

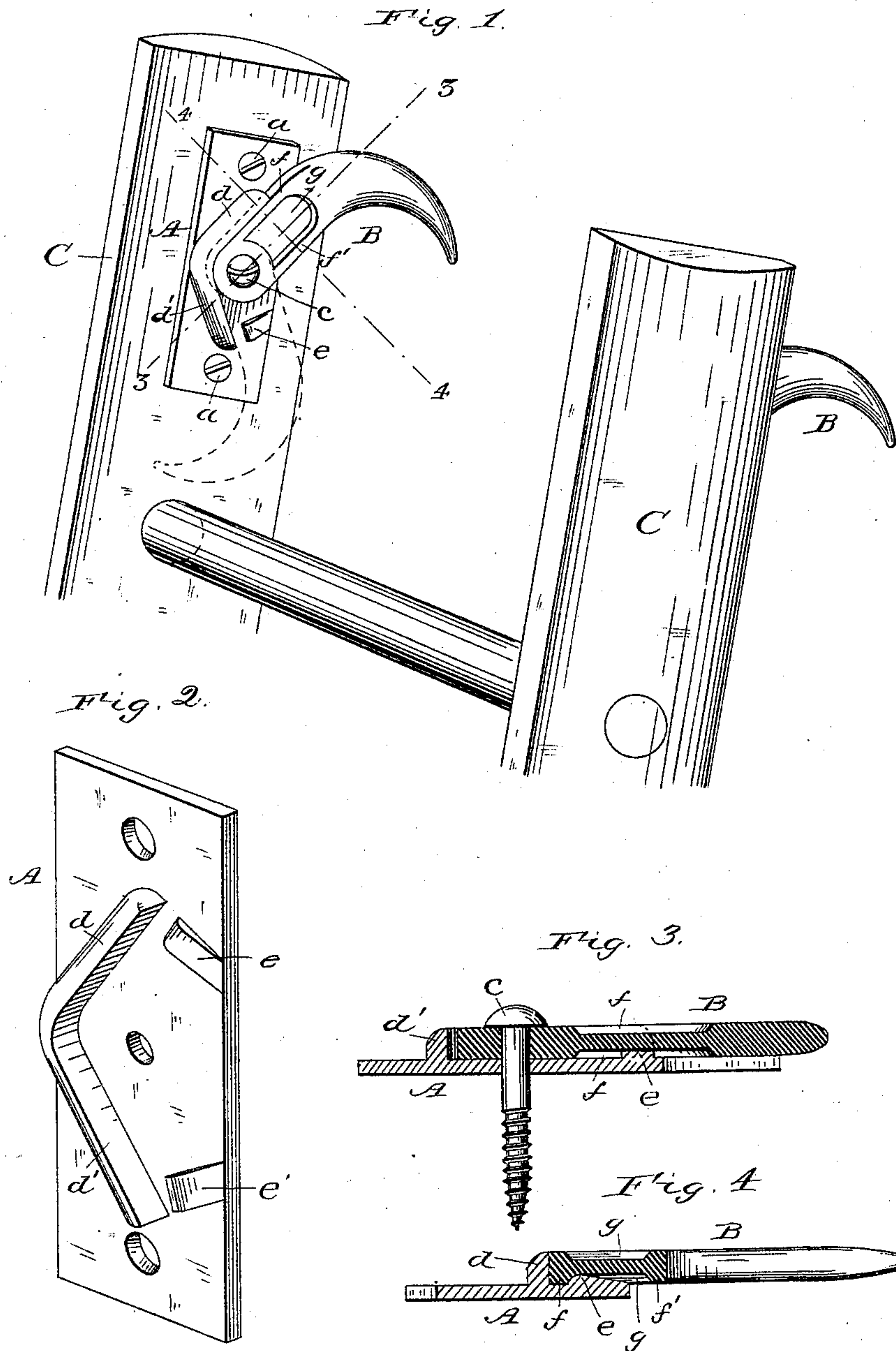
(No Model.)

J. F. MANAHAN.

LADDER HOOK.

No. 285,637.

Patented Sept. 25, 1883.



witnesses:  
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# UNITED STATES PATENT OFFICE.

JOHN F. MANAHAN, OF LOWELL, MASSACHUSETTS.

## LADDER-HOOK.

SPECIFICATION forming part of Letters Patent No. 285,637, dated September 25, 1883.

Application filed July 27, 1883. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN F. MANAHAN, of Lowell, in the State of Massachusetts, have invented certain new and useful Improve-  
5 ments in Ladder-Hooks, of which the following is a specification.

My invention has relation to hooks designed to be applied to the upper end of a ladder for the purpose of enabling the ladder to take a  
10 secure hold on the roof or other object to which it reaches. It has been usual heretofore to employ hooks for this purpose. It is my object to form and arrange the hooks so that they may be either opened to project beyond  
15 the ladder in a position to catch onto the object to which the ladder is to be held, or closed up out of the way within the compass of the ladder structure, and to provide means whereby they will be retained in either position. I  
20 also construct the hooks—each of which consists of a hook proper and a base-plate to which the hook is pivoted—so that they can be applied indifferently to either the right or the left hand side piece of the ladder. The  
25 hook may thus be not improperly considered reversible in a double sense, for it can be applied to either side piece of the ladder, or changed from one to the other indifferently, and, when applied, can be opened and shut at  
30 pleasure.

The nature of my invention and the manner in which the same is or may be carried into effect can best be explained and understood by reference to the accompanying drawings, in  
35 which—

Figure 1 is a perspective view of the upper end of a ladder provided with hooks in accordance with my invention. Fig. 2 is a view of the base-plate detached. Fig. 3 is a section of  
40 the hook on line 3 3, Fig. 1. Fig. 4 is a section of the hook on line 4 4, Fig. 1.

The hook consists of two parts—the base-plate A and the hook proper, B. The base-plate is preferably applied to the flat inner face  
45 of the side piece, C, of the ladder, at or near the top, and is there held by screws *a* or other suitable means. To it is pivoted, at *c*, the hook proper, the pivot-pin *c* preferably screwing through the base-plate into the side piece, C.  
50 The base-plate is provided with two stops—the

one to meet the hook when open, the other to meet it when shut. These stops may be variously formed. I prefer to make them in one casting with the base-plate, as in the drawings, where they are shown as consisting of two ribs  
55 or flanges, *d d'*, which project from the face of the base-plate, and meet to form an obtuse angle in rear of the pivot or hub of the hook. Flange *d* constitutes a stop for the open hook, and is so positioned that the rear edge of the  
60 hook, when the latter is fully open, will rest and bear against said flange, as indicated in full lines in Fig. 1. When, on the contrary, the hook is turned down and shut, its opposite edge will bring up against the lower flange, *d'*,  
65 as indicated in dotted lines in Fig. 1. In order to make the base-plate capable of being applied to either side piece, C, indifferently, flange *d'* has precisely the same position below relatively to the pivot *c* that flange *d* has above.  
70 Consequently the plate can be set either end up, flanges *d d'* acting, the one as a stop for the open hook and the other as a stop for the closed hook, according to the position of the plate. If, for instance, the plate on the inner  
75 face of the left-hand side piece, C, were shifted to a corresponding position on the right-hand side piece, then the flange *d'* would be above and the flange *d* below the pivot *c*. The hook proper, when open, projects beyond the ladder  
80 in position to catch and hold onto any object to which it is applied, and when closed it is contained within the compass of the ladder and is entirely out of the way, as indicated in Fig. 1.

I combine with the hook means—which I term a “double detent” or catch—whereby the hook proper can be retained securely in either its open or its shut position. A double  
85 detent or catch having this function can obviously be made and applied in a variety of ways. I prefer a construction and arrangement which will permit the double detent to be cast or formed solidly in one piece with the  
90 hook, and such an arrangement is illustrated in the drawings. Upon the outer or exposed face of the base-plate are cast or formed two  
95 lugs or projections, *e e'*—the one near the top of the upper stop-flange, *d*, the other near the bottom of the lower stop-flange, *d'*, and both  
100



of them on that portion of the base-plate over which the hook proper moves. On the contiguous face of the hook proper are two ledges or flanges,  $f f'$ , formed in this instance by forming a central recess,  $g$ , in the face of the hook proper. The flanges  $f f'$  and lugs  $e e'$ , in connection with stop-flanges  $d d'$ , constitute the double detent or catch. In bringing the hook proper to open position (shown in full lines in Fig. 1) the flange  $f$  meets and rides or snaps over the lug  $e$  just at the time the hook brings up against the stop-flange  $d$ , and thus the hook is held securely by the flange  $d$  on one side and the lug  $e$  on the other side of the flange  $f$ . When the hook is shut, its other flange,  $f'$ , snaps over the lug  $e'$ , and it is thus virtually locked in place by the parts  $d' e'$ . The relative position of the lugs  $e e'$  with respect to their respective stop-flanges  $d d'$  is the same, with a view to preserving the reversible character of the base-plate, and for the same reason the hook proper is formed on each face with flanges  $f f'$  and recess  $g$ , which permits the hook proper to be applied to a base-plate on either side piece of the ladder. All parts of the hook are thus reversible and interchangeable and can be applied indifferently to either side of the ladder. There is practically sufficient spring in the hook proper and its pivot to permit the hook to snap over the lugs on the base-plate, both the lugs and the hook-flanges being beveled at their meeting ends to facilitate this operation. If, however, it be desired, some special means—in the nature of a rubber or spring washer on the pivot-pin  $c$  between its head and the hook, or some other device having a similar function—can be employed to allow the hook to rise. This, however, would be a nicety, not a necessity, and would add somewhat to the expense of manufacture.

The device in its present shape is not only entirely effective, but is extremely simple, consisting of two castings, which can be manufactured quickly, easily, and at small expense. 45

Having described my improvements, what I claim as new and of my own invention is—

1. A ladder-hook comprising a base-plate, a hook proper pivoted to said base-plate, and a double detent or catch for retaining or locking the hook proper in either its open or its closed position, substantially as hereinbefore set forth. 50

2. The combination, with the side pieces of a ladder, of hooks pivoted thereto in such position that when open they will project outside of the ladder, and when shut they will be contained within the compass of the ladder, and double detents or catches whereby said hooks are locked or retained in either their open or their closed position, substantially as hereinbefore set forth. 55

3. The base-plate formed with stops  $d d'$  and lugs  $e e'$ , in combination with the pivoted hook proper provided with flanges  $f f'$ , substantially as hereinbefore set forth. 60

4. A reversible ladder-hook, consisting of a base-plate formed with two sets of stops and lugs situated one above and the other below the pivotal point and occupying the same positions relatively thereto, in combination with a pivoted hook proper, provided on each face with flanges or ribs adapted to co-operate with the stops and lugs on the base-plate, substantially in the manner and for the purposes hereinbefore set forth. 65 70 75

In testimony whereof I have hereunto set my hand this 17th day of July, 1883.

JOHN F. MANAHAN.

Witnesses:

WM. A. READ,

CHARLES H. CONANT.