Sept. 2, 1947. F. H. GEARY 2,426,825

CONSTRUCTION STAGE

Filed Jan. 29, 1946 3 Sheets-Sheet 1

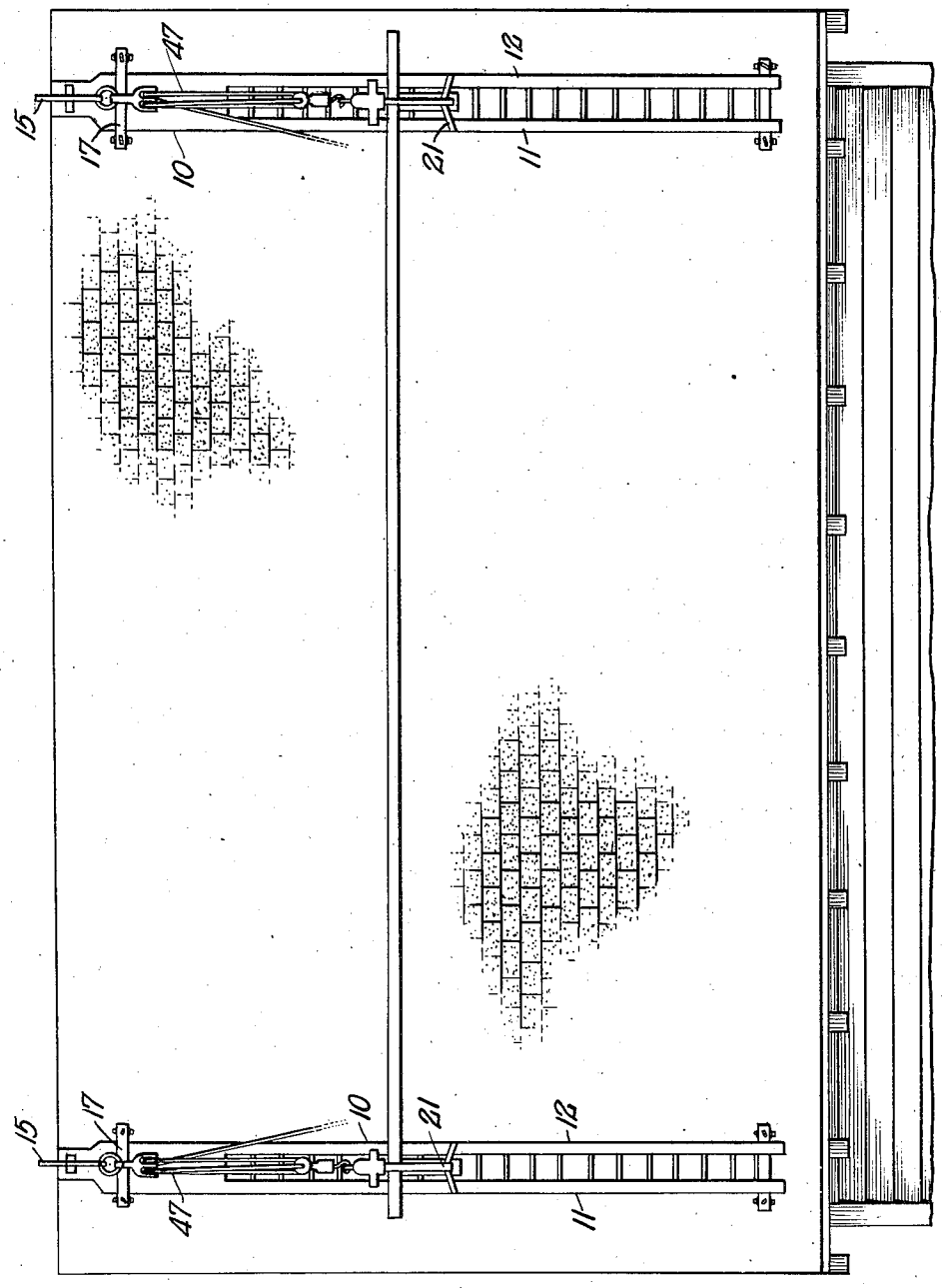


Fig. 1.

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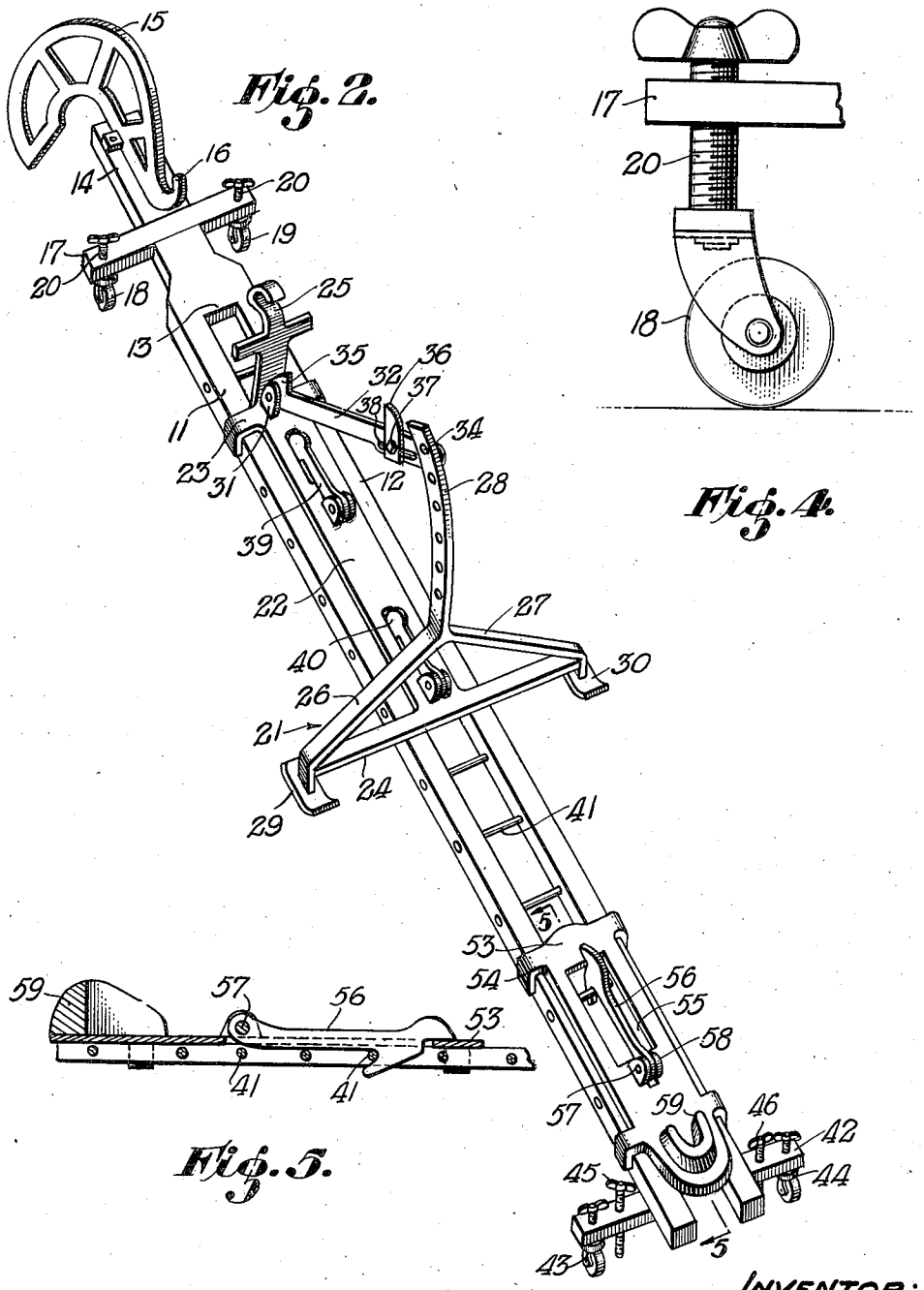


Fig. 2.

Fig. 4.

Fig. 5.

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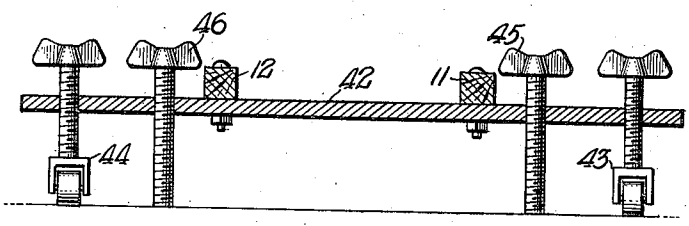


Fig. 6.

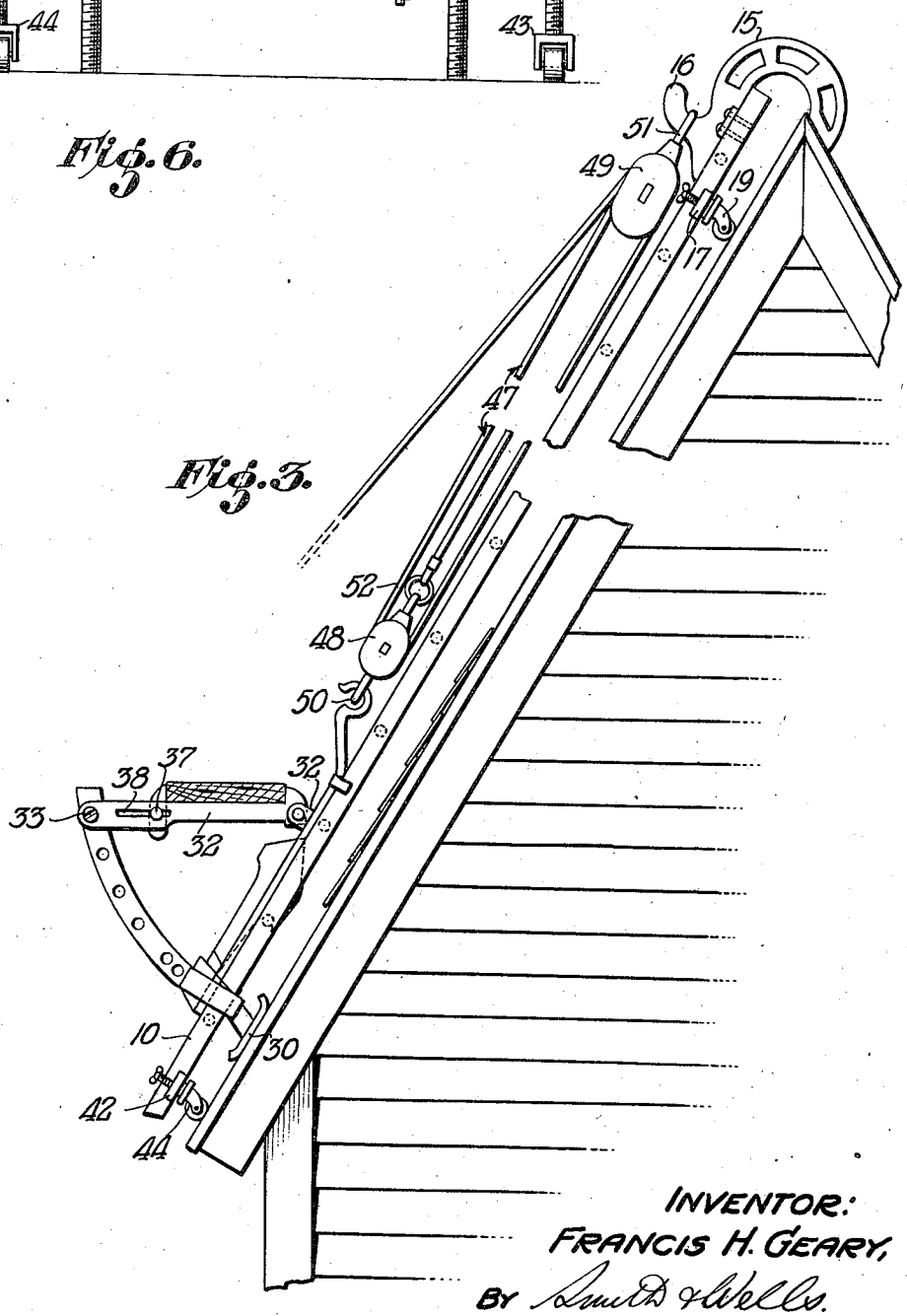


Fig. 5.

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CONSTRUCTION STAGE

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Application January 29, 1946, Serial No. 644,113

3 Claims. (Cl. 304—20)

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The present invention relates to a construction stage. The principal object of the invention is to provide a stage which is capable of application to the vertical wall of the building for the initial preparation of roofing at the lower edge of a roof and which may be mounted on the roof to complete the laying of roofing material with a minimum interference to the placing of the material.

It is also a purpose of my invention to provide a stage of this character with a novel carriage construction whereby a platform may be supported and adjusted upwardly along the roof with ease.

It is a further purpose of my invention to provide a novel carriage construction whereby the roofing may be laid beneath the carriage without shifting the carriage.

Other objects and advantages of my invention will appear more fully from the following description and the accompanying drawings, wherein a preferred form of the invention is shown. It should be understood, however, that the drawings and descriptions are illustrative only, and should not be taken as limiting the invention except in so far as it is limited by the claims.

In the drawings:

Figure 1 is a somewhat diagrammatic view of the stage applied to a roof showing the relative positions of the carriages;

Figure 2 is a perspective view of one of the carriages with the various parts associated therewith;

Figure 3 is a side view of the carriage applied to a roof;

Figure 4 is an enlarged side view of one of the adjustable supports for the carriage;

Figure 5 is a sectional view on the line 5—5 of Figure 2; and

Figure 6 is an enlarged detail view of the lower cross bar and its supporting pins and rollers.

Referring now to the drawings, my construction stage is made up of two carriages 10 which are essentially alike. These carriages are used in pairs as shown in Figure 1 of the drawings. More than a pair of carriages may, of course, be used if the length of the roof warrants it. The carriages are so constructed that they may be used initially from the ground level to start the roof laying and be supported from the peak of the roof and used throughout the laying of the roof, with a minimum amount of stage shifting and resulting loss of time. Since the carriages are essentially duplicates, the description of one will suffice for both.

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The carriage 10 comprises a frame made of two side bars 11 and 12 which are joined at the top as indicated at 13 to provide a head piece 14. The head piece 14 has a hook 15 securely fastened thereto. The hook 15 is of an open trussed construction as shown to give adequate strength with lightness. A small hook 16 is formed as an integral part of the hook 15. This small hook is used for anchoring the falls.

The head 14 is supported above the roof surface by a cross bar 17. The cross bar is securely fastened to the head and is supported by two rollers 18 and 19. Each roller is swivelled on the base of a threaded stem 20. The stem 20 is threaded in the cross bar 17 so that the roller can be raised and lowered with respect to the cross bar. The rollers make the carriage easily shiftable and the adjustability of the rollers makes it possible to raise a roller and lay the roofing underneath it without shifting the carriage.

The bars 11 and 12 have cross rods 41 connecting them at relatively close intervals from the head 14 to the lower end thereof. The bars may be of any suitable length for the roofing job on which they are used. The cross rods are used to support a bracket 21. The bracket 21 is made up of metal strips. It comprises a central web portion 22, a cross bar 23, a cross bar 24, an upper hook 25, two lower diagonal bars 26 and 27, a bar 28 extending upward from the diagonal bars and feet 29 and 30 at the lower ends of the diagonal bars 26 and 27. The web portion 22 has ears 31 near its upper end to which a platform supporting bar 32 is secured. This platform supporting bar is also secured by a bolt 33 to the bar 28. It will be noted that the bar 28 has a series of holes 34 therein so that the angle of the bar 32 may be adjusted. The bar 28 also has a shoulder 35 near the upper end and an adjustable shoulder 36 adjacent to the bar 28. The adjustable shoulder comprises a short strip of metal that is clamped to the bar 32, by a bolt 37 that extends through an elongated slot 38 in the bar 32. The web portion 22 has two pivoted hook members 39 and 40 mounted therein. These hook members are adapted to engage the cross rods 41 to keep the bracket in place.

Near its lower end the carriage has a cross bar 42 fixed therein. This cross bar carries two adjustable rollers 43 and 44 which are similar in all respects to the rollers 18 and 19, and which are mounted by like adjustable stems. In addition to the rollers the cross bar 42 carries two adjustable pins 45 and 46. The pins are threaded in the cross bar 42 so that they can be raised and

lowered. The reason for providing the pins and rollers in this adjustable fashion is to permit the operator to raise a pin or roller out of the way while he is placing a shingle or other roofing element on the roof at that particular point. The carriage is so open in construction that it is possible to nail the roofing on either side of the bars 11 and 12 and between the bars without difficulty.

A set of falls 47 is provided for each carriage. The set consists of two multiple pulleys 48 and 49 with rings 50 and 51 for attaching them to the hooks 16 and 25, and a rope 52 threaded throughout the pulleys in the usual fashion.

In some cases it is desirable to suspend a similar carriage from one or both of the carriages on a roof for working on the side or end wall of a building. In order to utilize the carriage in this fashion, I provide a bracket 53. This bracket comprises a flat metal body portion having four down turned projections 54 to engage over the sides of the cross bars 11 and 12. Near the upper end of the bracket 53 there is an opening 55 and a hook 56 mounted to operate in this opening. The hook is pivoted by a pin 57 to an ear 58 on the bracket. The hook is adapted to engage the cross bars 41 so as to secure the bracket in a desired position on the carriage. The bracket 53 has a socket member 59 securely mounted thereon near its lower end. This socket member is so fastened that it may support one of the hooks 15 for suspending a carriage at the edge of the roof.

This stage operates from the roof, the two carriages being sustained by the bridged hooks, which provide, for both vertical and roof operations, the positive safeguard to future stage security.

Now to outline briefly the manner of operating the stage, I will describe its use in shingling. First the carriages are mounted on the roof and the falls are used to draw the brackets 21 up away from the lower edge. By using the hook holding brackets 53 and additional carriages suspended from them, the initial work at the lower edge of the roof is accomplished, from the chalk line to a point above the cross bar 42. The pins 45—46 and the rollers 43—44 are raised singly as the material is laid under them then lowered and re-set, hand tight to support the carriage spaced from the roof. When the lower shingling is done then the brackets 53 are removed, the brackets 21 are brought down to their lowermost position. Now the stage is ready for the shingling to advance unobstructed. As the work goes forward the brackets 21 are raised from time to time by the falls 47. The hooks 39 and 40 will drop over the cross rods and secure the brackets in each position advanced to.

Thus from the beginning I have, by these novel means, eliminated the street staging as the preliminary means to all roof work, also the advancing of the dangerous roof cleat with its continual placing and later removal, all of which make no contribution to the actual work in hand.

Now while the stage provides the better way vertically, it further lends itself to ideal conditions for roof work, due to the metal brackets 21 operated by the falls. These brackets have hard rubber feet 29 and 30, that are curved at each end to assure an even support and easy operation.

The two carriages may be readily moved to new positions, the attached cross bars 17 and 42 being equipped with rollers to insure easy movement. The two carriages provide two hooked ladders which may be used for vertical operations by removal of the cross bars 17 and 42.

This specification but briefly outlines the many advantages this stage offers. It is a means not only to simplify and make more easy and complete the work progress but, from the very nature of its most simplified construction and operation, it does give full assurance to the operator of improved results and of greater safety in his work.

Having thus described my invention, I claim:

1. A construction stage comprising a pair of spaced apart carriages, a hook affixed to one end of each carriage, support rollers mounted on the carriages adjacent the ends thereof for holding the carriages spaced from a roof, on which they rest, a stage bracket on each carriage, cross bars on the carriages, hooks pivoted on the brackets for engaging the cross bars and holding the brackets in adjusted position, and take-up falls secured to the brackets and to the hook carrying ends of the carriages for moving the brackets upwardly along the roof.

2. A construction stage comprising a pair of spaced apart carriages, a hook affixed to one end of each carriage, support rollers mounted on the carriages adjacent the ends thereof for holding the carriages spaced from a roof, on which they rest, adjustable support pins mounted on the carriages adjacent to the support rollers at the ends thereof opposite the hook carrying ends, said pins being spaced apart and spaced from the adjacent rollers in a direction crosswise of the carriages, a stage bracket on each carriage, cross bars on the carriages, hooks pivoted on the brackets for engaging the cross bars and holding the brackets in adjusted position, and take-up falls secured to the brackets and to the hook carrying ends of the carriages for moving the brackets upwardly along the roof.

3. A construction stage comprising a pair of like carriages adapted to be mounted on a roof in spaced apart relation to support a platform therebetween for easy adjustment along the carriages from the lower edge to the top of the roof, each carriage comprising a top hook for securing the carriage at the roof top, a frame consisting of side bars and cross rods extending downwardly from the hook, a supporting cross bar secured to the frame adjacent the hook, means mounted on the cross bar for supporting the upper end of the frame above the roof surface, a second cross bar secured to the frame adjacent the end thereof opposite to said hook, and a plurality of supports on said cross bars for holding the said ends of the frame above the roof, said supports being adjustable individually in the cross bars away from the roof to permit laying of shingles, etc., thereunder.

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