

Dec. 29, 1953

W. VEERSMA

2,664,124

MICROCONTROL FOR TOP OUT-FEED PLANER ROLL

Filed Nov. 13, 1952

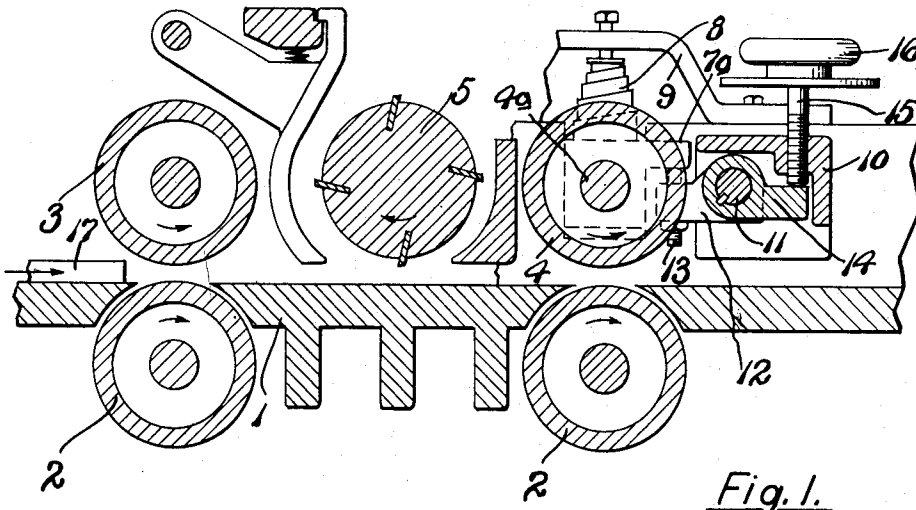


Fig. 1.

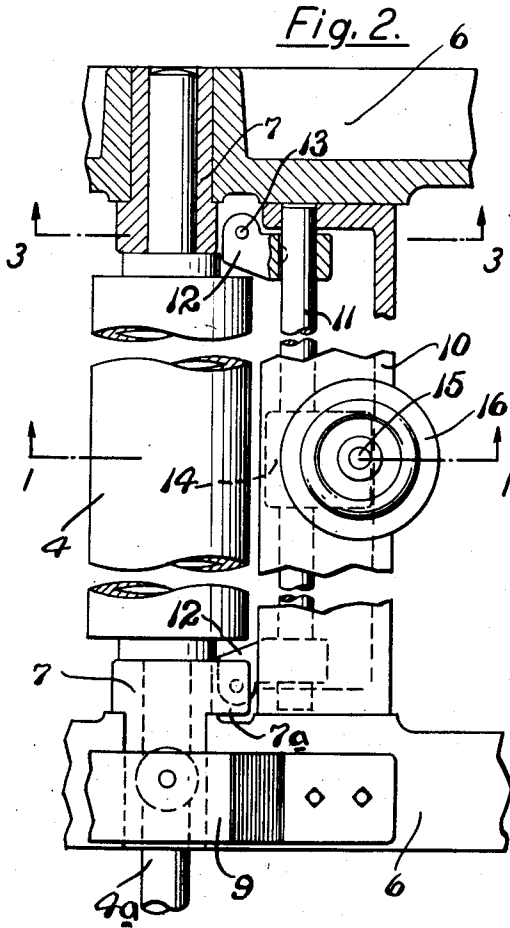


Fig. 2.

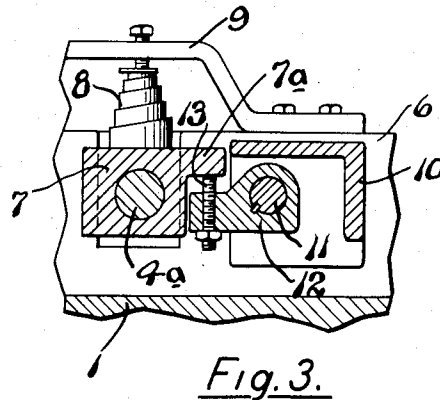


Fig. 3.

Inventor  
Walter Veersma  
By Frank E. Liverance, Jr.  
Attorney

# UNITED STATES PATENT OFFICE

2,664,124

## MICROCONTROL FOR TOP OUT-FEED PLANER ROLL

Walter Veersma, Holland, Mich., assignor to Buss  
Machine Works, Holland, Mich., a corporation  
of Michigan

Application November 13, 1952, Serial No. 320,314

4 Claims. (Cl. 144-247)

1

This invention relates to wood planers, and is more particularly concerned with a very accurate, effective and substantially perfect control for adjusting top out-feed planer rolls, novel means being provided for simultaneous and equal micro-adjustment of the journal boxes carrying the ends of the shaft of the out-feed planer roll so that separate and independent adjustment of each end of such shaft is eliminated, thus insuring against danger that the adjustment of one journal will be non-exact with respect to the other.

It is an object and purpose of the present invention to provide such adjustment in a simple and very practical way, the structure being sturdy and dependable and the adjustment being accomplished quickly and with accuracy and exactness, simultaneously for both ends of such out-feed planer roll.

An understanding of the invention may be had from the following description taken in connection with the accompanying drawing, in which,

Fig. 1 is a fragmentary transverse section lengthwise of the upper portion of a planer, substantially on the plane of line 1-1 of Fig. 2.

Fig. 2 is a fragmentary plan view, with some parts shown in section, of the out-feed planer roll and the novel adjustment mechanism with which it is equipped, and

Fig. 3 is a fragmentary vertical section substantially on the plane of line 3-3 of Fig. 2.

Like reference characters refer to like parts in the different figures of the drawing.

In a wood planer, the boards or other material which are to be planed are passed over a horizontal table 1 and are driven by lower spaced feed rollers 2 and pressed against at their upper sides by upper feed rollers 3 and 4, the latter being the out-feed roller, one at each side of the rotating cutter 5. Such upper rollers are carried on shafts which extend between spaced apart sides 6 of the side members of the fixed frame of the planer, the ends of the shafts being rotatably mounted in journal boxes 7 which are received in vertical recesses having vertical spaced sides which operate as guides for the sides of the boxes 7. For example, the shaft 4a of the roller 4 at its ends is rotatably mounted in the journal boxes 7 which, in the planer structure, have acting upon them heavy compression springs 8, the lower ends of which bear upon the upper sides of the boxes 7 and have adjusting screws at their upper ends threaded through overhanging brackets 9 permanently secured to the side members 6 of the fixed frame of the machine.

2

Heretofore it has been common practice to adjust the journal boxes 7 by screws which are threaded upwardly through the side members 6 against the lower sides of the boxes 7. For adjusting the roller with respect to the boards or other work which is planed, the adjusting screws for each box are independently loosened and adjusted and afterward locked in place with the usual lock nuts. This has resulted in the danger that the shaft will not be accurately adjusted in exact equal amounts at the opposite ends thereof.

With my invention, each of the journal boxes 7 is provided with an integral lug 7a extending horizontally therefrom toward a fixed horizontal cross bar 10 permanently secured at its ends to the opposed sides 6 of the frame and located above the table. A rock shaft 11 is mounted for rocking movement at its ends to the ends of the cross bar or beam 10. On such shaft 11 two arms 12, one adjacent each end of the shaft, are keyed or otherwise permanently secured each at its free end extending under the adjacent lug 7a. A lock screw 13 is threaded upwardly through each arm 12 to bear against the under side of the adjacent lug 7a (Fig. 1). Initially the journal boxes 7 are independently adjusted by adjusting the screws 13 and care is exerted that the adjustment shall be accurate. This can be done with skilled labor and when it is once done at the factory adjustment thereafter of the screws 13 is seldom required.

Between the ends of the rock shaft 11 and, preferably adjacent its middle portion, a third arm 14 is keyed extending from the rock shaft in a direction opposite the arms 12. A screw 15 provided with a hand wheel 16 at its upper end is threaded downwardly through the upper side of the beam 10, bearing at its lower end against the outer end portion of the arm 14. Such hand wheel may be provided with suitable spaced indicating characters calibrated so that the extent of the adjustment vertically of the journals 7 may be accurately known and controlled.

With the board, indicated at 17 in Fig. 1, moving in the direction indicated by the arrow under the incoming feed rolls 2 and 3 and passing therefrom to the rotating cutter 5 and outwardly between the outgoing rolls 2 and 4, the spacing of said rollers 2 and 4 is controlled by manual operation of the band wheel 16. When turned in one direction to depress the arm 14 the journals 7, one at each end of the shaft 4a are simultaneously elevated equal amounts. When turned in the opposite direction, such journals under the

3

pressure of the springs 8 are simultaneously lowered equal amounts.

There is thus eliminated the tedious and critical releasing of locking screws, similar to the screws 13 used directly underneath the journal 7, every time that an adjustment of the out-going feed roller 4a is desired. Such adjustment is now accomplished without requirement of using skilled labor by merely turning the hand wheel 16 a preselected amount.

Furthermore, the adjustment may be performed while the machine is in production and does not require shutting down production lines. In many cases, a planer or more than one planer will be in a production line, with conveyors between separated machines leading to the front of a machine and away from the back thereof, with no operator on many of the machines. The adjustment can be taken care of with the machine running, contrary to prior practice.

The invention is very practical and useful, is sturdy and dependable and serves a very desirable purpose of maintaining the initial factory accurate adjustment set by the screws 13, so that in all subsequent elevations or lowerings of the feed roll, each end of it will be elevated or lowered exactly the same distance.

The invention is defined in the appended claims and is to be considered comprehensive of all forms of structure coming within their scope.

I claim:

1. In a planer having an out-feed roller journaled for rotation in journal boxes, one at each end of said roller, with springs acting on said boxes to press them in a downward direction, the improvement comprising, a fixed bar spaced from and paralleling said roller, a rock shaft mounted on said bar, parallel thereto, an arm adjacent each end of the rock shaft extending, one toward each journal box, and engaging therewith to simultaneously lift each box on rocking the the rock shaft in one direction, and means mounted on the bar operatively connected with the rock shaft to rock it in said one direction or release it to rock in the opposite direction under force of said springs, and to maintain said rock shaft in selected positions.

2. In a planer having an out-feed upper roller

4

journaled for rotation in journal boxes, one at each end of said roller, with spring means acting on said boxes to press them in a downward direction, the improvement comprising, a fixed bar spaced from and paralleling said roller, a rock shaft mounted on said bar parallel thereto, an arm adjacent each end of the shaft extending, one toward each journal box and engaging therewith to elevate said boxes on upward movement of said arms when the shaft is rocked in one direction, an additional arm on said rock shaft between its ends extending therefrom in a direction opposite the first arms, and a screw threaded through said bar, bearing against said additional arm to depress it at its outer end and rock said shaft.

3. A structure having the elements defined in claim 2, each of said journal boxes having a horizontal lug extending toward and overlapping an associated arm of the first mentioned arms, and a screw threaded upwardly through each of said first mentioned arms bearing, each at its upper end against the under side of its overlapping lug.

4. An attachment for wood planers comprising, a horizontal bar, a shaft rockably mounted thereon at its ends in parallelism thereto, an arm fixed adjacent each end of the shaft extending generally horizontally therefrom, an additional arm fixed to the shaft between the ends of the shaft extending oppositely to the first arms, and manually operable means mounted on the bar engaging against the upper side of the additional arm and movably operable to depress said arm and rock said shaft, said bar being adapted to be secured between the sides of a planer frame above the table of a planer, parallel to and spaced from an upper out-feed roller of the planer, with the first arms extending toward end journal boxes for rotatably mounting said roller.

WALTER VEERSMA.

References Cited in the file of this patent  
UNITED STATES PATENTS

Number	Name	Date
350,892	Myrick	Oct. 12, 1886
412,451	Benjamin	Oct. 3, 1889
1,255,625	Mitchell	Feb. 5, 1918