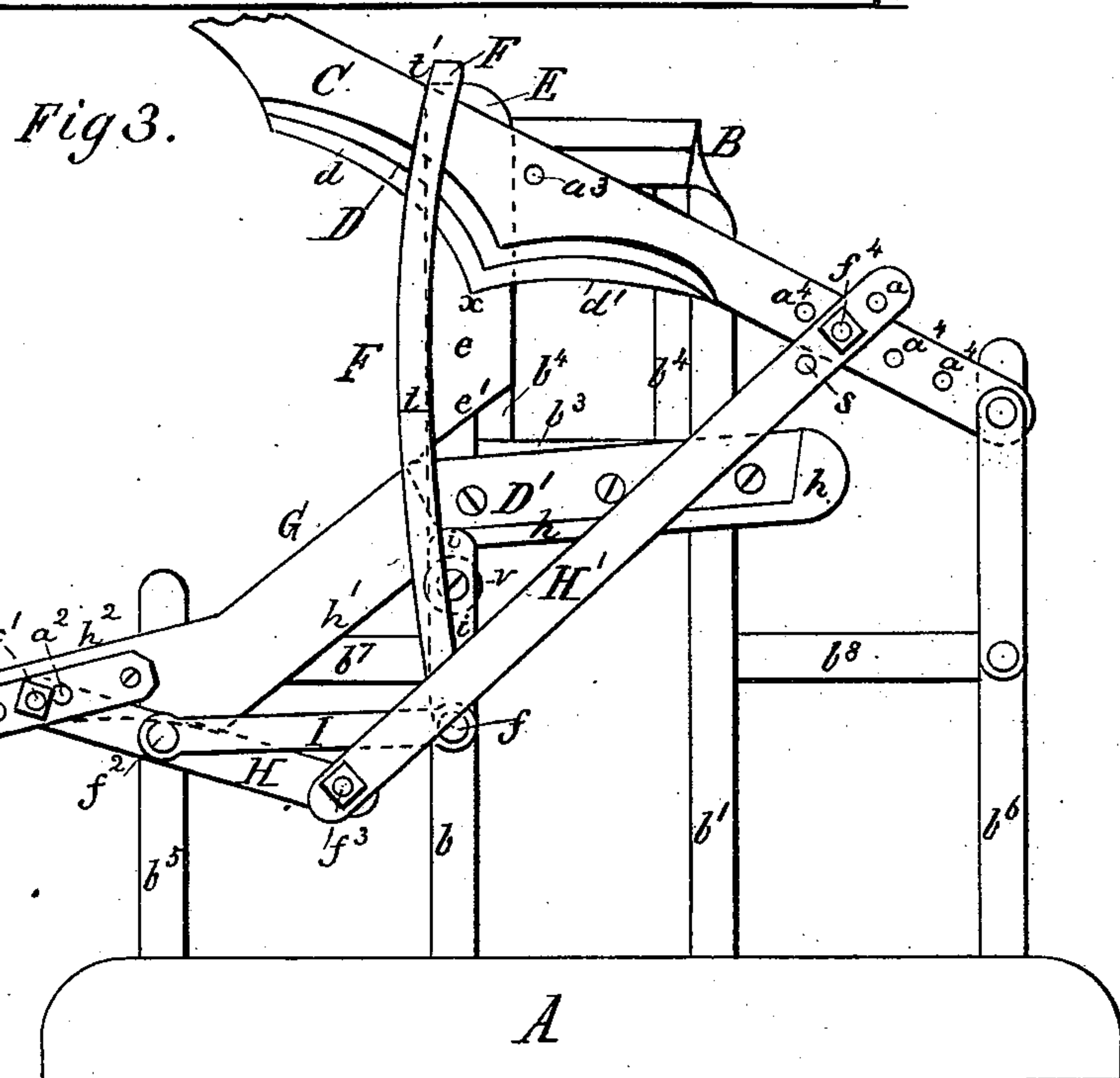
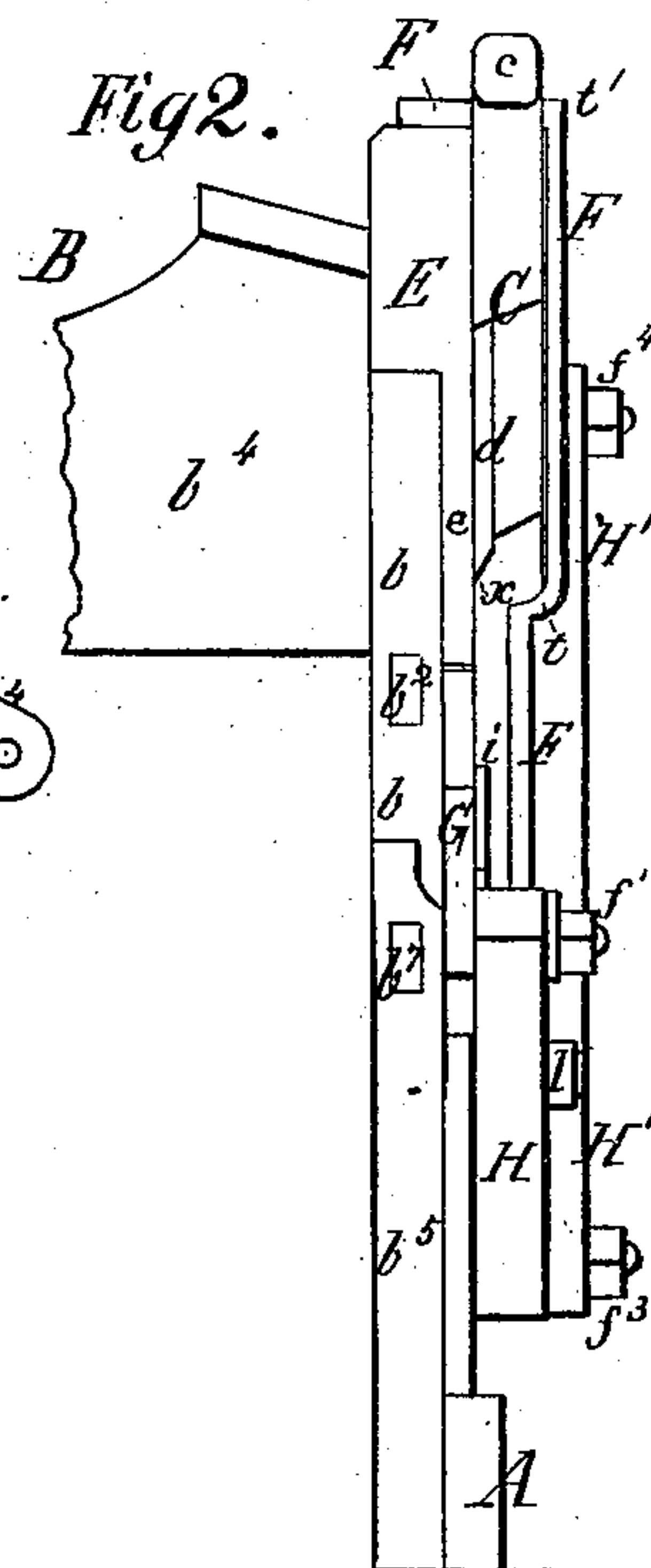
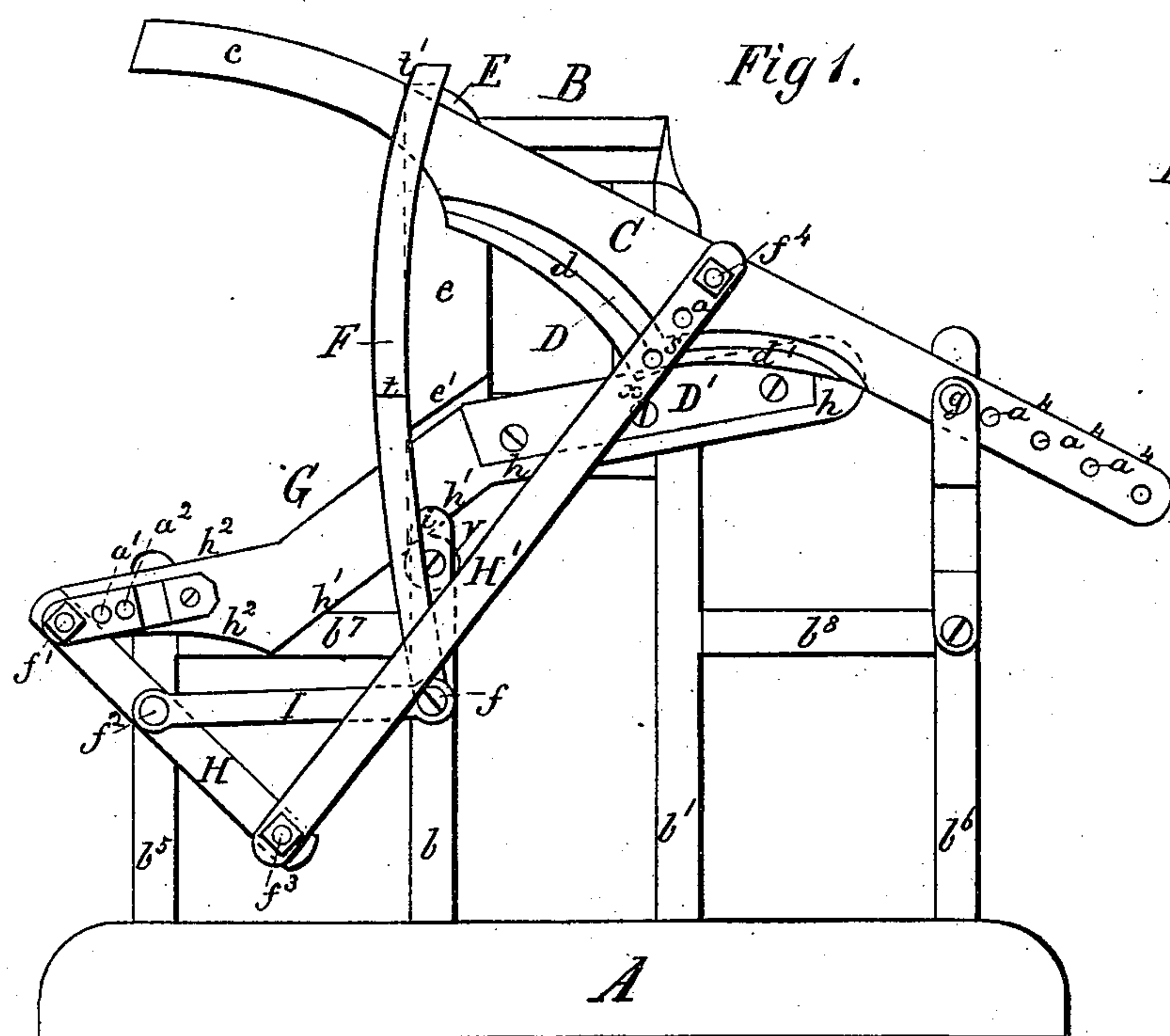
(No Model.)

2 Sheets—Sheet 1.

J. L. PAYNTER.  
Straw Cutter.

**No. 236,618.**

**Patented Jan. 11, 1881**



*Witnesses:*

Thosell Card  
J. F. Theo. Lang.

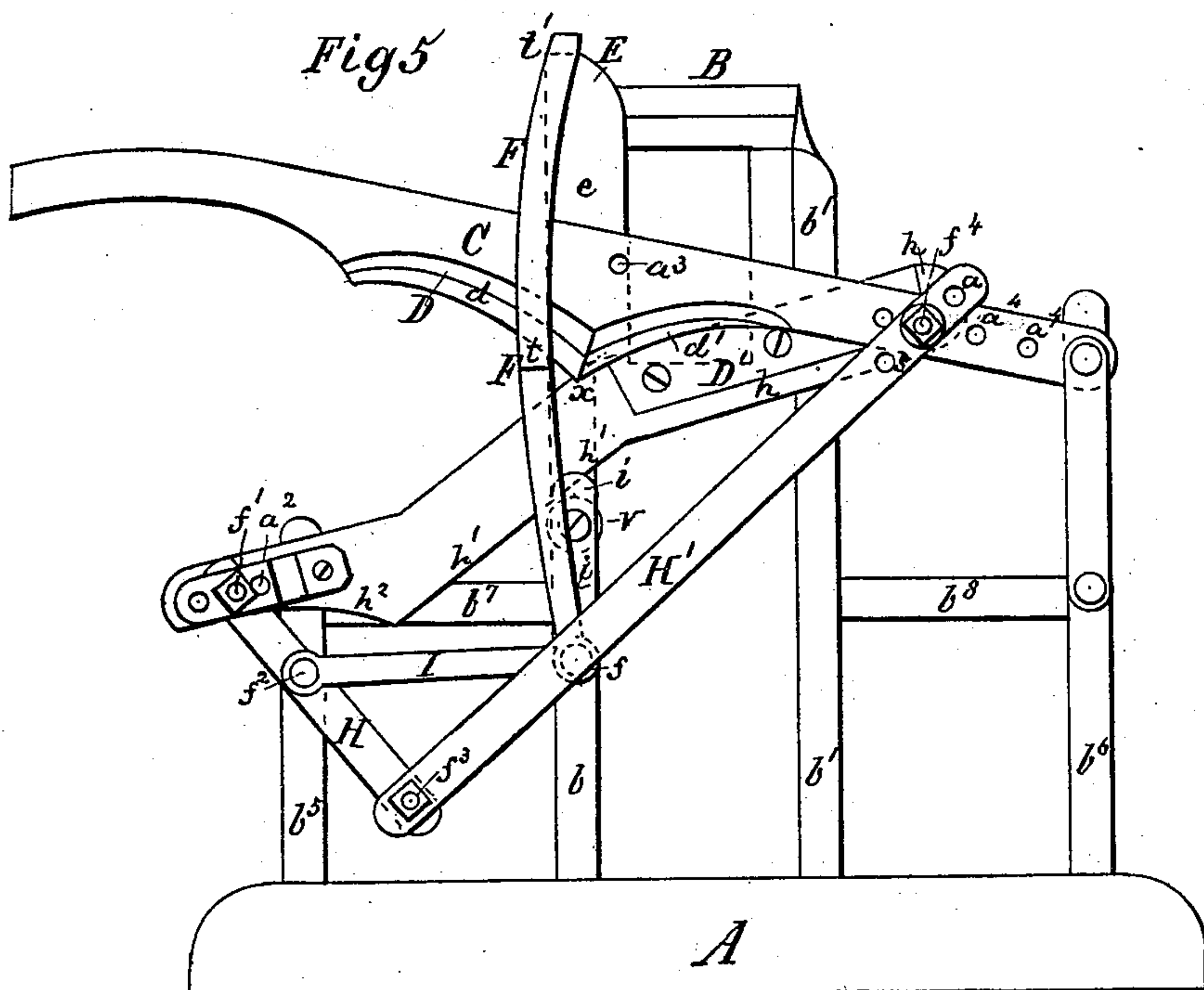
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4  
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2 Sheets—Sheet 2.

**No. 236,618.**

**Patented Jan. 11, 1881.**



Inventor:  
Jacob S. Paynter  
by  
Marion, Russell & Lawrence



# UNITED STATES PATENT OFFICE.

JACOB L. PAYNTER, OF SALEM, INDIANA, ASSIGNOR OF ONE-HALF TO  
ELKANA CRAYCRAFT, OF SAME PLACE.

## STRAW-CUTTER.

SPECIFICATION forming part of Letters Patent No. 236,618, dated January 11, 1881.

Application filed June 1, 1880. (No model.)

*To all whom it may concern:*

Be it known that I, JACOB L. PAYNTER, a citizen of the United States, residing at Salem, in the county of Washington and State of Indiana, have invented a new and useful Improvement in Straw-Cutters; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings and letters of reference marked thereon, forming a part of this specification of said improvement, in which drawings—

Figure 1 is a front elevation of my improved straw-cutter, the hand-lever which carries the upper cutting-blade being elevated to the limit of its upward throw preparatory to its depression to effect a cut, and with the several articulating parts adjusted in such relation as to utilize that half of the length of the upper and lower cutting-blades which is nearest to the operator during the act of cutting straw, and Fig. 2 is a side elevation of the same with a portion of the cutter-box broken off. Fig. 3 is a front elevation of the straw-cutter with the hand-lever elevated as in Fig. 1, but with the several articulating parts adjusted so as to bring into action portions of the cutting-blades not utilized during the act of cutting straw, as signified in Fig. 1. Fig. 4 is a front elevation with the articulating parts adjusted as in Fig. 1, but showing the relation of said parts at the completion of a cut. Fig. 5 is a front elevation with the articulating parts adjusted as in Fig. 3, but showing the relation of said parts at the completion of a cut.

The object of my invention is the production of a straw-cutter which shall have its articulating parts capable of such an adjustment that when one portion of the cutting-blades becomes dull from use new or unused portions of the blades may be brought into action by a readjustment of said parts, but without changing the fixed position of the cutting-blades upon the parts to which they are attached.

Another object is to so combine the movable or operating parts of the straw-cutter that, while the upper cutting-blade is effecting its cut with a downwardly-drawing cut, the lower

cutting-blade will effect its cut by an upward oblique thrust movement across the straw.

In the several figures, A indicates the front base-piece of the machine, to which, posts, as at  $b\ b'$ , are attached in a suitable manner, and stayed with a cross-beam,  $b^2$ , upon which the bottom  $b^3$  of the delivery end of the cutter-box B rests, the side pieces,  $b^4$ , of said box being secured to the posts  $b\ b'$ , as indicated. Posts, as at  $b^5\ b^6$ , also extend upwardly from the base-piece A, and are respectively connected to the main posts  $b\ b'$  by cross-beams, as at  $b^7\ b^8$ , said base-piece, posts, and cross-beams constituting a front frame for the support of the front end of the cutter-box and its operating parts, while the rear portion of the cutter-box (not shown in the figures) may be supported either as usual upon a rectangular frame or in any other suitable manner.

Having reference to Figs. 1, 2, and 4, C indicates the hand-lever of the machine, the handle  $c$  of which is grasped by the operator during the act of cutting straw. This hand-lever is supplied, in a suitable manner, with a single cutting-blade, D, having two lengths of cutting-edge,  $d$  and  $d'$ , extending equally to the right and left of its central point,  $x$ , each cutting-edge being of curved form, as shown, in order to effect a drawing cut upon the straw.

E indicates an extension of the post  $b$ , and against the face  $e$  of this extension the inner surface of the hand-lever works during its up and down movements, said lever working between the extension-piece E and a metal guide, F, which has its upper end secured on top of the extension E, and its lower end held in position by a screw-bolt,  $f$ , which screws into the post  $b$ .

The rear end of the hand-lever C is pivotally connected to the post  $b^6$ , as indicated at  $g$ , this end of the hand-lever being provided with perforations, as shown, so that the lever may be adjusted forward, as in Fig. 3, when its knife-edge portion  $d'$  is to be brought into action.

G is a cutter-bar carrying a lower straight-edged cutting-blade, D'. This bar is arranged to have its inner surface work against the outer front surface of the posts  $b\ b'$ , but in rear of the hand-lever C and its cutting-blade D, the cut-



ter-bar and hand-lever, with their cutting-blades, being so contiguous that the cutting-edges of both blades will come in shearing contact during the act of cutting straw. The cutter-bar G is of irregular longitudinal formation, as represented in the figures, its end portion,  $h$ , to which the blade  $D'$  is applied, its central portion,  $h'$ , and its rear portion,  $h^2$ , all being at different angles with reference to the base-support A, as shown. The end of the rear portion,  $h^2$ , of the cutter-bar G is pivotally connected, as at  $f'$ , to a swinging bar, H, which is pivoted to the post  $b^5$  at  $f^2$ , and to this bar H a connecting-bar, H', has its lower end pivoted, as at  $f^3$ , and its upper end pivoted, as at  $f^4$ , to the hand-lever C. A stay-bar, as at I, connects the posts  $b$   $b^5$ , the bolt, as at  $f$ , passing through one end of the bar I, as well as the lower end of the guide F, and the bolt, as at  $f^2$ , passing through the opposite end of the bar I, as well as loosely through the swinging bar H, and into the post  $b^5$ . The cutter-bar G is held in position between the post  $b$  and a metal guide-piece,  $i$ , the upper end of the guide-piece overlapping a portion of cutter-bar, as shown. The lower edge of the central portion,  $h'$ , of this bar is supported by and travels upon a roller,  $v$ , confined between the guide-piece  $i$  and post  $b$  by a screw-bolt, which passes through said guide-piece and roller and into the post  $b$ , as indicated. The lower end of the piece  $i$  is held in place by the bolt  $f$ , which passes through one end of the cross-bar I and the lower end of the guide F and into the post  $b$ . The oblique termination at  $e'$  of the face portion  $e$  of the extension-piece E of the post  $b$  serves as a guide for the upper edge of the portion  $h'$  of the cutter-bar G during the movements of the bar G.

It will be seen that the rear portion,  $h^2$ , of the cutter-bar G is provided with perforations or bolt-holes, as at  $a'$   $a^2$ , so that when desired the cutter-bar G may be adjusted rearwardly; also, that the upper portion of the connecting-bar H' has like holes, as at  $a$   $a$  and  $s$ , whereby it may be properly pivotally adjusted to the hand-lever C centrally of the length of the hand-lever at  $a^3$ , when the hand-lever C is adjusted forward from its position shown in Fig. 1 to its position shown in Fig. 3; also, that the hand-lever C is provided with one perforation or bolt-hole, as at  $a^3$ , about centrally of the length of the lever, and with other perforations, as at  $a^4$ , at the rear end of said hand-lever. Thus, when it is desired to utilize the cutting-edge  $d$  of the upper blade, D, in conjunction with the lower blade,  $D'$ , the several parts C, G, H, and H' may be adjusted together for action, as signified in Fig. 1; and that when it is desired to utilize the cut-

ting-edge  $d'$  of the upper blade, D, in conjunction with the lower blade,  $D'$ , the several parts C, G, H, and H' may be adjusted together for action, either as signified in Fig. 3, with the bar H' pivotally connected at  $f^4$  with the rear end of the hand-lever C, or with the bar H' adjusted to the hole  $a^3$  at a point centrally of the length of the hand-lever C, in which latter case the bolt  $f^4$  would pass through the hole  $s$  of bar H' and through hole  $a^3$  of the hand-lever C. In this manner it will be seen that when one portion of the blades becomes dull from use, new or undulled portions (more or less) of the blades D and  $D'$  may be brought into action, thus avoiding the necessity of removing and grinding the blades so frequently, as is the case where but one given length of cutting-edge of the blades is used to cut the straw.

In the operation of the machine, the downward throw of the hand-lever C reaches its limit by the lever striking upon the bent or shouldered portion  $t$  of the guide F, and the upward throw of the hand-lever is limited by the lever striking against the part  $t'$  of said guide. The downward stroke of the hand-lever C causes the bar H' to force the bar H from its position shown in Fig. 1 to its position shown in Fig. 4, and thereby force the cutter-bar G bodily forward from its position shown in Fig. 1 to its position shown in Fig. 4, the movement of its cutter-blade  $D'$  being obliquely to the straw delivered to its action, as well as with an upward thrust against the straw, and this simultaneous with the downward-drawing cut of the upper blade, D. In this manner the straw is cut with great facility.

I claim—

1. In a straw-cutter, the combination of a hand-lever provided with an upper cutting-blade, a cutter-bar provided with a lower cutting-blade, a connecting-bar, H', and a swinging bar, H, whereby said parts are capable of such an adjustment that when one portion of the cutting-blades becomes dull new or unused cutting-edges of the blades may be brought into action without changing the fixed position of the blades upon the parts to which they are attached, substantially as described.

2. In a straw-cutter, the combination of the upper cutting-blade, D, with the lower cutting-blade,  $D'$ , cutter-bar G, swinging bar H, and connecting-bar H', substantially as and for the purpose described.

JACOB L. PAYNTER.

Witnesses:

FRED L. PROW,  
ELKANA CRAYCRAFT.