Sept. 29, 1959 D. F. DAKIN 2,906,485

SCAFFOLD BRACKETS

Filed May 21, 1958 2 Sheets-Sheet 1

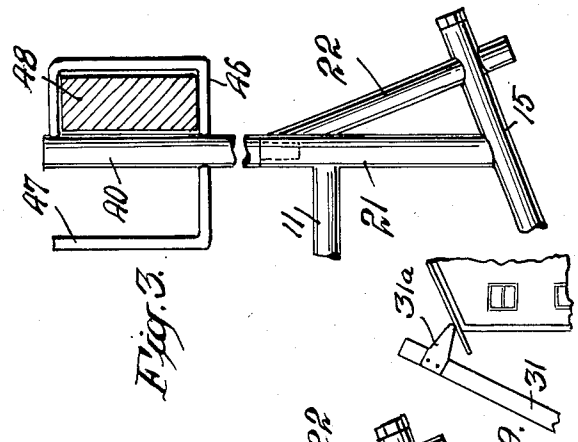


Fig. 3.

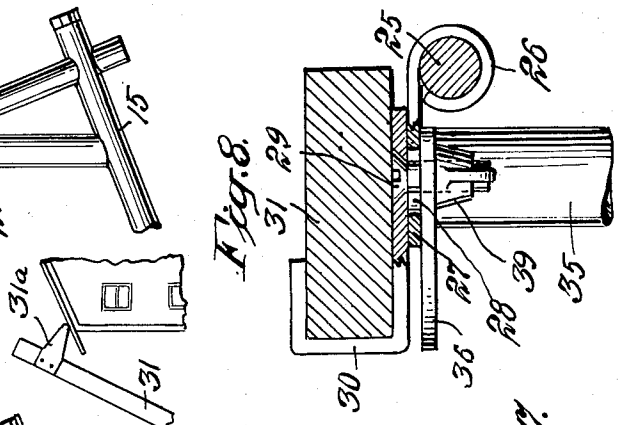


Fig. 8.

Fig. 9.

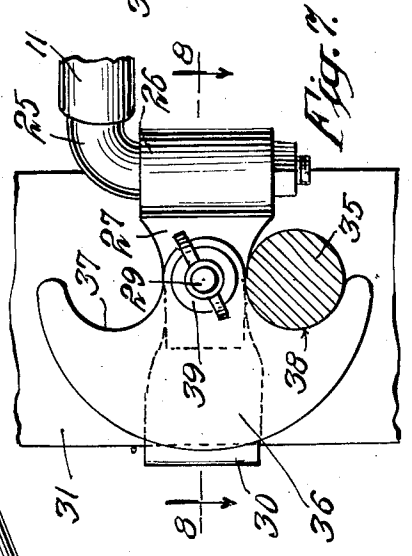


Fig. 7.

Fig. 1.

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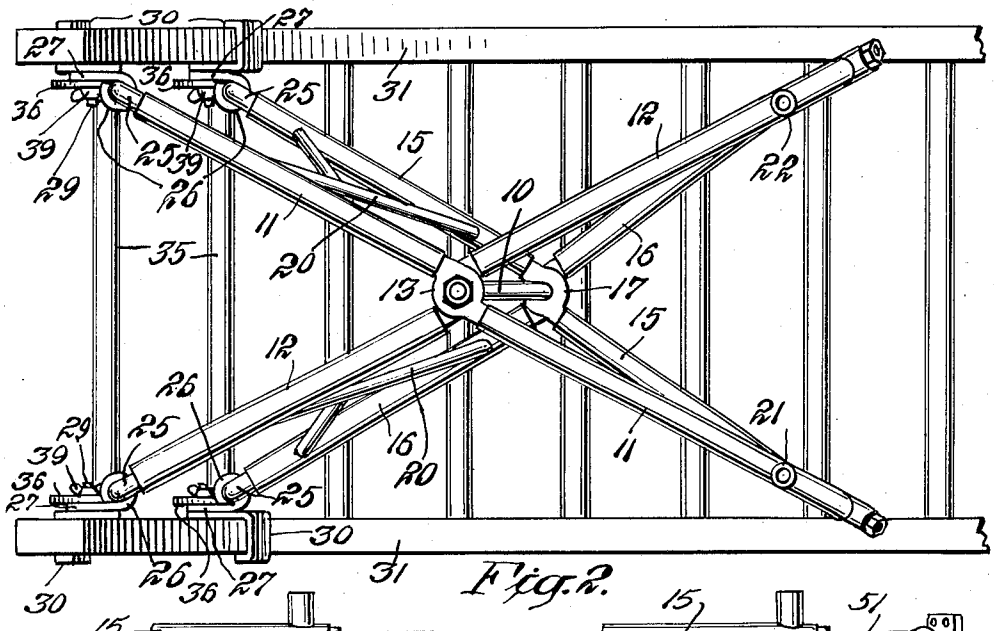


Fig. 2.

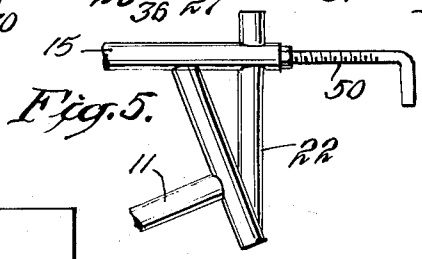


Fig. 5.

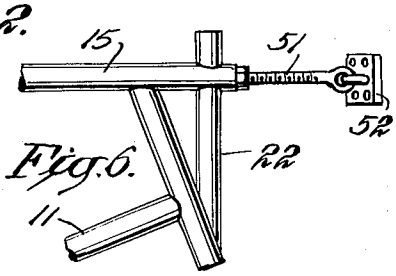


Fig. 6.

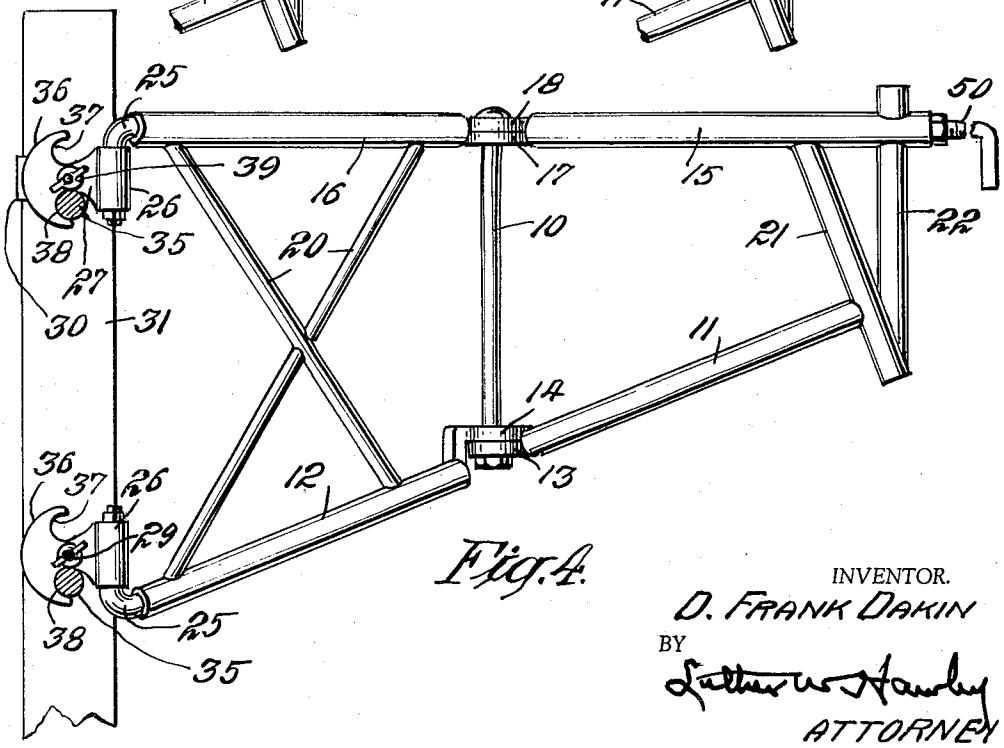


Fig. 4.

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SCAFFOLD BRACKETS

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5 Claims. (Cl. 248—238)

This invention relates to brackets for use with ladders in construction and repair work and particularly to brackets designed for attachment to ladders for supporting scaffold planks.

Scaffolds are commonly supported on ladders disposed in slanted position and when so disposed the bracket must be so designed as to hold the scaffold horizontal.

However, if the ladder is supported in vertical position, as by hooks or supporting rods connected to the cornice or roof, room is provided between the ladder and building wall for the scaffold bracket, or the scaffold bracket can be secured outside of the ladder instead of between the ladder and the wall, provided the ladder is properly and firmly held in position.

This invention has for its salient object to provide a scaffold bracket and means for connecting the bracket to a ladder, so designed that the same bracket and same ladder clamps or connection can be used whether the ladder is disposed in vertical or slanted position.

Another object of the invention is to provide a scaffold bracket that is so constructed that it can be made from standard tubular members or pipe and a bracket that is simple and practical in construction and can be economically manufactured and fabricated.

Another object of the invention is to provide means in connection with a ladder scaffold bracket adaptable for securing the bracket rails of varying sizes and widths.

Another object of the invention is to provide a bracket of the character described with means for locking the bracket to the rungs of the ladder.

Another object of the invention is to provide a bracket of the character described with means for securing the bracket to a fixed structure of a building and for holding the ladder in a vertical position.

Further objects of the invention will appear from the following specification taken in connection with the drawings which form a part of this application, and in which:

Fig. 1 is a side elevation of a scaffold bracket constructed in accordance with the invention and mounted on a slanting ladder;

Fig. 2 is a top plan view of the structure shown in Fig. 1;

Fig. 3 is a detail elevational view of the outer end of the bracket shown in Fig. 1, showing a guard rail mounted thereon;

Fig. 4 is an elevational view of the scaffold bracket mounted on a vertical ladder;

Fig. 5 is a detail elevational view of the outer end of the bracket shown in Fig. 4, showing an adjustable hook for securing the bracket to a fixed part of a building structure;

Fig. 6 is a view similar to Fig. 5 but showing another attaching device for attaching the bracket to the structure of the building;

Fig. 7 is an enlarged elevational view showing the mechanism for mounting the bracket on a ladder rail;

Fig. 8 is a sectional elevation taken substantially on line 8—8 of Fig. 7, looking in the direction of the arrows; and

Fig. 9 is a detail elevation, broken away, showing a modified construction.

In the particular embodiment of the invention illustrated, the scaffold bracket is formed of two frames which are pivoted to each other intermediate their ends upon a pivot bolt **10**. Each of the frames consists of upper frame members **11** and **12** intermediate the ends of which there are secured pivot washers or hubs **13** and **14**.

The pivoted frames also comprise lower frame members **15** and **16** and intermediate the ends of these members there are secured pivot washers or hubs **17** and **18**. The washers **13**, **14**, **17** and **18** are mounted on the pivot pin **10**.

The frame members **11** and **12** are connected to the corresponding lower frame members **15** and **16** by cross braces **20** and at their other ends the frame members **11** and **12** are connected to the other ends of the frame members **15** and **16** by tubular members **21** and **22**.

It will be understood from the foregoing description that the frames of the bracket can be swung on the pivot pin **10** to open position, as shown in Fig. 2, or to closed position with relation to each other.

The frame members above described are made of tubular material or pipe and at their inner ends each frame member has threaded thereinto an angular hook **25** on which is mounted a loop **26** of a plate **27** having a slot **28** intermediate the ends thereof. A bolt **29** extends through the slot in the plate **27** and adjustably secures to the plate a channeled member **30** which embraces one face and the sides of a ladder rail **31**.

The hook **25** is threaded on the end and a lock nut may be threaded on the end of the hook to hold the hooks in adjusted position.

When the scaffold bracket is to be mounted on a slanting ladder, as shown in Fig. 1, the channeled member **30** is swung to the position shown in Fig. 8 and embraces the underside of the ladder rail **31**. As shown in Fig. 7, the upper and lower edge of the plate having the channel **30** thereon and of the plate **27** are arcuate in shape and are adapted to rest on a ladder rung **35**.

If desired, the upper end of the slanting ladder may have projetcions **31***a* on the rails **31** to hold the top of the ladder away from the wall or roof of the building (see Fig. 9).

In order to secure the plate of the channel **30** and the plate **27** in position on the rung and to prevent displacement thereof, the bolt **29** extends through a plate **36** having arcuate portions **37** and **38** adapted to hook around the rung of the ladder, as shown in Fig. 1. A wing nut **39** secures the locking plate **36**, plate **27**, and the plate of the channel member **30** tightly together when they are mounted on the ladder in the manner shown in Fig. 1.

The channel member **30** which is secured to the lower frame member is swung from the position shown in Fig. 8 through 180° so that the channel will embrace the inner side of the ladder rail.

The ladder bracket, as shown in Fig. 1, has supported in the tubular member **21**, an upright post **40**, on the upper end of which is formed a loop **46** or an L-shaped bracket **47** for supporting a guard rail **48**. The scaffold blanks are mounted on the upper frame members **11** and **12** in the manner shown in Fig. 1. The tubular members **21** or **22** can be used to support a post on which a hoist can be mounted.

When the bracket is mounted on a vertical ladder, as shown in Fig. 4, the bracket and ladder are supported

on some fixed part of the building structure in connection with which the ladder and scaffold are to be used. In the detail view shown in Fig. 5, the outer ends of the frame members **11** and **12** have threaded thereinto hooks **50** which can be threaded outwardly a sufficient extent to extend over a windowsill, or if desired, to extend into openings in the roof. In this manner the bracket will be supported horizontally and the ladder will be spaced away from the house and be held in vertical position. Under these circumstances the guard rail at the end of the bracket remote from the ladder will not be needed, but in case a guard rail is needed it can be mounted in one of the tubular members **22**.

Any suitable means can be used for securing the bracket to the building structure and, if desired, instead of using the hooks, securing means, such as that shown in Fig. 6, can be utilized. In this figure there are shown threaded bolts **51** on the outer end of which are pivotally mounted plates **52** which can be secured to the roof or other fixed part of the building structure.

From the foregoing description and from the illustration in Figs. 1 and 4 particularly it will be noted that the bracket, when connected to a vertical ladder, is inverted from the position shown in Fig. 1 in which the bracket is mounted on a slanting ladder.

Although certain specific embodiments of the invention have been particularly shown and described, it will be understood that the invention is capable of modification and that changes in the construction and in the arrangement of the various cooperating parts may be made without departing from the spirit or scope of the invention, as expressed in the following claims.

What I claim is:

1. A scaffold bracket comprising a pair of frame members hinged together intermediate their ends, each frame member comprising an upper member and a lower member inclined upwardly relatively to the upper member and from one end toward the other end thereof, means at the more widely spaced ends of the upper and lower members of each frame member for securing the bracket to the rails of a ladder, said means including pivoted means to engage and embrace rungs of the ladder.

2. A scaffold bracket comprising a pair of frame members hinged together intermediate their ends, each frame member comprising an upper member and a lower member inclined upwardly relative to the upper member and from one end toward the other end thereof, means at the more widely spaced ends of the upper and lower members of each frame member for securing the bracket to the rails of a ladder, said means including pivoted locking means to engage and embrace rungs of the ladder, and means at the more closely spaced ends of said members for securing said end of the bracket to a fixed structure to which the bracket is to be secured.

3. A scaffold bracket comprising a pair of frame members hinged together intermediate their ends, each frame member comprising an upper member and a lower member inclined upwardly relative to the upper member and from one end toward the other end thereof, means at the more widely spaced ends of the upper and lower members of each frame member for securing the bracket to the rails of a ladder, said means including adjustable means to engage and embrace rungs of the ladder, and adjustable means at the more closely spaced ends of said members for securing said end of the bracket to a fixed structure to which the bracket is to be secured.

4. A scaffold bracket comprising a pair of frame members hinged together intermediate their ends, each frame member comprising an upper member and a lower member inclined upwardly relative to the upper member and from one end toward the other end thereof, means at the more widely spaced ends of the upper and lower members of each frame member for securing the bracket to the rails of a ladder, said means including pivoted means to engage and embrace rungs of the ladder, and means at the end of the bracket remote from the ladder securing means for supporting a guard rail.

5. A scaffold bracket comprising a pair of frame members hinged together intermediate their ends, each frame member comprising an upper member and a lower member inclined upwardly relative to the upper member and from one end toward the other end thereof, means at the more widely spaced ends of the upper and lower members of each frame member for securing the bracket to the rails of a ladder, said means including pivoted means to engage and embrace rungs of the ladder, and a plurality of means at the end of the bracket remote from the ladder securing means for supporting a guard rail whether the bracket is secured to a vertical ladder or to a slanting ladder.

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