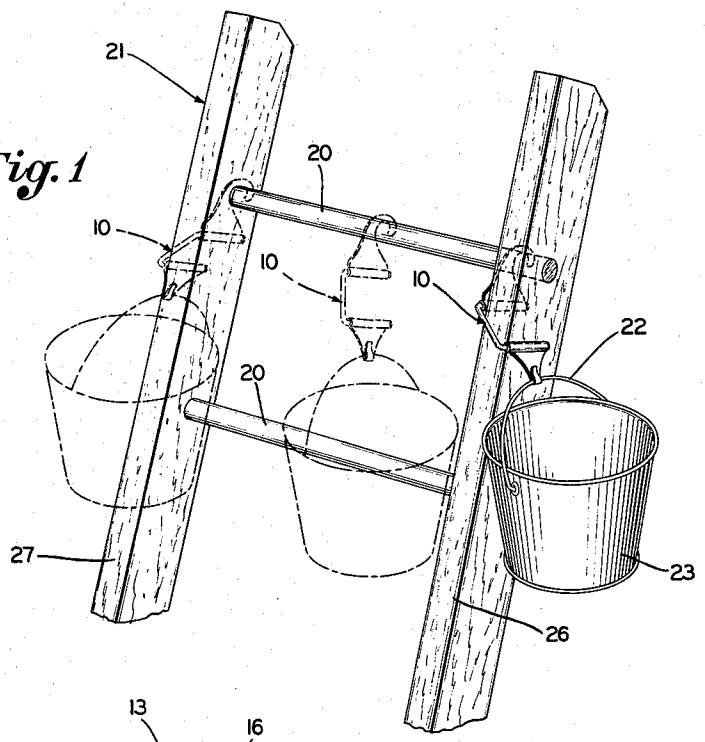
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HOOK CONSTRUCTION

Filed May 26, 1960

Fig. 1



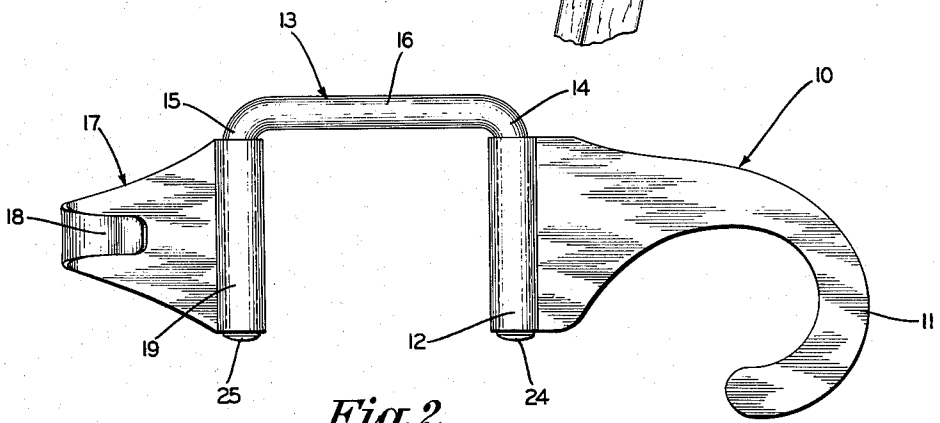


Fig. 2

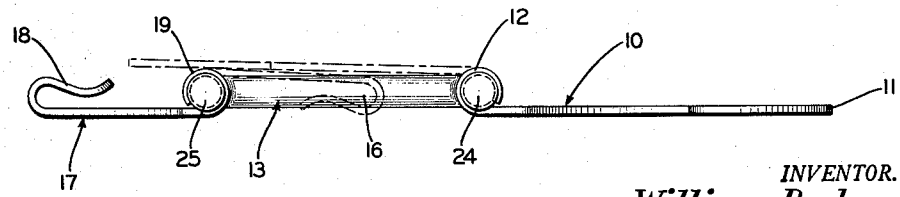


Fig. 3

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HOOK CONSTRUCTION

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My invention relates to improvements in hook construction, and more specifically to a ladder hook construction for supporting containers, such as buckets and paint cans, on the rungs of ladders in a new and unique fashion. Even more specifically, my invention relates to a hook construction for supporting containers, such as buckets and paint cans, on the rungs of ladders in such a manner that the bucket or paint can is positioned supported at the outer side of a side rail of the ladder in a secure manner.

Many prior constructions of hooks have been used for supporting various types of receptacles on the rungs of ladders, for instance for the purpose of picking fruit from trees and painting various types of structures. One such early and commonly used form of construction is to fashion a double hook from heavy wire, that is, in a generally S-shape, whereby the upper hook engages over a rung of a ladder and the lower hook may be engaged by the bale or handle of a container, thereby supporting the container on ladder in a position to be used.

The prime difficulty with this form of ladder hook is that the container is supported on the rung of the ladder between the side rails thereof. Thus, the person using the container must stand directly over the same and it is difficult and awkward to gain access to the inner confines of the container.

Various forms of improvements have been provided over this simple, very early, form of hook construction and certain of these have attempted to support the container outwardly adjacent one of the side rails of the ladder. For instance, one such improved form is fabricated from a single piece of metal, and is provided with a hook for engaging a rung of the ladder, a generally U-shaped portion of set dimensions connected to the hook and engaging over a side rail of the ladder, with finally a straight laterally extending member connected to the U-shaped member laterally outwardly of the ladder side rail for supporting the container through engagement with the bale or handle thereof.

One major difficulty with this prior improved form of hook construction is that side rails on ladders have various lateral thickness, depending on the material from which the ladder is constructed and also depending on the length of the ladder. Thus, unless this improved hook construction is fabricated for a particular construction of ladder, the U-shaped member thereof will not properly engage the side rail of the ladder and the container will not be securely supported at the side of the ladder.

Another major difficulty with this prior improved form of hook construction is that this construction is a single purpose hook, that is, it can be used merely for the purpose of attempting to support a container laterally outwardly of the side of the ladder. It, therefore, is a single purpose hook useable for one specific purpose and is otherwise not useable for supporting containers in other positions, such as the position in which containers are supported by the old conventional S-shaped hook.

Finally, another major difficulty with this improved form of hook construction is that it is formed rigidly in one piece extending fully and is therefore extremely bulky. For this reason, this prior improved form of hook construction must be carried separately and cannot be conveniently carried in a workman's pocket for use as desired.

It is, therefore, a general object of the present invention to provide an improved hook construction for use with ladders and the like which overcomes the difficulties and disadvantages of the prior constructions as discussed above.

It is a primary object of the present invention to provide a hook construction for ladders and the like which may be used to support various forms of containers laterally outwardly of the side rail of a ladder in order to place the container in a convenient position for use.

It is a further object of the present invention to provide a hook construction for ladders and the like which automatically adjusts for various lateral thickness of side rails on the ladders so that, despite the size of the particular ladder side rail, the container is always securely and safely supported thereon.

It is still a further object of the present invention to provide a hook construction for ladders and the like which is universally useable, that is, for securely and safely supporting containers laterally outwardly of either side rail of a ladder or between the ladder side rails as desired.

It is also an object of the present invention to provide a hook construction for ladders and the like which may be conveniently folded to a flat minimum size for easily being placed in a workman's pocket for use when desired.

Finally, it is an object of the present invention to provide a hook construction for ladders and the like which satisfies all of the above objects in a simple and efficient manner, yet may be easily fabricated, and provided for use at a nominal expense.

These and other objects are accomplished by the parts, constructions, arrangements, combinations and subcombinations comprising the present invention, the nature of which is set forth in the following general statement, a preferred embodiment of which—illustrative of the best mode in which applicant has contemplated applying the principles—is set forth in the following description and illustrated in the accompanying drawings, and which is particularly and distinctly pointed out and set forth in the appended claims forming a part hereof.

In general terms, the improved hook construction for use on ladders and the like comprising the present invention may be stated as including, a rung hook adapted for engagement generally longitudinally over a general laterally extending rung of a ladder, adjacent one of the generally longitudinally extending side rails of the ladder. This rung hook is pivotally connected to generally U-shaped connection means, in the form of a U-shaped connection member having spaced legs and a connecting portion extending between said legs. The rung hook is pivotally connected to one of the connection member legs for pivotal movement at least in a direction toward and away from the ladder side rail, and the connection member may be positioned with one leg adjacent each of the inner and outer sides of the ladder side rail with the connecting portion adjacent a front face of this side rail.

Still further engagement means is operably connected to the connection member leg adjacent the side rail outer side, that is, this engagement means is connected to the connection member leg opposite from the connection member leg to which the rung hook is pivotally connected, for engaging a container supporting the same at the ladder side rail outer side. This connection means is preferably comprised of a second hook which may be formed as a part of the connection member leg but is preferably pivotally connected to the connection member leg for pivotal movement toward and away from the ladder side rail outer side.

More specifically, the rung hook is preferably generally sheet-like and is wrapped laterally around the connection

member leg to provide the pivotal connection therebetween. Further, more specifically the second hook is preferably likewise formed sheet-like and is also preferably wrapped around the other connection member leg to provide the pivotal connection therebetween. Finally, more specifically the second hook preferably extends generally laterally, that is, at generally a right angle to the plane of extension of the rung hook.

By way of example, an embodiment of the improved hook construction for use on ladders and the like of the present invention is illustrated in the accompanying drawings forming a part hereof, wherein like numerals indicate similar parts through the several views, and in which:

FIG. 1 is a perspective view showing the hook construction of the present invention in full lines supporting a bucket laterally outwardly adjacent the right-hand side rail of a ladder, with the support of this bucket by the hook construction being shown intermediate the rung of the ladder between the side rails thereof and laterally outwardly adjacent the left-hand side rail thereof in dot-dash lines;

FIG. 2, an enlarged top plan view of the hook construction of the present invention; and

FIG. 3, a side elevation of the hook construction of the present invention shown in full lines in extended position and in dot-dash lines in folded position.

As shown in the drawings, the hook construction of the present invention preferably includes a rung hook, generally indicated at **10**, having the hook portion **11** and connector portion **12**. As shown, the rung hook **10** preferably is formed generally sheet-like and is merely wrapped at the connector portion **12** to form a hollow generally cylinder shape.

A connection member is generally shown at **13** and is generally U-shaped, having the spaced leg portions **14** and **15** connected by the connecting portion **16**. The connection member **13** is preferably formed from conventional rod material so that the leg portions **14** and **15** thereof are generally cylindrical in shape.

The engagement hook is generally indicated at **17** having a hook portion **18** and a connector portion **19**. This engagement hook **17**, similar to the rung hook **10**, is also preferably formed generally sheet-like with the connector portion **19** being wrapped in hollow generally cylindrical shape.

One major difference, however, between the rung hook **10** and the engagement hook **17** is that the respective hook portions **11** and **18** are formed differently, that is, preferably extending in different directions and of different shape. Hook portion **11** of the rung hook **10** is of a size adapted for engagement over a rung **20** of a ladder **21** and is formed extending in the same general plane as the connector portion **12** of this rung hook. The hook portion **18** of the engagement hook **17**, however, is formed of a smaller size, adapted for engagement with the bale **22** of a container, such as the bucket **23**, and is formed extending normal to or generally perpendicular to the connector portion **19** of this engagement hook.

In assembly of the hook construction of the present invention, once the rung hook **10** and connection member **13** have been formed, it is merely necessary to insert the connection member leg portion **14** telescoped through the rung hook connector portion **12**, with the end **24** of leg portion **14** then being enlarged, as shown, in any usual manner to retain rung hook **10** and connection member **13** pivotally assembled. The engagement hook **17** is telescopically assembled with the connection member leg portion **15** in the same manner, with the end **25** of leg portion **15** likewise being enlarged in any usual manner to retain the engagement hook **17** and connection member **13** pivotally assembled, as shown.

Thus, as shown in the drawings, when the hook construction of the present invention in its preferred form is in flat fully extended position, the rung hook **10** extends in one plane and the engagement hook **17** extends in this same general plane, with both of these hooks being pivotal normal to this plane through the pivotal connections with the connection member **13**. Furthermore, the hook portion **11** of the rung hook **10** opens in this same plane, whereas the engagement hook **17** preferably opens normal to this plane.

With the preferred form of the hook construction of the present invention engaged over the rung **20** of a ladder **21** in its usual working position, for instance as shown in the center of FIG. 1 intermediate the length of the rung **20**, the rung hook **10** opens rearwardly and downwardly and extends generally longitudinally, being connected to the connection member leg **14** for lateral pivotal movement. The U-shaped connection member **13** opens rearwardly and the leg portion **15** thereof is pivotally connected to the engagement hook **17** for lateral pivotal movement. Finally, the hook portion **18** of the engagement hook **17** preferably opens laterally.

As shown in FIG. 3 in dot-dash lines, in the preferred form of the hook construction of the present invention, the engagement hook **17** may be pivoted to assume a position within the confines of the connection member **13**, and then the rung hook **10** may be likewise pivoted to overlie and extend across both the engagement hook **17** and connection member **13**. Thus, in this folded position, the preferred form of the hook construction occupies a minimum of space and may be easily carried in the pocket of a workman for use as desired.

As is shown in FIG. 1 of the drawings, the hook construction of the present invention is universally useable for supporting a bucket or other container on a ladder at virtually any position. As shown, the hook construction may be used at the right-hand side of the ladder with the rung hook **10** engaged over the rung **20** of the ladder **21** inwardly adjacent the inner side of the right-hand side rail **26**, with the connection member **13** engaged over the right-hand side rail **26**, and with the engagement hook **17** adjacent the outer side of the right-hand side rail **26** and engaging the bale **22** of a bucket.

Furthermore, the hook construction, as illustrated at the center of FIG. 1, may be used as a straight double hook with the rung hook **10** engaged over the rung **20** and the connection member **13** and engagement hook **17** extending substantially straight downwardly to support bucket **23**. Finally, as shown at the left of FIG. 1, the rung hook **10** may be engaged over the rung **20** adjacent the inner side of the left-hand side rail **27**, with the connection member **13** engaged over the left-hand side rail **27**, and with the engagement hook **17** positioned adjacent the outer side of the left-hand side rail **27** engaged with the bale **22** of the bucket **23**.

Thus, with the hook construction of the present invention, a bucket or other container may be supported outwardly adjacent either side rail of a ladder or between the side rails of the ladder. Furthermore, when a container is being supported outwardly adjacent either of the side rails of the ladder, the connection member **13** is free to pivot with reference to the rung hook **10** and engagement hook **17**, and securely engage and wedge the particular side rail over which it is positioned. This not only makes the hook construction virtually universally useable for any width of ladder side rail, but at the same time firmly engages the particular side rail to securely support the container.

It is further pointed out, as is clearly shown in FIG. 1, when a container, such as the bucket **23**, having a pivotally connected bale, such as the bale **22**, is supported outwardly adjacent either of the ladder side rails, the bale **22** is pivoted toward this side rail, thereby exposing a large percentage of the confines of the bucket **23**. This provides greatly increased convenience for using the bucket **23** in view of the convenient entry into the same without interference from the bale **22**.

Although, the preferred embodiment of the hook construction of the present invention is illustrated and de-

scribed as having the rung hook **10** and engagement hook **17** formed of sheet-like wrapped construction, and the connection member **13** formed merely of bent cylindrical rod, it is obvious that many variations can be made in the construction without departing from the broad principles of the present invention. It should be understood, therefore, that it is not intended to limit the principles of the present invention to the exact particular form shown.

In the foregoing description, certain terms have been used for brevity, clearness and understanding but no unnecessary limitations are to be implied therefrom, because such words are used for descriptive purposes herein and are intended to be broadly construed.

Moreover, the embodiment of the improved construction illustrated and described herein is by way of example and the scope of the present invention is not limited to the exact details of construction shown.

Having now described the invention, the construction, operation and use of preferred embodiment therefor, and the advantageous new and useful results obtained thereby, the new and useful construction and reasonable mechanical equivalents thereof obvious to those skilled in the art are set forth in the appended claims.

I claim:

1. Hook construction for use on a ladder having longitudinally extending laterally spaced side rails joined by longitudinally spaced laterally extending rungs, including a rung hook engageable generally longitudinally over a run adjacent an inner side of a side rail, generally U-shaped connection means having spaced legs and a connecting portion for engagement over said side rail with the legs adjacent said inner side and an outer side of said side rail and the connecting portion adjacent a front face of said side rail, pivot means connecting the rung hook to the connection means leg adjacent said side rail inner side for pivotal movement at least in a direction toward and away from said side rail, an engagement hook having an upwardly opening hook portion for engaging a container, and second pivot means connecting the engagement hook to the connection means leg adjacent said side rail outer side for pivotal movement at least in a direction toward and away from said side rail; whereby, the weight of the container will wedge the connection means legs against the side rail sides.

2. Hook construction for use on a ladder having longitudinally extending laterally spaced side rails joined by longitudinally spaced laterally extending rungs, including a sheet-like rung hook extending generally longitudinally and having a hook portion engageable generally longitudinally over a rung adjacent an inner side of a side rail, generally U-shaped connection means having generally cylindrical spaced legs and a connecting portion for engagement over said side rail with the legs adjacent said inner side and an outer side of said side rail and the connecting portion adjacent a front face of said side rail, the rung hook having a generally hollow cylindrical wrapped portion telescoped pivotally over the connection means leg adjacent said side rail inner side for pivotal movement toward and away from said side rail, and engagement means operably connected to the connection means leg adjacent said side rail outer side for engaging a container; whereby, the weight of the container will wedge the connection means legs against the side rail sides.

3. Hook construction for use on a ladder having longitudinally extending laterally spaced side rails joined by longitudinally spaced laterally extending rungs, including a sheetlike rung hook extending generally longitudinally and having a hook portion engageable generally longitudinally over a rung adjacent an inner side of a side rail, generally U-shaped connection means having generally cylindrical spaced legs and a connecting portion for engagement over said side rail with the legs adjacent said inner side and an outer side of said side rail and the connecting portion adjacent a front face of said side rail, the rung hook having a generally hollow cylindrical wrapped portion telescoped pivotally over the connection means leg adjacent said side rail inner side for pivotal movement toward and away from said side rail, a generally sheetlike engagement hook having an upwardly opening hook portion for engaging a container, the engagement hook being wrapped above the hook portion in a generally hollow cylindrical connection portion, and the engagement hook connection portion being pivotally telescoped over the connection means leg adjacent said side rail outer side for pivotal movement toward and away from said side rail; whereby, the weight of the container will wedge the connection means legs against the side rail sides.

4. Hook construction as defined in claim 3 in which the hook portion of the engagement hook extends and opens upwardly generally normal to the side rail outer side.

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