(No Model.)

J. H. WRIGHT.

SHIPPING DEVICE FOR METAL PLANING AND SHAPING MACHINES.

No. 312,060. Patented Feb. 10, 1885.

Fig. 1.

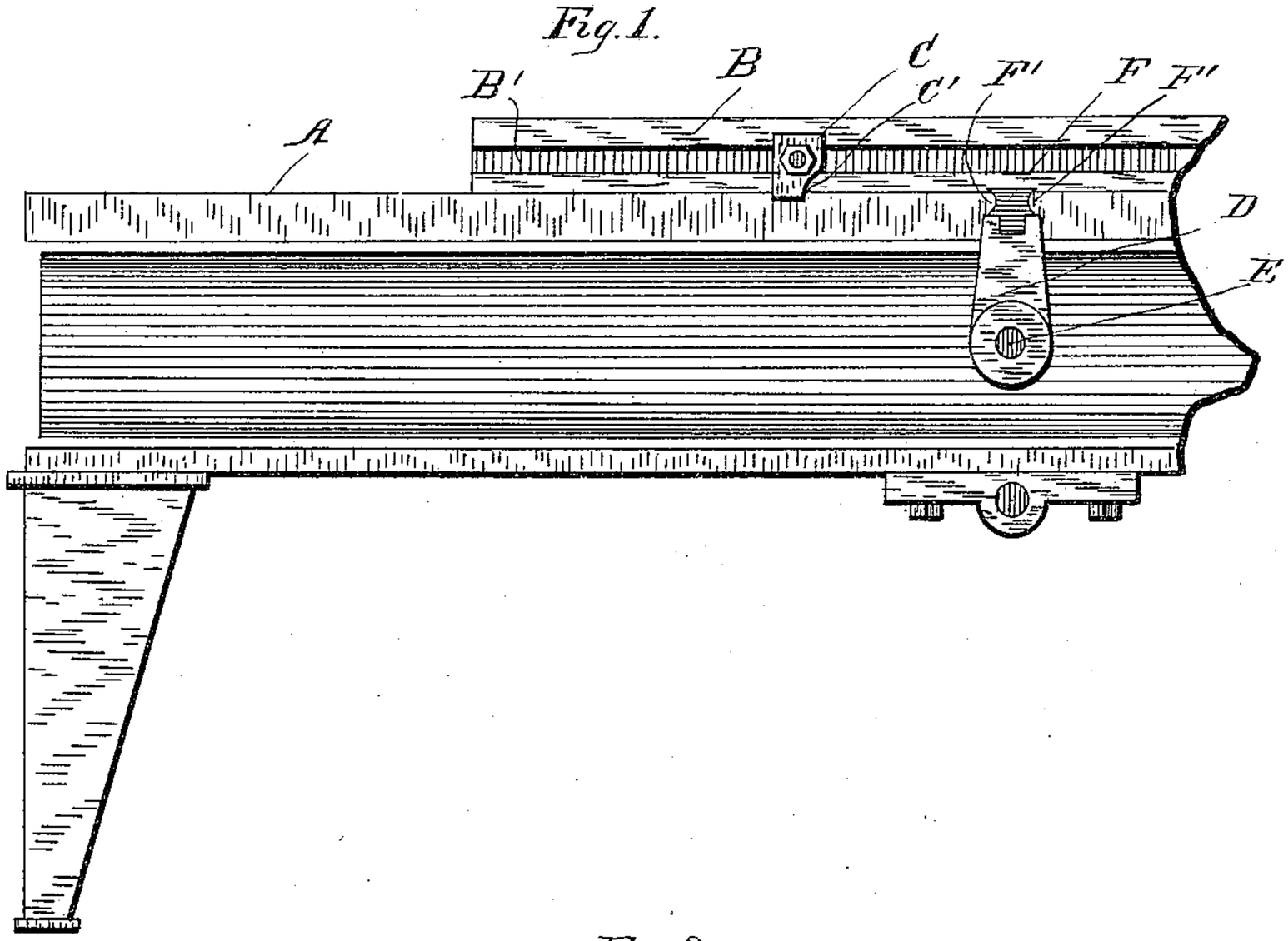


Fig. 2.

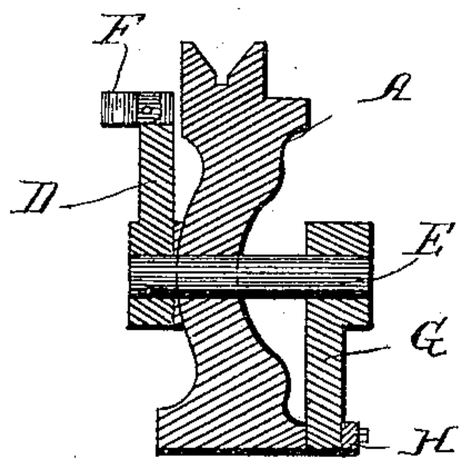
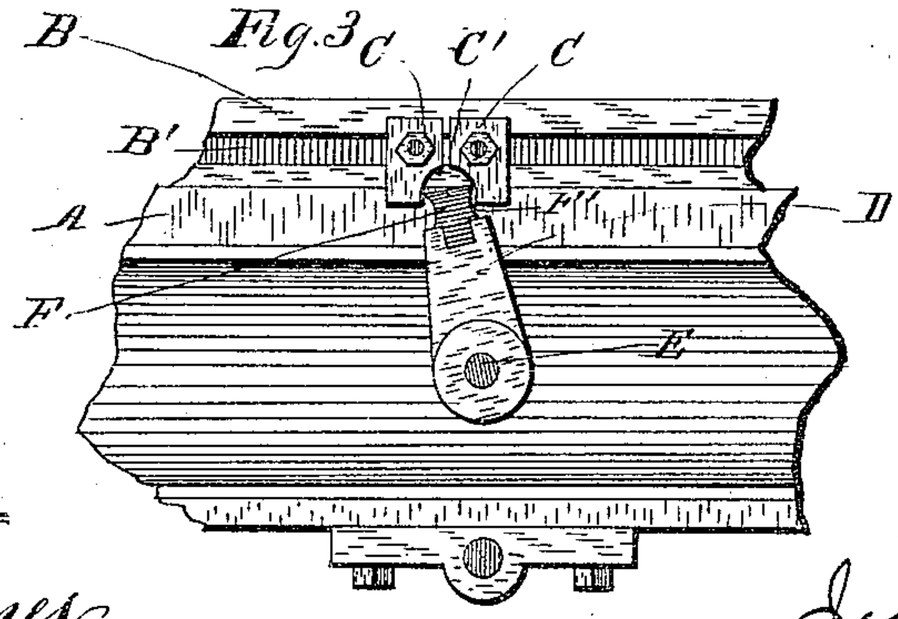


Fig. 3.



Witnesses:
W. A. Jones.
A. B. Fairchild

Inventor
John H. Wright
By atty
A. Sullivan

UNITED STATES PATENT OFFICE.

JOHN H. WRIGHT, OF BRIDGEPORT, CONNECTICUT.

SHIPPING DEVICE FOR METAL PLANING AND SHAPING MACHINES.

SPECIFICATION forming part of Letters Patent No. 312,060, dated February 10, 1885.

Application filed March 1, 1884. (No model.)

To all whom it may concern:

Be it known that I, JOHN H. WRIGHT, a citizen of the United States, residing at Bridgeport, in the county of Fairfield and State of Connecticut, have invented certain new and useful Improvements in Shipping Devices for Combined Metal Planers and Shapers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to that class of metal-working machines in which a reciprocating table is used; and it has for its object to produce a shipping device which shall be so constructed as to permit the table to be moved away from the tool in either direction without interfering with the adjustment of the shipping-dogs, and which also will permit of quicker reciprocation of the table than has ever heretofore been accomplished—that is to say, I produce the reverse movement with a shorter throw of the table. I am thus enabled, first, to examine the work at any time without being compelled to readjust the shipping mechanism, whereby much time is saved; and, secondly, I accomplish a still more important result, in that I am able to combine the functions of a metal-shaper with those of a metal-planer without change of parts.

With these ends in view my invention consists in the construction and combination of elements, as will be hereinafter fully described, and then pointed out in the claims.

In order that others may fully understand the construction and operation of my improved device, I will proceed to describe the same, referring by letters to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a side elevation of a portion of the bed and table of a metal-planer, showing one of the shipping-dogs, the outer shipping-lever, and the tumbling-dog. Fig. 2 is a cross-section of the bed and the shipping-levers, with the shaft and tumbling-dog in elevation; and Fig. 3 is a side elevation of a portion of the bed and table, showing the shipping-dogs so adjusted that the table has but little throw—as, for instance, when the machine is used as a shaper.

A is the bed, and B the table.

C C represent the shipping-dogs, which are adjustably secured in a groove, B′, in the side of the table.

I have shown the shipping-dogs as secured in the groove by means of a bolt and nut, the head of the bolt (not shown) engaging in the groove; but other means may be substituted, if preferred.

I preferably make the faces of the shipping-dogs which come in contact with the tumbling-dog slightly concave, as at C′. This, however, is not essential, as a notch may be substituted, or, if preferred, a straight surface, the form shown being preferable.

E is a short shaft which passes through the bed, and is provided at its opposite ends with levers D and G, which I term "shipping-levers." These levers project in opposite directions in a straight line. The outer one, D, projects upward, and at its end is pivoted a tumbling-dog, F. This tumbling-dog is pivoted to lever D at its outer lower corner, thus avoiding the use of a spring, as when thrown either into or out of operative position its own weight will hold it in that position.

It will be observed in the drawings that both of the operative faces of the tumbling-dog are made concave, as at F′. This is a very important feature of my invention, as in use the contact portions of the shipping-dogs pass into this concave portion, thus enabling me to so adjust the shipping-dogs that I am able to reciprocate the table in the space of half an inch, thereby giving to a metal-planer provided with my improved shipping device the additional functions of a metal-shaper. In fact, I am able to cut a rectangular slot or groove to any depth and of any length from half an inch to the extreme capacity of the machine. The inner lever, G, projects downward in a direction diametrically opposite to lever D. A link, H, pivoted to this lever connects it with the clutch-operating mechanism, which may be of any kind, and forms no part of my present invention. I preferably use, however, in connection with this device the clutch-operating mechanism which forms the subject of my application for Letters Patent of even date herewith, Serial No. 122,569.

The operation of my present invention is as

follows: Suppose, without regard to what may be the throw of the table, that it is desired to examine the work. To do so it is merely necessary to throw the tumbling-dog into the position shown in Fig. 2, when the continued action of the feed will cause the table to pass away from the tool (not shown) in either direction that may be desired. The shipping-dogs do not come in contact with lever D, but only with the tumbling-dog when it is in its operative position, as in Figs. 1 and 3.

The feed mechanism forms no part of my present invention, and none, therefore, has been illustrated. I preferably use, however, in connection with this device the feed mechanism which forms the subject of another application for Letters Patent of even date herewith, Serial No. 122,568. When a short throw of the table is desired, the shipping-dogs are adjusted in the position shown in Fig. 3.

I do not desire to limit myself to the exact construction shown, as it is obvious that the details may be varied within reasonable limits without departing from the spirit of my invention—as, for instance, lever G may be made in the form of a quadrant-gear, and a rack substituted for link H.

Having thus described my invention, I claim—

1. In a metal-working machine, a shipping-lever the operating portion of which is pivoted at its lower corners to the main portion thereof, and which may be thrown into or out of operative position, remaining in either position, whereby the reciprocation of the table may or may not take place without affecting any of the adjustments.

2. In a planer, a shipping-lever having a tumbling-dog pivoted at its upper end, in combination with adjustable shipping-dogs upon the table, as described, and for the purpose set forth.

3. The tumbling-dog pivoted at its outer lower corner to the shipping-lever, whereby when thrown into or out of operative position the weight of the dog will hold it in such position.

4. Shipping-levers D and G and pivoted tumbling-dog F, having concave sides F′, in combination with shipping-dogs C, substantially as described.

5. Shaft E and the shipping-levers, in combination with a tumbling-dog having concave operating-faces and pivoted to one of the levers, and adjustable shipping-dogs, also having curved operating-faces, as described, and for the purpose set forth.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN H. WRIGHT.

Witnesses:
A. M. WOOSTER,
WM. A. JONES.