

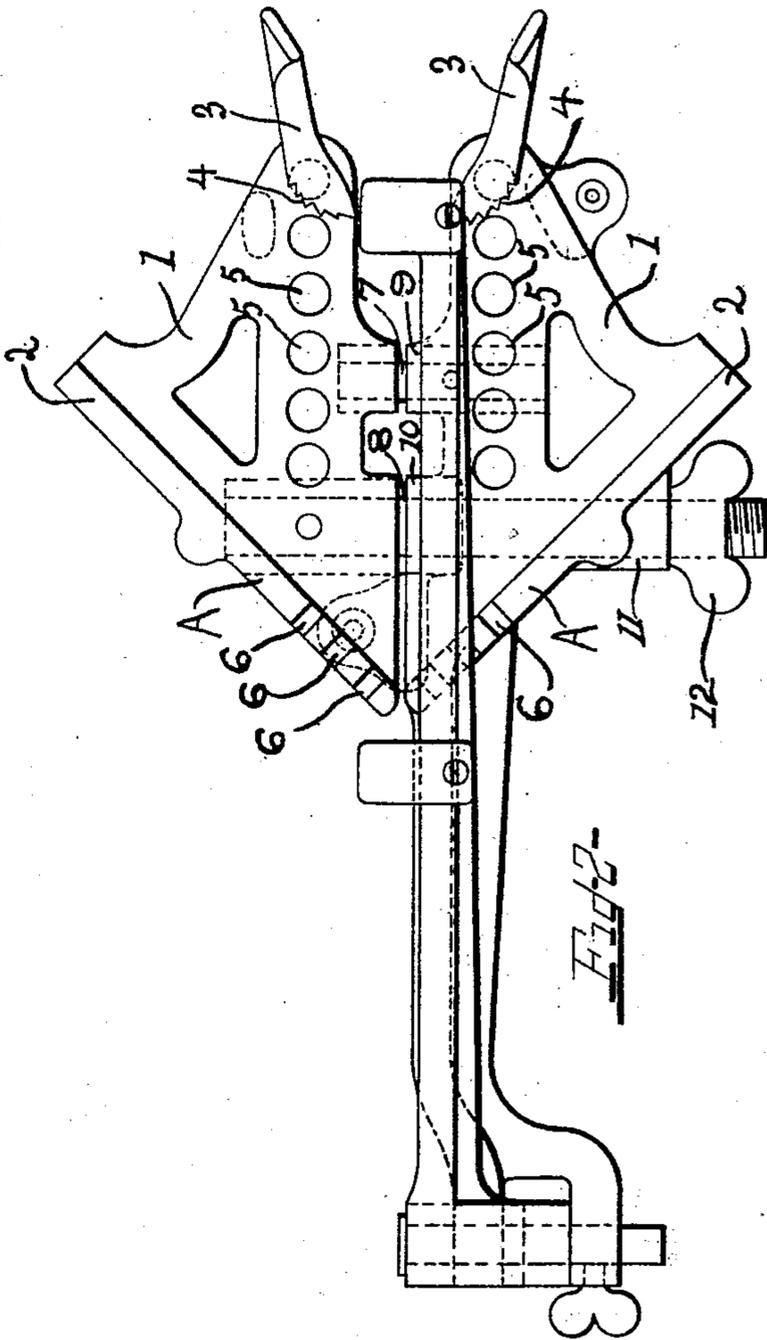
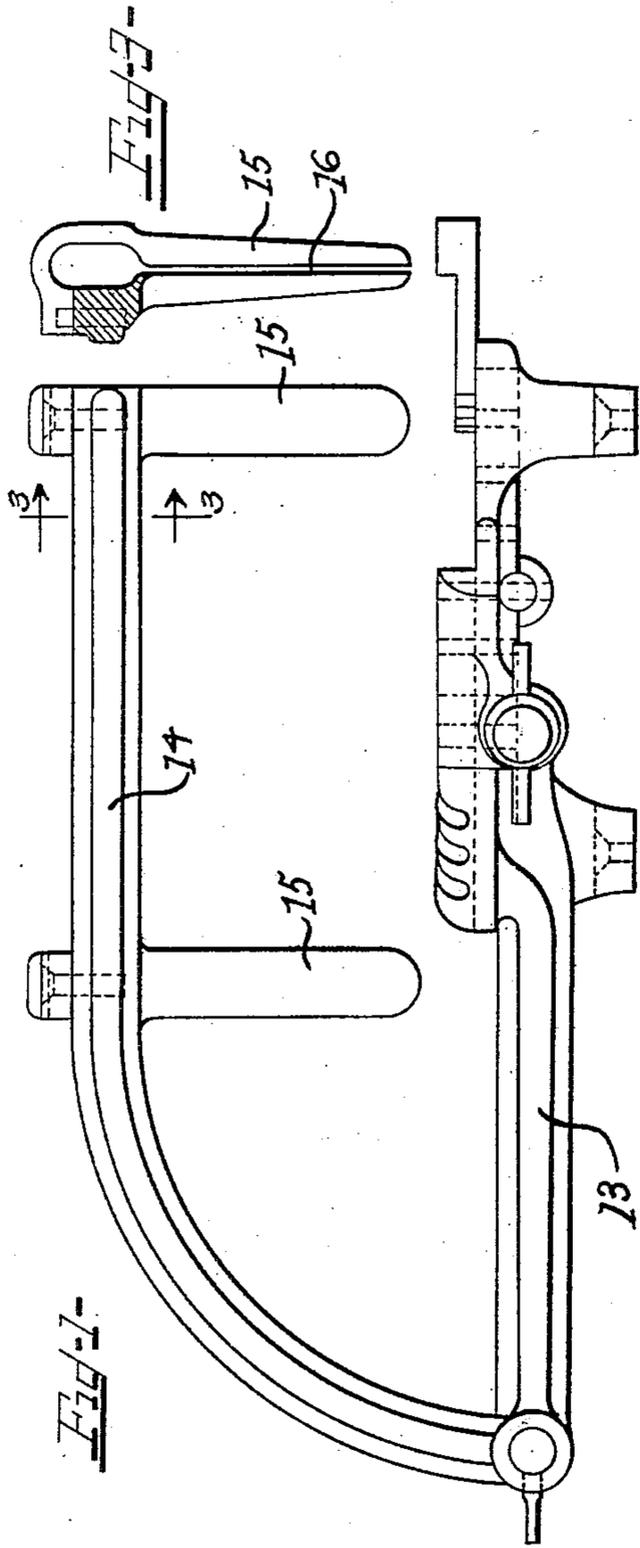
No. 713,511.

Patented Nov. 11, 1902.

E. H. SHELDON.  
JOINTING DEVICE.

(Application filed Jan. 14, 1901.)

(No Model.)



WITNESSES -  
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# UNITED STATES PATENT OFFICE.

EDGAR H. SHELDON, OF CHICAGO, ILLINOIS.

## JOINTING DEVICE.

SPECIFICATION forming part of Letters Patent No. 713,511, dated November 11, 1902.

Application filed January 14, 1901. Serial No. 43,228. (No model.)

*To all whom it may concern:*

Be it known that I, EDGAR H. SHELDON, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Jointing Devices, (Case No. 1,) of which the following is a full, clear, concise, and exact description, reference being had to the accompanying drawings, forming a part of this specification.

My invention contemplates the provision of a device for making angle-joints, such as bevel and miter joints. The invention also contemplates the preparation of pieces or parts for such joints whether the joints be completed in the device or not. In this application I have shown a form of device for accomplishing these results which I have found very satisfactory in operation.

In the accompanying drawings, Figure 1 is a side elevation of such a device embodying my invention. Fig. 2 is a plan view of the same. Fig. 3 is a section taken on line 3 3 in Fig. 1.

The device which I have illustrated in the drawings for carrying out my invention contains a pair of clamping members A A, each of which is intended to receive one of the pieces which are to compose the miter-joint. To such end, as a convenient construction, each of these clamping members is provided with a flat bed portion 1, upon which the piece can rest, and a side wall or abutment 2, against which the side or edge of the piece can fit. The two members A A are arranged in such relative position that the side walls 2 2 form a right angle to one another, each of these walls being conveniently at forty-five degrees from a central line extended between the two members. Each of the clamping members A A is provided with a suitable device for holding or engaging the piece of wood to be arranged upon the member firmly in position thereon. As a simple arrangement I have shown each member provided with a pivoted lever 3, having its inner end provided with notches or teeth 4 4. This notched or toothed end of the lever is cam-shaped, so that as the lever is swung about its pivot the distance between its notches or teeth and the wall 2 decreases. In this way when a strip or piece of wood is placed upon

one of the clamping members with one of its side edges against the wall 2 the lever 3 can be swung so as to cause its teeth 4 4 to abut against and firmly grip the piece or strip between itself and the wall 2.

As an arrangement for permitting the gripping of pieces of wood of different widths the clamping members A A are provided each with a series of apertures 5 5, and the levers 3 3 are provided with rigidly-attached pivots, which are adapted to fit in the apertures 5 5. In this way the levers 3 3 can be placed with their pivots in any one of the apertures 5 5, according to the width of the piece of wood. The side walls 2 2 of the clamping members A A are desirably provided with serrations or recesses 6 6 near their adjacent ends, through which nails or screws can be inserted into the pieces while clamped. The two clamping members A A are arranged for relative movement toward and away from one another, a convenient arrangement being to provide one of the members with rigidly-attached bolts 7 and 8 and the other member with sockets 9, 10, and 11, whereof the socket 9 is adapted to receive the bolt 7 and the sockets 10 and 11 to receive the bolt 8. The bolt 8 is desirably made sufficiently long to extend through the socket 11, and its end is threaded and provided with a thumb-nut 12. By turning the thumb-nut 12 the two clamping members A A can be drawn toward one another, so as to firmly clamp the two pieces together. As this clamping of the two members together increases the two pieces of wood are engaged more firmly by the levers 3 3.

The device is further desirably provided with an arrangement by which a saw can be employed to saw the ends of the pieces to be joined correspondingly and can be held in proper and invariable position during such time. The arrangement shown consists of a long arm 13, conveniently made integral with one of the clamping members and projecting forwardly from the same. This arm 13 carries a swinging arm 14, which has a pivotal sliding connection with the end of the arm 13. The arm 14 is constructed with a pair of depending brackets 15 15, each of which has a slot 16, adapted to receive and serve as a guide for a saw.

In the operation of the device the two pieces

to be joined together are placed upon the two clamping members, and each piece is gripped firmly between the wall 2 of its clamping member and the lever 3 thereof by properly adjusting and swinging the levers 3 3. It will be observed that in the arrangement shown these two levers 3 3 are so positioned that they are tightened by a movement of their outer ends toward each other. This facilitates the gripping of the two pieces of wood by permitting the two levers 3 3 to be grasped by the same hand and crowded toward one another by a single movement of the hand. The pieces of wood being firmly gripped in the two members A A, the latter are clamped toward one another by adjusting the thumb-nut 12. If the mitered ends of the pieces do not fit closely together, a saw can be employed, so as to saw one or both of the ends of the pieces, and thereby bring about a perfect fit between the same. It will be seen that since the saw is held in proper position relatively to the pieces to be mitered that the inclination or miter of the two pieces must of necessity be exactly the same, as a result of which a perfect joint can be made. The two pieces of wood being thus fitted perfectly together, nails or screws are inserted into the two pieces, as desired.

The device can of course be constructed and used without the attachment for the saw; but I prefer to incorporate that attachment in the device, because it permits the mitered pieces to be properly cut for a perfect joint should they happen to fit imperfectly.

The device can also be used to prepare pieces for jointing, although the joint be not finished—that is to say, secured together in the device. In such case the device is simply used as a means for permitting the abutting ends of the strips or pieces to be jointed to be cut into perfect correspondence for the desired joint.

The provision of the sliding connection between the swinging arm 14 and the supporting-arm 13 is to permit the proper adjustment of the saw as occasion may require.

While I have described my invention applied for making miter-joints, it will be understood that devices can be constructed in accordance with it in such a manner as to provide for the making of bevel or other similar joints.

By the invention it will be seen that I provide for both the preparation of the pieces for making a miter-joint and the quick and easy construction of that joint in a perfect manner.

The device herein shown is an effective embodiment of my invention; but inasmuch as its various parts and mechanisms can be replaced by others without departing from the spirit of my invention I do not wish to be understood as limiting myself to the exact construction shown.

What I claim as my invention is—

1. The combination of a couple of clamping members each adapted to receive one of the pieces to be joined, bars or rods extended

through said members, one of the same being rigidly secured to one member and having a screw-threaded portion extended through the other, and a nut for the exposed end of said rod or bar, substantially as described. 70

2. A device of the class specified, comprising a pair of clamping members having side abutments, means whereby said members can be moved bodily toward and away from one another, and clamping devices arranged upon said clamping members, one on each, and adapted to act upon the inner edges of the pieces or strips to be clamped, substantially as described. 75 80

3. In a device of the class specified, the combination of a pair of clamping members provided with side abutments, means whereby the members can be moved bodily toward and away from one another, and levers pivoted upon said members on the inner sides of the pieces to be clamped, substantially as described. 85

4. In a device of the class specified, the combination of a pair of clamping members, having side abutments and also each having a series of apertures extending toward and away from the said abutments, rods by which a relative bodily movement on the part of the said members toward and away from one another can be secured, and levers having corrugated inner ends and mounted upon pivots adapted to fit into the apertures in said members, substantially as described. 90 95 100

5. The combination of a pair of clamping members each provided with a gripping-lever adapted to grip the material upon its clamping member, said levers being arranged to grip the material when swung toward each other, substantially as described. 105

6. The combination with a couple of clamping members, each of which is provided with means for holding or gripping a piece or strip to be jointed, to the piece or strip of the other device, the said members being arranged to hold their strips in proper relative position for jointing, means for moving said clamping members toward one another, one of said devices being provided with a projecting arm, and a swinging arm having a pivotal connection adapted to permit the bodily lateral movement of said arm with the said projecting arm, the said swinging arm being constructed with projections having slots adapted to act as guideways for a saw, and being arranged to swing into and out of position above the said clamping members, substantially as set forth. 110 115 120

7. A device of the class specified, comprising a pair of clamping members provided with abutments arranged at an inclination to one another, and also provided with notched levers for gripping and holding pieces or strips between themselves and said abutments, the clamping members being provided with apertures and the levers being provided with fixed bolts adapted to fit into said apertures, means for shifting said clamping members 125 130

relatively to one another without destroying the relative angularity of their abutments, one of said clamping members being provided with a projecting arm, and a swinging arm 5 having a laterally-slidable pivotal connection with said projecting arm and being constructed with downwardly-extending portions provided with slots adapted to serve as guide-ways for a saw, the said swinging arm being 10 arranged to swing into and out of position over or above the clamping members, substantially as described.

8. The combination with the clamping members provided with means for gripping 15 or holding the strips or pieces to be joined,

the said means consisting of abutments, and pivoted levers adapted to act so as to thrust the strips or pieces against said abutments, the said pivoted levers being provided with attached pivots and the clamping members 20 being provided with series of apertures in which said pivots can fit, whereby the levers can be adjusted for strips or pieces of different width, substantially as set forth.

In witness whereof I hereunto subscribe my 25 name this 9th day of January, A. D. 1901.

EDGAR H. SHELDON.

Witnesses:

A. MILLER BELFIELD,  
HARVEY L. HANSON.