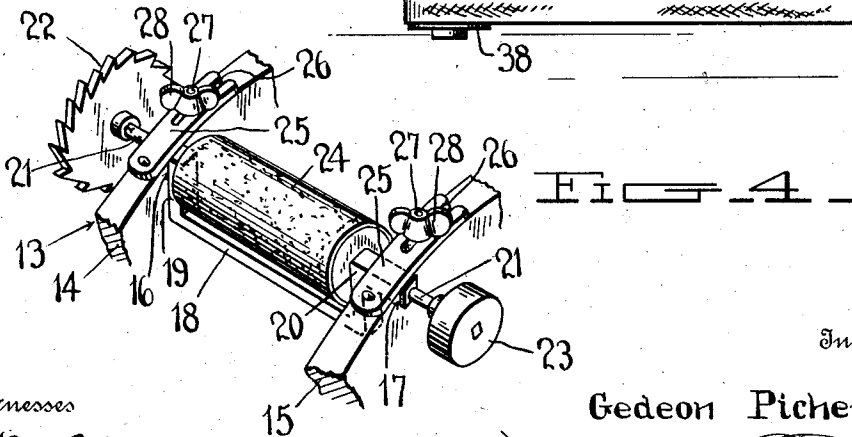
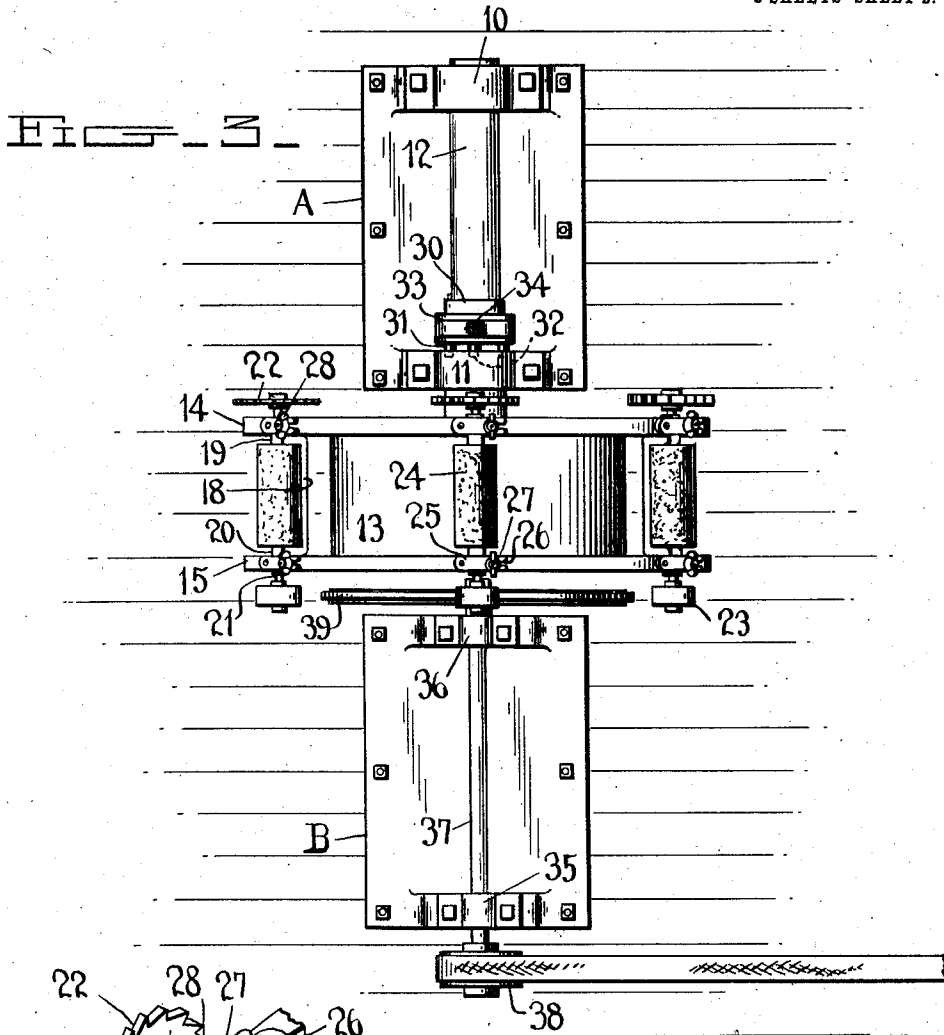


G. PICHER.
COMBINATION WOODWORKING MACHINE.
APPLICATION FILED FEB. 3, 1910.

1,011,367.

Patented Dec. 12, 1911.

2 SHEETS-SHEET 2.



Witnesses

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UNITED STATES PATENT OFFICE.

GEDEON PICHER, OF WATERVILLE, MAINE.

COMBINATION WOODWORKING-MACHINE.

1,011,367.

Specification of Letters Patent.

Patented Dec. 12, 1911.

Application filed February 3, 1910. Serial No. 541,826.

To all whom it may concern:

Be it known that I, GEDEON PICHER, a citizen of the United States, residing at Waterville, in the county of Kennebec, State of Maine, have invented certain new and useful Improvements in Combination Woodworking-Machines; 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.

This invention relates to combination wood working machines.

The object of the invention is to provide a machine of the character named wherein a plurality of wood working tools are mounted upon a shiftable carrier so that they may be moved at the will of the operator so as to bring any one of the tools into operative position with respect to the work supporting table; said movement serving at the same time to operatively connect the tool moved to operative position with a driving mechanism whereby the actuation of said tool may be instituted.

With the above and other objects in view the invention consists in the details of construction and in the arrangement and combination of parts to be hereinafter more fully described and set forth in the claim.

In describing the invention in detail reference will be had to the accompanying drawings wherein like characters of reference denote corresponding parts in the several views, and in which,

Figure 1 is a side elevation of a machine constructed in accordance with the invention; a fragment of the work supporting table being shown in section; Fig. 2, an end elevation of what is shown in Fig. 1; Fig. 3, a plan view of the machine with the work supporting table removed; and, Fig. 4, a detail perspective view of a fragment of the tool carrier showing the manner of supporting the tools and attaching same to the carrier.

Referring to the drawings, A represents the frame work of the machine which supports the shiftable tool carrier, B the frame work which supports the driving mechanism, and C the work supporting table.

Journalled on the frame work A in suitable bearings 10 and 11 is a shaft 12 which has fixed on one end thereof for simultaneous rotation therewith a drum or carrier 13, the heads 14 and 15 of which project beyond the

cylindrical portion disposed between said heads. Each of the heads 14 and 15 have formed in their circumferential edges corresponding recesses 16 and 17 respectively, in which are adapted to be secured the removable arbors which operatively support the various tools. Each of said arbors comprises a U-shaped member 18, the arms of which are bent laterally so as to form the outwardly projecting portions 19 and 20 adapted to be seated in the recesses 16 and 17 respectively, when said arbor is attached to the drum or carrier.

Journalled in the arms of the member 18 and projecting portions 19 and 20 thereof is a shaft 21 which carries at one end a tool 22, in this instance shown as a circular saw, and at the other end a friction wheel 23. Also mounted on said shaft between the arms of the member 18 is another tool 24, shown in this instance as a rotary sand papering device. It will be here noted that the nature of the tools to be carried by the various arbors disposed upon the shiftable carrier will be controlled by circumstances dependent upon the nature of the work at hand.

Pivoted upon the circumferential edges of the heads 14 and 15 so as to be moved into position across the recesses 16 and 17 respectively are keeper plates 25, the outer ends of each of which are slotted as at 26. Also mounted in the circumferential edges of the heads 14 and 15, on the opposite sides of the recesses 16 and 17 from the pivot of the plates 25 are the set screws 27 which are adapted to project through the slot 26 of said plates 25 when the latter are disposed across the recesses 16 and 17. A thumb nut 28, mounted for travel on the set screws 27 serves to lock the free end of the plate 25 against the edge of the head on which it is mounted and thus maintain said plate disposed across the recess in said head. It will thus be apparent that through the instrumentality of the plates 25 the arbors 18, and the tools carried thereby are effectively locked upon the carrier.

The work supporting table C has provided therein directly above the carrier 13, an opening 29, through which the tools carried by the arbor 18 are adapted to project when said tools are disposed in operative relation with respect to the work supporting table.

In order to lock the shaft 12 and the drum 13 against rotation and thus maintain a de-

sired tool in operative position there is provided on said shaft 12, between the bearings 10 and 11 a clutch which comprises a collar 30 adapted for longitudinal movement with respect to said shaft, but in non-rotative engagement therewith. The inner face of said collar has projecting therefrom a plurality of fingers 31, which when said collar is moved toward the bearing 11 are adapted to enter corresponding recesses 32 in the end of said bearing and thereby lock the shaft and tool carrier against rotation. The position of the recesses 32, and the fingers 31 is such that when any desired tool mounted on the carrier is disposed in operative position said recesses and fingers are disposed in alinement so that the carrier and shaft 12 may be locked against further rotation.

The cylindrical face of the collar 30 is provided with a groove 33 in which are disposed the arms of the fork end of a lever 34 which latter is suitably pivoted to permit the convenient manipulation of same by the operator in order to move the fingers of said collar into and out of the recesses in the bearing 11 as desired.

Journalled on the frame work B in suitable bearings 35 and 36 is a shaft 37 which carries at its outer end a belt pulley 38 to permit connection with any suitable source of power while on its inner end is mounted a friction wheel 39 disposed in parallel relation to the head 15 of the carrier and in vertical alinement with the friction wheels 23 mounted on the shafts 21, which are carried by the various U-shaped members 18. The friction wheel 39 is disposed eccentrically with respect to the drum 13 so that only when a desired tool is positioned in operative relation to the work supporting table, will the friction wheel 23 carried by the arbor upon which said tool is supported contact with the friction wheel 39 and thus enable

said tool to be operated by the rotation of friction wheel 39.

What is claimed is:

A wood working machine comprising a pair of main frames disposed in longitudinal alinement and having their adjacent ends spaced apart, a shaft journaled in one of said frames, a drum fixed on said shaft and disposed between adjacent ends of the frames, the heads of said drum being extended to form spaced annular flanges, and said flanges being provided with a plurality of corresponding recesses in their peripheries, a plurality of U-shaped frames having their arms provided with lateral extensions seated in corresponding recesses in said heads, a plurality of keeper plates pivoted upon the peripheries of said heads for movement across respective recesses to confine the lateral extensions on the U-shaped frames therein, means for securing said keeper plates in locking position, a rotary shaft mounted in each of said U-shaped frames, a friction wheel fixed on each of said shafts, a shaft journaled in the other main frame eccentric to the shaft carried by the first named main frame, a friction wheel fixed concentrically on the last named shaft and having its periphery confined within the first named friction wheels and adapted to successively engage the latter as the drum is rotated, and means for locking said drum against rotation so as to maintain a given friction wheel carried thereby in operative engagement with the friction wheel carried by the last named shaft.

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

GEDEON PICHER.

Witnesses:

SILVIO PAGANUCCI,
EDWARD F. COTE.