

1,033,921.

2 SHEETS—SHEET 1.

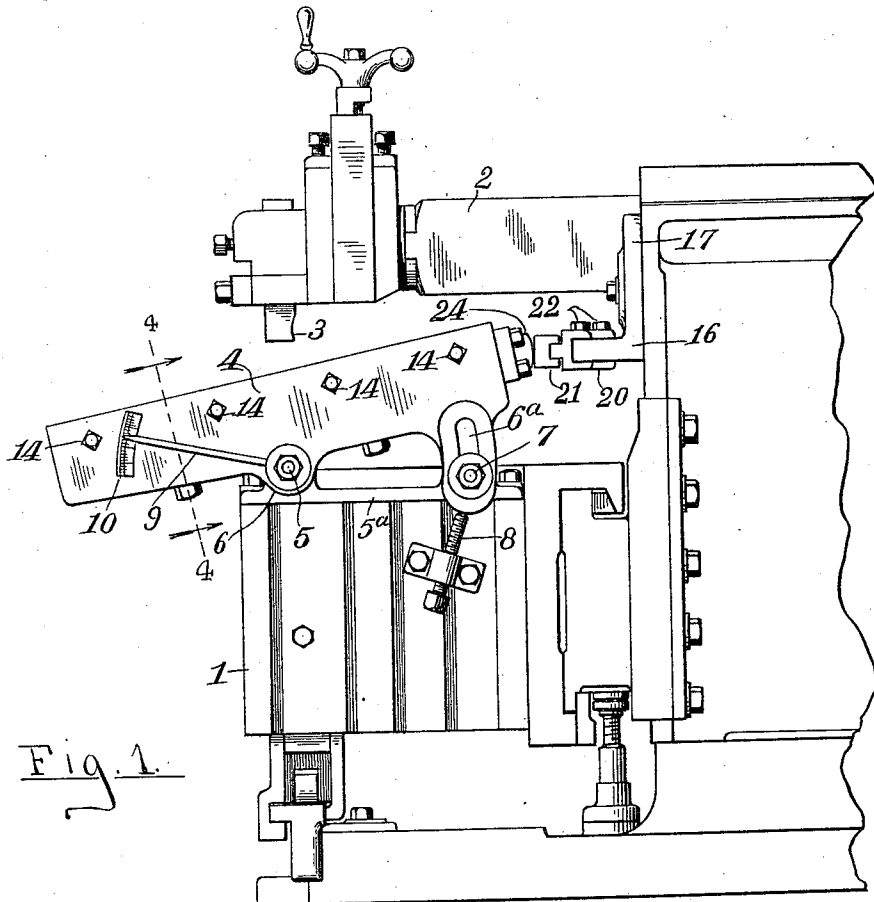


Fig. 1.

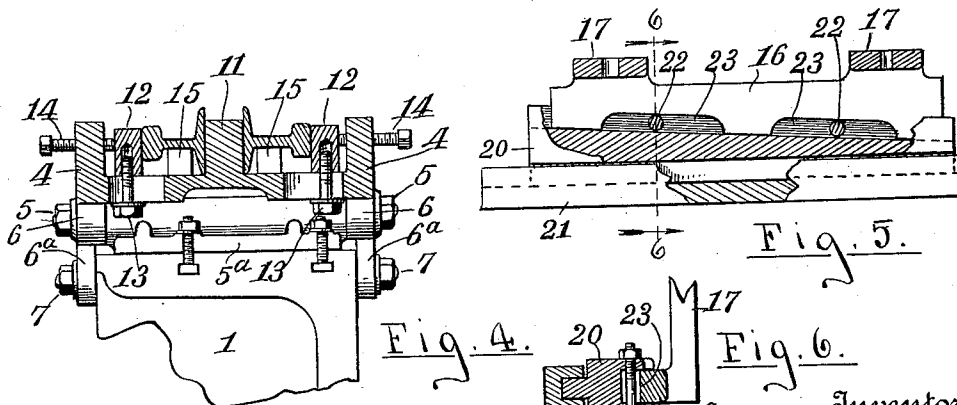


Fig. 5.

Fig. 6.

Witnesses
Harold C. Van Antwerp
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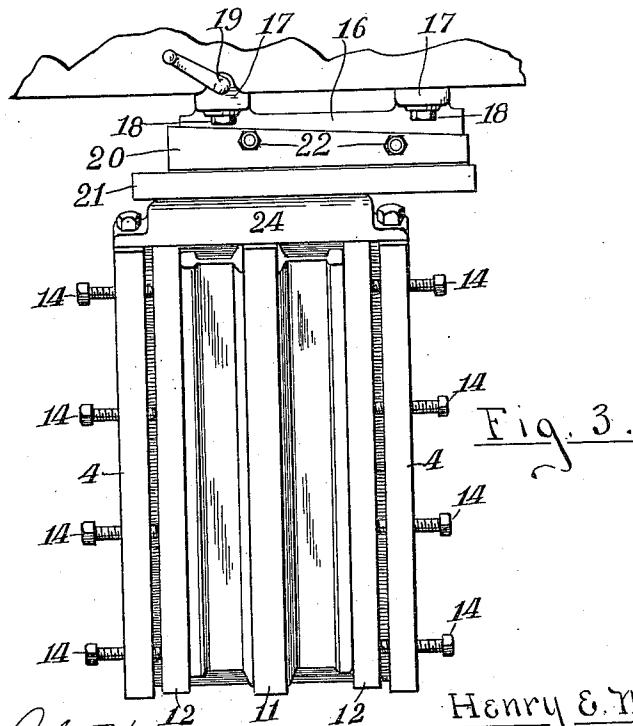
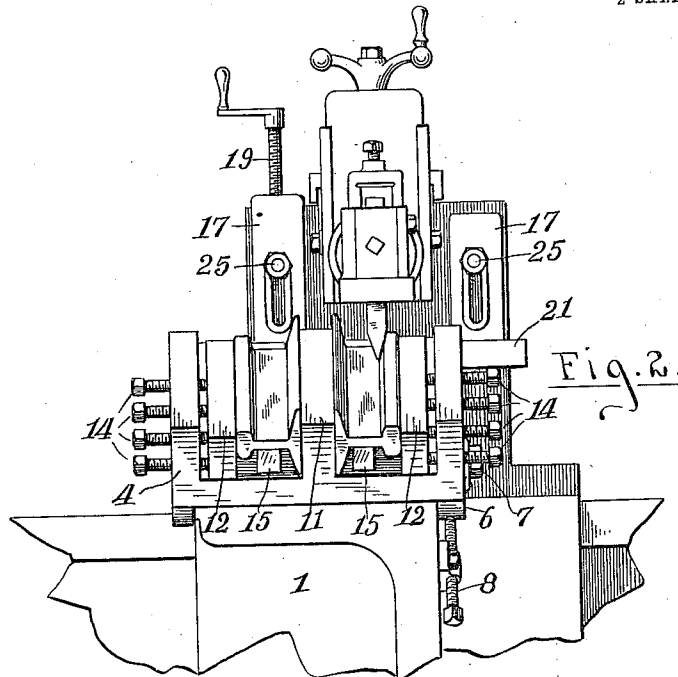
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H. E. MORTON.
 WORK HOLDER FOR SHAPERS.
 APPLICATION FILED SEPT. 1, 1911.

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Patented July 30, 1912.

2 SHEETS—SHEET 2.



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UNITED STATES PATENT OFFICE.

HENRY E. MORTON, OF MUSKEGON HEIGHTS, MICHIGAN.

WORK-HOLDER FOR SHAPERS.

1,033,921.

Specification of Letters Patent.

Patented July 30, 1912.

Application filed September 1, 1911. Serial No. 647,150.

To all whom it may concern:

Be it known that I, HENRY E. MORTON, a citizen of the United States of America, residing at Muskegon Heights, in the county of Muskegon and State of Michigan, have invented certain new and useful improvements in Work-Holders for 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 improvements in work holders for shapers and more particularly to such holders which are adjustable for tapered work and its object is to provide the same with improved means for holding the work; improved means for adjusting the holder; improved means for supporting the holder against the action of the tool; and to provide the same with various new and useful features hereinafter more fully described and particularly pointed out in the claims, reference being had to the accompanying drawings, in which:—

Figure 1 is a side elevation of a device embodying my invention applied to a draw cut shaper; Fig. 2 a front elevation of the same; Fig. 3 a plan view of the same; Fig. 4 a transverse section on the line 4—4 of Fig. 1; Fig. 5 a detail in plan view of the support for the holder somewhat enlarged and with portions broken away; and Fig. 6 a transverse section of the same on the line 6—6 of Fig. 5.

Like numbers refer to like parts in all of the figures.

1 represents the vertically and horizontally adjustable bed of the shaper on which the work is usually secured. 2 the reciprocating tool carrier of the shaper. 3 the cutting tool of the same. 4 the body of the work holder. This body is provided with lugs 6 near the middle pivoted upon a bolt 5 extending through a base plate 5^a detachably secured to the bed of the shaper. The body is adjustable about the axis of the bolt 5 by means of downwardly extended arms near the rear embracing the base plate and having segmental slots 6^a and a binding bolt 7 extends through the slots and through the base plate 5^a.

8 is an adjusting screw engaging one of the arms to accurately adjust the inclination of the body 4.

9 is a fixed index and 10 a scale on the body to indicate the angle of adjustment.

The body 4 is divided into two substantially equal channels to receive the work by means of a middle partition and in each channel is a laterally movable clamping bar 12 between which and the partition 11 the work is clamped by means of screws 14 engaging the said bar. The bar is also further secured in place by bolts 13 extending through transverse slots in the bottom of the body and into the bar 12.

15 represents supporting blocks used in connection with certain forms of work such as railroad rails when shaping the same for split switches.

To support the holder against the force exerted by the cutter 3, I provide a vertically adjustable bracket 16 mounted on the frame of the shaper provided with slotted arms 17, vertically adjusted by a screw 19 and held in adjustment by binding screws 25 extending through said slots and into the frame of the shaper. On this bracket is slidably mounted a grooved wedge 20 embracing the edge of the bracket 16 and slidable thereon. This wedge is secured in adjustment by bolts 22 extending through the grooved portion thereof and adjustable in recesses 23 in said bracket. Slidably mounted on the wedge 20 is a facing strip 21 which engages the rounded rear side of a buffer bar 24 fixed on the rear of the body 4. By means of this wedge the device may be accurately adjusted to rigidly support the rear end of the holder against the force exerted by the cutter.

I am thus able to produce a very strong and substantial holder which may be accurately adjusted, and will withstand heavy cutting strains. It will also be noted that the holder is double and adapted to hold two pieces of work side by side so that while cutting one piece another may be adjusted and secured in place and the bed 1 shifted to alternately operate upon the respective pieces of work, thus saving time and operating the machine practically continuously.

What I claim is:—

1. A work holder for shapers, comprising a body pivotally mounted on the bed of the shaper, means for adjusting said body at more or less inclination to the stroke of the cutting tool of the shaper, a bracket vertically adjustable on the frame of the shaper

opposite the inner end of said body, a wedge slidable on the bracket, a facing strip slidable on the wedge, and bolts to secure the wedge in place on the bracket.

5 2. A work holder for shapers, comprising a body pivotally supported on the bed of the shaper, means for adjusting the body at various inclinations to the stroke of the cutting
10 tool of the shaper, a buffer bar having a rounded surface attached to the rear of the body, a vertically adjustable bracket mounted on the frame of the shaper opposite said bar, a wedge slidably mounted on the bracket, and a facing strip slidable on the wedge en-
15 gaging the buffer bar.

3. A work holder for shapers, comprising a body pivotally mounted on the bed of the shaper, means for adjusting said body at various inclinations to
20 the stroke of the cutting tool of the shaper, a bracket vertically adjustable on the frame of the shaper and opposite the said body, a wedge having a groove to receive the edge of the bracket, said edge also
25 having elongated recesses therein, bolts in

the wedge extending through the groove and recesses and adjustable in the latter, a facing strip on the wedge slidably connected thereto by tongue and groove adapted to engage the rear of the work holder and support the
30 same against the stroke of the cutter.

4. A work holder for shapers, comprising a base plate detachably mounted on the bed of a shaper, a body pivoted near the front
35 of said plate, arms on said body embracing the plate and having segmental slots concentric with the axis of the pivot, bolts extending through said slots and clamping the arms to the plate, a bracket vertically adjustable on the frame of the shaper, a
40 wedge adjustable on the bracket, a facing strip adjustable on the wedge and a buffer bar on said body engaged by said facing strip.

In testimony whereof I affix my signature 45
in the presence of two witnesses.

HENRY E. MORTON.

Witnesses:

ALEXANDER VAN ZANTEN,
THOMAS HARRY RIDOUT.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,
Washington, D. C."