Dec. 2, 1930. C. M. MARKHAM 1,783,622

TIMBER SPLICER

Filed Aug. 30, 1929

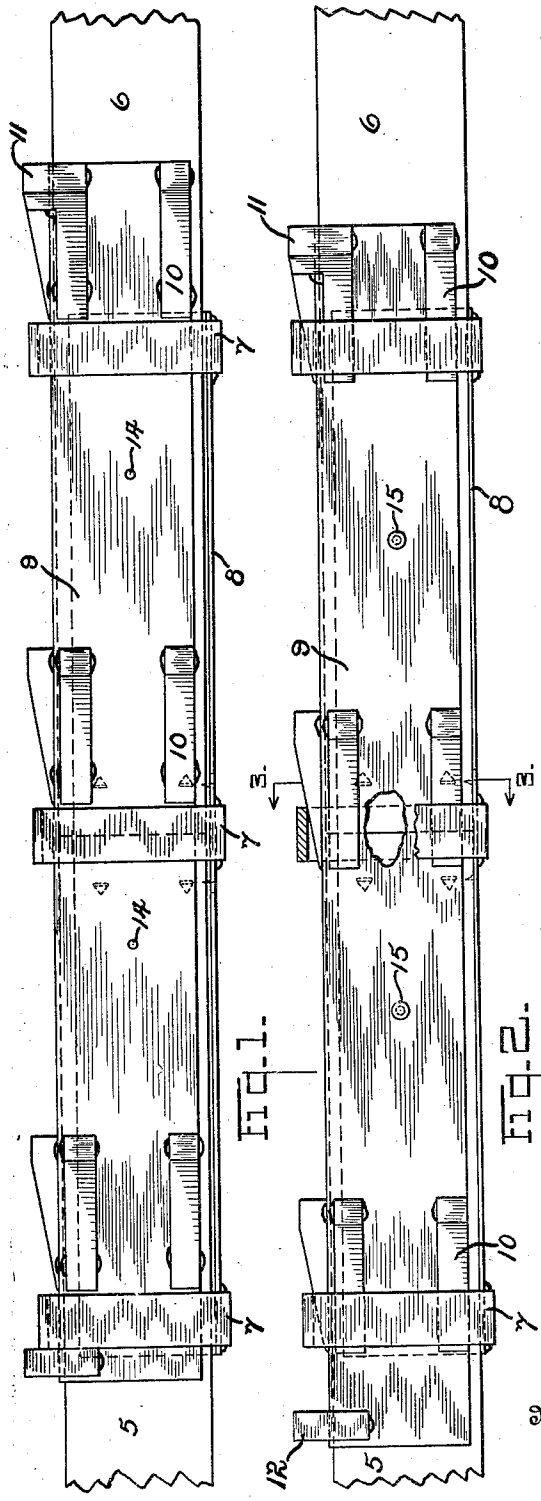


Fig. 1.

Fig. 2.

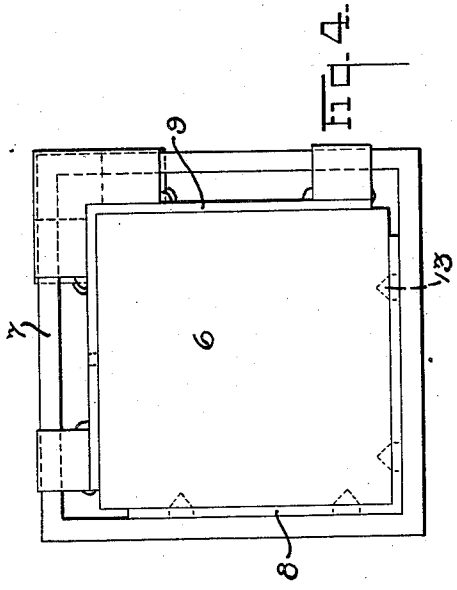


Fig. 4.

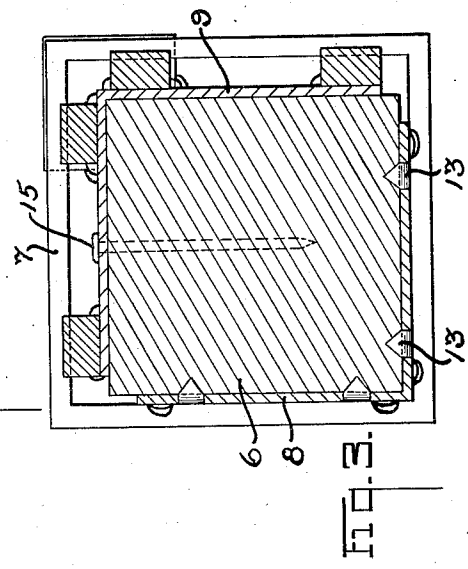


Fig. 3.

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UNITED STATES PATENT OFFICE

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TIMBER SPLICER

Application filed August 30, 1929. Serial No. 389,525.

This invention relates to appliances for splicing timbers together in end-to-end relation, and more particularly to devices of this character adapted for use in connection with the construction of concrete buildings.

The object of the invention is the provision of a simple, efficient and inexpensive device of the class described, which enables timbers to be easily and quickly secured together in end-to-end relation, and also separated when the work for which intended is finished, and which provides strong and durable splicing means for the timbers.

The invention is fully described in the following specification, and while in its broader aspect it is capable of embodiment in numerous forms, a preferred embodiment thereof is illustrated in the accompanying drawings, in which—

Fig. 1 is a side elevation of a device embodying the invention with timbers disposed in splicing relation therein and with the movable clamping member in released position; Fig. 2 is a different side elevation thereof with the movable clamping member in timber clamping position, and with parts broken away; Fig. 3 is an enlarged cross-section on the line 3—3 in Fig. 2, and Fig. 4 is an enlarged end view thereof.

Referring to the drawings, 5 and 6 designate two timbers to splice, which timbers, particularly when used in connection with concrete construction work, are usually square in cross-section, although other shapes may be, and sometimes are, employed.

The splicing means illustrated includes three band members 7 providing substantially square openings, if the timbers to be spliced are square, and these members are fixed in substantially equi-distant relation along, what may be termed, a stationary clamping member 8. This clamping member is of L, or angle-iron form in cross-section and extends through the several bands 7, being set in and fitting one of the corner angles of each of the bands. The side edges of the member 8 are shown as terminating short of the sides of the bands 7 toward which they project, although this is not necessary. The bands 7 are fixed to the member 8 by riveting, welding, or in any other suitable manner.

The movable member 9 of the clamp extends through the bands 7 in transverse opposition to the fixed clamping member 8, and is of angular form in cross-section, corresponding to that of the member 8 so as to cooperate therewith to form a timber receiving passageway of cross-sectional shape, substantially corresponding to that of the timbers.

The member 9 is provided on the outer side of each leg portion thereof, and within each band 7, with one or more wedge block 10, all pointing in the same direction and adapted to coact with the respective sides of the bands 7 to force the member 9 toward the member 8 when the former is moved in one direction along the interposed member.

The clamping member 9 extends at its ends beyond the respective end bands 7, a sufficient distance to permit the member 9 to have the necessary lengthwise clamping and releasing movements relative to the bands 7 and stationary clamping member 8. The member 9 is provided at its opposite ends at the corner portions thereof, with driving blocks 11 and 12, the former, in the present instance, being fixedly secured to and connecting the outer ends of the adjacent wedge blocks 10 at the respective ends of the clamping member.

In order to facilitate the clamping action of the members 8 and 9 against the timbers to be spliced, the leg portions of the member 8 are preferably provided with inwardly projecting spurs 13, which imbed themselves in the surface portions of the clamped timbers, providing such timbers are of wood. One or both of the leg portions of the member 9 may also be provided with apertures 14 for receiving securing nails 15.

In the use of my clamping device, the timbers to be spliced have their adjacent ends inserted into opposite ends of the splicing means between the clamping members 8 and 9; the member 9, during such action, being withdrawn to the right, in the present instance, to move the wedge blocks 10 out of wedging coaction with the bands 7. The ends of the timbers preferably meet within

the center band 7, which is approximately in the center of the device. The timbers having been assembled within the splicing device in this matter, the operator strikes the right end of the clamping member 9 with a hammer or other suitable tool, the striking action being preferably against the block 11, thereby forcing the wedge blocks under the respective bands 7 and causing the timbers to be securely clamped between the members 8 and 9. To release the splicing means, it is only necessary to strike the left end of the clamping member 9, for instance the block 12, with a hammer or other suitable tool. It is thus evident that my splicing means not only provides a very simple and strong and durable splice, but also is easily and quickly operated to either have clamping coaction with a pair of timbers or to be released therefrom.

I wish it understood that my invention is not limited to any specific construction, arrangement or form of the parts, as it is capable of numerous changes and modifications without departing from the spirit of the claims.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is:—

1. A timber splicer having transversely opposed timber clamping members, which members are of a cross-sectional shape to form timber receiving cavities which face each other and extending across the joint of timbers to be spliced, retaining means encircling said members and permitting relative transverse and longitudinal movements of the members, and means on one of the members operable to cooperate with the retaining means when the associated member has lengthwise movement in one direction to force the two members to have clamping coaction with any interposed timbers.

2. A timber splicer having transversely opposed timber clamping members, said members being of angular form in cross-section to receive opposing side portions of the timbers to be spliced, retaining bands encircling said members and fixed to one of said members, the other member being capable of transverse movements relative to the bands, and wedge means movable lengthwise of the members and cooperating with the bands and movable member to cause the members to have clamping coaction with interposed timbers.

3. A timber splicer having a pair of transversely opposed timber clamping members cooperating to form an opening therebetween for receiving timbers to be spliced, retaining bands confining the members and permitting them to have limited relative transverse movements, one of said members being fixed to the bands and having timber piercing spurs projecting inwardly therefrom, and wedge means interposed between the loose member and retaining bands and operable, when moved in one direction lengthwise of the fixed member, to cause the members to have clamping coaction with interposed timbers.

4. A timber splicer having transversely opposed timber clamping members, retaining means for said members adapted to retain the members in assembled relation and one member being fixed to said means and the other member being capable of transverse and longitudinal movements relative thereto, wedge means carried by the movable member for coaction with the retaining means to fix the movable member toward the companion member when the movable member is moved in one direction lengthwise of the means, and means on the movable member for coacting with the retaining means to limit the lengthwise movements of such member.

5. A splicer of the class described, comprising transversely opposed clamping members mounted for relative transverse and longitudinal movements and extending lengthwise of the timbers to be spliced, a plurality of means encircling said members in spaced relation lengthwise thereof to confine the transverse movements of the members, and means on one side of said members cooperating with the encircling means to cause the associated member to have opposed timber clamping action with respect to the other member when the members have predetermined longitudinal relative movements.

6. A splicer of the class described, comprising transversely opposed timber clamping members mounted for relative transverse and longitudinal movements and extending lengthwise of the timbers to be spliced across the joint thereof, a plurality of retaining means for said clamping members spaced lengthwise thereof, and wedge means on one of said clamping members operable to coact with the retaining means when the associated member has longitudinal movement in one direction to force such member towards its companion.

In testimony whereof I have hereunto signed my name to this specification.

CHARLES M. MARKHAM.