F. N. RUSSELL & E. CLARK.

MITERING DEVICE.

APPLICATION FILED FEB. 24, 1911.

1,038,966.

Patented Sept. 17, 1912.

2 SHEETS—SHEET 1.

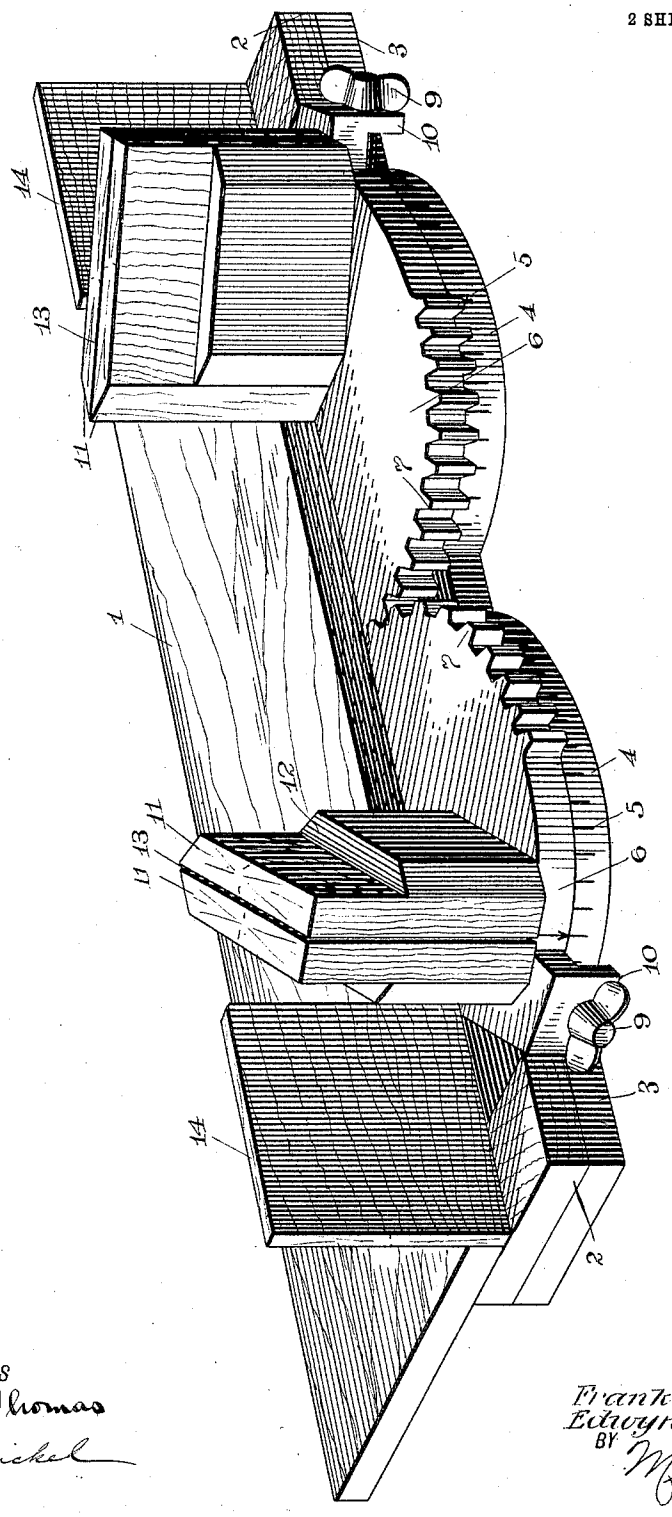

FIG. 1.

WITNESSES

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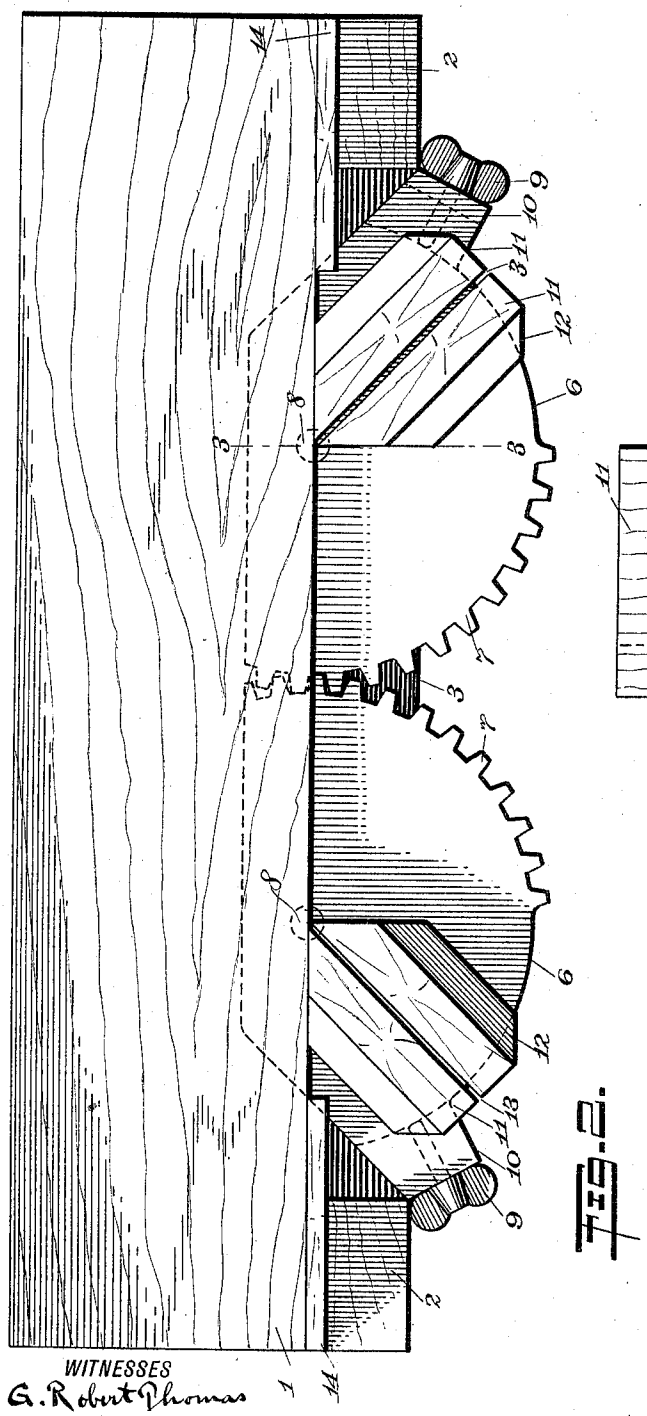

Fig. 2.

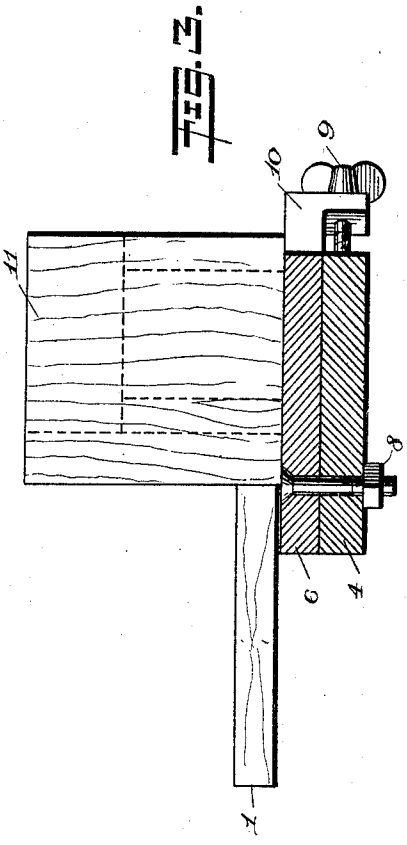

Fig. 3.

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UNITED STATES PATENT OFFICE.

FRANK N. RUSSELL AND EDWYN CLARK, OF CHICAGO, ILLINOIS.

MITERING DEVICE.

1,038,966. Specification of Letters Patent. Patented Sept. 17, 1912.

Application filed February 24, 1911. Serial No. 610,554.

To all whom it may concern:

Be it known that we, FRANK N. RUSSELL and EDWYN CLARK, citizens of the United States, and residents of Chicago, in the county of Cook and State of Illinois, have invented a new and Improved Mitering Device, of which the following is a full, clear, and exact description.

Our invention is a mitering device, and it comprises a plurality of saw guides, together with improved means for adjusting said guides according to the requirements of actual practice; and means for holding said saw guides in any adjusted position.

Reference is to be had to the accompanying drawings forming a part of this specification, in which the same characters of reference indicate the same parts in all the views.

Figure 1 is a perspective view of our improved mitering device; Fig. 2 is a top plan view of the same; and Fig. 3 is a transverse vertical section taken on the line indicated by the numeral 3, on Fig. 2, when the saw guide is in its central position.

On the drawings, the numeral 1 indicates a base board, to the bottom of which, adjacent the front corners thereof, is fixed a pair of spacing blocks 2. These spacing blocks project a certain distance beyond the front edge of the board; and to the lower sides of these blocks is fixed a metal strip 3. This metal strip has a pair of arc-shaped projections 4 on each side of its center, and projecting outward a certain distance away from the front edge of the base board 1. The curved outer surfaces of these arc-shaped projections 4 have scale divisions 5 marked thereon. Each scale division embraces a suitable number of angular degrees to indicate the position to which the saw guides of the mitering device are adjusted. Above these arc-shaped projections, and lying partly within the space between the metal strip 3 and the base board 1, is a pair of adjusting sectors 6. These sectors 6 have their outer edges curved to correspond with the curve of the arc-shaped projections 4; and have engaging gear teeth 7 formed thereon. Each of these adjusting sectors 6 is pivoted at 8, by means of a bolt or other suitable device, this bolt being located at the center of the sectors 6 and the arc-shaped projections 4. These sectors 6 are made of metal, like the strip 3; the base 1 is of wood, and the blocks 2 are of metal. When either of the sectors 6 is turned, the other is of course turned with it, on account of the engagement between the gear teeth 7. The sectors are held in any position of adjustment which may be necessary, by means of fastening bolts 9, which are carried by down-turned extensions 10, formed integral with the sectors 6, or attached thereto in any suitable way.

A pair of saw guides 11 is carried by each of the adjusting sectors 6, these saw guides being mounted on the upper faces of these sectors. They are held in position, in the manner shown, by means of a pair of upstanding lugs 12, which are of metal and may be cast integral with the sectors 6 or secured thereon in any other suitable way. The saw guides 11 are of wood, and are spaced apart a suitable distance to form openings 13, in which the blade of the saw is received, when a cross cut at an angle, on a plank or board resting upon the base 1, is to be made by the workman.

The front edge of the base board 1 carries adjacent the ends thereof a pair of stops 14. The timber which is to be cut rests snugly against these stops when the mitering device is used.

To employ our improved mitering device, the base board 1 can be fastened to the top of a table or work-bench, and the board or other article which is to be cut can be laid on the face thereof and held by hand against the end stops 14. The saw guides 11 can be turned around their pivot 8 until the spaces 13 are directly above the angle on the scale 4, at which the cut is to be made. The binding device 9 is then tightened to hold the saw guide in position, and the proper cut can then be made.

By means of the gear teeth 7 on the sectors 6, the saw guides are adjusted together whenever one of them is moved.

Obviously we may make certain small changes in the construction of our mitering device such as fairly fall within the scope of our invention.

Having thus described our invention, we claim as new and desire to secure by Letters Patent:

1. A mitering device comprising a base board having end stops adjacent the forward edges thereof, spacing means attached to the bottom of said board at the front corners thereof and projecting forward, a strip attached to said means and held spaced from

the base board thereby, said strip having a pair of segment-shaped projections extending from its front edge on either side of the middle of said board, a pair of sectors pivotally secured between said strip and said board, said sectors having engaging gear teeth along their curved edges, a saw guide carried by each of said sectors, said sectors and said segment-shaped projections being concentric, and means carried by the sectors to engage the curved edges of the segment-shaped projections to secure the saw guides in any adjusted position.

2. A mitering device comprising a base board having spacing blocks attached to the bottom thereof, a strip secured to said blocks and held spaced from the base board thereby, said strip having a pair of contiguous segment-shaped projections extending from one edge of the same beyond the adjacent edge of the base board, a pair of sectors pivotally secured between said strip and said board, each of said sectors being concentric with one of said segment-shaped projections, said sectors having engaging gear teeth along their curved edges, whereby they can be moved in unison, a saw guide carried by each of said sectors, and means for securing said sectors in adjusted position.

3. A mitering device comprising a strip having a pair of contiguous segment-shaped projections extending from one longitudinal edge of the same, said projections lying on either side of the middle of said board, a pair of spacing blocks secured to said strip adjacent the ends thereof, a base board mounted upon said blocks and spaced from the said strip, a pair of saw guides mounted upon said strip in operative relation to said base board, said saw guides being pivoted to said strip adjacent the center of said segment-shaped projections, means for connecting said saw guides together to enable them to move in unison, and means for securing said guides in adjusted position.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

FRANK N. RUSSELL.
EDWYN CLARK.

Witnesses:
C. H. RICHARDSON,
M. L. MITCHEL.

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