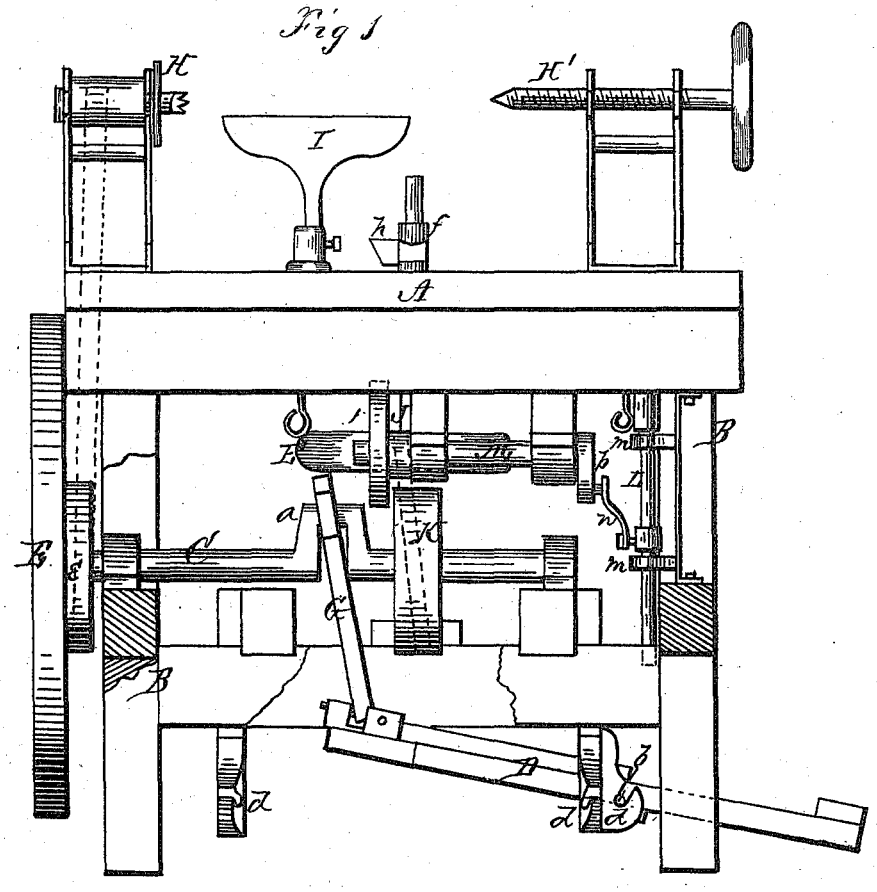
3 Sheets--Sheet 1.

E. PASSÉ.

Universal Joiners.

No. 142,348. Patented September 2, 1873.

Fig 1



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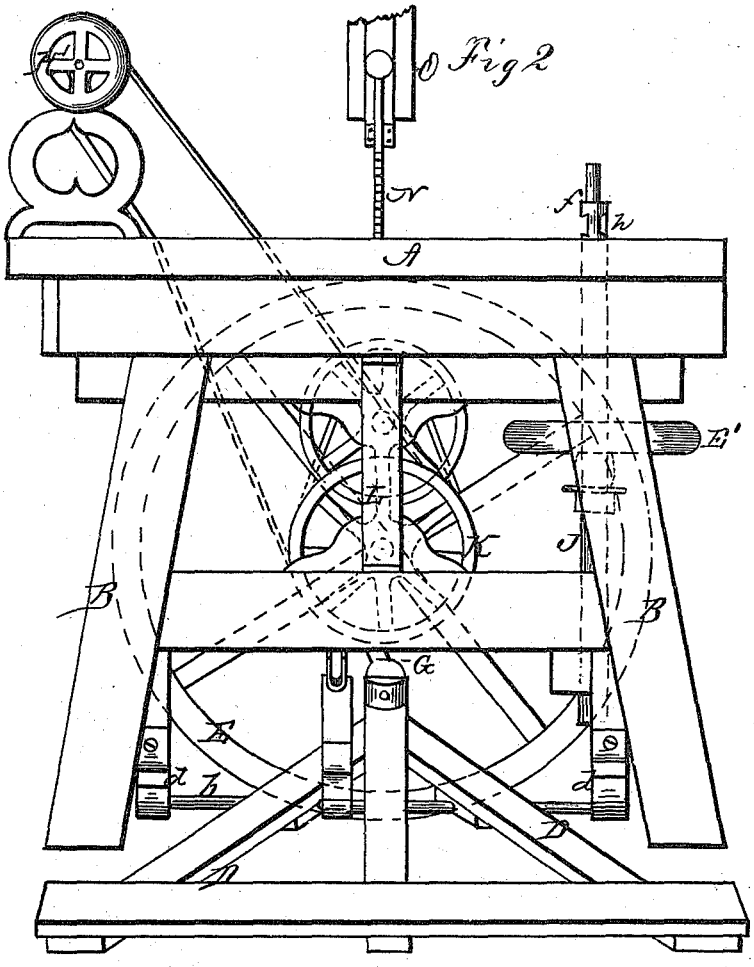

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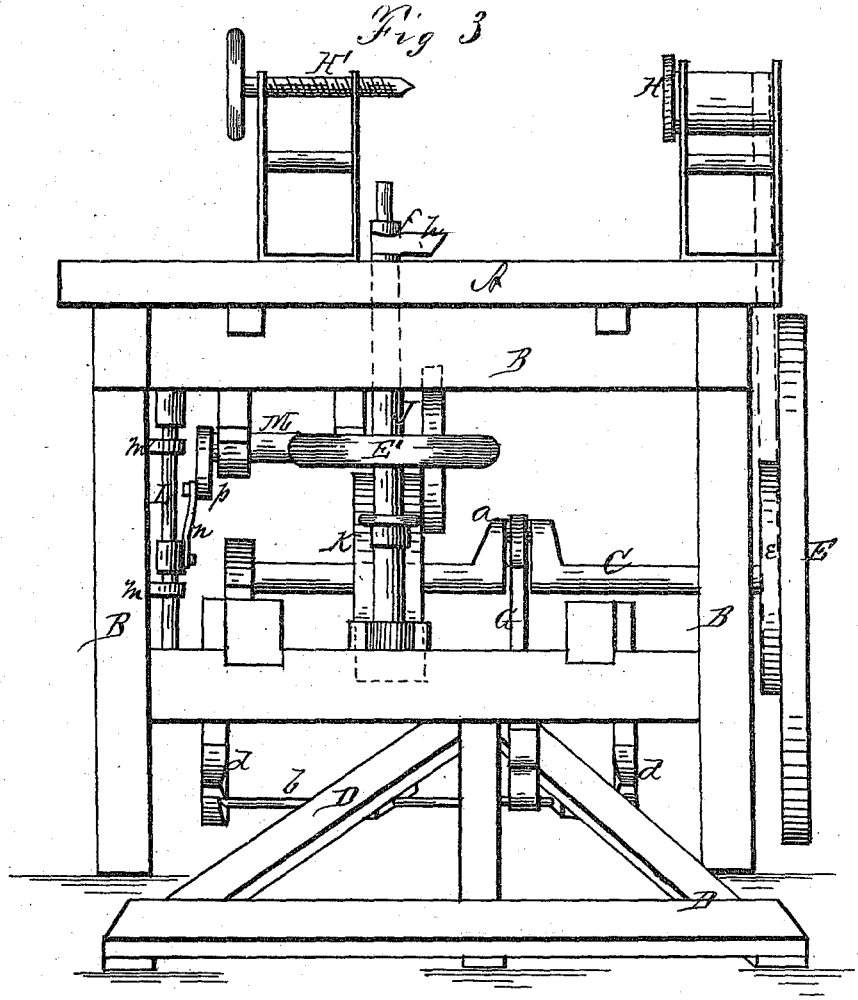
Fig 3



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UNITED STATES PATENT OFFICE.

ERNST PASSÉ, OF FORT WAYNE, INDIANA.

IMPROVEMENT IN UNIVERSAL JOINERS.

Specification forming part of Letters Patent No. **142,348**, dated September 2, 1873; application filed May 17, 1873.

To all whom it may concern:

Be it known that I, ERNST PASSÉ, of Fort Wayne, in the county of Allen and State of Indiana, have invented certain new and useful Improvements in Universal Joiners; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings and to the letters of reference marked thereon.

The nature of my invention consists in the arrangement in one frame of a crank-shaft, adjustable treadle with pitman, lathe, countershafts connected with the main shaft, cutter-head, and a slide with scroll-saw, all as hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawings, which form a part of this specification, and in which—

Figure 1 is a side elevation of my machine, showing the side of the lathe. Fig. 2 is another side elevation, showing the side of the saw; and Fig. 3 is another side elevation, showing the side of the molding-cutter.

Like letters of reference in the several figures indicate corresponding parts.

A represents the bed or table of my machine supported upon a frame, B, of any suitable construction. In this frame is a horizontal shaft, C, having a crank, *a*, formed upon it, and carrying on its outer end a fly or balance wheel, E. D represents the treadle, constructed in triangular form, as shown in Figs. 2 and 3, and attached to a shaft, *b*, which is supported in bearings *d d* attached to the frame. There are three sets of these bearings attached, one set to each of three sides of the frame. The inner end of the treadle D is, by a bar or rod, G, connected with the crank *a* of the shaft C, so that by working the treadle said shaft may be revolved. H and H′ represent the centers, and I the tool-rest, of an ordinary lathe, arranged on one side of the table A, and the center H is, by a belt, shown in dotted lines in Fig. 1, connected with a pulley, *e*, on the crank-shaft C, and thus revolved by the motion of the same imparted to it by the treadle. On the opposite side of the table A from the lathe is a vertical shaft, J, passing up through the table, and provided with a cutter-head, *f*, with adjustable cutter or cutters *h* for cutting moldings of various kinds, rabbets, &c. This shaft is revolved by means of a twisted belt from a pulley, K, on the crank-shaft C. In a full-sized machine the lower bearing of the shaft J is to be in an adjustable or movable lever or bar, so that the shaft may be raised or lowered at will to elevate or depress the cutters *h*, according to the character of the molding to be cut. On the shaft J is a fly-wheel, E′. On one of the other sides of the table A is a vertical slide, L, moving in guides *m m* attached to the frame B, and this slide connected by means of a pitman, *n*, with a crank, *p*, upon the end of a shaft, M, which runs parallel with the main crank-shaft C. The shaft M is revolved by means of a belt from the pulley K on the main crank-shaft C, by which means the slide L is given a reciprocating up-and-down motion. To the upper end of the slide L is attached the lower end of a gig or scroll saw, N, the upper end of which should be connected with or attached to any suitable take-up device, O.

By thus arranging these three machines in one, space in the work-shop is greatly economized, and each one of the three machines is complete in itself.

The treadle D is to be changed from one side to another, according to what machine is to be used.

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

The arrangement in the frame A B of the crank-shaft C, adjustable treadle D, pitman G, lathe H, shafts J M connected with the main shaft C, cutter-head *f*, slide L, and scroll-saw N, all as shown and described, and for the purposes herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 13th day of May, 1873.

ERNST PASSÉ.

In presence of—
M. M. ROHRER,
ROBT. HARVEY.