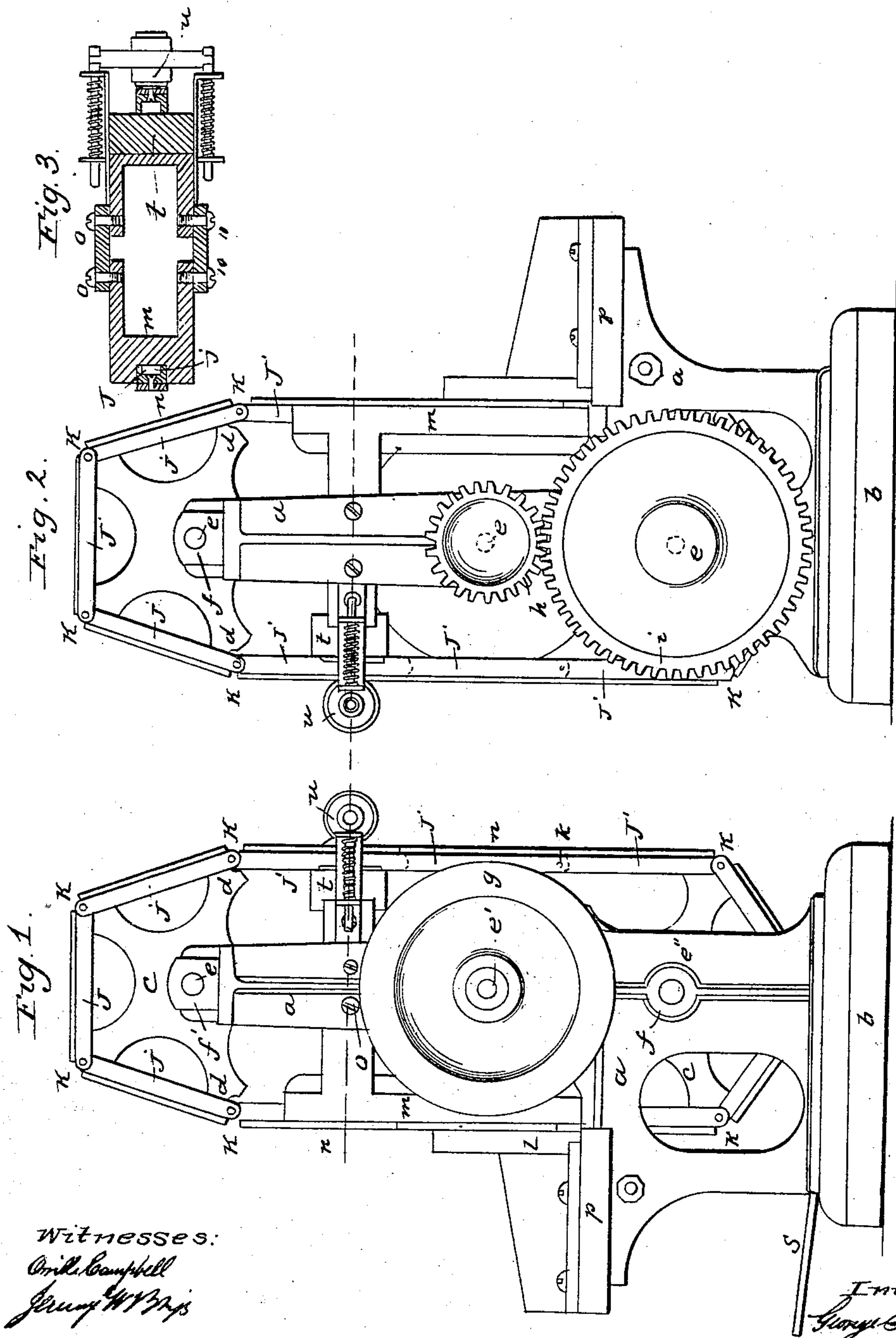


G. STORER.

Shaping and Slotting Metals.

No. 28,818.

Patented June 19, 1860.





# UNITED STATES PATENT OFFICE.

GEORGE STORER, OF NEW BRITAIN, CONNECTICUT, ASSIGNOR TO HIMSELF AND THE  
STANLEY RULE & LEVEL CO., OF SAME PLACE.

## MACHINE FOR FINISHING WORKS IN WOOD OR METAL.

Specification of Letters Patent No. 28,818, dated June 19, 1860.

*To all whom it may concern:*

Be it known that I, GEORGE STORER, of New Britain, county of Hartford, and State of Connecticut, have invented certain new and useful Improvements in Finishing-Machines for Finishing Wood and Metal or Metal Alone; and I do hereby declare that the same is described and represented in the following specification and drawings.

To enable others, skilled in the art, to make and use my improvement in finishing machine, I will proceed to describe its construction and operation, and referring to the drawings in which the same letters indicate like parts in each of the figures.

The nature of this improvement consists in the construction of a proper frame work and gearing, in or upon which is arranged in a suitable manner a series of sliding plates, planed, or trued-up in a uniform shape and size, and connected at their ends by a properly formed joint, so made in their shape and distance from center to center as to just fit into bearings made in the ends of projecting arms, or in the periphery of wheels, the centers of which bearings are made of a corresponding distance from center to center so that the joints of the sliding plates will mesh into the bearings, as the said wheels or arms revolve similar to the action, or mesh of gearing. Upon the front part of the frame work is arranged ways or guides, in or through which the sliding plates are fitted and caused to move in a true and easy manner. To the face of the said sliding plates are secured by screws or their equivalents, plates having cutting surfaces, so that as the wheels or arms revolve, produces one continuous, true cutting surface in front of the said ways or guides. There is also arranged in front of the aforesaid ways or guides, and at right angle therewith (or nearly so) a sliding table, to which I propose to secure a proper device for holding wood or metal pieces, so as to produce a parallel, inclined, or angular surface thereby, and is what I call a continuous, or endless, cutting surface, and resemble in appearance the cut of a milling tool and is peculiarly adapted for truing, and smoothing surface made up of wood and metal, such as try squares, rules, levels, &c., and is also applicable, and very useful, for various other purposes.

In the accompanying drawings, Figures 1 and 2, are side elevations. Fig. 3, is a top

sectional view, cut through the line *a*. (Figs. 1, 2).

*a* is the frame work; *b*, the bed piece, or floor to which the frame work is secured for use.

*c* are wheels or projecting arms, in the periphery or ends of which are formed bearings *d* of a corresponding distance from center to center, so that the joints of the sliding plates *j*, will mesh into the said bearings, as they revolve upon, and over the wheels, or projecting arms *c*.

*e* are the shafts on which the wheels or projecting arms *c* are secured and revolved.

*f* are the journal boxes for the journals of the shafts *e*, to turn in, and by which their distance apart may be adjusted, by screws or their equivalents.

*e'* is the driving shaft, the driving pulley *g* is secured onto one end thereof, and a toothed wheel *h* is secured onto the opposite end, and meshes into another tooth wheel *i* secured on one end of the shaft *e''*, thus completing the driving connections.

*j* are the sliding plates, having a round or butt form joint at *k*, so as to fit the bearings *d* in the periphery of the wheels, or in the ends of the arms at *c*.

*n* are cutter plates planed true and of an even thickness, and of such length as to just fill up and make a close joint when fitted and secured to the sliding plates *j*, (by screws or their equivalents,) in their successive travel through the ways or guides *m*. Said plates have cutting edges formed on their outer surface, by planing, or other means of forming them, whereby a true cutting surface may be produced and may also be made of any desirable width required for use, which many times would be found difficult to perform, by means heretofore used for the same purposes.

*p* is a movable bed fitted to the ways (constructed on the projecting portion of the frame work *a*) and at right angle or nearly so with the guide ways *m*, upon which bed is secured a fixed or adjustable gage or holder *r*, by the use of which the work is held, and pressed up to the cutting surface by means of a treadle *s*, (crank and pinion, or other suitable device).

*t* is a guide and *u* is a friction roll arrangement, the object of which is to guide the plates *j*, to their proper place onto the wheels, or arms *c* and to steady and prevent



chatter in their (the sliding plates *j* and *n*) movement.

In using this machine the work is placed against the gage or holder *r*, and pressed up  
5 to the cutting surface *n*, by means of a foot treadle *s*, crank and pinion or other proper device for moving and holding the bed *p*, back and forth.

I propose to make the jack or holder *r*  
10 adjustable, so that an angular, or wedge shaped pieces may be trued up corresponding in their shape and size.

This machine is peculiarly adapted for finishing up of try-squares, rules, levels &c.  
15 which have both wood and metal on the same surface.

By the use of this improvement a great amount of hard and valuable labor is saved, and the same work performed in less time,  
20 by more ordinary, or less skilful workmen.

I believe I have thus described the nature, construction, and operation of my machine,

so as to enable a person skilled to make and use the same and in doing so have shown some of the advantages to be derived by its  
25 use over others now or heretofore in use.

I am aware that all (or nearly all) of the parts composing this machine, are old, and in use for other purposes, but

What I claim and desire to secure by Letters Patent is— 30

The combination of the sliding plates *j*, the milled, or cutting plates *n* guide ways *m*, with a proper holding jack *r*, upon the bed *p*, constructed and operating substantially  
35 in the manner as and for the purpose described.

In testimony whereof I have hereunto set my hand this 17 day of April 1860.

GEORGE STORER.

Witnesses:

ORVILLE CAMPBELL,  
JEREMY W. BLISS.