

No. 648,885.

Patented May 1, 1900.

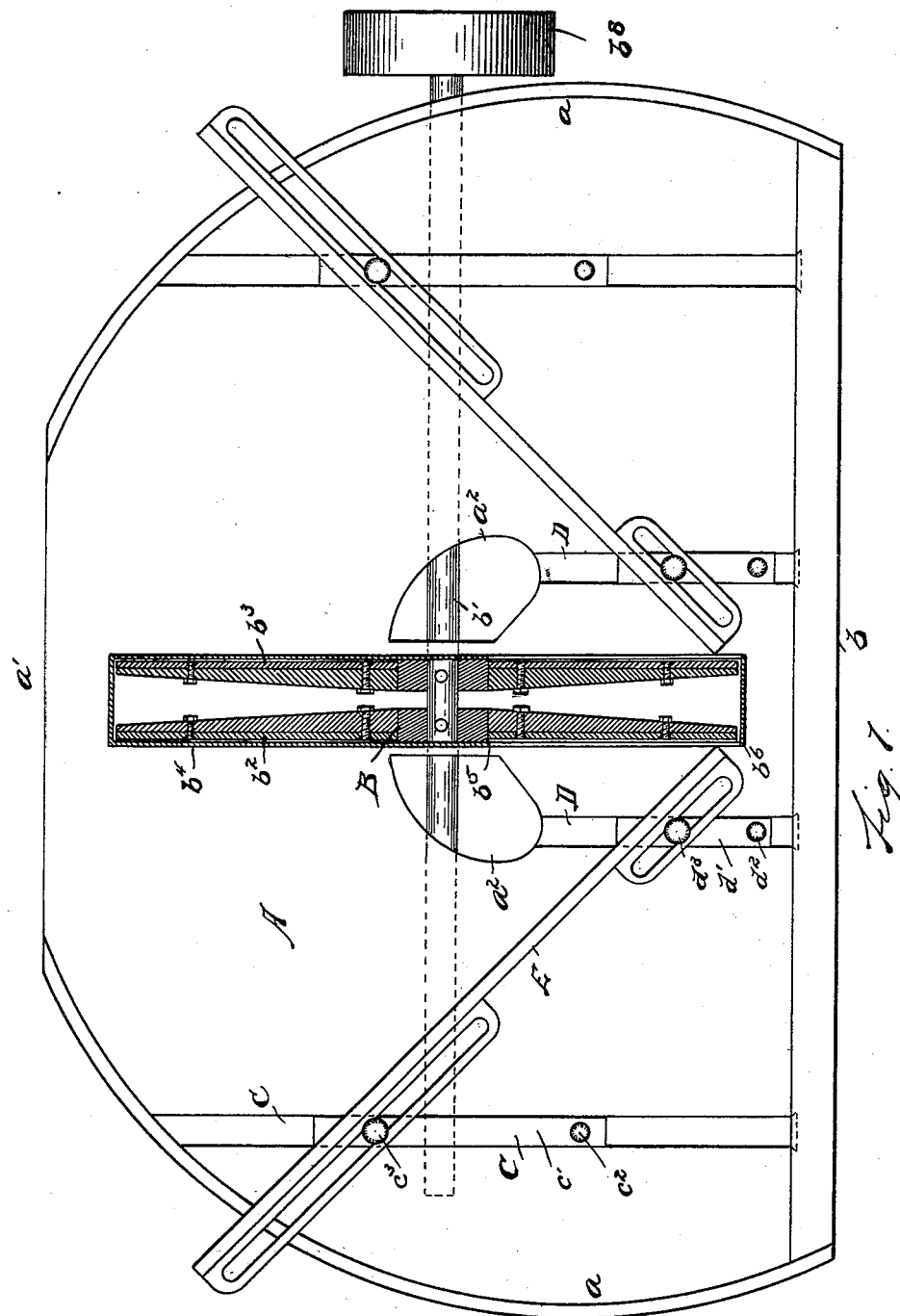
J. H. SHANTZ.

TRIMMER.

(Application filed Sept. 23, 1899.)

(No Model.)

2 Sheets—Sheet 1.



WITNESSES
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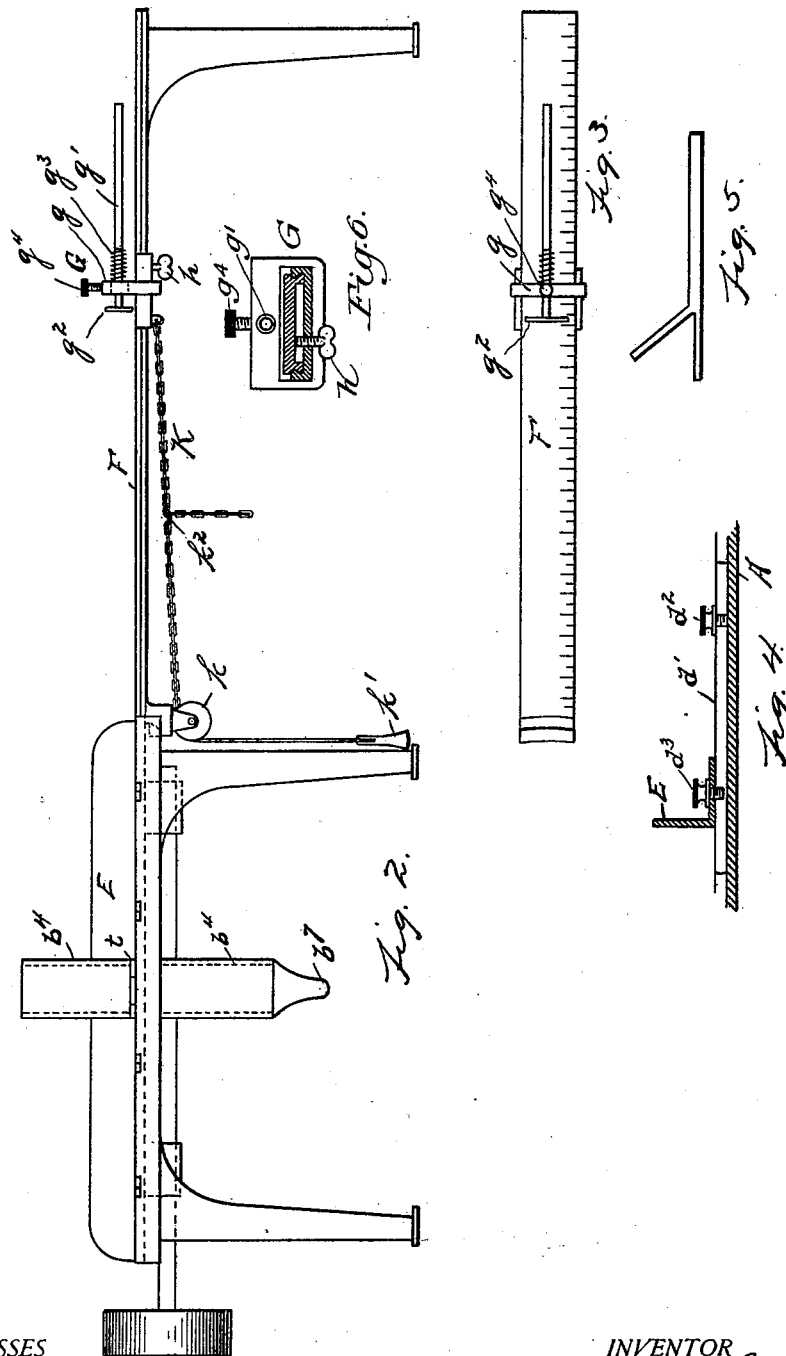
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UNITED STATES PATENT OFFICE.

JOHN H. SHANTZ, OF DETROIT, MICHIGAN, ASSIGNOR OF ONE-THIRD TO
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TRIMMER.

SPECIFICATION forming part of Letters Patent No. 648,885, dated May 1, 1900.

Application filed September 23, 1899. Serial No. 731,433. (No model.)

To all whom it may concern:

Be it known that I, JOHN H. SHANTZ, a citizen of Canada, residing at Detroit, county of Wayne, State of Michigan, have invented a certain new and useful Improvement in Trimmers; and I 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 pertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

This invention relates to trimming-machines, and has for its object an improved machine adapted to trim off the ends of molding and finishing material.

The machine is arranged to be set to trim the board at any angle to the main axis of the material and to trim molding of any desired length and bring it accurately to a given size.

In the drawings, Figure 1 is a plan view of the main part of the machine. The trimming-head is shown in section. Fig. 2 is an elevation of the machine with an auxiliary supporting-table attached thereto. Fig. 3 is a plan view of the auxiliary table. Fig. 4 is a view, on an enlarged scale, showing the gage-holding mechanisms. Fig. 5 shows an angled face-plate to be used with the carriage shown in Fig. 3. Fig. 6 is a cross-section through the auxiliary table F and part of the sliding carriage G.

A indicates a table which is bounded by circular arcs a on its right and left sides.

B indicates a cutter-head which is located along a middle diameter between the arcs a .

The periphery of the table does not necessarily form a complete circle, as the arched periphery is only useful in places.

The back of the table behind the cutting-knives is on a chord b of the circle and the front periphery c is on a chord a' of the circle.

C and D indicate grooves in the table A, and in these grooves are located slides c' and d' . The slides are arranged to be held by set-screws c^2 and d^2 .

E indicates a gage and side support for the work. The gage is held to the sliding blocks c' and d' by means of set-screws c^3 and d^3 , which pass through long slots in the gage E. The gage E is held securely at any angle with respect to the edge of the trimming-knife B

by shifting the blocks c' and d' until the gage assumes the proper angle, and the gage is then shifted in or out with respect to the trimming-knives B, as may be desired. The trimming-knives B are on a frame that is circular and mounted on a shaft b' , that is supported in suitable bearings under the table and is provided with a driving-pulley b^8 . The knives are held to arms of the frame, so that the shavings or trimmings pass between the arms into the chamber between the two adjacent trimmer-faces b^2 and b^3 . The knives are covered by a casing b^4 , that entirely surrounds them, except at those portions where the material to be treated engages with them. Those portions of the covering which are indicated in Fig. 1 as between the points b^5 and b^6 are cut away. At all other parts the covering prevents accidental injury from the knives. On the under side of the cutter-head the covering b^4 is continued downward to an outlet b^7 , through which the shavings or trimmings drop to the floor or into a conveyer. The upper half of the casing b^4 is made separate from the lower half and is hinged to the table at t , so that it may be thrown back if for any purpose it is desired to have access to the knives.

F indicates an auxiliary support or table that is held to the main table A by a rim that projects downward from the edge of the table A and engages in an arched groove at the end of the auxiliary table F. The engagement allows the auxiliary table F to be swung on the main table, and it holds the auxiliary table so that it points radially out from the center of the main table. The auxiliary table F is provided with a sliding carriage G, and the sliding carriage G is held to the table-top in any suitable way, so that it may travel lengthwise of the top of the auxiliary table F, but is held from escaping therefrom. The carriage G supports a sliding yoke g , through which extends a pressure-bar g' , that is provided on its front end with a head g^2 .

g^3 is a spring acting to exert a yielding pressure toward the cutter upon the pressure-bar g' . A set-screw g^4 is arranged to hold the bar g' with respect to the yoke g . The carriage itself is held from movement along the auxiliary table when it is desired to have the carriage stationary by a set-screw h , that engages against the under side of the table.

The yoke is provided with a draw-chain K, that extends over a sheave k , that reaches to a foot-lever k' . The chain K is made in two parts. That part of the chain which extends
 5 over the sheave k terminates with a hook k^2 , that engages with that part of the chain which engages the yoke G. The chain, being in two parts held together by a hook of the one part engaging in one of the links of the other part,
 10 is adjustable as to length, and the carriage may be located at any place along the table-top F without other changes in the draft appliance which is attached to it except to unhook and rehook the hook and chain.
 15 The table-top A is provided on each side of the trimmer-head with a hole a^2 large enough to admit the hand of the workman, the object of the hole being to enable the workman to place his fingers under a portion of the material that is being treated, either when the
 20 material is short or when for any reason it is desirable to secure a firm grip on the material.
 In operation the gage-guide E is set to the proper angle with the trimmer-knives by
 25 loosening the setting-blocks c' and d' , sliding the blocks until the gage takes the proper angle, and then setting up the auxiliary table with its surface in line with the gage on the main table, the surface of the auxiliary table
 30 being in front of the gage-line. The carriage G is brought to about the position which it is to take in order that the plate g^2 may press against the rear end of the material. The material to be trimmed is placed on the table
 35 against the gage, with its rear or outer end engaging against the face-plate g^2 . This face-plate g^2 is shaped for the particular work to be done, sometimes being flat, as in Fig. 3, and sometimes being angled, as in Fig. 5.
 40 The material is then pressed against the trimmer by pulling the yoke on the carriage G by means of the foot-lever k' . The trimming is continued until the material is cut to the proper length, which is indicated by the position the yoke takes along the graduated edge
 45 of the table-top F.

The carriage G and the graduated table are especially useful in treating pieces of such a length that the workman cannot from his position near the trimmer-head see accurately
 50 the location of the rear end on the table. The carriage being fixed by the set-screw, the yoke can be drawn forward only a limited distance.

What I claim is—

1. In combination with a guarded rotary
 trimming-knife, a work-supporting table, and adjustable gage-guides, said table being provided with holes whereby work lying thereon
 60 may be grasped from the under side, substantially as described.

2. In combination with a work-supporting table having a curved edge, an auxiliary work-supporting table engaging with the curved
 65 edge of the main table, and arranged to be swung around the center of the main table, substantially as described.

3. In combination with a rotary trimmer, a main table having a curved periphery, an auxiliary table arranged to engage the main
 70 table, a carriage on said auxiliary table, a yoke supported by the carriage, and means for applying power to said yoke, whereby it may engage the rear end of the work, and press the work forward against the trimming-knife,
 75 substantially as described.

4. In combination with a work-supporting table, having a curved edge, and a vertically-projecting rim having the curvature of said
 80 edge, an auxiliary work-supporting table provided with a groove adapted to engage said vertically-projecting rim, whereby said auxiliary work-supporting table is arranged to
 85 be swung around the center of the main table, substantially as described.

In testimony whereof I sign this specification in the presence of two witnesses.

JOHN H. SHANTZ.

Witnesses:

JOHN N. GOODRICH,
 M. E. KOTT.