

Jan. 27, 1931.

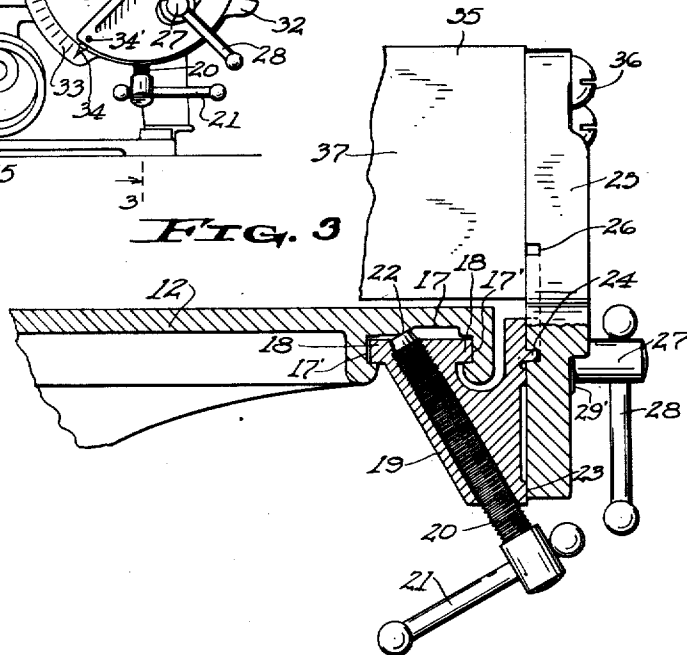
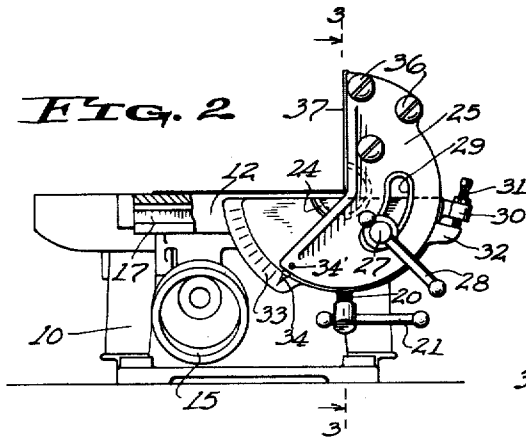
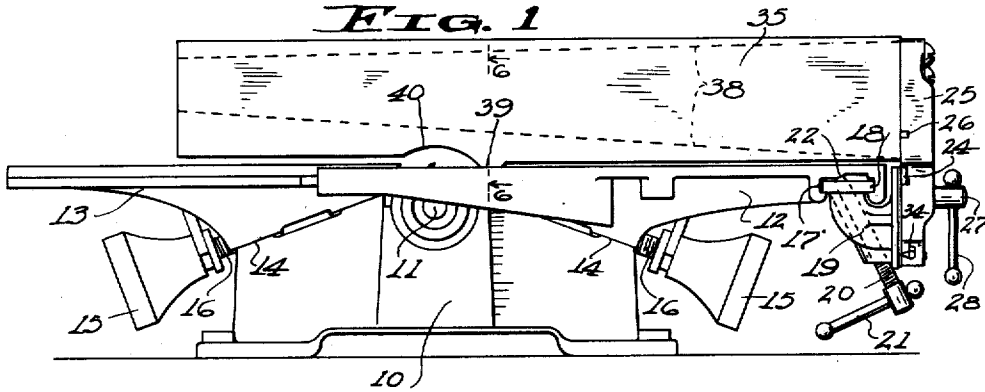
H. E. TAUTZ

1,790,288

FENCE FOR JOINTERS

Filed April 18, 1930

2 Sheets-Sheet 1



WITNESSES

Irving J. Rose

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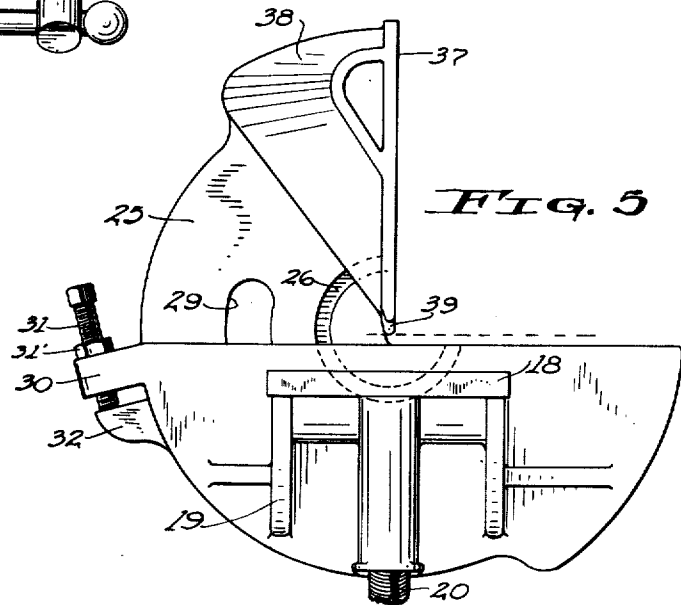
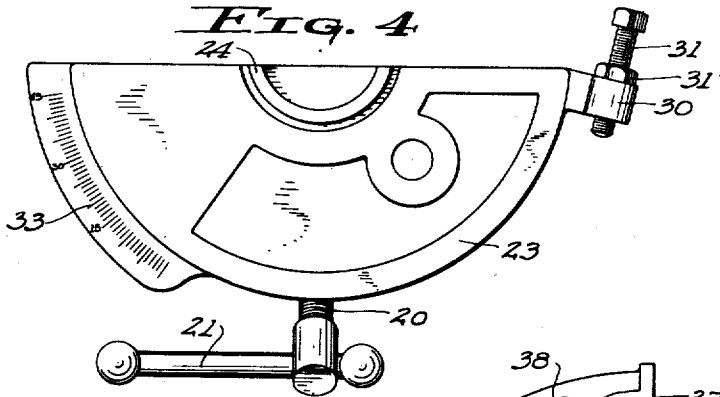
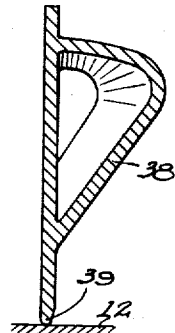


FIG. 6



WITNESSES

Swing Rose
M. E. Downing

FIG. 7

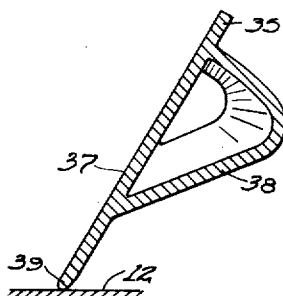
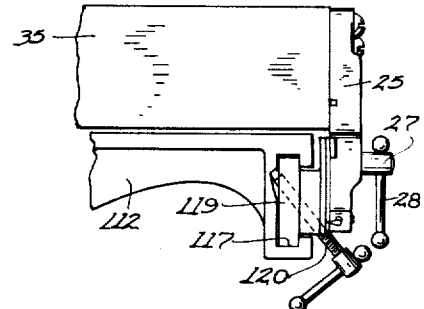


FIG. 8



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FENCE FOR JOINTERS

Application filed April 18, 1930. Serial No. 445,338.

The invention relates to fences for jointers and other wood-working machines.

An object of the invention is to provide a work-guiding fence which is adjustably mounted at the front end of the work-receiving table of a jointer, or other wood-working machine, and below the top surface of the table to thereby leave the table surface free from grooves or ways in which chips or sawdust may collect, or in which the work may accidentally engage to interfere with proper operation.

Another object of the invention is to provide fence-adjusting means which are located at the front end of the table where they are easily accessible to the operator and do not interfere with the work.

A further object of the invention is to provide a fence which has a pivotal axis extending substantially in the plane of the table, and which includes a depending portion at one end pivotally mounted on a bracket adjustably secured to the front end portion of the table, such pivotal mounting comprising a segmental rib on one member fitting in a segmental groove in the other co-operating member, and the fence having a heel or lug which pivotally bears on the table surface adjacent the cutter-head of the machine.

A further object is to provide a fence mounting including a die-cast bracket having a stop for quickly determining the position of the fence at right-angles to the table, and also having an angular scale for facilitating the angular adjustment of the fence.

A further object is to provide a fence which, with its supporting bracket, can be quickly and easily removed from the table, and which can be readily replaced on the table and be rapidly and accurately adjusted both with respect to the cutter-head and with respect to the surface of the table.

A further object is to provide a rigid lightweight fence having an integral longitudinally-extending tubular portion of substantially triangular cross-section.

A further object is to perfect details of construction of the fence mounting and to reduce the cost of manufacture in order to render the device suitable for small size ma-

chines in the so-called "home work shops".

The invention further consists in the several features hereinafter set forth and more particularly defined by the annexed claims.

This application constitutes a continuation in part of my co-pending application for Planer attachment for jointers, Serial No. 355,231, filed April 15, 1929.

In the accompanying drawings, Fig. 1 is a front elevation of a jointer embodying the fence structure of the present invention;

Fig. 2 is an end view of the jointer;

Fig. 3 is a detail sectional elevation of the fence mounting taken along the line 3—3 of Fig. 2;

Fig. 4 is a detail elevation of the fence bracket;

Fig. 5 is an end elevation of the fence assembly as it appears when removed from the jointer table, the view being taken looking at the free end of the fence;

Fig. 6 is a detail transverse sectional view of the fence taken along the line 6—6 of Fig. 1;

Fig. 7 is a view similar to Fig. 6, but showing the fence in inclined position, and

Fig. 8 is a fragmentary detail view showing a modified form of fence mounting.

In these drawings, the numeral 10 designates a jointer base frame having a cutter-head 11 mounted in suitable bearings therein and driven in any suitable manner. A front table 12 and a rear table 13 are slidably mounted on inclined ways 14 formed on the base frame 10, so as to be independently raised or lowered with respect to the knives of the cutter-head, as usual. The adjusting means for the table includes a pair of adjusting nuts 15, each of which is threaded on a respective screw 16 secured to the base frame.

The front table 12 is provided at its front end with a guide channel 17 which extends transversely along the under side of the table in parallel relation to the axis of the cutter-head. The opposite side portions of the channel 17 are formed with grooves 17' of rectangular cross-section which slidably receive therein the opposite flanges 18 of a die-cast metal bracket 19, portions of which depend from the channel 17 and extend for-

wardly of the front end of the table 12. A clamping screw 20, having a slidably mounted handle 21 in its head portion, is threaded angularly into the bracket 19 to engage an abutment 22 formed along the upper wall of the channel 17, to thereby urge the bracket downwardly and forwardly into firm engagement with the grooves 17'. By this adjustment the forward flange 18 of the die-cast bracket is brought to bear against the lower and side face of the forward groove 17', and the vertical forward face 23 of the bracket 19 is brought into a plane at right-angles to the upper face of the jointer table 12.

An arcuate segmental rib 24 projects integrally from the forward face of the die-cast bracket 19, and is concentric with a horizontal axis which is normal to the forward face of the bracket 19 and which lies substantially in the plane of the upper surface of the jointer table, or in some instances slightly above the table surface. A plate 25 bears against the vertical surface 23 of the bracket 19 and is provided with an arcuate segmental groove 26 within which slidably fits the segmental rib 24 on the bracket, to thereby define for the plate an axis of rotation lying substantially in the plane of the upper surface of the jointer table.

A shouldered clamping screw 27, having a slidably mounted handle 28 in its head portion, is threaded into the bracket 19 and extends through an arcuate slot 29 formed in the plate 25. The shouldered head portion of the screw 27 engages a washer 29' which receives the screw therethrough and which bears against the plate 25 to clamp the plate in angularly adjusted position. A lug 30 is formed integrally on the die-cast bracket 19 and has a stop-screw 31 threaded therein for engagement with a lug 32 formed on the plate 25, to thereby limit the angular displacement of the plate in one direction. A lock nut 31' holds the screw 31 in adjusted position. An angular scale 33 is molded on the die-cast bracket 19 and co-operates with an index pointer 34 secured to the plate 25, to thereby facilitate the angular adjustment of the plate. The index pointer 34 is of angular shape and has one end portion rotatably fitting within a bore formed in the edge portion of the plate 25. The pointer can thereby be swung into proper registration with the scale 33, and is held in position by a set screw 34'.

A fence 35 is fixedly secured to the upper portions of the plate 25 by means of screws 36, and presents a flat work-engaging face 37, which is disposed at right-angles to the upper surface of the table 12 when the lug 32 on the fence plate engages the stop-screw 31. The fence 35 is provided with integral re-enforcing walls 38 which form therewith a rigid tubular structure tapering toward the free end of the fence and presenting a substantially triangular cross-section. At a

point adjacent the cutter-head 11, a rounded heel or lug 39 is formed on the lower edge of the fence to pivotally engage the upper surface of the jointer table 12 and thereby prevent springing of the fence by a downward pressure, especially in the inclined positions of the fence. A recess 40 is formed in the lower edge of the fence to provide clearance for the cutter-head.

In the modified form of fence mounting shown in Fig. 8, the jointer table 112 is provided in its front end portion with a transversely-extending channel 117 opening laterally to receive a flanged die-cast bracket 119 which is urged forwardly and downwardly against the recessed walls of the channel by means of a clamping screw 120. The plate 25 carrying the fence 35 is fitted on the bracket 119 in a manner heretofore described, and is clamped thereto by a screw 27. This form of fence mounting is generally similar to that first described except for the disposition of the channel 117 which opens laterally instead of downwardly.

The assembly comprising the fence 35, fence plate 25, and bracket 19, is of unitary character, and is capable of being shifted transversely of the table, or removed from the table, after loosening the clamping screw 20. During such shift or removal, the flanged portions 18 of the bracket 19 slide along the grooves or ways 17' of the channel 17, which is open at its opposite ends. When the fence assembly is to be replaced on the table, the bracket 19 is slid into the open-ended channel 17 a selected distance and the screw 20 is then tightened to clamp the assembly firmly in place. When the screw 27 is tightened, the fence plate 25 is clamped firmly against the forward vertical face of the bracket 19, whereupon the fence 35 extends longitudinally of the table 12 and at right-angles to the axis of the cutter-head. The abutment of the lug 32 with the stop screw 31 serves to place the plane of the fence at right-angles to the upper surface of the table 12. In this manner, the more commonly used 90° adjustment can be readily obtained. When the angular position of the fence is to be adjusted, the screw 27 is loosened and the fence plate 25 rotated to a selected position as indicated by the position of the pointer 34 with respect to the scale 33, whereupon the tightening of the clamping screw 27 will secure the fence firmly in its adjusted position.

The clamping screw 27 not only clamps the fence assembly against movement, but also insures a disposition of the fence at right-angles to the axis of the cutter-head, so that rabbeting, tenoning, and molding operations can be accurately performed.

What I claim as new and desire to secure by Letters Patent is:

1. The combination, with a wood-working machine having a work-receiving table and a

cutter, there being transversely-extending ways formed at an outer end portion of said table and arranged below the upper work-engaging surface of the table, of a bracket slidably mounted on said ways, means for clamping said bracket on said ways, a plate rotatably mounted on said bracket to swing about a horizontal axis substantially coincident with the upper surface of the table, means for adjustably clamping said plate to said bracket, and a fence fixedly secured to said plate and extending over the table.

2. The combination, with a wood-working machine having a work-receiving table and a cutter, there being transversely-extending ways formed at an outer end portion of said table and arranged below the upper work-engaging surface of the table, of a bracket slidably mounted on said ways, means for clamping said bracket on said ways, a plate rotatably mounted on said bracket to swing about a horizontal axis substantially coincident with the upper surface of the table, means for adjustably clamping said plate to said bracket, and a fence fixedly secured to said plate and extending over the table, said fence having a lug at its lower edge pivotally engaging the upper surface of the table adjacent said cutter.

3. The combination, with a wood-working machine having a work-receiving table and a cutter, of a bracket slidably mounted at the outer end portion of said table for transverse movement therealong, means for clamping said bracket on said table, a fence extending over the table and having a depending portion at its front end rotatably mounted on said bracket to swing about an axis substantially in alignment with the upper surface of the table, and means for clamping the depending portion of the fence to said bracket.

4. The combination, with a wood-working machine having a work-receiving table and a cutter, of a bracket secured to the outer end portion of said table and disposed below the upper work-engaging surface of the table, and a fence extending longitudinally over the table and having at its end portion an angularly adjustable pivotal mounting on said bracket.

5. The combination, with a wood-working machine having a work-receiving table and a cutter, of a bracket secured to the outer end portion of said table, and a fence extending longitudinally over the table and having at its end portion an angularly adjustable pivotal mounting on said bracket, there being a lug at the lower edge of said fence pivotally engageable with the upper surface of the table adjacent said cutter, and the pivotal axis of said fence being substantially coincident with the upper surface of the table, the lower edge of said fence being spaced from the upper surface of the table along the greater part of its length.

6. The combination, with a wood-working machine having a work-receiving table and a cutter, of a bracket secured to the outer end portion of said table and having an arcuate segmental rib concentric with an axis substantially coincident with the upper surface of the table and said rib being disposed below said surface, a fence extending longitudinally over the table and having a depending portion bearing against said bracket and provided with an arcuate segmental groove within which said rib slidably fits to define an axis of rotation for the fence, and means for clamping said fence to said bracket.

7. The combination, with a wood-working machine having a work-receiving table and a cutter, there being a transversely extending channel formed at the outer end portion of the table and arranged below the upper surface of the table, of a die-cast bracket having portions slidably mounted in said channel and having an arcuate scale formed thereon and arranged about an axis substantially coincident with the upper surface of the table, means for clamping said bracket in said channel, a fence extending over said table and having a depending portion co-operating with said scale and pivotally mounted on said bracket to swing about said axis, and means for adjustably clamping said fence to said bracket.

8. The combination, with a wood-working machine having a work-receiving table and a cutter, of a bracket secured to the outer end portion of said table, a fence extending longitudinally over the table and having at its end portion an angularly adjustable pivotal mounting on said bracket, there being a pair of co-operating stop lugs on said bracket and fence, and an adjusting screw carried by one of said lugs for engagement with the other lug to determine a terminal position for said fence in which the surface of said fence is at right-angles to the upper surface of said table.

9. A fence for wood-working machines comprising an elongate tubular metal body having an integrally formed flat work-engaging surface, and means for pivotally supporting said tubular body at one end thereof to a table of a wood-working machine.

10. A fence for wood-working machines comprising an elongate tubular metal body having an integrally formed flat work-engaging surface, the tubular portion of said body being longitudinally tapered to present at one end portion a larger cross-section than at the other end, and means for pivotally supporting said tubular body at its larger end to a table of a wood-working machine.

11. A fence for wood-working machines comprising an elongate tubular metal body having an integrally formed flat work-engaging surface, the tubular portion of said

body being longitudinally tapered and having a substantially triangular cross-section, and means for pivotally supporting said tubular body at the larger end thereof to a table of a wood-working machine.

12. In a wood-working machine, the combination of a support, a rotary cutter-head mounted on said support, a table carried on said support and having an upper work-receiving surface along which work is fed to said cutter-head, there being ways formed at the outer end portion of said table and arranged below the upper work-engaging surface of the table, said ways extending transversely of the table in parallel relation to the axis of said cutter-head, a bracket slidably mounted on said ways, means for clamping said bracket on said ways in selected positions therealong, a work-guiding fence extending longitudinally above said table and having a pivotal mounting on said bracket to swing about an axis lying substantially in the plane of said table, and means for adjustably clamping said fence to said bracket.

13. The combination, with a wood-working machine having a table and a cutter, there being transversely-extending ways formed at an outer end portion of the table and overlaid by said end portion, of a bracket slidably mounted in said ways for movement therealong, a fence extending over the table and mounted at its end portion on said bracket, and means for clamping said bracket to said ways and simultaneously disposing said fence at a pre-determined angular relation with respect to said ways.

14. The combination, with a wood-working machine having a table and a rotary cutter, there being transversely-extending ways formed at an outer end portion of said table and overlaid by said end portion, of a bracket slidably mounted on said ways, a fence extending over the table and mounted at its end portion on said bracket, and means for clamping said bracket to said ways and simultaneously disposing said fence at right-angles to the axis of said cutter.

In testimony whereof, I affix my signature.

HERBERT E. TAUTZ.

body being longitudinally tapered and having a substantially triangular cross-section, and means for pivotally supporting said tubular body at the larger end thereof to a table of a wood-working machine.

12. In a wood-working machine, the combination of a support, a rotary cutter-head mounted on said support, a table carried on said support and having an upper work-receiving surface along which work is fed to said cutter-head, there being ways formed at the outer end portion of said table and arranged below the upper work-engaging surface of the table, said ways extending transversely of the table in parallel relation to the axis of said cutter-head, a bracket slidably mounted on said ways, means for clamping said bracket on said ways in selected positions therealong, a work-guiding fence extending longitudinally above said table and having a pivotal mounting on said bracket to swing about an axis lying substantially in the plane of said table, and means for adjustably clamping said fence to said bracket.

13. The combination, with a wood-working machine having a table and a cutter, there being transversely-extending ways formed at an outer end portion of the table and overlaid by said end portion, of a bracket slidably mounted in said ways for movement therealong, a fence extending over the table and mounted at its end portion on said bracket, and means for clamping said bracket to said ways and simultaneously disposing said fence at a pre-determined angular relation with respect to said ways.

14. The combination, with a wood-working machine having a table and a rotary cutter, there being transversely-extending ways formed at an outer end portion of said table and overlaid by said end portion, of a bracket slidably mounted on said ways, a fence extending over the table and mounted at its end portion on said bracket, and means for clamping said bracket to said ways and simultaneously disposing said fence at right-angles to the axis of said cutter.

In testimony whereof, I affix my signature.

HERBERT E. TAUTZ.

DISCLAIMER

1,790,288.—*Herbert E. Tautz*, Milwaukee, Wis. FENCE FOR JOINTERS. Patent dated January 27, 1931. Disclaimer filed September 30, 1935, by the patentee, the assignee, *Delta Manufacturing Company*, consenting.

Hereby enters this disclaimer to claim 8 of said specification which is in the following words, to wit:

"8. The combination, with a wood-working machine having a work-receiving table and a cutter, of a bracket secured to the outer end portion of said table, a fence extending longitudinally over the table and having at its end portion an angularly adjustable pivotal mounting on said bracket, there being a pair of co-operating stop lugs on said bracket and fence, and an adjusting screw carried by one of said lugs for engagement with the other lug to determine a terminal position for said fence in which the surface of said fence is at right-angles to the upper surface of said table."

[*Official Gazette* October 22, 1935.]

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[*Official Gazette October 22, 1935.*]