

P. J. JOECKEN.
 ADJUSTABLE JOURNAL BOX.
 APPLICATION FILED FEB. 24, 1908.

936,455.

Patented Oct. 12, 1909.

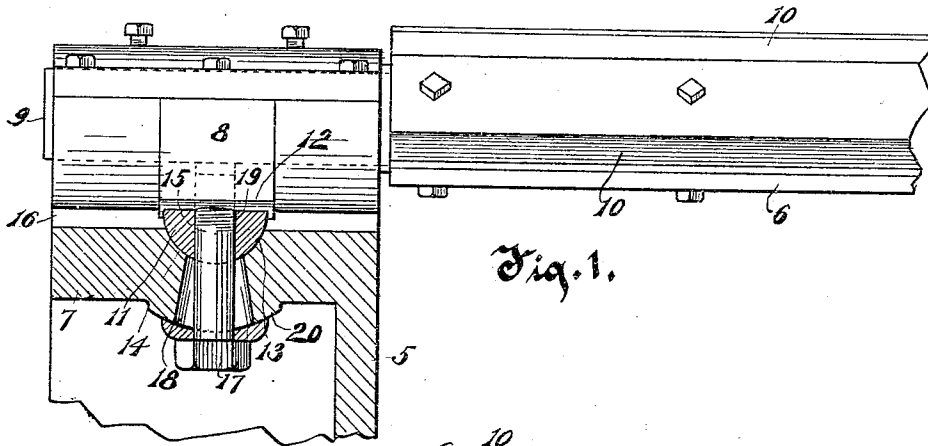


Fig. 1.

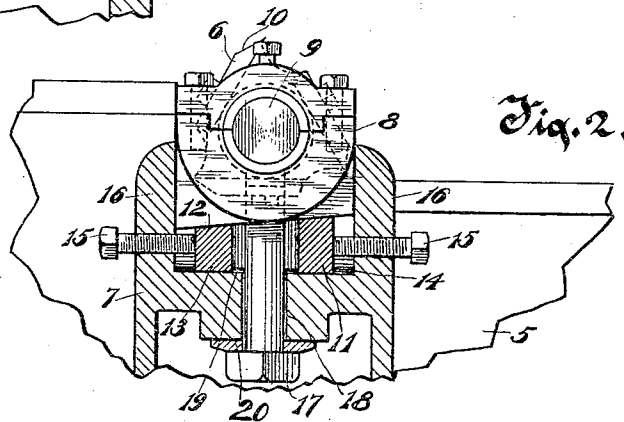


Fig. 2.

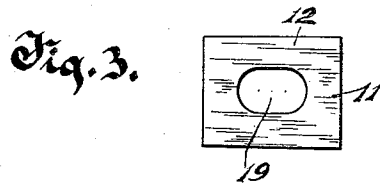


Fig. 3.

Witnesses:

W. H. Keeney.
Anna F. Schmidtbauer

Inventor.

Peter J. Joecken
 By *Benedict, Worsell & Caldwell*
 Attorneys.

UNITED STATES PATENT OFFICE.

PETER J. JOECKEN, OF SHEBOYGAN FALLS, WISCONSIN, ASSIGNOR TO FALLS MACHINE COMPANY, OF SHEBOYGAN FALLS, WISCONSIN, A CORPORATION OF WISCONSIN.

ADJUSTABLE JOURNAL-BOX.

936,455.

Specification of Letters Patent.

Patented Oct. 12, 1909.

Application filed February 24, 1908. Serial No. 417,290.

To all whom it may concern:

Be it known that I, PETER J. JOECKEN, residing in Sheboygan Falls, in the county of Sheboygan and State of Wisconsin, have invented new and useful Improvements in Adjustable Journal-Boxes, of which the following is a description, reference being had to the accompanying drawings, which are a part of this specification.

This invention relates to improvements in adjustable journal boxes for wood-working machines and more particularly to that class known as planers.

The primary object of this invention is to provide means for adjusting and alining the cutter of a planer, or shafts of other machines.

A further object of the invention is to provide means for locking the cutter or shaft in its adjusted position.

With the above, and other objects, in view the invention consists of the devices and parts, or their equivalents, as hereinafter described.

In the accompanying drawing, in which like reference characters refer to corresponding parts throughout all of the views: Figure 1 is a transverse sectional view of a fragment of a planer provided with the improved alining means; Fig. 2 is a front view thereof, with parts in section; and Fig. 3 is a detail in plan view of the alining means.

Referring to the drawing the numeral 5 indicates one of the side frames of a planer and 6 the rotatable cutter thereof. The frame is provided with bearing brackets 7 (only one being shown), integral therewith and extending forwardly and rearwardly of the front and rear portions respectively of said frame, and these bearing brackets are adapted to support journal boxes 8 disposed thereon. A shaft 9 is journaled in said boxes and provided with a number of longitudinally positioned knives 10 bolted thereto forming the cutter of the planer. The cutter is adapted to be rotated by means of a pulley and belt (not shown) in the usual manner.

The lower surfaces of the journal boxes are inclined and rest upon adjustable wedge blocks 11 the upper surfaces 12 of which are correspondingly inclined so that when the wedge blocks are moved in one direction, the journal boxes and the cutter journaled there-

in will be raised, and when moved in the opposite direction, the journal boxes and the cutter journaled therein will be lowered, and by moving only one of the wedge blocks, the cutter may be properly alined with the surface upon which the material to be planed rests. The lower portions 13 of the wedge blocks are semicircularly in cross section and fit in correspondingly semicircular depressions 14 in the brackets 7 so that the journal boxes will swing slightly when either end of the shaft is adjusted permitting said journal boxes to always remain in alinement with the axis of the cutter in any position of adjustment.

The inclined surfaces of the wedge blocks and the inclined lower surfaces of journal blocks will remain in contact with each other in any position of adjustment so that said wedge blocks may be moved endwise to raise or lower the journal blocks and the cutter carried thereby. The semicircular depressions 14 are longer than the wedge blocks 11 to allow an endwise movement of said blocks in adjusting the height of the journal blocks, and in order to move said wedge blocks, adjusting bolts 15 threaded in the upwardly extending guide lugs 16 of the brackets 7 and bearing against the ends of the wedge blocks are provided whereby a very fine adjustment of the cutter may be made.

When the cutter is properly alined the journal blocks are securely fastened to the brackets by means of locking bolts 17 which pass through elongated openings 18 in the brackets 7, through slots 19 in the wedge blocks 11 and are threaded into the lower portions of the journal blocks. The elongated openings 18 of the brackets permit the bolts 17 swinging in a plane parallel with the axis of the cutter, and the lower surfaces of the brackets are curved concentrically with the curve of the wedge blocks so that the journal blocks may be locked thereto at any angle of adjustment of the cutter. The slots 19 of the wedge blocks permit of the said blocks being moved endwise by means of the adjusting bolts 15 when the locking bolts 17 are loosened.

In order to provide flat bearings for the heads of the locking bolts 17, washers 21 formed with lower flat surfaces and with their upper surfaces curved concentrically with the curve of the brackets are positioned

between the bolt heads and the curved surfaces of the brackets, so that in adjusting the cutter the curved portions of the washers will slide and bear against the curved surfaces of the brackets, and the bolt heads will bear against the flat portions of the washers.

The operation of alining or adjusting the cutter is as follows: The locking bolts are loosened and the adjusting screws are turned to move the wedge blocks to the right or left as desired to cause said wedge blocks to raise or lower the journal blocks between the guide lugs. In case it is desired to raise or lower only one of the journal blocks, the semicircular lower portions of the wedge blocks revolving slightly in the semicircular depressions formed in the brackets will permit the journal blocks to swing in a line parallel with the axis of the cutter and prevent the cutter shaft binding in the journal boxes. When the cutter has been properly alined the boxes and wedge blocks are securely clamped and locked to the brackets by means of the locking bolts. The elongated openings and the lower curved surfaces of the brackets and the washers provided with the curved and flat surfaces permit the locking bolts to swing with the wedge blocks and to be locked together in any position of adjustment and without any tendency to disturb the axial alinement of the journal boxes with the cutter shaft. It is obvious that this means of adjusting and alining the shaft of a planer is also adapted to adjust and aline shafts of other machines and it is to be understood that the claims contemplate the use of the adjustment in machines of a character other than described.

From the foregoing description, it will be seen that the construction is very simple and inexpensive and the finest degree of adjustment is provided for.

This case constitutes a division with additions of my application for Letters Patent for improvements in wood-working machines, filed August 30, 1907, and bearing Serial No. 390,742.

What I claim as my invention is:

1. Means for adjusting and alining a shaft, comprising a frame provided with guide lugs and with semicircular depressions, vertically adjustable journal blocks provided with inclined lower surfaces mounted on said frame and positioned between the guide lugs, blocks provided with semicircular lower portions and with inclined upper surfaces located beneath the journal blocks, the semicircular portions of the blocks being positioned in the semicircular depressions of the frame and the inclined upper surfaces engaging the inclined lower surfaces of the journal blocks, said blocks also provided with openings extending vertically therethrough, said frame beneath the semicircular depressions provided with surfaces con-

centric with said depressions and having openings extending vertically therethrough, screws threaded to the lugs for moving the blocks horizontally to adjust the journal blocks and the shaft vertically, and locking screws engaging the concentric surfaces and extending through the openings in the frame and also in the blocks and threaded to the journal blocks for locking the said journal blocks and the other blocks to the frame in any position of adjustment.

2. Means for adjusting and alining a shaft, comprising a frame provided with openings, semicircular depressions and semicircular surfaces beneath the depressions and concentric therewith, adjustable journal blocks mounted on said frame, a shaft journaled in said blocks, wedge blocks provided with semicircular portions and with openings slidably positioned beneath the journal blocks, the semicircular portions of the wedge blocks fitting in the semicircular depressions of the frame and constructed to have a partial rotation therein, means for sliding the wedge blocks horizontally to adjust the journal blocks and the shaft vertically, and means passing through the openings in the wedge blocks and the frame and engaging the journal blocks and the concentric surfaces of the frame for locking the parts together in adjusted positions.

3. Means for adjusting and alining a shaft, comprising a frame provided with openings, semicircular depressions and semicircular surfaces beneath the depressions and concentric therewith, adjustable journal blocks mounted on said frame, a shaft journaled in said blocks, wedge blocks provided with semicircular portions and with openings slidably positioned beneath the journal blocks, the semicircular portions of the wedge blocks fitting in the semicircular depressions of the frame and constructed to have a partial rotation therein, screws for sliding the wedge blocks horizontally to adjust the journal blocks and the shaft vertically, and screws passing through the openings in the wedge blocks and the frame and engaging the journal blocks and the concentric surfaces of the frame for locking the parts together in adjusted positions.

4. Means for adjusting and alining a shaft, comprising a frame provided with guide lugs and with semicircular depressions, vertically adjustable journal blocks provided with inclined lower surfaces mounted on said frame and positioned between the guide lugs, blocks provided with semicircular lower portions and with inclined upper surfaces located beneath the journal blocks, the semicircular portions of the blocks being positioned in the semicircular depressions of the frame and the inclined upper surfaces engaging the inclined lower surfaces of the journal blocks, said blocks also provided

with openings extending vertically there-
through, said frame beneath the semicircu-
lar depressions provided with surfaces con-
centric with said depressions and having
5 openings extending vertically therethrough,
screws threaded to the lugs for moving the
blocks horizontally to adjust the journal
blocks vertically, washers provided with
curved portions positioned to bear against
10 the concentric curved surfaces, and locking
screws extending through the washers and
through openings in the frame and also in
the blocks and threaded to the journal blocks
for locking the said journal blocks and the
15 other blocks to the frame in any position of
adjustment.

5. Means for adjusting and alining a
shaft, comprising a frame provided with
openings, semicircular depressions and semi-
circular surfaces beneath the depressions and
20 concentric therewith, adjustable journal
blocks mounted on said frame, a shaft jour-
naled in said blocks, wedge blocks provided
with semicircular portions and with open-

ings slidably positioned beneath the journal 25
blocks, the semicircular portions of the
wedge blocks fitting in the semicircular de-
pressions of the frame and constructed to
have a partial rotation therein, screws for
sliding the wedge blocks horizontally to ad- 30
just the journal blocks vertically, washers
provided with flat surfaces and with por-
tions curved concentrically with the curved
surfaces of the brackets and positioned so
that said curved portions will bear against 35
the curved surfaces of the brackets, and
locking screws extending through the wash-
ers and through openings in the frame and
also in the blocks and threaded to the jour-
nal blocks for locking the said journal blocks 40
and the other blocks to the frame in any po-
sition of adjustment.

In testimony whereof, I affix my signa-
ture, in presence of two witnesses.

PETER J. JOECKEN.

Witnesses:

N. J. JOEHN,
A. LEHT.