

J. L. HEWES.
Metal Planing-Machines.

No. 153,254.

Patented July 21, 1874.

Fig. 1

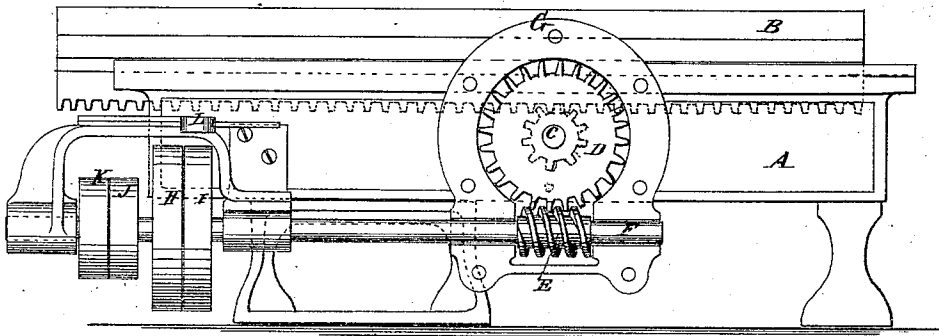
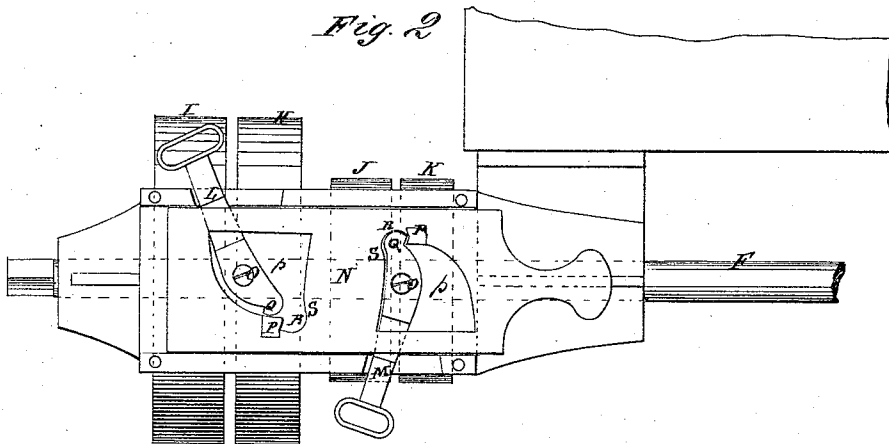


Fig. 2



Witnesses:

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UNITED STATES PATENT OFFICE.

JOSEPH L. HEWES, OF NEWARK, NEW JERSEY.

IMPROVEMENT IN METAL-PLANING MACHINES.

Specification forming part of Letters Patent No. **153,254**, dated July 21, 1874; application filed August 23, 1873.

To all whom it may concern:

Be it known that I, JOSEPH L. HEWES, of Newark, in the county of Essex and State of New Jersey, have invented a new and Improved Metal-Planer, of which the following is a specification:

The invention will first be fully described, and then pointed out in the claims.

Figure 1 is a side elevation of a portion of the planer constructed according to the invention, a part of the case in which the worm-gears are inclosed being removed; and Fig. 2 is a plan view of the belt-shifting apparatus.

Similar letters of reference indicate corresponding parts.

A is the frame; B, the table; C, the shaft which works the table; D, the worm-wheel on said shaft, and E the worm on the driving-shaft F, gearing with the worm-wheel.

The essential advantage of this arrangement is the smoothness of the working, and the entire abatement of the clashing of the ordinary gears.

G is a case, which I attach to the bed, by which, together with a cap screwing onto the front face, to inclose the worm-gears, to protect the gears from dust, and to hold oil for the gears to constantly run in, to secure the most perfect lubrication. H is the fast pulley, and I the loose one, for the belt which gives the forward motion to the bed. J is the fast pulley, and K the loose one, for the belt for giving the back motion. L is the shifting-lever for the former belt; M, the shifter for the other, and N is the slide for shifting them, said slide being operated by stops on the

table of the planer, as in the ordinary way. The shifters L M are pivoted to supports at O. The levers L M are alike in form, but reversed in position, and have a loop at one end, to receive the belt, and a notch, Q, at the other, which latter interlocks with angular projections P P on the slide N, while the side faces S S of the slide act upon the sides of the levers at points opposite to the notches Q. In the slide are spaces *p p*, which allow the slide always to move so as by one projection, P, to shift one belt from a fast pulley before the face S of the slide begins to shift the other belt from the loose pulley.

I am aware that W. H. H. Sisum, in his patent of April 18, 1871, describes mechanism for shifting belts which accomplishes the same result as that described by me, but I disclaim the mechanism described in said patent; and

I claim as my invention—

1. The combination, with shaft F, having two sets of pulleys, H I, J K, of the shifting-levers L M, each having a notch, Q, and the slide N, having projections P, acting faces S, and spaces *p*, as and for the purpose specified.

2. The casing G for the worm-gears, attached to the bed of the machine so as to inclose said wheels by a cap screwed on the front of said case, as represented in Fig. 1, substantially as specified.

JOSEPH L. HEWES.

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