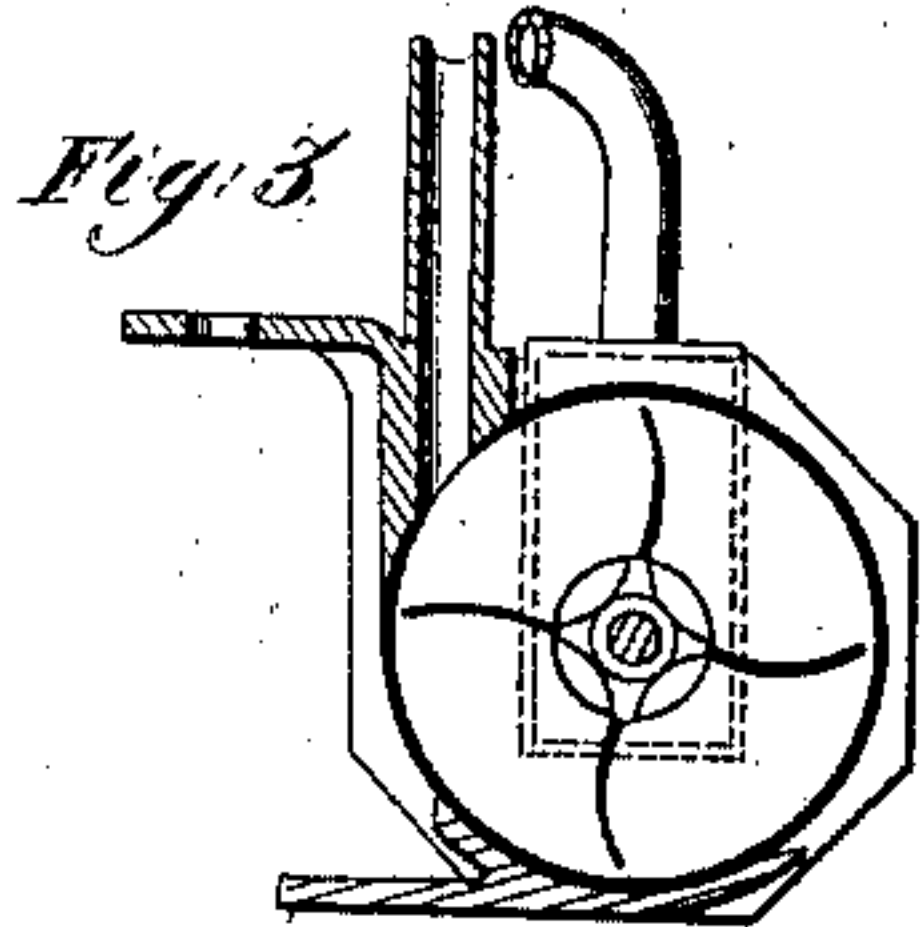
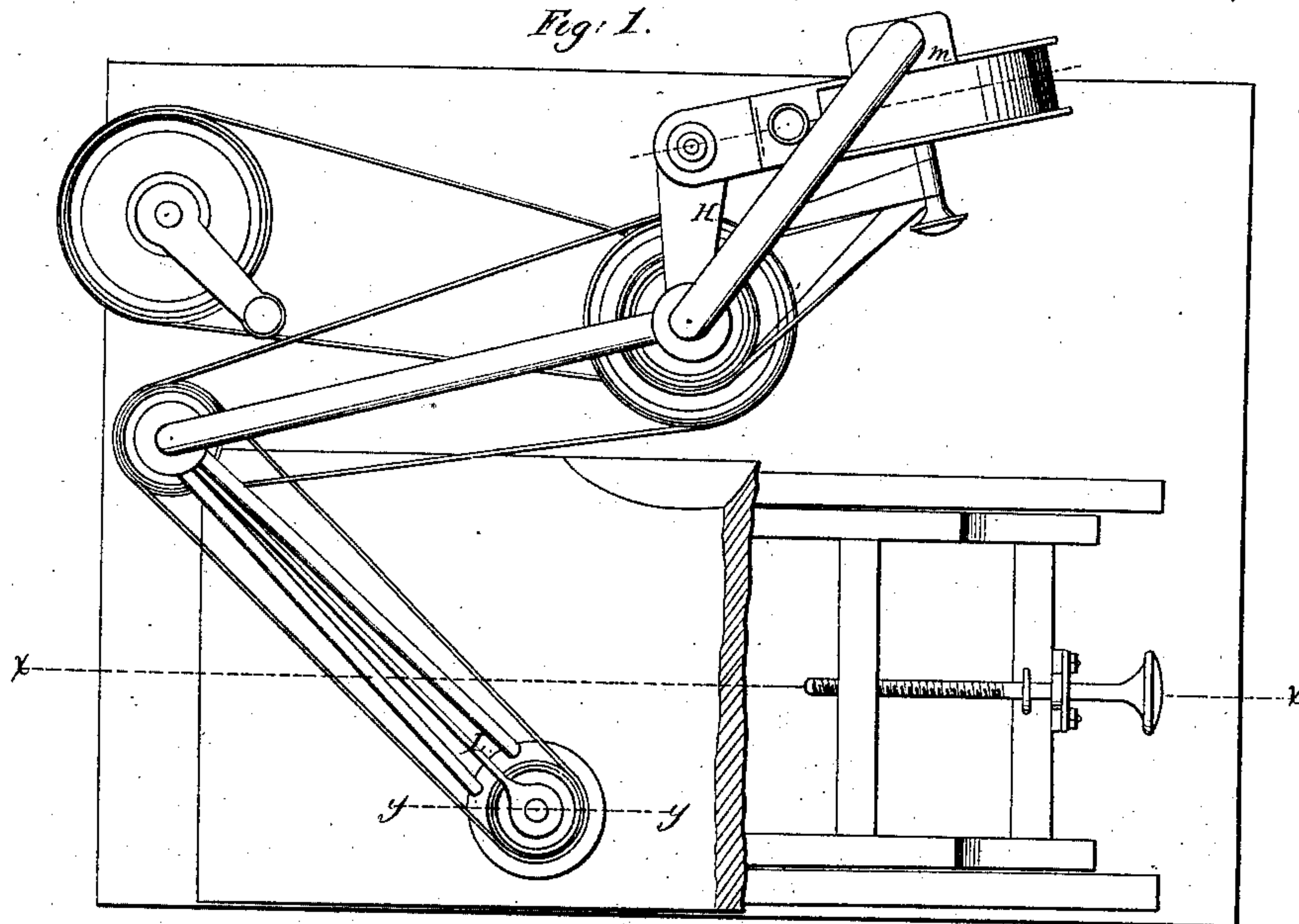


*J. H. Wonderly,  
Polishing Wood.*

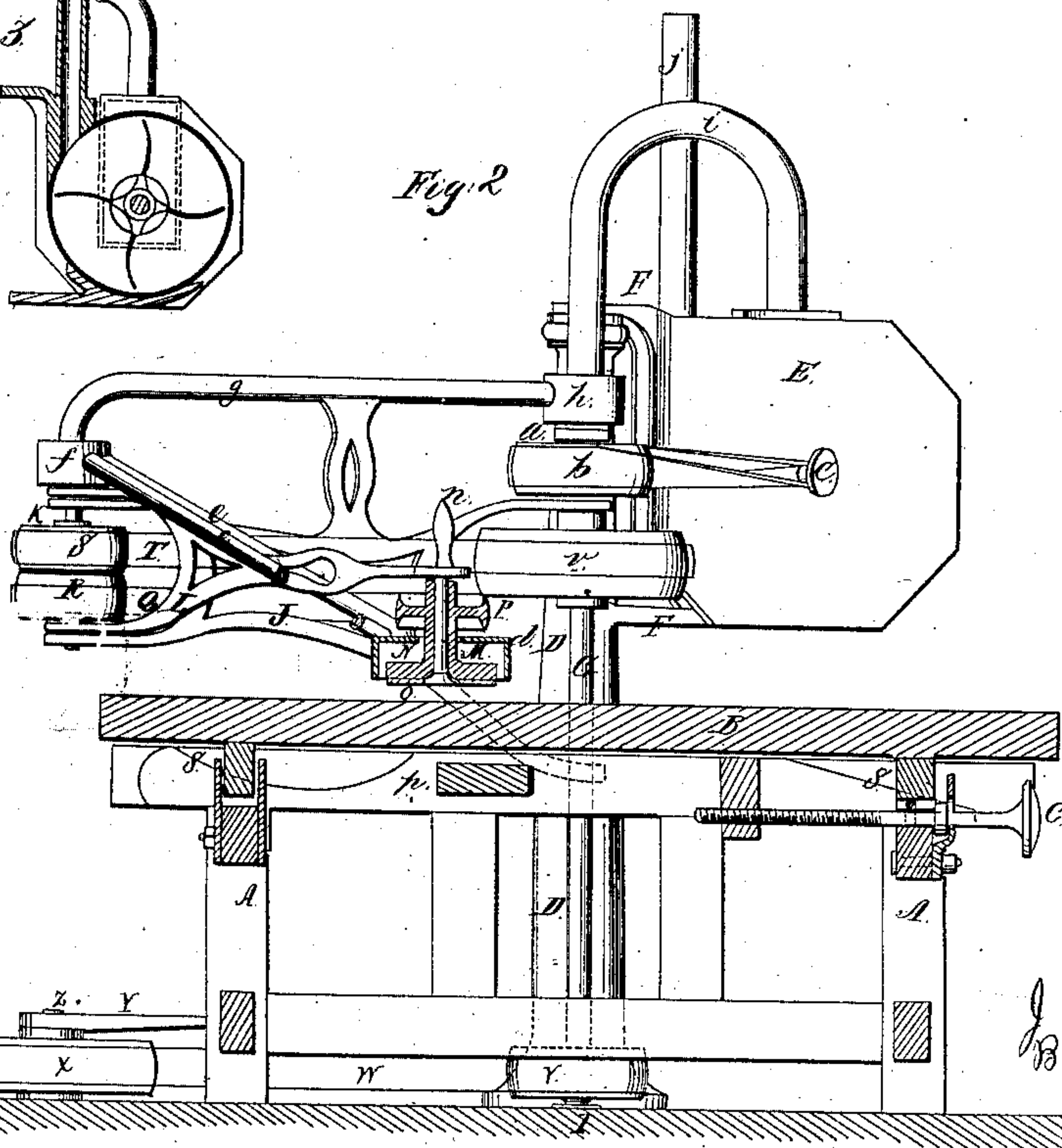
*No. 55,570.*

*Patented June 12, 1866.*

*Fig. 1.*



*Fig. 2.*



*Witnesses:*

*J. H. Wonderly*  
*Jacob C. Green*

*Inventor*  
*J. H. Wonderly*  
*By Attorney*



# UNITED STATES PATENT OFFICE.

J. H. WONDERLY, OF WILLIAMSPORT, PENNSYLVANIA.

## IMPROVED MACHINE FOR SANDPAPERING WOOD-WORK.

Specification forming part of Letters Patent No. 55,570, dated June 12, 1866.

*To all whom it may concern:*

Be it known that I, JOSEPH H. WONDERLY, of Williamsport, in the county of Lycoming and State of Pennsylvania, have invented a new and useful Improved Machine for Sandpapering Wood-Work, &c.; and I do hereby declare the following to be a full, clear, and exact description of the nature, construction, and operation of the same, sufficient to enable one skilled in the art to which it appertains to construct and use the same, reference being had to the accompanying drawings, which are made part of this specification, and in which—

Figure 1 is a plan view of the machine, a portion of the table being removed to show the mode of its adjustment. Fig. 2 is a vertical section on the line *x x*, Fig. 1, the sand-paper disk being sectioned in the line *y y*.

The invention consists in furnishing the sand-paper disk, which revolves at the end of a jointed arm, with a provision for the indraft and removal of the dust, the result of the attrition; and, secondly, in the arrangement of the table and devices for elevating and depressing it. This is accomplished by means of a cap over the revolving sand-paper disk and a suction-fan, which communicates by tubes with the said cap, the tubes following the direction of the arms, being jointed axially with them.

In the drawings, A is a frame, on which is a table, B, rendered adjustable as to height by means of the screw C, which moves the frame *p*, whose inclines S elevate the table B or by recession allow it to fall.

In the vicinity of the table rises a post, D, which supports the machinery, the fan-case E being supported therefrom by the brackets F F, the upright shaft G being attached at its upper end to the post D by the bracket H, while its lower end is stepped into a socket, I.

Pivoted to the upright shaft G is a bracket, J, which has a free motion in a horizontal plane upon the shaft G, being retained at the required height by enlargements on the shaft G. The outer end of the bracket G has an upright pivotal rod, K, on which is journaled the bracket L, which has a motion in a horizontal plane and bearing a forearm relation to the humerus J, the pivotal rod forming the elbow-joint.

On the end of the forearm L is a shaft, M, on whose lower end is a disk, N, faced with sand-paper or analogous material, O. This

shaft is rotated by means of the drum P and belt Q from the pulley R, which, together with the pulley S, is fast upon the shaft K. The pulley S receives its motion by the belt T from the pulley U on the shaft G, which is rotated by the pulley V and belt W from the pulley X on the shaft Z, whose prime motor is the hand-crank Y.

It will be perceived that by the "shoulder and elbow" motions, as they may be termed, the disk may be brought over any part of the surface of the table B, while the belts are retained at an even tension, the intervening pulleys being concentric with the axes of vibration. The motion of the disk N is continuous and unimpeded by the motions of the brackets L J.

It remains to describe the action of the pneumatic portion of the apparatus, which consists of a fan, *k*, revolving in a case, E, and exhausting the air by a series of tubes from the cap *d*, which is immediately above the sand-paper disk N O, so that the air, which, under the draft of the fan, rushes between the disk and the lower edge of the cylinder, shall carry with it the sawdust and other light result of the attrition of the sand-paper upon the wood, discharging said dust eventually by the pipe *j*, which passes from the periphery of the fan-case E to the desired place of discharge.

The communication between the cap *d*, which receives the dust, and the fan, which draws it in and discharges it, consists of the pipes *e e*, *g*, and *i*, with the drums *f h*, which constitute hollow joints and agree in their axial line with the shafts K G, so as to move with the vibrations of the brackets L J.

It is not necessary to go into a further specific detail of the whole operation, but suffice it to say that the table being raised to bring the work to the proper level by the screw C, which draws the inclined planes *s s* of the frame *p* against the transverse cleats underneath the table, that the disk is brought by the handle *n* to the required position within the range of its horizontal movement and the abrading work performed to the required extent as the sand-paper disk traverses the surface of the work operated upon.

The form and number of the joints and brackets may be changed as required to suit the convenience and necessities of varying cases.

Having described my invention, what I claim

therein as new, and desire to secure by Letters Patent, is—

1. The combination of the cap *d* or equivalent, jointed connecting-pipes, and exhaust-fan, operating substantially as described.

2. The adjustable table B, provided with the sliding frame *p*, having the inclined planes *s s* and the regulating-screw C, arranged and op-

erated substantially as shown, and for the purpose set forth.

To the above specification of my improvement in sandpapering-machines I have signed my hand this 6th day of December, 1865.

Witnesses: J. H. WONDERLY.

C. D. SMITH,

JAS. L. EWIN.