

(No Model.)

2 Sheets—Sheet 1.

W. T. MILES.  
METAL PLANER.

No. 262,970.

Patented Aug. 22, 1882.

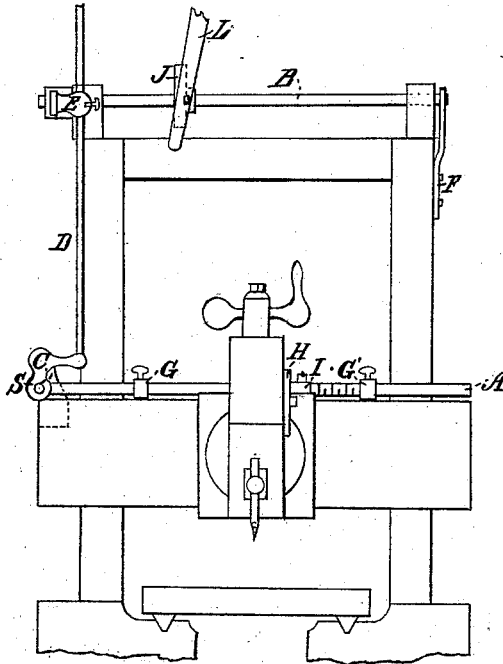


Fig. 1

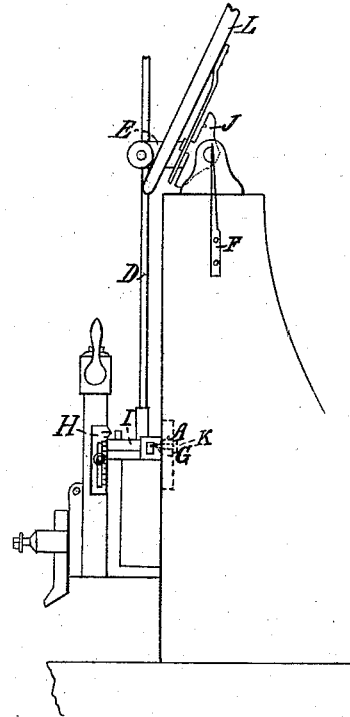


Fig. 2

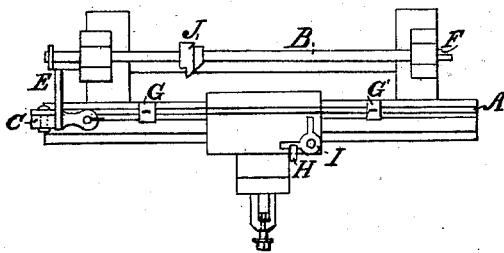


Fig. 3

Witnesses  
John C. Otis  
John C. A. Otis.

Inventor  
William Thomas Miles.

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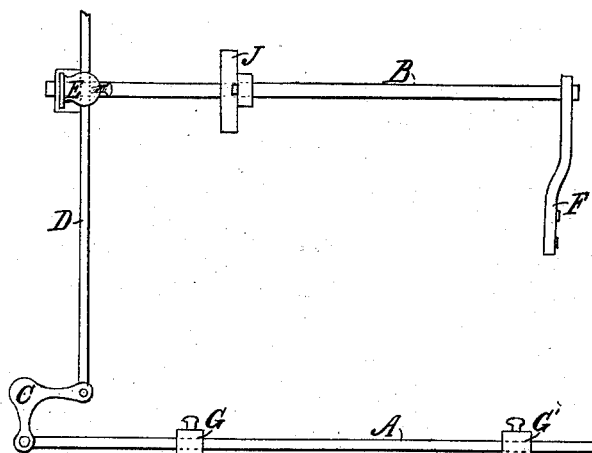


Fig. 4

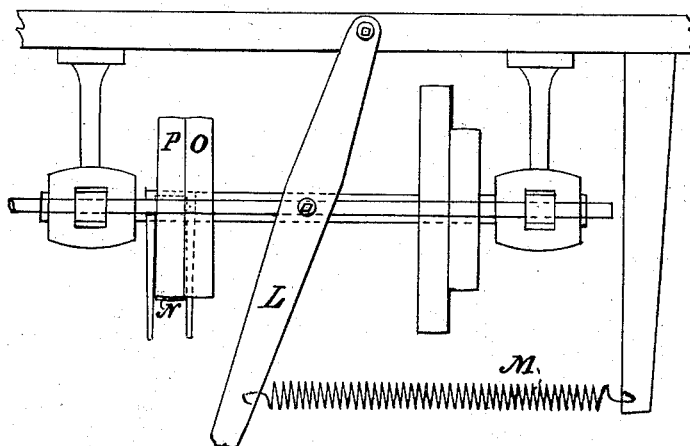


Fig. 5

Witnesses

John C. Otis  
John C. F. Otis.

Inventor

William Thomas Miles.

# UNITED STATES PATENT OFFICE.

WILLIAM T. MILES, OF WORCESTER, MASSACHUSETTS.

## METAL-PLANER.

SPECIFICATION forming part of Letters Patent No. 262,970, dated August 22, 1882.

Application filed March 20, 1882. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM THOMAS MILES, a citizen of the United States, residing at Worcester, in the county of Worcester and State of Massachusetts, have invented a new and useful Stop-Motion for Metal-Planers, which, according to my knowledge and belief, has not been in public use in the United States for more than two years prior to this application.

The object of my invention is to enable the operator by means of adjusting-dogs upon a sliding bar to cause the machine to stop automatically, after planing to the exact spot desired, when using the horizontal feed either right or left or the vertical feed when planing either up or down, thus requiring less care on the part of the attendant and enabling him to run two or more machines on many kinds of work with the same ease and certainty of doing good work that he could one without my invention. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a front elevation. Fig. 2 is an end view, and Fig. 3 is a plan of the same. Fig. 4 is a front elevation of my invention detached from the planer. Fig. 5 is a view of the counter-shaft and driving-pulleys of the planer, showing the manner in which my device acts upon them to stop the planer.

Similar letters refer to similar parts throughout the several views.

My invention consists of a sliding bar, A, attached to the cross-head of a planer, in connection with a rock-shaft, B, on the top of the housings, to effect the stop when the horizontal feed is used, and the adjustable lug H, having inclined planes upon it, which act upon one end of the elbow I, the other end of which acts upon the dog G' to cause the stop when the vertical feed is used.

The dogs G slide upon the bar A and are fastened at any point desired by thumb-screws. The sliding bar A is connected with the cross-head by means of the elbow C, whose center of motion is a stud attached to the stud-plate S, which plate is fastened to the cross-head and rises and falls with it whenever it is raised or lowered. The sliding bar A transmits its motion to one end of the elbow C, the other end of which actuates the connecting-rod D, which rod acts upon the arm E upon

the rock-shaft B, causing it to rotate. A rotation through fifteen degrees is sufficient to unlock the shifter and stop the machine. 55

The rock-shaft B and the parts connected with it are held in position by the spring F resting upon a flattened part of it, the face of the lug J being held on the same line as the face of the shifter L. 60

I attach a bell to notify the attendant when the machine stops. I also attach a scale to one or both of the dogs G, and also one on the vertical lug H, to assist in setting the stops. I use the usual counter-shaft with the fast and loose pulleys for driving the planer; but as it forms no part of my invention, and as it is a well-known device, I will merely explain the way it is connected with my invention. The shifter L, being acted upon by the spiral spring M, draws the driving-belt N upon the loose pulley O, stopping the planer. To start the planer the shifter L is pushed up to the lug J, where it engages a slight projection on the center of the face of it, holding the driving-belt N upon the tight pulley P and running the planer. 75

The operation of the invention is as follows: When it is desired to plane a certain distance from the point of beginning in a horizontal direction, the dog G', when a right-hand tool is used, and the dog G when a left, is set upon the bar A that distance from the zero-mark on the tool-carriage by the scale, and when the feed brings the tool-carriage in contact with the dog the bar and the parts connected with it are acted upon, the rock-shaft, being rotated slightly, unlocks the shifter, when the spiral spring M acts upon the shifter L, drawing the driving-belt N upon the loose pulley O, stopping the planer. 85

When it is desired to plane a certain distance in a vertical direction the adjustable lug H is set so that the inclined planes on it will be that distance above or below its point of contact with the end of the elbow I. The dog G' is brought in contact with the other end and fastened, and when the vertical feed brings the inclined plane in contact with the end of the elbow I the motion is transmitted to the dog, bar, and other parts of the apparatus the same as when the dog is acted upon by the tool-carriage direct, as in the horizontal stop. 95

It will be seen that when the sliding bar A

is moved in either direction by the action of the vertical lug H, or by the tool-carriage raising or lowering the connecting-rod D, and so revolving the rock-shaft in either direction, the effect is the same—namely, stopping the planer.

When the rock-shaft revolves in one direction one end of the lug J is pressed against the shifter, springing it away from the projection in the center and allowing the spiral spring M to act, and when revolved in the other the other end acts in the same manner, producing the same result. The point of the screw K, being driven into a recess in the elbow C, holds it and the sliding bar immovable and converts it into a dead-stop for planing duplicate pieces. When used in this way it does not act upon the rock-shaft to stop the planer; but either of the dogs G, being set upon the bar A in the proper place, prevents the tool-carriage from going farther, so it must stop at that point on planing each successive piece.

The vital principle of my invention consists

in transmitting motion by means of the sliding bar A to the rock-shaft B for the purpose of stopping the planer.

My invention differs from any with which I am acquainted in its easy adjustment within the whole range of the planer and its adaptation to general instead of special work.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In a stop-motion for a metal planer, the sliding bar A, attached to the cross-head of a planer, having the adjustable dogs G, which are acted upon by the tool-carriage, for the purpose set forth.

2. The rock-shaft B, in combination with the sliding bar A, substantially as described.

3. The vertical lug H, substantially as described, and for the purpose specified.

WILLIAM THOMAS MILES.

Witnesses:

JOHN C. OTIS,

JOHN P. K. OTIS.