

(No Model.)

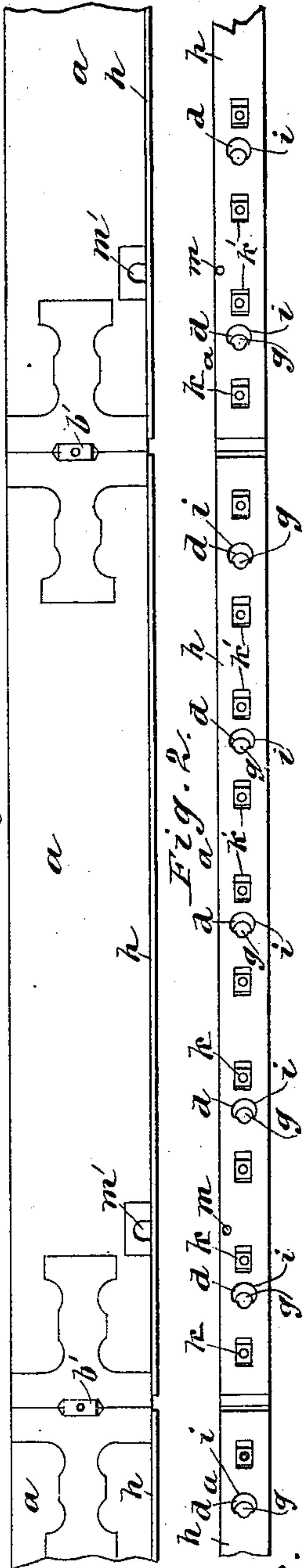
R. A. MACKENZIE.

OUTLINING TOOL.

No. 353,077.

Patented Nov. 23, 1886.

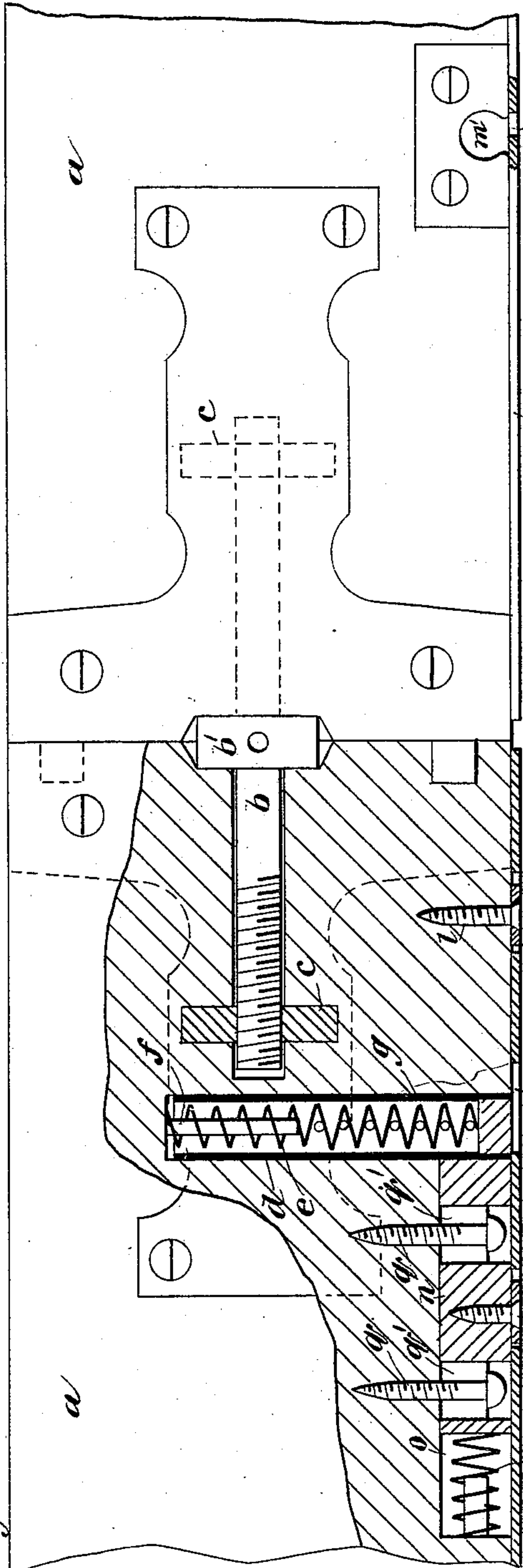
Fig. 1.



WITNESSES:

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Fig. 3.

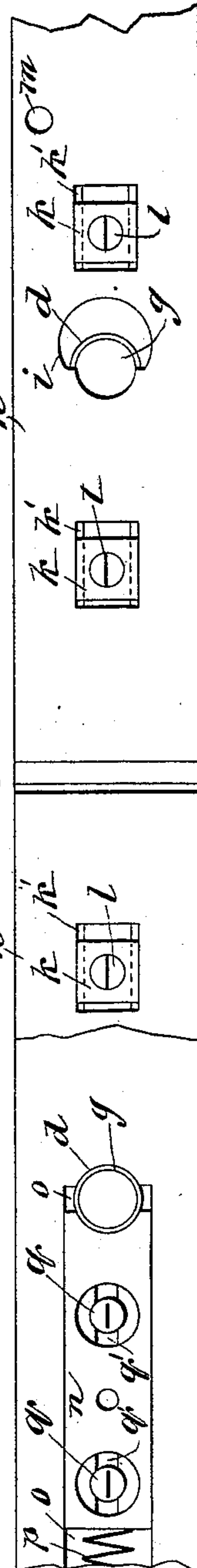


BY

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Fig. 4.





# UNITED STATES PATENT OFFICE.

ROBERT A. MACKENZIE, OF NEW YORK, N. Y.

## OUTLINING-TOOL.

SPECIFICATION forming part of Letters Patent No. 353,077, dated November 23, 1886.

Application filed June 10, 1886. Serial No. 204,722. (No model.)

*To all whom it may concern:*

Be it known that I, ROBERT A. MACKENZIE, of the city, county, and State of New York, have invented a new and Improved Outlining-  
5 Tool, of which the following is a full, clear, and exact description.

My invention relates to an outlining device designed particularly for carpenters' use in the work of dressing doors and similar pieces of  
10 stuff to their frames, whereby a perfect fit may be obtained without the necessity of frequently setting the door up in the frame to test the same as the work proceeds.

The invention consists of the outlining device constructed, combined, and operated as  
15 hereinafter described and claimed.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate  
20 corresponding parts in all the figures.

Figure 1 is a reduced side elevation of my invention, showing its sectional construction. Fig. 2 is a reduced edge view of the same. Fig. 3 is an enlarged side view of the device,  
25 parts being broken away to show its construction, and Fig. 4 is a broken edge view.

The outlining-tool is by preference made in several sections, *a*, adapted to be connected together end to end by any suitable means.  
30 Each section is complete in itself, so when detached from the other sections it may be used as a short outlining-tool. I prefer to join the sections by means of a right and left hand screw-bolt, *b*, adapted to screw into nuts *c c*,  
35 fitted in the sections, the bolt being formed or provided with a central nut, *b'*, formed with orifice in which a small rod may be placed to act as a lever to facilitate the turning of the bolt. The sections *a* are duplicates of each  
40 other, and each section has several chambers, *d*, formed in one of its straight edges. In each chamber *d* is placed a coiled spring, *e*, preferably placed upon a short spindle, *f*, to prevent torsion of the spring. Upon or over each  
45 spring *e* is placed, in each chamber *d*, a plunger, *g*, preferably in the form of a tube plugged at its outer end.

Secured upon the edge of each section *a* is a metal plate, *h*, having formed in it as many  
50 openings, *i*, as there are plungers *g*, and the plate *h* is adapted to be moved longitudinally, first, for retaining the plungers *g* wholly in

the chambers *d* against the pressure of the springs *e*, and, secondly, for releasing said  
plungers, so the springs *e* may force them out- 55  
ward through the openings *i*. The plates *h* are by preference held to the edge of each section *a* by dovetailed plates *k k'*, held in dovetailed slots *k'* in the plate by screws *l l'*, passed through the plates *k k'* and screwed, some into 60  
the material of the section, others into the friction-blocks *n*, below described. The plate *h* of each section may be moved longitudinally by a small rod or bar inserted in an orifice, *m*, made in the plate, a recess, *m'*, being formed 65  
in the side of the section for the insertion of the bar. When the plates *h* are moved to release the plungers *g*, so that they will be forced outward by the springs *f* in order to grasp the tubes for holding them from being forced 70  
entirely out of the chambers *d* by the springs *i*, I provide a friction-block, *n*, (above mentioned,) for each tube, placed in a cavity, *o*, made in the edge of the sections. Each friction-block *n* is forced toward its tube *d* by a 75  
coiled spring, *p*, and when the tubes are held in their chambers *d* the blocks *n* are held in contact with the tubes by the action of the springs *p*; but when the plate *h* of each section is moved to release the tubes *d*, the friction-blocks *n* are moved by the movement of 80  
the plate back away from the tubes, so they are left entirely free to the action of the springs *e*. The movement of the plate *h* effects the movement of the blocks *n* through the medium 85  
of the small plates *k'* and screws *l'*, which latter enter the friction-blocks, as shown in Fig. 3. The friction-blocks are held in place in the cavities *o* by the screws *q q'*, which pass through the countersunk slots *q'* made in the blocks 90  
and screw into the material of the sections *a*.

In use the plungers *g* will all be forced into their chambers and the plates *h* move to hold them within the chambers. Then the edge of the tool will be placed upon the surface of the 95  
frame or other objects whose outline it is desired to obtain. The tool being so placed, the user will insert a small rod in the orifice *m* of the plate *h*, and move it longitudinally to release the tubes *g*, whereupon the whole 100  
series of tubes will be forced by the springs *e* into contact with the surface upon or against which the tool is held. The plate *h* will then be moved back as far as it will go, which will



permit the friction-blocks *n* to press upon the tubes and hold them firmly in the positions they occupy. The tool now being removed from contact with the surface, the outer ends 5 of the tubes *g* will give the exact outline of the surface, which can be easily transcribed to a door, panel, frame, or any object, so the same can be easily dressed to match.

My invention is applicable to many uses, 10 but in fitting doors to their frames it is particularly useful.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

15 1. As a new and improved article of manufacture, an outlining-tool provided with numerous spring-actuated plungers held in chambers formed in the body of the tool, and provided also with a sliding plate arranged for 20 retaining a series of plungers and for simultaneously releasing a series of them, substantially as and for the purposes set forth.

2. The sections *a*, formed with numerous chambers, *d*, in combination with the springs

*e*, plungers *g*, and the apertured sliding plate 25 *h*, held at the edge of the section and arranged to release all of the plungers simultaneously, substantially as and for the purposes set forth.

3. The sections *a*, formed with chambers *d* 30 at right angles with the chambers *d*, in combination with the plungers *g* and springs *e*, placed in the chambers *d*, for forcing the plungers outward, and the sliding plate *h*, arranged to retain the plungers, substantially as described. 35

4. The several sections *a*, provided with means for connecting them together end to end, in combination with the sliding plates *h* 40 at the edges of the sections, and having apertures *i*, the spring-actuated plungers *g*, placed in the chambers *d*, and the spring-actuated friction-blocks *n*, arranged to press against the plungers *g*, substantially as and for the purpose set forth.

ROBERT A. MacKENZIE.

Witnesses:

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C. SEDGWICK.