

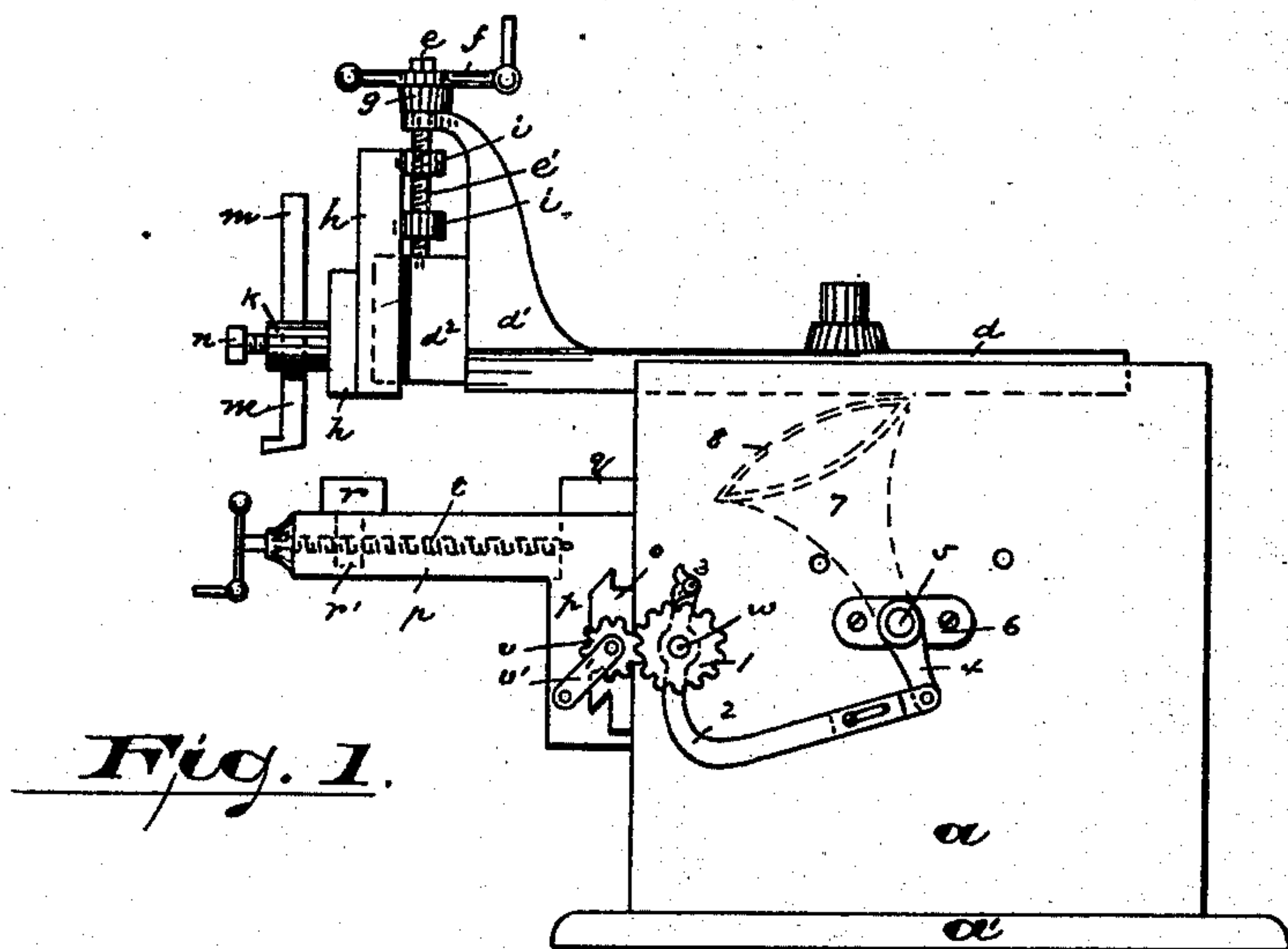
(No Model.)

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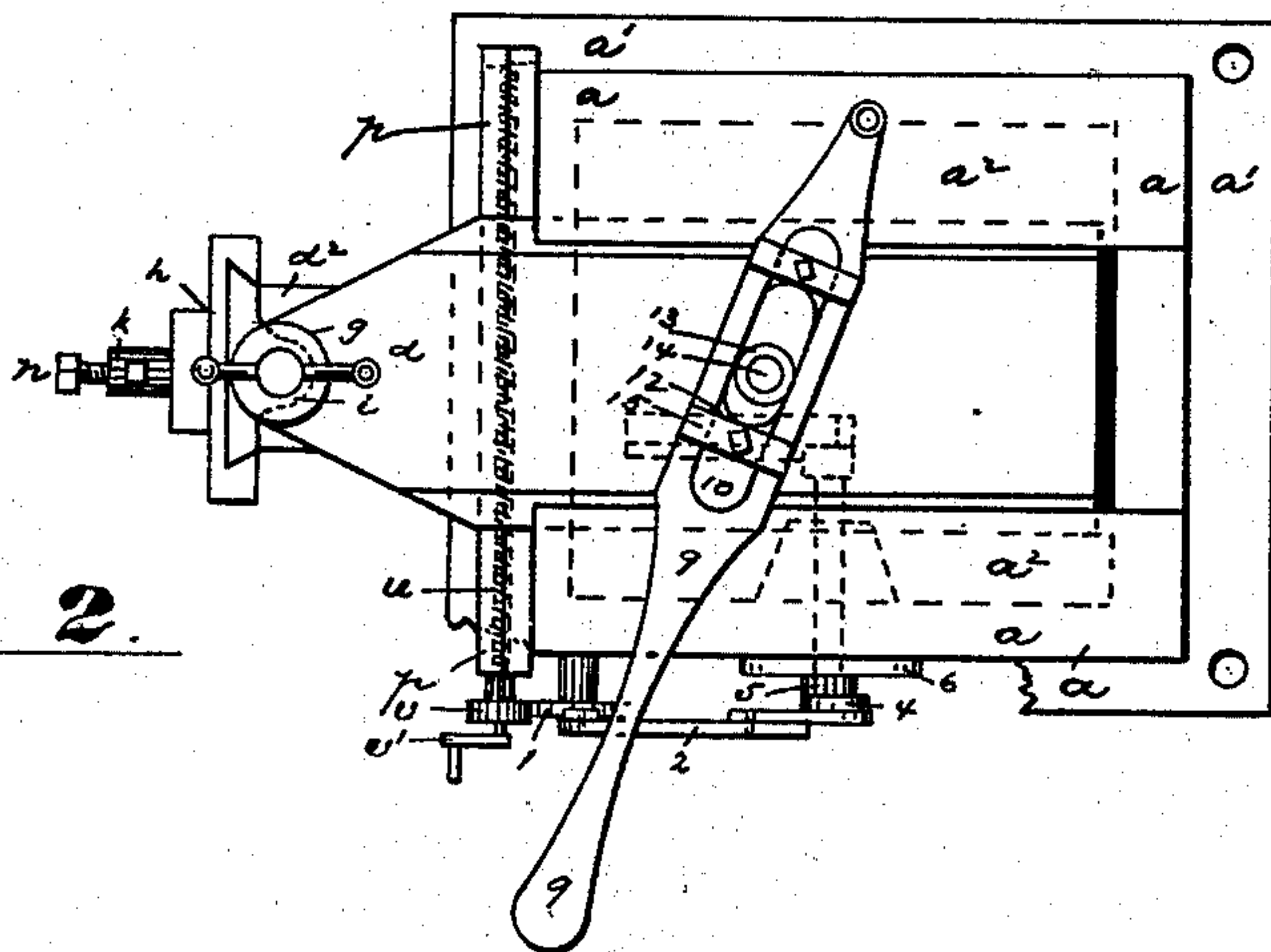
J. HANGOCZKY.  
HAND PLANING MACHINE.

No. 413,444.

Patented Oct. 22, 1889.



*Fig. 1.*



*Fig. 2.*

WITNESSES:

E. L. Sherman  
Alfred Gartner

INVENTOR:

*Jacob Hangoczy*

BY *Wm. H. Chas.* ATTY'S.

(No Model.)

2 Sheets—Sheet 2.

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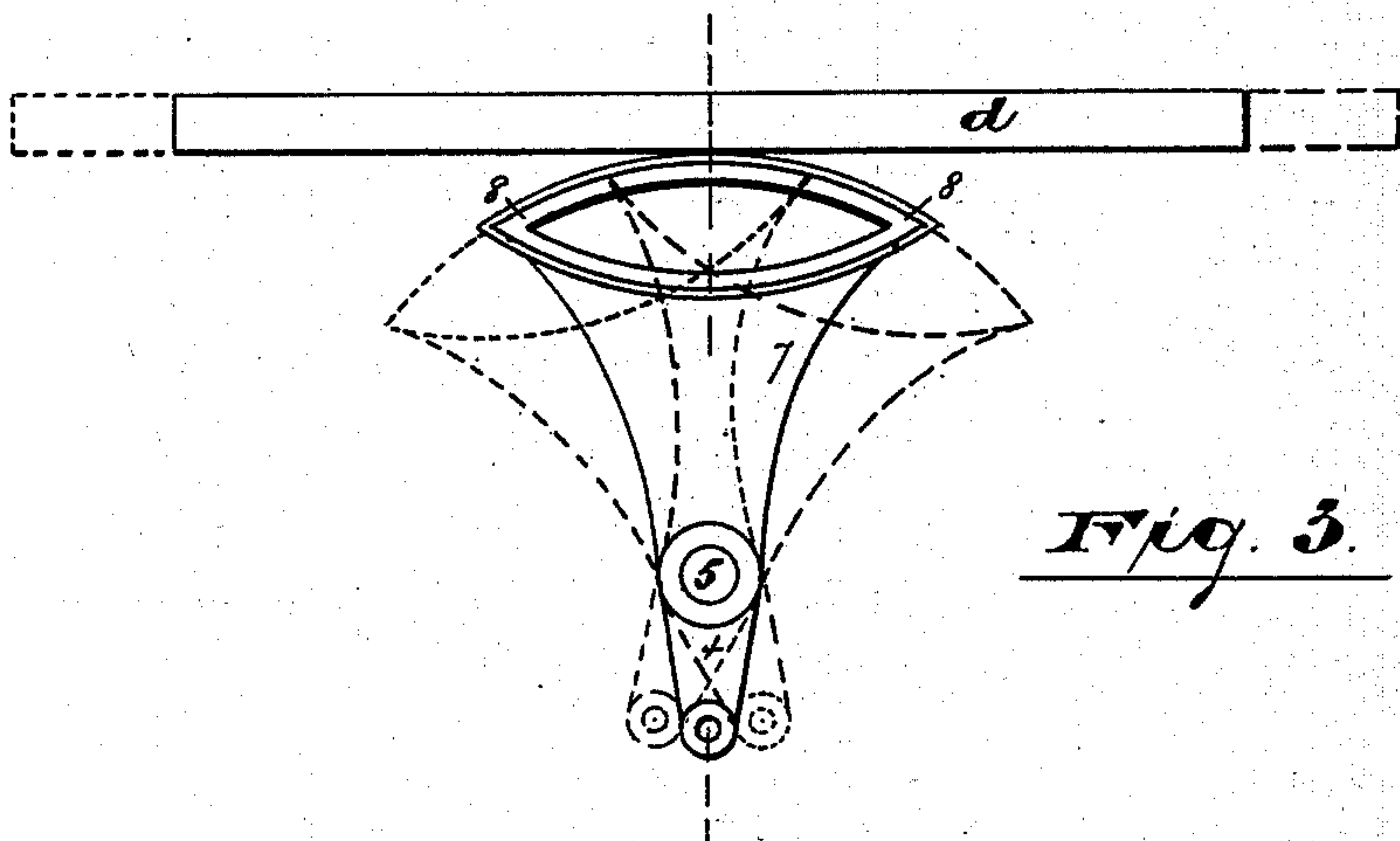


Fig. 3.

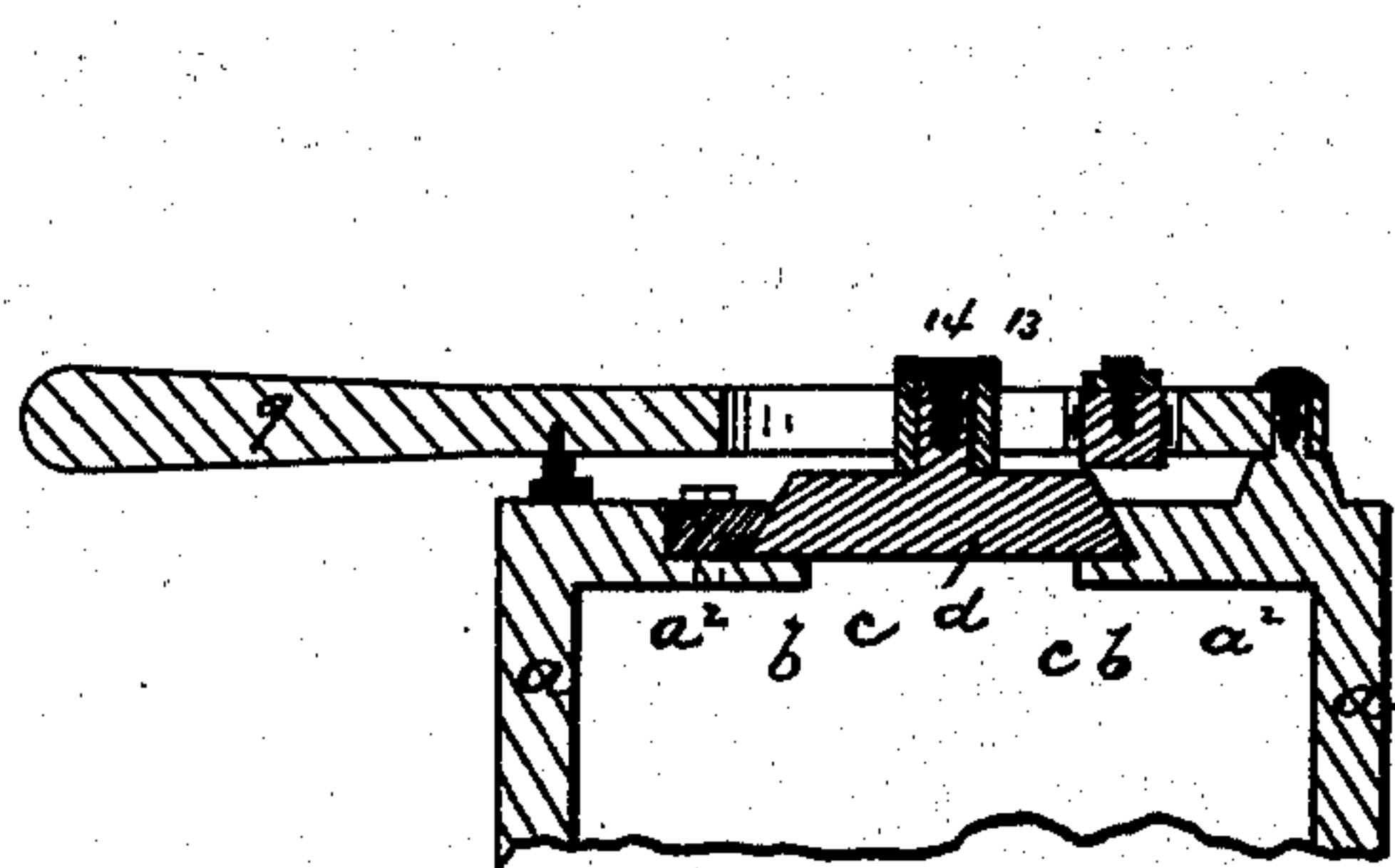


Fig. 5.

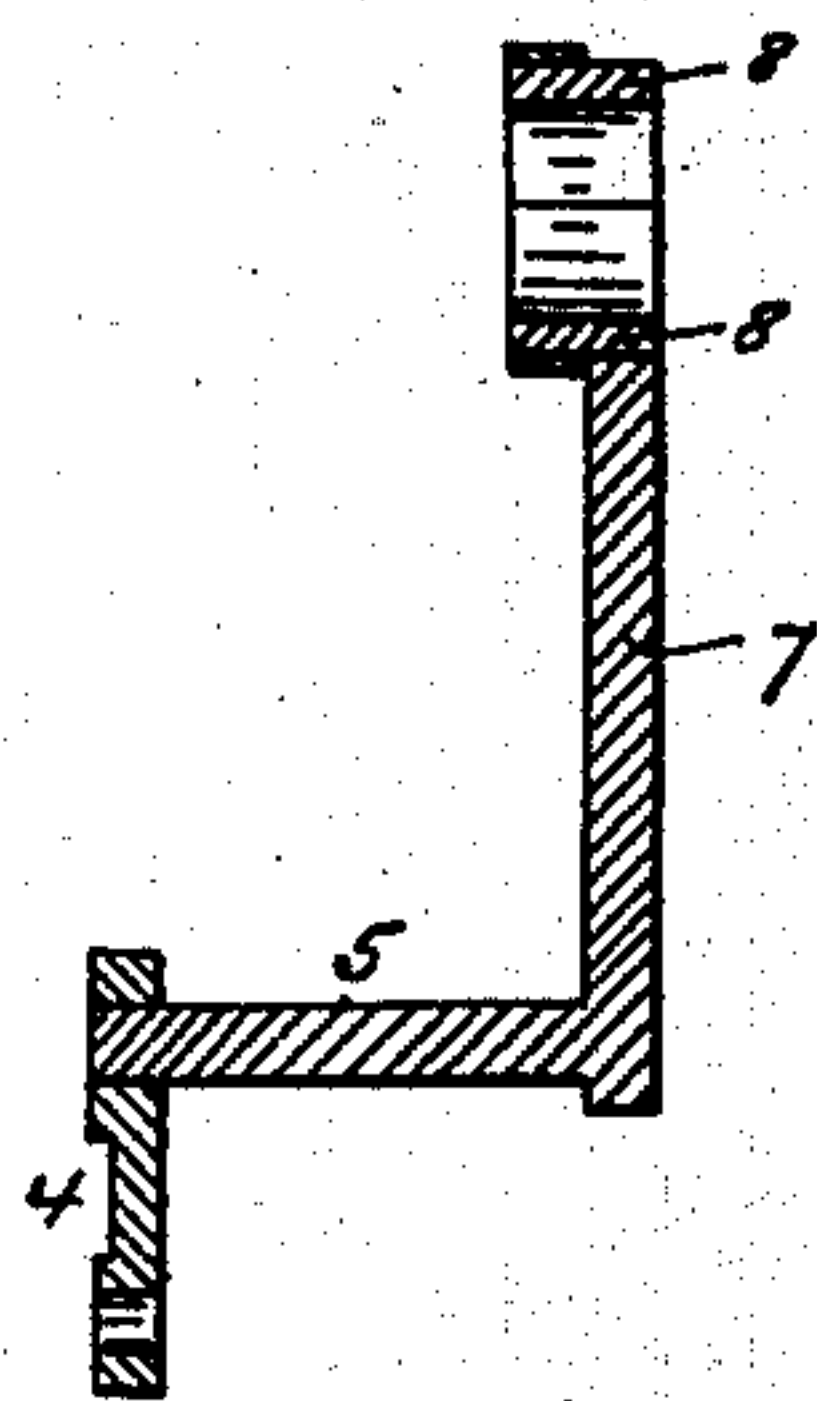


Fig. 4.

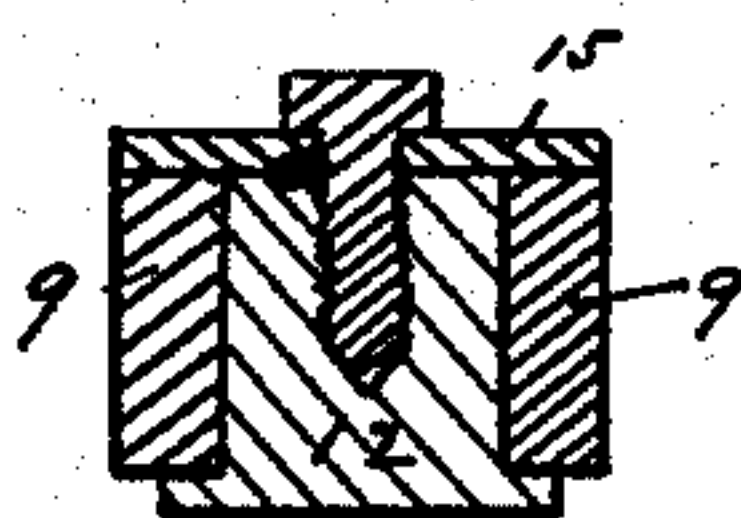


Fig. 6.

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# UNITED STATES PATENT OFFICE.

JACOB HANGOCZKY, OF NEWARK, NEW JERSEY.

## HAND PLANING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 413,444, dated October 22, 1889.

Application filed May 28, 1889. Serial No. 312,392. (No model.)

*To all whom it may concern:*

Be it known that I, JACOB HANGOCZKY, a citizen of the United States, residing at Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Hand Planing-Machines; 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 of reference marked thereon, which form a part of this specification.

The object of this invention is to increase the scope of the hand planing-machine, extend its applicability to a larger class of work, and render the machine simpler and easier.

The invention consists in the improved hand-planer herein described and the combination and arrangement of parts thereof, substantially as will be hereinafter set forth, and finally embodied in the clauses of the claims.

Referring to the accompanying drawings, in which like letters of reference indicate corresponding parts in each of the several figures, Figure 1 is a side view of a hand-planer embodying my improvement, the cutter-lever removed. Fig. 2 is a top plan view of the planer, the carriage not being shown. Fig. 3 is a detail view showing the construction of the feed-lever. Fig. 4 is a section through line *x*, Fig. 1. Fig. 5 is a section through line *y*, Fig. 3; and Fig. 6 is a section on line *z*, Fig. 2.

In said drawings, *a* represents the base or body-frame of the machine, with enlarged base *a'*, for securing it to a floor and inwardly-projecting tops *a''* on opposite sides, in which are arranged beveled slots *b b*, in which slide the beveled edges *c c* of a tool-carrying frame *d*, as shown in Fig. 4. On the outward or forward end of the frame *d* is a standard *d'* and extension *d''*. In the forward upper projection of the standard *d'* is an opening adapted to serve as a bearing for a vertical shaft *e*, the lower portion of said shaft being screw-threaded, as at *e'*, Fig. 1. On the top of the shaft *e* is secured a hand-lever *f*, resting on a shoulder *g* on the shaft between the

lever and the standard. The front of the extension *d''* has a beveled flange, as clearly shown in Fig. 2, on which fits and slides the tool-adjuster *h*. This tool-adjuster has two projecting lugs *i i*, which have threaded sockets, in which the threaded portion of the shaft *e* is arranged to rotate, as shown in Fig. 1. On the front of the sliding portion is the tool-holder proper *k*, provided with a slot, in which is secured the cutting-tool *m* and held in proper position by set-screw *n*. On the front of the frame *a* is a beveled shoulder projection *o*, on which is fitted and slides a carriage *p*, for holding and presenting metal to the cutting-tool. On top of the carriage is a guide *q*, rigidly secured thereto, and on the outwardly-extending surface of the carriage *p* is another guide *r*, with a downwardly-extending lug *r'*, having a central threaded opening adapted to receive a threaded adjusting-rod *t*, secured in the carriage *p*, the carriage being slotted to allow the passage of the lug *r'*, as will be manifest. A feeding-shaft *u* is secured to the frame for moving the carriage forward and back in the ordinary manner. On one end of the feed-shaft is secured a gear-wheel *v* and a hand-lever *v'*. On a stud *w*, secured to the side of the frame, revolves a gear-wheel 1, meshing into gear-wheel *v*. On the outward end of the stud is pivoted a double-acting pawl 3 to engage with the teeth on gear-wheel 1. The lever 2 in its lower portion is made in two parts, so as to be extensible, and is curved or bent, so as to be pivotally connected to an arm 4, rigidly secured to the outer end of a rocker-shaft 5, turning in bearings 6 6. On the inner end of the rocker-shaft 5 is rigidly secured a feed-lever 7 on the same angular line as the lever 4. The top or outer end of the lever 7 is made, preferably, oval, as at 8, and covered with leather or some similar material, so as to engage the under side of the tool-carrying device *d*. To the upper part of the frame, and opposite the operator, is pivoted a hand-lever 9, having an elongated slot 10, in the ends of which are fitted blocks 12 12, having their inner ends curved. These blocks are secured by a screw to binding-plates 15, and are used to adjust and hold the blocks in position. Within the slot 10



moves and slides a collar or sleeve 13, adapted to revolve on a stud or post 14, secured to the upper surface of the tool-carrying device *d*.

In operating my improved hand-planer the metal to be planed is placed on the carriage and secured firmly in position by screwing up the sliding guide. The cutting-tool is then adjusted by means of the set-screw into its position for cutting, as described, the cutting mechanism having first been drawn back to its extreme limit. The feed-lever will then be in the position shown by the dotted lines at the right in Fig. 3. The lower part of the lever 2, which is extensible, as shown, is then adjusted so that the distance of movement of one of the teeth of the wheel *v* shall be equal to the width of the cut to be made, the depth of the cut being regulated by the set-screw holding the cutting-tool. The machine is then ready for operation. By drawing the hand-lever 9 to the left the part *d*, carrying the cutting mechanism, will be advanced, and with it the feed-lever 7, the feed-lever being held in continuous contact with the under side of the part *d* by the pressure of the leather. This forward section of the feed-lever causes the rocker-shaft to turn, carrying the lower portion of the lever 2 backward, while the upper portion will be carried forward, and with it pawl 3, in engagement with the wheel 1. When the hand-lever has been drawn to the left far enough to allow the entire passage of the cutting-tool over the metal to be cut, the feed-lever will have also advanced sufficiently far to cause the pawl, through the lever-connections described, to move so far forward as to cause the wheel 1 to move far enough to cause the wheel *v* to revolve the distance of one tooth, carrying with it the screw-bar *u*, thus causing the carriage, with the metal to be cut, to be advanced the desired distance for the next cut. After the cutting has been completed the carriage is turned back to its first position by throwing over the pawl and turning the screw-rod *u* backward by means of the handle *v*.

I do not make any claim to the mechanism

for adjusting the cutter, nor to the means of securing the piece to be cut to the carriage. Neither do I intend to limit myself to the specific construction and arrangement of the various parts of the machine claimed by me; but

What I do claim as new, and desire to secure by Letters Patent, is—

1. The improved hand-planer herein described, combining therein a cutting mechanism, a supporting-carriage, and an automatic feed operated by the cutting mechanism, as set forth.

2. In a hand-planer, an automatic feed consisting of an operative lever in contact with the cutting mechanism and secured to a rocker-shaft, and a connecting-lever secured to said shaft and pivotally connected to one end of a reciprocating rod, the other end of said rod being pivoted to a pawl engaging a gear-wheel adapted to mesh into a gear-wheel on the feed-screw rod, as described, and for the purpose set forth.

3. In a hand-planer, a cutter-operating mechanism consisting of a slotted lever pivoted to said frame, a stud secured to the top of the sliding frame of the cutting mechanism, and a loose sleeve or collar on said stud and adapted and arranged to reciprocate in the slot in said lever, as described, and for the purpose set forth.

4. In a hand-planer, a cutter-operating mechanism consisting of a lever having an elongated slot, blocks adjustably secured in said slot, a stud secured to the top of the sliding frame of the cutting mechanism, and a loose sleeve or collar on said stud and adapted and arranged to reciprocate between said blocks in said slot, as described, and for the purpose set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 19th day of April, 1889.

JACOB HANGOCZKY.

Witnesses:

ALFRED GARTNER,  
OLIVER DRAKE.