

J. H. Masker,

Turning Irregular Forms.

N^o 26,691.

Patented Jan. 3, 1860.

Fig. 1.

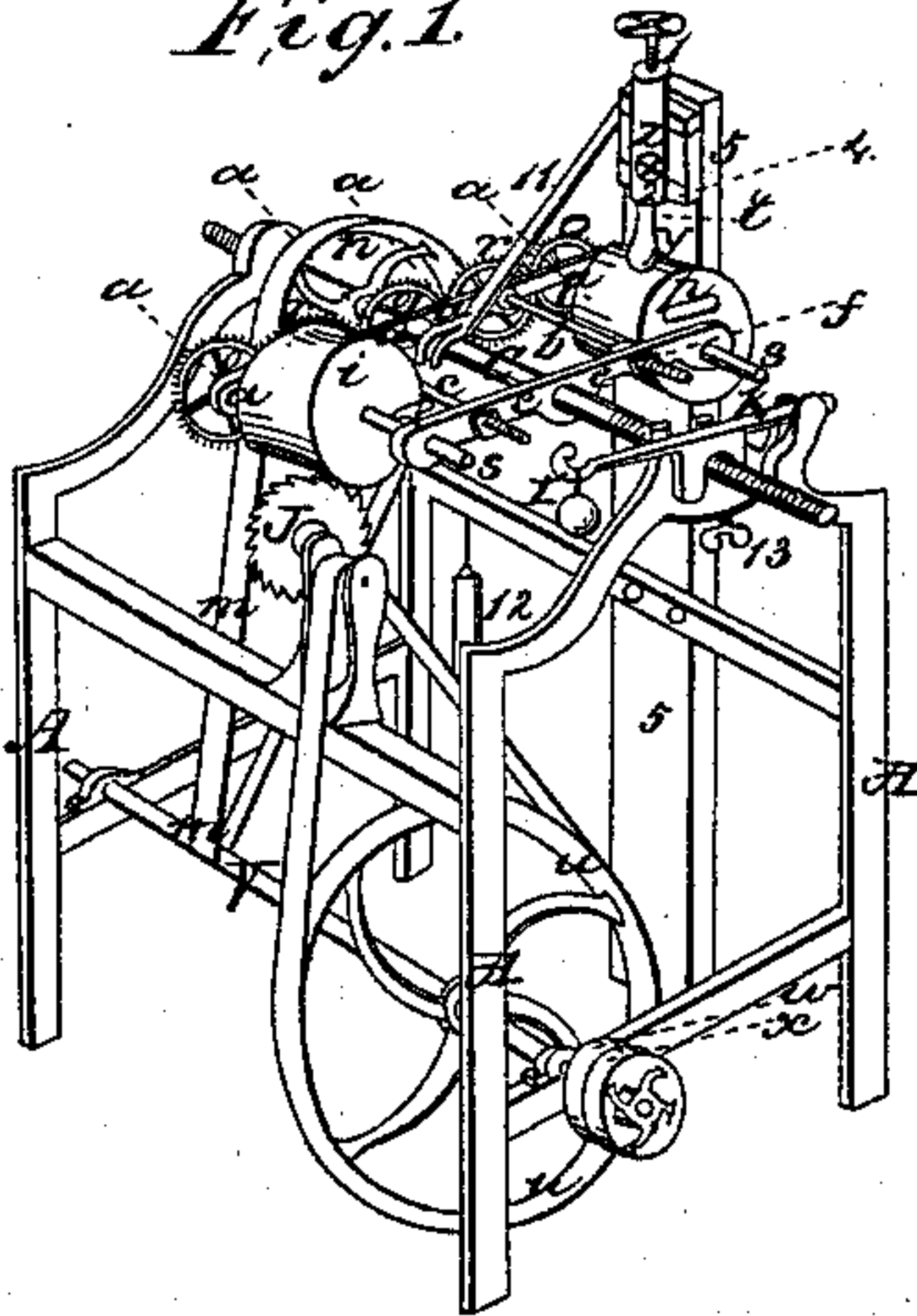


Fig. 2.

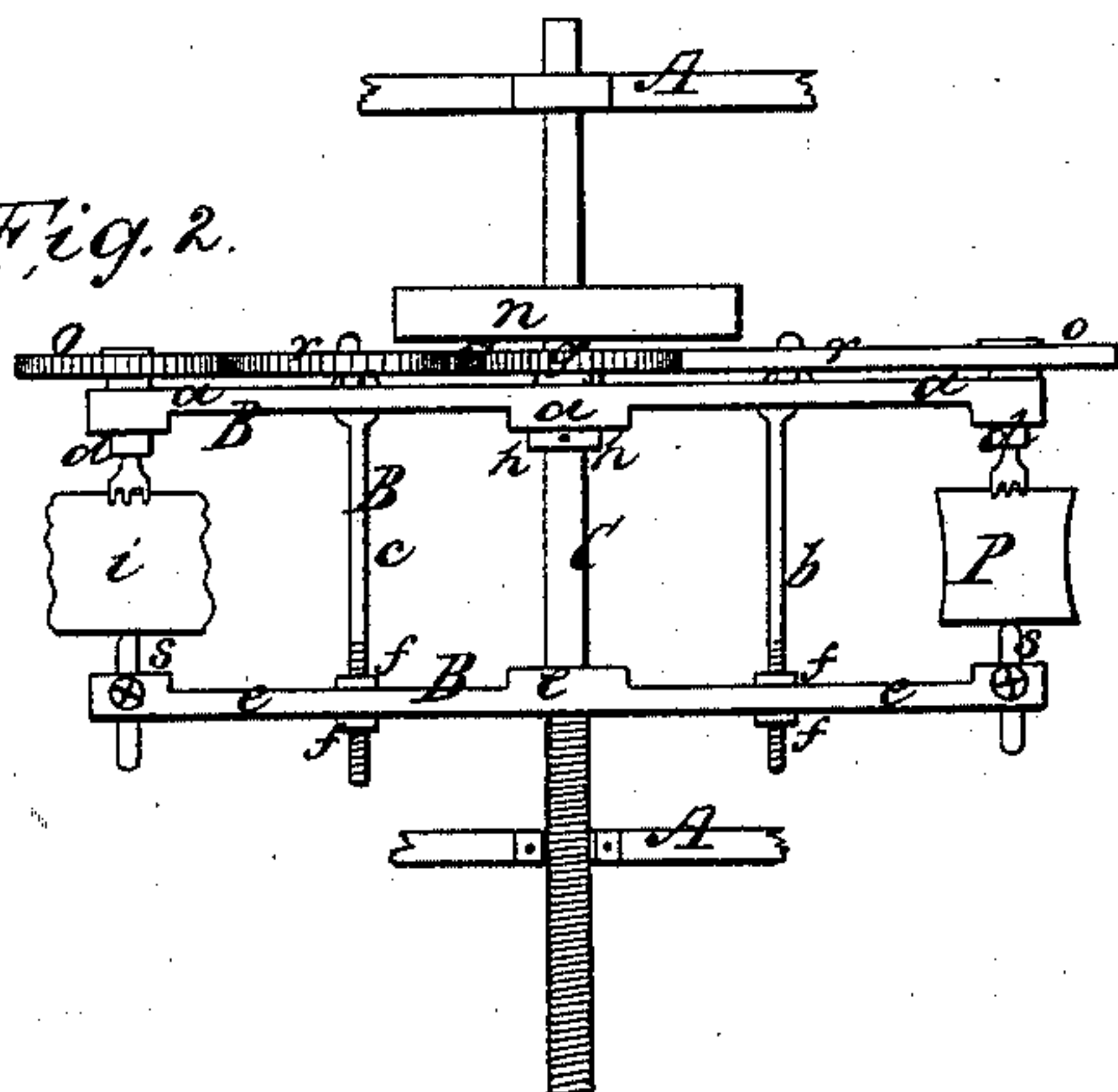
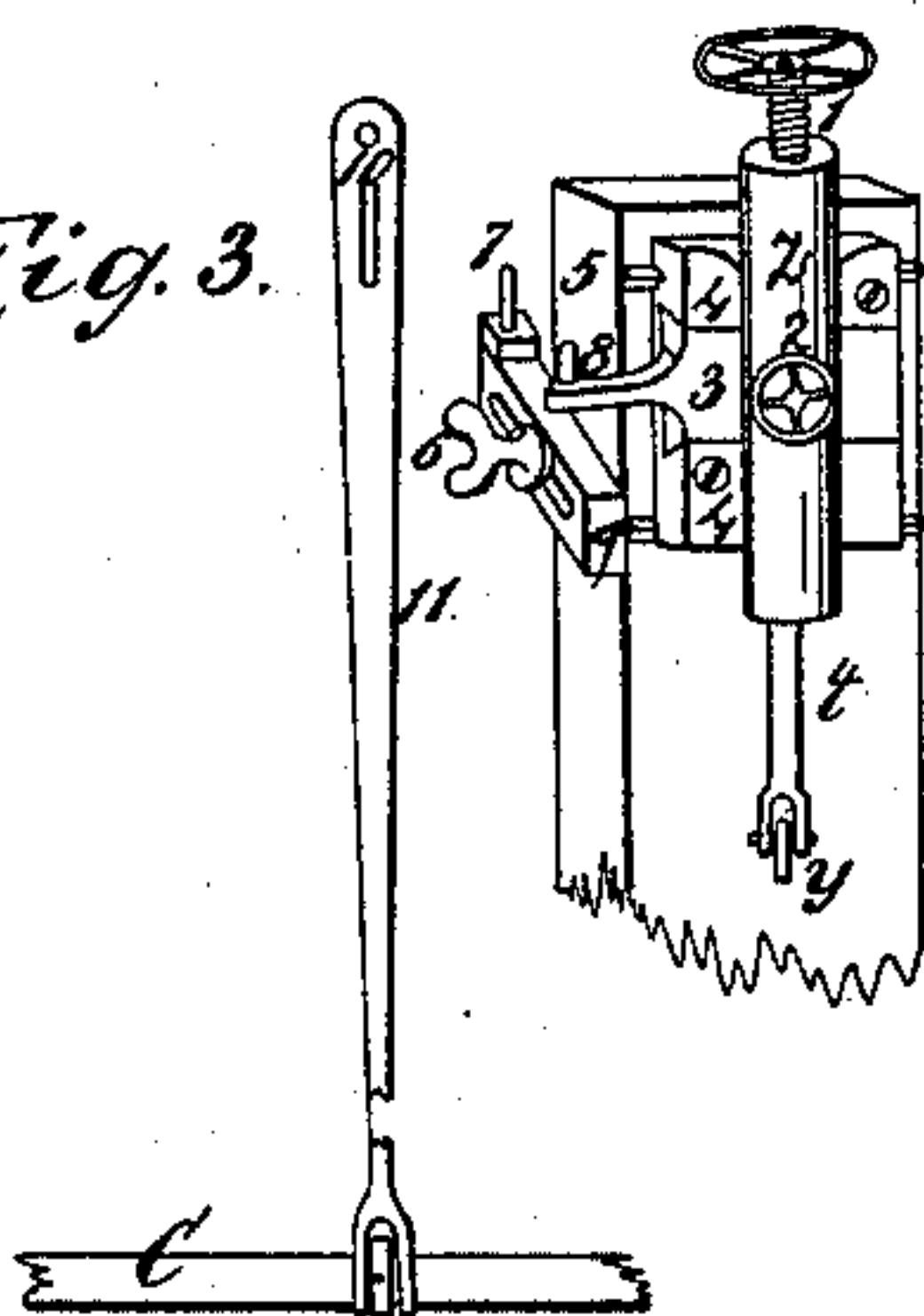


Fig. 3.



Witnesses.

Wm M Gooding
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Inventor.

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UNITED STATES PATENT OFFICE.

J. H. MASKER, OF NEWARK, NEW JERSEY.

MACHINE FOR TURNING HAT-BLOCKS.

Specification of Letters Patent No. 26,691, dated January 3, 1860.

To all whom it may concern:

Be it known that I, J. H. MASKER, of the city of Newark, in the county of Essex and State of New Jersey, have invented certain
5 Improvements in Machinery for Forming Hat-Blocks; and I do hereby declare the following to be a full and exact description thereof, reference being had to the drawings which accompany this specification and make
10 part of the same.

The nature of my invention consists in the adaptation of machinery to varying the length, size, and shape of blocks, from the pattern block from which they are turned
15 or formed, by the same machine as will, if desired, produce an exact duplicate of the pattern.

In the drawings, Figure 1 is a perspective view of the machine. Fig. 2 is a top view
20 of the part of the machine in which the blocks are held while being shaped. Fig. 3 is the contrivance by which the blocks can be made longer than the pattern.

The same letters and figures refer to the
25 same parts in each of the figures in the drawings.

A is the frame of the machine.

B, *a*, *e*, is the frame in which the block to be turned and the pattern block are held.
30 This frame is of metal and is formed by the sides *a* and *e*, being connected by the bars *b* and *c*. These bars are permanently fixed to the side *a*, but are loose in the side, *e*. A thread is cut on those ends of the bars (*b* and
35 *c*) which pass through the side *e*. A nut *f* being placed on each side of *e*, holds it in the desired place. By this means the frame B can be adapted to blocks of various
40 lengths.

The main shaft C passes through and revolves in the sides *a* and *e* in the frame B, its place being the middle of the length of the frame. The side *a* is held to the same place on the main shaft, while the shaft revolves, by the hub of the cogwheel *g* on one
45 side of *a* and by a ring collar *h* on the main shaft on the other side, so that while the shaft C travels endwise, as it does in operating, the frame B is carried along with it.
50 The object of the endwise traveling being that of bringing the surface of the rough block *i*, in its progress, in contact with the cutter wheel *j*.

The shaft C is caused to travel endwise
55 through its bearings on the top of the frame

A by a screw cut upon that end which passes through the side *e* of the frame B. To the frame A is attached a lever *k*, which has a recess with a thread in it corresponding with the screw on C. This lever is pressed
60 upon C by the small weight *l*, so that when the shaft C is made to revolve by the belt *m* and the wheel *n* every revolution moves it forward one thread of the screw.

At each end of the side *a* of the frame B
65 is a lathe mandrel *d*, made fast on the outside of the frame to a cog wheel *o*. Between *o* and the cog wheel *g* an intermediate wheel *r* is placed, and as the wheel *g* is made stationary on the main shaft C the
70 revolving of the shaft causes the blocks *i* and *p* both to turn in the same direction by the means of the intermediate wheels, *r*.

In the ends of the side *e* of the frame B, and in exact line with the centers of the
75 mandrels *d*, a center pin *s* is placed, which holds the blocks *i* and *p* at one end, the other end being held by the dogs or chucks in the mandrels *d*. These center pins are kept in place by a screw and hand wheel.
80

The cutter wheel J is driven by the wheel
85 *u* on the shaft *v*, and the shaft *v* is belted to the main shaft in the factory from the fast and loose pulley *w* and *x* on the shaft *v*.

Over the middle of the circumference of
85 the pattern block *p* is placed a small wheel *y* running on the end of a stem *t* which passes up through a socket piece *z*. This stem is lifted or lowered by the hand wheel and screw 1 and secured in its place by the screw
90 and hand wheel 2.

The socket is affixed to a slide 3 which works in the block 4, said block being fastened to the post 5. On the side of the post
95 5 a block with a slot through it is held fast by the thumb screw 6. On the top of this block, at one end, is a pin 7, standing back of a pin 8, which is fast to the slide 3. The object of the slot in the block 9 is to allow the relative positions of the pins 7 and 8 to
100 be varied. The pin 7 being stationary and the pin 8 fast to the slide 3, when the hole 10 in the lever 11 is put on the pin 7, and the pin 8 through the slot in the lever 11, the slide 3 is moved by the motion of the
105 lever.

The lever 11 has one end so attached to the shaft C as to be made to move with the shaft while it is traveling endwise, and thus the slide 3 is brought slightly forward to-
110

ward the side *a* of the frame B, and with the slide goes the socket *z* and the wheel stem *t*.

The wheel *y* rests on the block *p*, and the block is held to the wheel by the weight 12, which is hung on the frame B, at the opposite end to the wheel and pattern block; and as the frame B is loose in its bearings on the shaft C, to allow the shaft to rotate, the pattern block *p* is kept up close to the wheel *y*. Its surface, however irregular, is thus brought in contact with the wheel *y*, giving the frame B an oscillating motion. This motion, as the cutter J is stationary and works on the under side of the rough block *i*, gives to the rough block *i* the exact shape of the pattern block *p*.

By having the wheel *y* on the upper side of the pattern block *p* and the cutter on the under side of the rough block *i*, the object of varying the size of the block, while retaining the shape, is attained. While the frame B is on a level the blocks will be the same size, but if the stem *t* be lowered the new block will be larger, because held farther from the cutter J, or if the wheel stem *t* be lifted it makes the new block smaller by lowering it on to the cutter J.

If it is desired to retain the relative shape of the pattern with the exception of enlarging or diminishing either end of the block, the object can be attained by throwing the shaft C out of level by means of the

set screws 13 under the bearing in the frame A.

As in using this machine it is intended to take old as well as new blocks for patterns, the contrivance in Fig. 3 is provided for that end. If the wheel *y* was to travel from end to end on an old block of which exact duplicates or any size longer was required, it would leave a piece at each end of the rough block unfinished, but by means of the lever 11 and the slide 3 the wheel *y* is made to advance slightly in the same direction in which the pattern block is traveling, and thus is prevented from having the pattern pass from under it before the desired length of the new block is completed. The variation is regulated by shifting the fulcrum pin 7 nearer or farther from the slide pin 8 by means of the thumb screw 6 and the slotted block 9.

I am aware of various patents for turning irregular forms. I do not therefore lay any claim thereto.

What I claim and desire to secure is—

The oscillating frame B, and the devices for altering the shape of the block from that of the pattern, constructed combined and arranged substantially as herein above set forth.

J. H. MASKER.

Witnesses:

W. M. GOODING,
JOHN G. DEMAREST.