

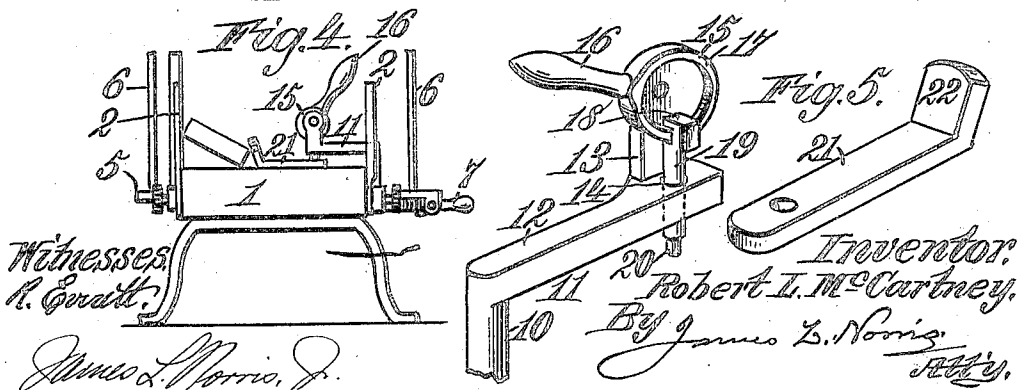
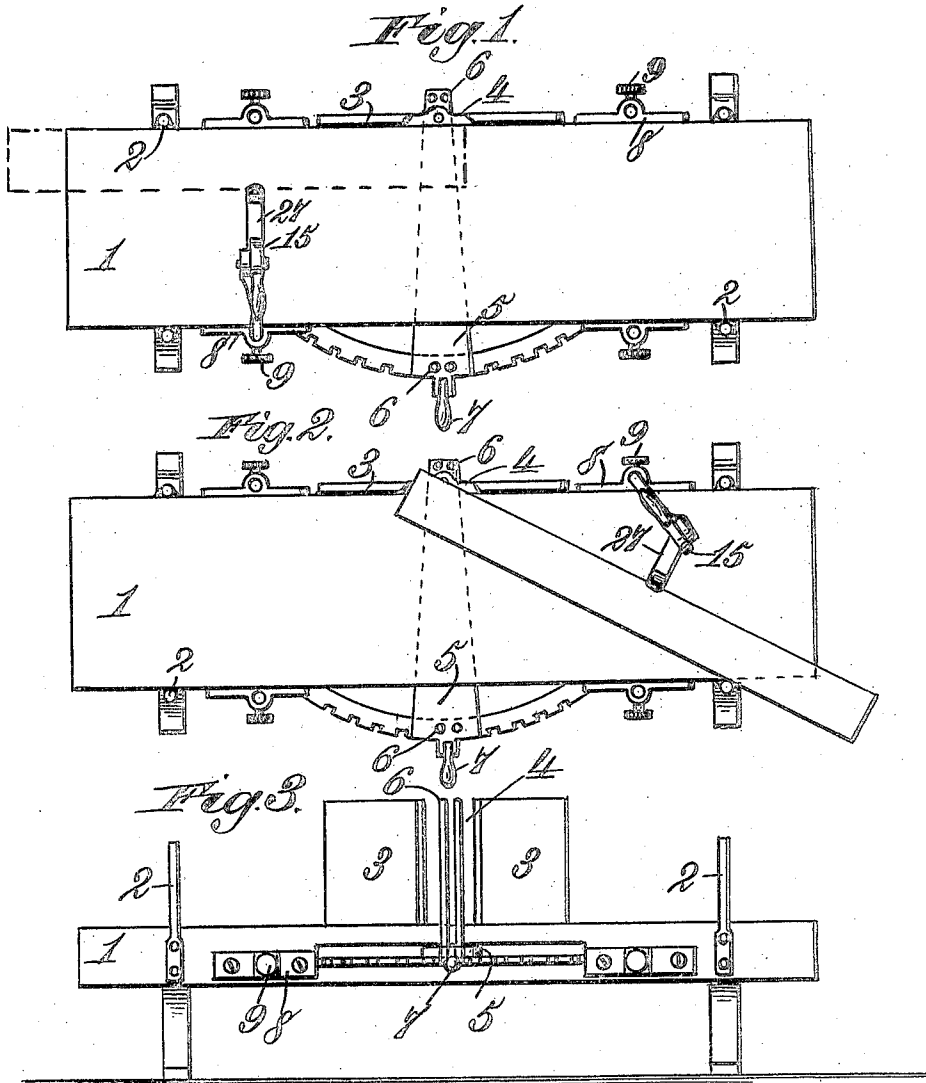
No. 818,275.

PATENTED APR. 17, 1906.

R. L. McCARTNEY.

CLAMPING ATTACHMENT FOR MITER BOXES AND THE LIKE.

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UNITED STATES PATENT OFFICE.

ROBERT L. McCARTNEY, OF OTTUMWA, IOWA.

CLAMPING ATTACHMENT FOR MITER-BOXES AND THE LIKE.

No. 818,275.

Specification of Letters Patent.

Patented April 17, 1906.

Application filed April 10, 1905. Serial No. 254,804.

To all whom it may concern:

Be it known that I, ROBERT L. McCARTNEY, a citizen of the United States, residing at Ottumwa, in the county of Wapello and State of Iowa, have invented new and useful Improvements in Clamping Attachments for Miter-Boxes and the Like, of which the following is a specification.

This invention relates to an attachment for miter-boxes or other bevel-cutting structures; and it consists, essentially, of a swinging or adjustable clamp or dog having supporting and operating devices which are readily applicable to opposite sides or edges of the miter-box or analogous structure and capable of disposition to exert either a pressure against or a drawing force on the work with which the attachment is employed.

The attachment may be used singly or in duplicate with a miter-box or other like device and is reversible to accommodate various classes of work.

The primary object of the invention is to provide means, in connection with a miter-box or other similar device, to hold the work immovable during the sawing or cutting operation, and thereby facilitate the formation of bevel edges in a certain or regular manner.

The attachment is of such nature that it may be readily applied to the ordinary form of miter-box now well known or commonly used without in the least requiring a change in structure of the box or other similar device to accommodate the application of the improved holding means.

Other objects and advantages will hereinafter appear, and among others may be mentioned the simplicity, as well as strength and durability, of the attachment and the readiness with which it may be applied in various positions with respect to the miter-box or like device.

In the drawings, Figure 1 is a top plan view of a miter-box, showing the improved attachments applied thereto and one being illustrated as holding the work in longitudinal relation to the base of the box. Fig. 2 is a view similar to Fig. 1, showing the attachment arranged to hold the work in flat position on the base of the box and applied to the edge of said box opposite to that illustrated by Fig. 1. Fig. 3 is a front edge elevation of the box and attachment as shown by Fig. 1. Fig. 4 is an end elevation of the box and the attachment shown by Fig. 1. Fig. 5 illus-

trates the attachment in detail perspective with the clamping bar or member separated.

Similar numerals of reference indicate corresponding parts in the several views.

The numeral 1 designates the base or bed of a miter-box having upwardly-projecting stop pins or rods 2 at opposite sides, centrally-disposed back braces 3, with a space 4 between the inner opposing edges thereof, and a swinging saw support or carrier 5, fulcrumed at a point between the back braces 3 and having upstanding saw-guides 6 and a front handle 7. The parts thus far described are well known in the art and do not constitute features of the present invention.

On opposite edges of the base 1 clips 8 are secured, four being shown as used, two on each side, and in each of the clips is a vertical bore, with which coöperates a set or clamping screw 9. These clips serve as guides, as well as holding means, for the main structure of the attachment and are adapted to receive elongated stems or shanks 10 of angle-supports 11, having arms 12 at their upper extremities at right angles to the said stems or shanks. The free terminal of each of the arms 12 has an upstanding post or fulcrum projection 13, which is located to one side of the center of the arm, and adjacent to the post an opening 14 extends vertically through the said arm. A cam-head 15 is eccentrically pivoted on the post 13 at an elevation above the upper edge of the arm 12, and an operating-handle 16 projects therefrom. One side of the head 15 is formed with a flange 17 of the same contour as the head to receive the upper hooked head or terminal 18 of a pin 19, having its lower end 20 reduced to engage the apertured extremity of a clamping bar or member 21, provided at its opposite end with an angularly-disposed foot 22. The pin 19 is freely movable through the opening 14 in the arm 12, and the upper hooked terminal 18 is always held in operative engagement with the cam-head 15, and hence when the cam-head is operated to raise and lower the pin the clamping bar or member 21 is also raised and lowered. When the head 15 is thrown down to a certain point to hold the bar or member 21 in immovable position, accidental disengagement of the head and loose movement of the said bar will be prevented by the eccentric attachment of the head 15 to the post 13.

One, two, or more of the attachments are

used in connection with the miter-box to hold the work to be cut in proper position with respect to the pins 2 and back braces 3 or to brace the work against one of the pins, as in cutting picture-molding, or wherever it is necessary to define beveled ends for forming a square joint. In such uses and as indicated by dotted lines in Fig. 1 the foot 22 of each clamping bar or member 21 is brought to bear with pressure against the edge of the work opposite that in contact with any one of the pins or the back braces. When the work has been properly arranged and the foot 22 of the bar 21 disposed thereagainst, the bar is locked against movement by throwing the handle 16 of the cam-head 15 in such position as to shove the pin 19 downwardly, and thereby bring the bar or member 21 in close contact with the upper surface of the base 1. In some instances the bar or member 21 may be overturned to reverse the foot and either extend across the work or immediately grasp the latter similar to a dog, the bar or member 21 with its foot 22 in effect serving as a clamping-dog. The attachment may also be vertically adjusted with respect to the thickness of the work on the bed or base 1 by shifting or moving the stem or shank 10 in the clip, with which it engages, and in some operations the clamping bar or member 21 may be disposed on top of the work with such clamping pressure as to prevent movement of the work, especially under the drag of the saw. It will be understood from the foregoing that the object of the attachment is to overcome any movement of the work engaged thereby which may be due to the operation of the saw, and in addition to shifting the support or carrier 5 for the saw in opposite directions to form the desired bevel the work itself may be disposed at an angle and the support or carrier held straight.

Instead of using the attachment in connection with a miter-box it may also be employed upon any work-bench, saw-table, or other device, and it is unnecessary to employ therewith in many instances any means for guiding or directing the movement of a saw. Other advantages will appear from time to time to those using the attachment, and in view of the simplified construction of the several parts the cost of manufacture will be reduced to a minimum, especially in view of the advantages derived by the application thereof to saw-tables, work-benches, and the like.

Having thus described the invention, what is claimed, is—

1. The combination with a work-supporting base provided with means for holding and forming a guide for the saw, of a stem vertically adjustable with respect to one edge

of the base and provided with an angular arm, a cam-head eccentrically mounted on a portion of the arm, a pin attached to the cam-head and movable through the arm, and a clamping member engaged by the lower end of the pin.

2. The combination with a work-supporting base provided with means for holding and forming a guide for the saw, of an angular element embodying a stem adjustable with respect to the base and having an angular arm, a cam-head eccentrically supported by the arm, a clamping member arranged under the plane of the arm, and adapted to be disposed in various angular positions on the base and a connection between the clamping member and cam-head.

3. The combination with a work-supporting base provided with means for holding and forming a guide for the saw, of a clamping attachment consisting of an adjustable stem having an angular arm, a cam-head eccentrically mounted on a portion of the arm and having a flange, a clamping member disposed under the plane of the arm and provided with a terminal foot, the clamping member being movable on the base to assume various angular positions and also applicable to either side of the base, and a pin movable through the arm and engaging the member and having an upper hooked terminal connected to the flange of the head.

4. The combination with a work-support having means for holding and guiding a saw, of a cam-head adjustably held thereon, a clamping member to engage the work-support and the work on the latter, the clamping member being adjustable to dispose it in various angular positions on the work-support, and a connection between the clamping member and the cam-head for vertically adjusting the said member.

5. The combination with a work-support having means for holding and guiding the movement of a cutting implement, of a clip mounted thereon and carrying a clamping-screw, a stem adjustably held in the clip and provided with an angular arm, a cam-head eccentrically mounted on a part of the arm, a clamping member disposed below the plane of the arm and adjustable to dispose it in various angular positions on the work-support, and a connection movably extending through the arm and engaging the cam-head and the clamping member.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

ROBERT L. MCCARTNEY.

Witnesses:

SUMNER SIBERELL

INA M. CRILEY.