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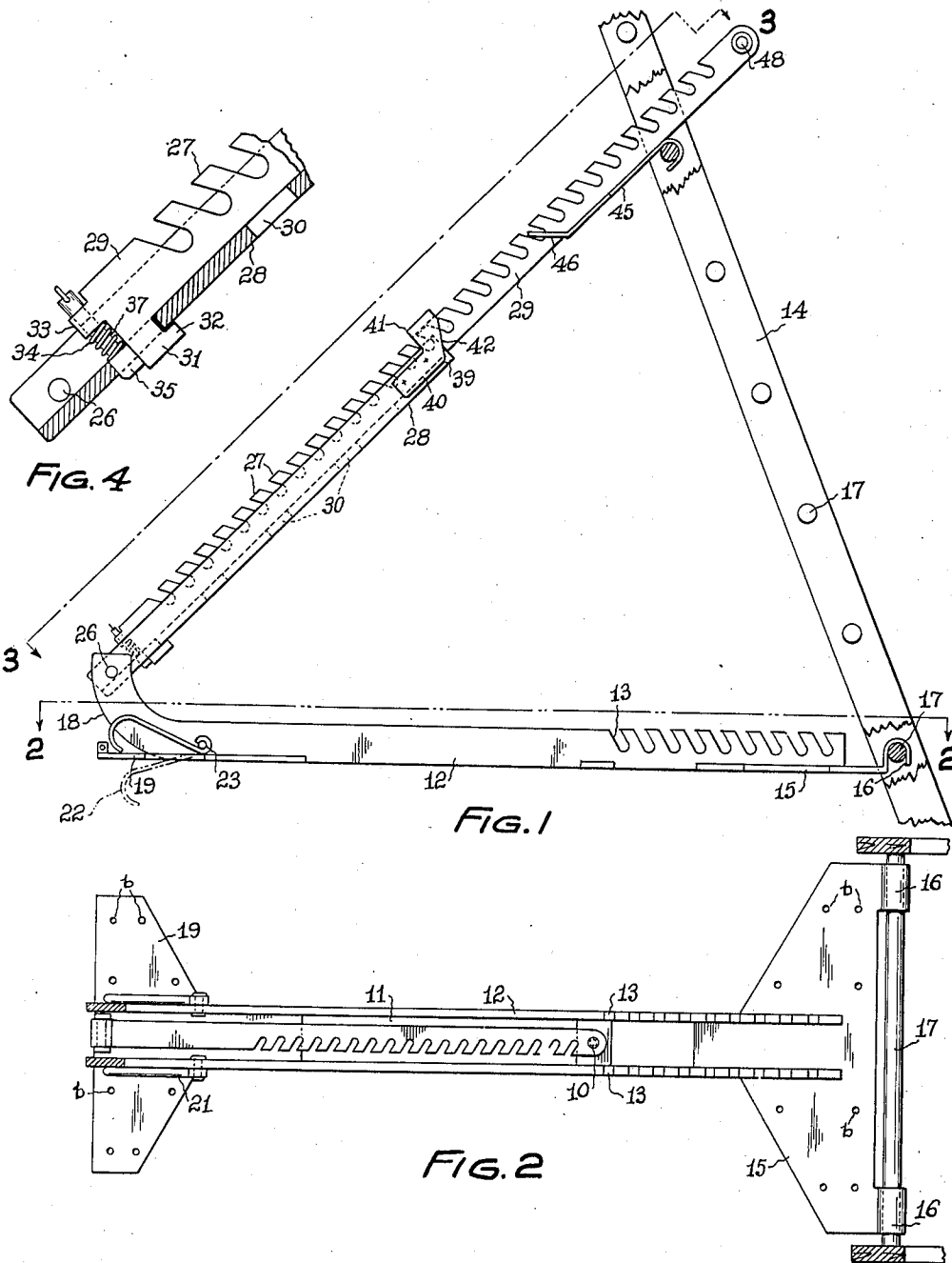
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2,299,323

COMBINATION BUILDING JACK

Filed Nov. 7, 1941

2 Sheets-Sheet 1



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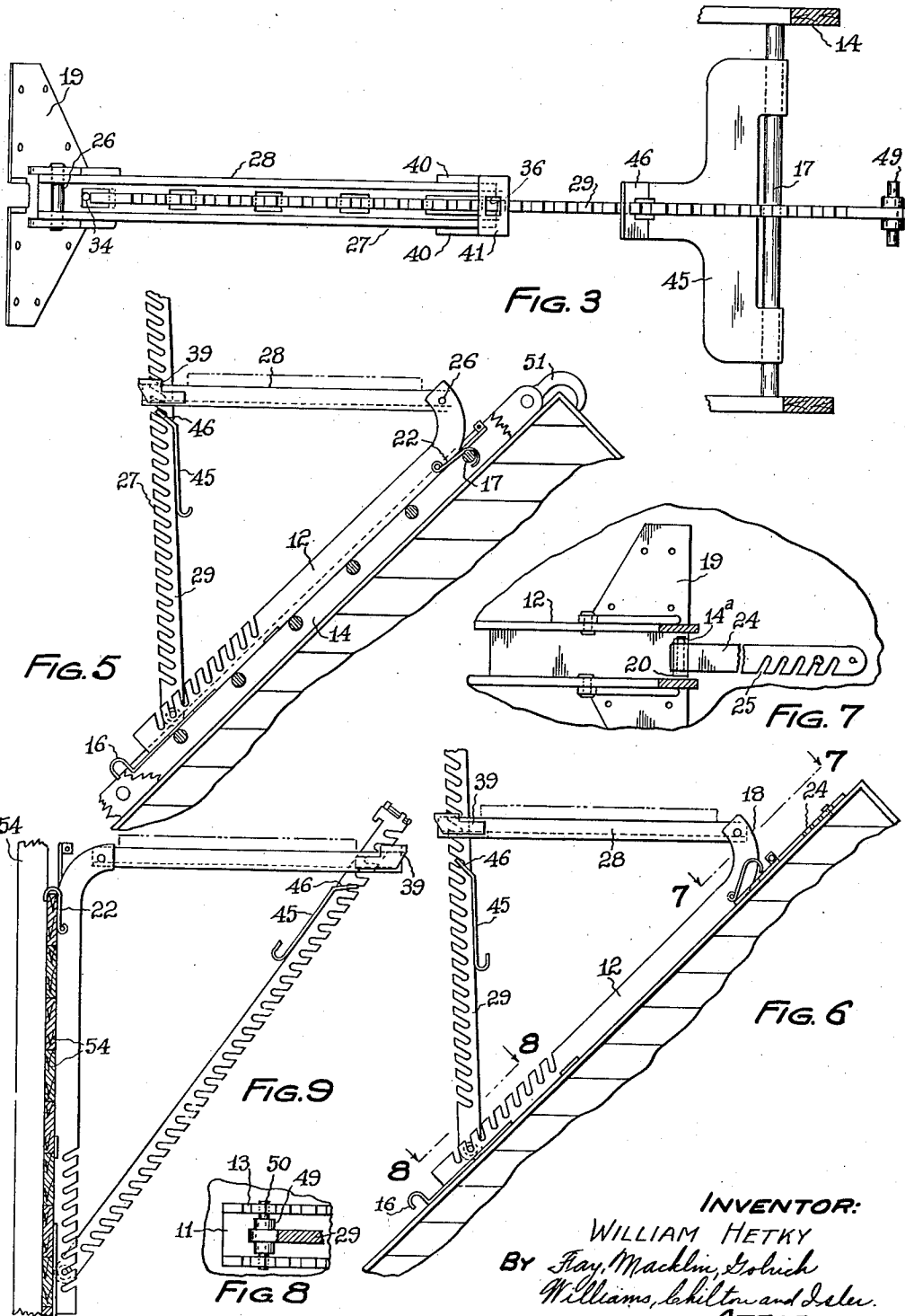
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COMBINATION BUILDING JACK

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7 Claims. (Cl. 304—10)

The present invention relates to a combination building jack and it is the main feature of the improved jack that it is generally applicable in the building trade to provide support for horizontal scaffold-boards either when attached on a sloping roof, an inclined ladder or a side wall. This universal use is possible without any considerable changes in the general arrangement of parts being necessary.

Another object of the invention is to provide a nailing strip on the improved building jack which enables the workman to fasten the strip on the roof while working on it, for instance, to nail down shingles on the roof or do any repair work required and afterwards to remove the strip with the nails remaining in place.

Further objects will become apparent from the specification and the drawings.

To the accomplishment of the foregoing and related ends, said invention, then, consists of the means hereinafter fully described and particularly pointed out in the claims; the annexed drawings and the following description setting forth in detail certain structure embodying the invention, such disclosed structure constituting, however, but one of various means in which the principle of the invention may be used.

In said annexed drawings:

Fig. 1 is a side elevation of the jack as attached to an inclined ladder;

Fig. 2 is a top view taken on line 2—2;

Fig. 3 is a top view taken on lines 3—3 of Fig. 1;

Fig. 4 shows a detail of a fastening device on an enlarged scale;

Figs. 5 and 6 illustrate two different uses of the jack for roof-building or repair;

Figs. 7 and 8 show details of connections between different parts of the jack on an enlarged scale; and

Fig. 9 illustrates the jack as attached to a side wall.

Referring now to Figs. 1 to 3, 11 is a channel-shaped base member made of formed metal having parallel side walls 12 with slots 13 formed therein toward one end of the member 11. This end has fastened to the bottom a plate 15 which has two hooks 16 formed thereon serving to attach the base 11, for example, to the rungs 17 of a ladder. The other end of base 11 is bent as shown at 18 and likewise carries a plate 19. This plate has slots 21 on either side of the base 11 which serve for receiving hooks 22, said hooks being pivotally mounted on a pin 23 and brought to the position shown in dotted lines when they

are used for attaching the base member as in Fig. 9.

Removably housed within said base 11 is a strip 24 of sheet metal with slot 25 formed thereon, said strip serving as a nailing strip in one of the uses of the jack already mentioned and described more fully later on. In the use of the building jack shown in Fig. 1, base 11 is in a horizontal position and serves for supporting the scaffold-board. The base may, however, be used as an upright as well. Plates 15 and 19 are, therefore, provided with nailing holes so that they may be fastened to a wall or the like under construction if there is no means of attachment. The nails have to be removed for detaching the jack after the work is done.

Pivotally connected as at 26 to the curved portion of member 11 is a second member 28 of channel shape, called the center arm, in which a slotted bar 29, hereafter called gear arm, is slidably mounted. The tooth shaped portions on bar 29 are designated by 27.

In order to fasten the gear arm 29 in a given position the end of said arm adjacent to the hinge point 26 has an extension 31 (Fig. 4) with a shoulder 32, which is passed through one of a number of holes 30 formed in the bottom part of arm 28 and fitted into a position in which shoulder 32 engages with the underside of arm 28. In this position it is held by a plunger 34, which is carried in a lug 33 shaped at the end of gear arm 29, the head portion of said plunger 35 being of a size to fill in the hole 30 after extension 31 has been moved into place. A spring 37, mounted between lug 33 and head 35 presses the latter down in the position shown in the drawings and thus holds gear arm 29 against displacement.

An additional means for cooperating in holding the gear down on member 28 is a metal strap 39 having two longitudinally extending portions 40 and a transverse portion 41, the latter bridging the center arm 28 and bearing on top of gear arm 29. The rear portion of strap 39 may be cut off as shown at 42.

This strap 39 also serves as a means for securing the connection between gear arm 29 and center arm 28 in case these are used in a different way as shown and described in connection with Figs. 5, 6 and 9. For this purpose it has a square hole 36 cut out in the top portion, which in some positions engages with a tooth 27 of arm 29.

Referring once more to Figs. 1 and 3, the means for attaching gear arm 29 to the rungs 17 of a ladder is a two-pronged hook, designated

by reference numeral 45. The rear portion 46 of this hook is bent at an angle with the main portion and being of thin metal is capable of being slipped into the slot between any two adjoining teeth of the gear arm 29, thus rendering the member adjustable when used angularly in respect to member 28, in which case it is not capable of sliding back and forth. The end of gear arm 29 has a hole 48 through which a pin 50 carrying a hub 49 is passed. This serves as a connecting means for the gear arm with base 11 in cases where this is convenient. In such cases the pin 50 will slip into one of the slots 13 to which it is fitted in size and holds members 11 and 29 in engagement (Fig. 8).

In Fig. 5 the parts are shown in such a position, the jack being used for roofing purposes. Base 11 is lying against a ladder 14 which engages the gable of the roof by means of a strong hook 51, while base member 11 is fastened to the ladder by the two hooks 22, hooks 16 being idle. Gear arm 29 has been drawn out from channel member 28 and turned to form an angle of approximately 90 degrees with the same. In this case center arm 28 is in a horizontal position and serves as a support for the scaffold planks, while gear arm 29 forms an upright and supports the center arm. Strap 39 will in this case serve as a connecting means between these two arms. Having been turned round by about 90°, as compared to the position shown in Fig. 1, the flat side of the top or transverse portion enters one of the slots of gear arm 20 and thus secures the connection between the latter and center arm 18, one of the teeth 27 engaging with the hole 36.

A further means for preventing detachment of the two connected members is hook 45 which in this case is suspended within the adjoining notch of gear arm 29 and, being wider in cross-section than arm 29, would bar any downward movement of the same past the rear portion 46.

The use of the jack similar to the one just explained is shown in Fig. 6, where the device is used to support a workman while working on a roof. The general disposition of members 11, 28 and 29 is the same as in Fig. 5. The difference consists in member 11 not being fastened to a ladder, but being suspended from the nailing strip 24, which, as shown in Fig. 7 has been taken out of base member 11 normally enclosing said strip. For this purpose screw 10 which usually holds the strip within base 11, is unscrewed, the nut 14a taken off, the strip removed from the casing and fastened by means of the bolt 20 to the end of plate 19 (Fig. 7), so that it will form an extension of member 11. The workman would have to use a ladder for fixing the first few nails in slots 25 but as soon as this is done, he may dispense with the use of the ladder, which in roofing work is an obstacle, as may be seen from Fig. 5, since it prevents the direct access to the roof owing to the intervening rungs. When the workman wants to remove the jack the nailing strip may be withdrawn sideways with the nails remaining in place, since the strip is no thicker than the fraction of an inch.

Yet another way to use the building jack according to my invention is shown in Fig. 9. Here the jack is adapted to follow a vertical line, base 11 forming the upright when it is suspended from a board 54 of a wall 53 under construction. Member 28 again serves as a support for the scaffold boards while gear arm 29 forms an inclined brace with strip 39 again providing a means to secure the two members from becoming

disconnected and hook 45 serving as an added precautionary device.

It will be understood that here, as in all similar cases, it will be necessary to use two jacks to provide the horizontal supporting means for scaffold boards. The building jack according to my invention is adaptable to many different applications in the building art, is easy to handle and to transport, adjustable to any desired angle of a slanting roof as well as to vertical structures and requires a very small space when packed up for shipment.

Owing to the double means for securing the connection of the supporting members it is very safe in use in spite of its light construction. In this respect the combination means 45, serving both as a hook and as a safety guard, proves to be of special convenience. I consider it, furthermore, to be of particular advantage that I may use the improved jack either with two arms, as shown in Fig. 1, or with three arms as shown in Figs. 5, 6 and 9, owing to the fact that center arm 28 is adapted to house a considerable part of gear arm 29 which may thus either serve as an extension to arm 28 or as a third arm positioned at a desired angle therewith.

Other modes of applying the principle of my invention may be employed instead of the one explained, change being made as regards the structure herein disclosed, provided the means stated by any of the following claims or the equivalent of such stated means be employed.

I therefore particularly point out and distinctly claim as my invention:

1. A combination building jack for providing support for a scaffold board, said jack comprising a base member, a center arm pivotally connected to said base member, means on said base member for attaching it to a part of a building, a third detachable member adapted to be mounted on said center arm in alignment or at an angle with the same and fastening means on said third member for attaching it to a part of said building.

2. A combination building jack for providing support for a scaffold board, said jack comprising a base member, a channel shaped center arm pivotally connected to said base member, means on said base member for attaching it to a part of a building, a third detachable member adapted to be mounted on said center arm alternatively in alignment or at an angle therewith and adjustable fastening means on said third member for attaching it to a part of said building.

3. A combination building jack for providing horizontal support for a scaffold board, said jack comprising a base member, a channel shaped center arm pivotally connected to said base member, means on said base member for attaching it to a part of a building, a slotted arm slidable in said center arm, said slotted arm having a portion formed thereon for engagement with holes in said center arm, means to hold said slotted arm in a given hole, a strap on said center arm for holding down said slotted arm in said center arm and detachable means for connecting said slotted arm to part of said building.

4. A combination building jack for providing horizontal support for a scaffold board, said jack comprising a base member, a channel shaped center arm pivotally connected to said base member, means on said base member for attaching it to a part of a building, a slotted arm slidable in said center arm, said slotted arm having a portion formed thereon for engagement with holes in said center arm, means to hold said

slotted arm in a given hole, and detachable means for connecting said slotted arm to part of said building.

5. A combination building jack for providing horizontal support for a scaffold board, said jack comprising a base member having a slotted portion at one end thereof, an arm pivotally connected to said base member, hook shaped means on both ends of said base member for alternatively attaching one of said ends to a part of a building and detachable means on said arm for attaching the same to the building or to connect it to the slotted portion of said base member respectively.

6. A combination building jack for providing horizontal support for a scaffold board, said jack comprising a channel shaped base member having a slotted portion at one end thereof, a detachable nailing strip normally housed in said base member, means for attaching said strip in alignment with said base member at the unslotted end thereof, a center arm pivotally connect-

ed to said base member, a third member adapted to be mounted on said center arm at an angle thereto and adapted to be fitted with one end into one of the slots at said slotted end of the base member.

7. A combination building jack for providing horizontal support for a scaffold board, said jack comprising a channel shaped base member having a slotted portion at one end thereof, a detachable nailing strip normally housed in said base member, means for attaching said strip in alignment with said base member at the unslotted end thereof, a center arm pivotally connected to said base member, a third member adapted to be mounted on said center arm at an angle thereof and adapted to be fitted with one end into one of the slots at said slotted end of the base member and safety means for securing said third member against detachment from said center arm.

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