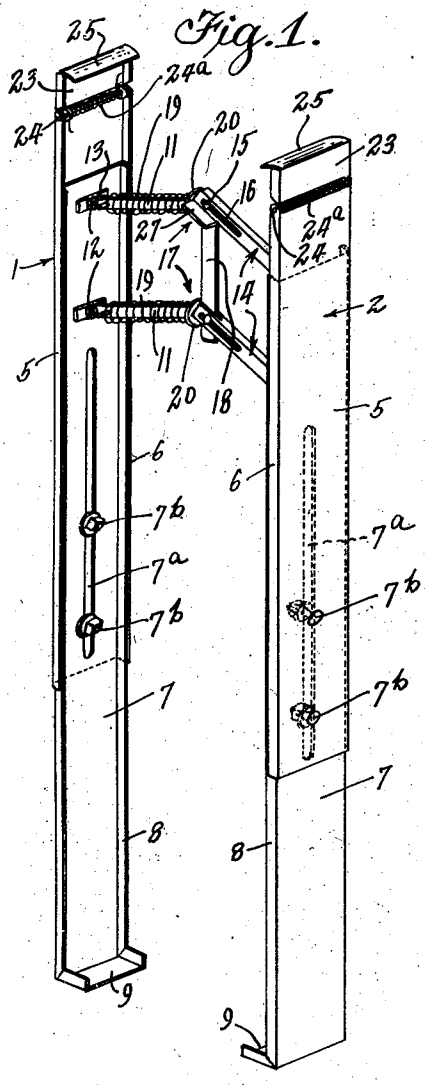
July 31, 1945. S. G. ACKLEY 2,380,487

FIRE BLOCK SETTER

Filed Feb. 9, 1942

Fig. 1.



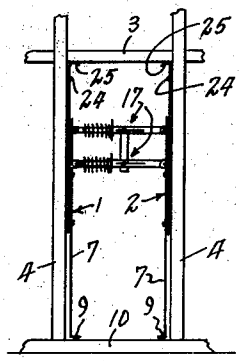


Fig. 2.

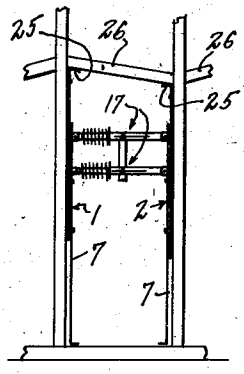


Fig. 3.

Fig. 6.

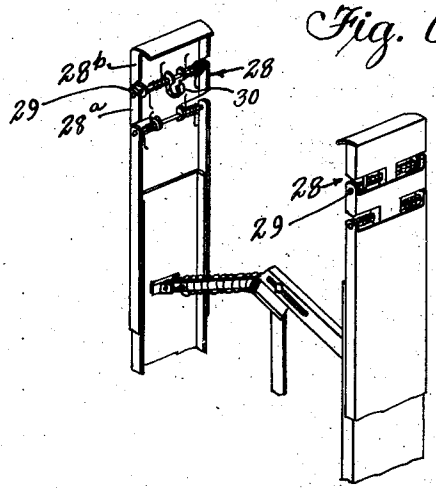
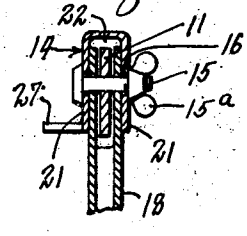


Fig. 5.



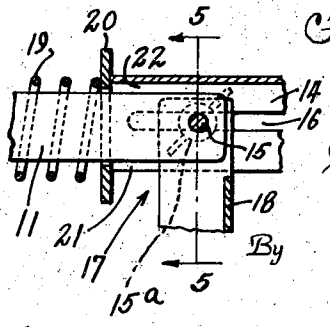


Fig. 4.

Inventor

Sherman G. Ackley

By Lyon & Lyon

Attorneys

Patented July 31, 1945 2,380,487

UNITED STATES PATENT OFFICE

2,380,487

FIRE BLOCK SETTER

Sherman George Ackley, South Gate, Calif.

Application February 9, 1942, Serial No. 429,989

3 Claims. (Cl. 20—4)

This invention relates to a device for facilitating placing fire-blocks between studs in frame buildings. These fire-blocks are short pieces that are set intercostally between the studs, and are nailed to the studs by toenailing. Building ordinances sometimes provide for the space to be allowed vertically between these fire-blocks. They are usually put in place horizontally, but may be staggered, that is to say, put in place in an inclined position.

One of the objects of this invention is to provide a device of simple construction, which will provide a support or rest for the fire-block while it is being nailed in position.

A further object of the invention is to provide a device of this kind, which can if desired, be readily adapted to support the fire-block either in a horizontal position, or in an inclined position.

In its preferred construction, the device involves the use of two members that are put in place between two adjacent studs and pressed against the adjacent faces of the studs. These members at their lower ends, rest upon a sill or stringer; or upon a fire-block that has already been put in position. The members are provided with means for forcing them outwardly to press them against the studs. This means is releasable so that after the fire-block has been nailed in place, the device can be released and removed. One of the objects of the invention is to provide means for facilitating the release of the device from under the fire-block; more specifically, to provide a construction or mounting for rests at the upper ends of the members, which will enable them to move outwardly and free themselves from engagement with the under side of the block. This facilitates the folding and withdrawal of the device from its operative position.

Further objects of the invention will appear hereinafter.

The invention consists in the novel parts and combination of parts to be described hereinafter, all of which contribute to produce an efficient fire block setter.

A preferred embodiment of the invention is described in the following specification, while the broad scope of the invention is pointed out in the appended claims.

In the drawing:

Fig. 1 is a perspective of the device, and illustrating its general arrangement and the relation of its parts.

Fig. 2 is a side elevation showing the two adjacent studs set on a stringer, and with this device illustrated more or less diagrammatically set in place between the studs in its operative position. This view illustrates the device as employed where the fire-blocks are horizontal.

Fig. 3 is a view similar to Fig. 2, but illustrating the manner in which the device adapts itself for setting staggered or inclined fire-blocks.

Fig. 4 is a vertical section taken through a flexible joint which I prefer to employ in constructing the device, certain parts being broken away.

Fig. 5 is a vertical section taken on the line 5—5 of Fig. 4, and further illustrating details of the construction. In this view the lower portion of a connecting bar is broken away.

Fig. 6 is a perspective illustrating another embodiment of the rest that may be employed to form the seat on which the fire-block can be supported when being nailed in place.

Before proceeding to a more detailed description of the invention, it should be understood that in practicing the invention, I provide two juxtaposed members, the upper ends of which constitute two rests to support the fire-block in a position to be nailed. I also provide gauge means for enabling these rests to be set at a predetermined level either above a bottom sill or stringer, or above a fire-block that has already been put in position.

In its general construction, the device includes jointed means that connects two side members, and this jointed means is so constructed that it can be readily operated to exert a pressure that forces the side members against the studs. The connection is easily releasable to enable the members to swing in toward each other, and in doing this the rests at the upper ends of the side members, cooperate to facilitate the withdrawal of the side members in spite of the fact that the rests are in contact with the fire-block that has just been nailed in place.

Referring more particularly to the parts, the device as illustrated in the accompanying drawing, includes two side members 1 and 2. These side members are associated with gauge means for enabling them to be set in position so that the upper ends of the side members can afford a support for a fire-block 3 to be set in position between two studs 4, as illustrated in Fig. 2.

Any suitable gauging means may be employed, but in the present instance for this purpose, I prefer to construct the side members in the form of elongated flat plates including main plates 5 with side flanges 6 to give the same stiffness. The use of these flanges will give these plates the re-

quired stiffness in spite of the fact that they are made of very light gauge metal. In order to give vertical adjustability to the side plates 5, I prefer to provide each side plate 5 with a gauge plate 7, which is also preferably provided with side flanges 8 which telescope inside of the flanges 6, and these plates 7 are provided with feet 9 at the lower ends to rest upon the sill or stringer 10 in the manner indicated in Figs. 2 and 3. They would also rest upon a fire-block that had been already placed to gauge the distance up to the next fire-block higher up. In order to enable the gauge to be adjustable, the plates 7 are formed with slots 7a in which clamping bolts 7b run. The heads of these bolts are on the outside, and the outer heads of the bolts are flat curved faces as indicated in Fig. 1.

Between the plates 5 I provide means for holding the members 1 and 2 shoved outwardly against the studs 4, and this means preferably includes a pair of parallel links 11 attached by hinge pins 12 to bracket 13 secured on the inner face of one of the plates 5, and the free ends of these links have a pin and slot connection with similar links 14 that are similarly connected to the inner face of the opposite plate 5. This pin and slot connection as illustrated, includes a pin 15 carried on the end of each link 11 and running in a slot 16 formed in the corresponding link 14. In this way two toggle joints 17 are formed, which I connect by a vertical connector bar or link 18. This link keeps the links 11 parallel with each other, and the links 14 parallel with each other, when the toggle joints are operated. Associated with this connection I provide resilient means for forcing the links 14 outwardly as far as their slots 16 will permit, to force the member 2 against its adjacent stud 4. For this purpose I provide coil springs 19 located around the links 11 and shoving at their ends against a saddle plate 20 (see Fig. 4) which saddle plate seats against the end of the corresponding link 14. These links 14 are preferably of narrow channel form so as to present two flanges 21 that carry the slot 16. In this way a clearance space or deep slot 22 is formed at the under side of the link 14 to receive the upper end of the connector bar 18. This bar projects up into this space and has an opening enabling it to be attached to one of the pins or bolts 15. These pins or bolts 15 are provided with wing nuts 15a enabling them to be clamped up more or less to secure them in place. However, it should be understood that these bolts are not clamped up so tight as to prevent free movement of the links 11 in the space between the flanges 21 of the links 14. This construction is clearly illustrated in Figs. 4 and 5.

When the device is clamped up as illustrated in Fig. 2, to enable the fire-block to be supported on the upper ends of the side members 1 and 2, it is advantageous to provide means for facilitating freeing of the side members 1 and 2 from the pressure of the fire-block which has been nailed in place, and which naturally would be exerting considerable pressure on their upper ends. For this purpose I prefer to provide movable rests 23 at this point. Each of these rests is in the form of a plate that projects upwardly from a hinge connection 24 that attaches it to the upper end of its corresponding plate 5. The upper end of each rest 23 is bent over to form an inwardly and downwardly projecting flange 25, thereby forming a convex upper face which can roll on the under face of the fire-block 3 as the members 1 and 2 are pulled inwardly when the joints 17 are "broken." These joints preferably break in an upward direction, that is, in a substantially vertical direction.

The vertical adjustability of the members 1 and 2 not only facilitates setting them to any desired height for the fire-blocks, but this adjustment also facilitates putting in inclined or staggered fire-blocks 26, as illustrated in Fig. 3. It is simply necessary to adjust one of the members 2 to a greater length than the other, and in this connection it should be understood that it is immaterial which side of this device is placed outermost when putting the same in position between the studs. This enables the device to be set in place for setting the next adjacent fire-blocks 26, which incline in another direction, without making any changes in the adjustment of the device.

The hinge joint 24 has a coil spring 24a associated with it, which normally holds the rest 23 in an upright position, but this spring will permit the rest 23 to swing back relatively to the members 1 and 2 when they are pulled inwardly by breaking the toggle joints.

If desired, one of the links 14 may be provided with a projecting flange 27 which will operate as a handle for breaking the toggle joints, or forcing the links down into their locking position. The toggle joints 17 should be constructed so that when they are forced down into their locking position, the links 11 and 14 pass slightly beyond their "dead center" position. This prevents any possibility of the force of the spring releasing the toggle joints accidentally.

If desired, the rests 23 may be constructed as illustrated in Fig. 6, in which each rest 28 is composed of two sections, 28a and 28b, the section 28a being hinged to the upper end of the member, and the upper section 28b being hinged to it. In this way two joints are formed including an upper joint 29. This joint 29 can be provided with a hook 30 on the inner side, that can be pulled out to "break" the joint. This pulls down the upper section 28b of the rest 28, and virtually shortens the member so that it can be immediately pulled away from the stud.

Many other embodiments of the invention may be resorted to without departing from the spirit of the invention.

What I claim is:

1. In a device for setting a fire-block between studs of a wall of a building, the combination of a pair of members adapted to rest at their lower ends upon a support and adapted to press against the adjacent faces of the two studs, a toggle connection between said members including toggle links, and resilient means associated therewith and cooperating with the toggle links to exert a pressure through said members against the studs to enable a fire-block to be supported on the upper ends of said members and nailed to said studs, said toggle connection capable of being moved laterally to relieve the pressure on said members and permit the same to be withdrawn from below the nailed fire-block.

2. In a device for setting a fire-block between studs of a wall of a building, the combination of a pair of members adapted to rest at their lower ends upon a support and adapted to press against the adjacent faces of the two studs, rests jointed to the upper ends of said members and capable of swinging outwardly, a toggle connection between said members with resilient means associated therewith cooperating with the toggle connection to exert a pressure through said members

against the studs, said toggle connection capable of being moved laterally to remove the pressure on said members and to permit the same to be withdrawn from contact with the studs, said jointed rests then operating to swing relatively outwardly and thereby facilitate the withdrawal of the members from below the nailed fire-block.

3. In a device for setting a fire-block between studs or the like, the combination of a pair of members to press against the adjacent faces of the two studs, jointed means including toggle links connected to each other and connected to said members, said toggle links having a pin and slot connection therebetween, resilient means associated with the links for exerting a spreading force upon the links and the members when the toggle links are in substantial alignment with each other for pressing the members against the studs, said members operating to support the fire-block on the upper ends when nailing the same to the studs, said toggle links operating when out of alignment with each other to relieve the pressure from said members.

SHERMAN GEORGE ACKLEY.