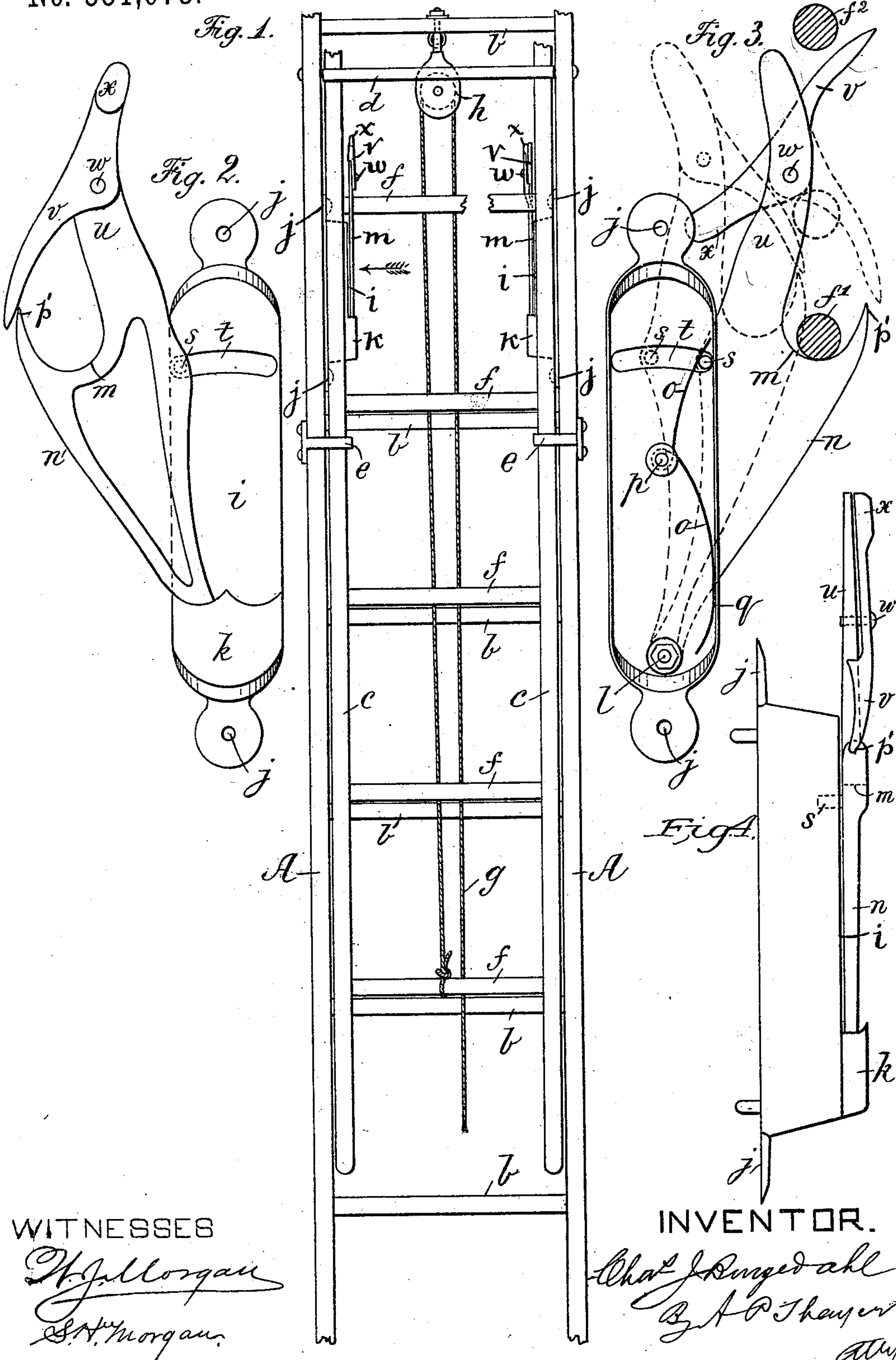


(No Model.)

C. J. BURGEDAHL.
EXTENSION LADDER HOOK.

No. 551,073.

Patented Dec. 10, 1895.



WITNESSES

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UNITED STATES PATENT OFFICE.

CHARLES JOHAN BURGEDAHL, OF BROOKLYN, NEW YORK.

EXTENSION-LADDER HOOK.

SPECIFICATION forming part of Letters Patent No. 551,073, dated December 10, 1895.

Application filed April 5, 1895. Serial No. 544,548. (No model.)

To all whom it may concern:

Be it known that I, CHARLES JOHAN BURGEDAHL, a subject of the King of Sweden and Norway, and a resident of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Extension-Ladder Hooks, of which the following is a specification.

My invention consists of improvements in the construction of extension-ladder hooks, whereby it is designed to provide more efficient and satisfactory hooks of the kind as hereinafter fully described, reference being made to the accompanying drawings, in which—

Figure 1 is front elevation of an extension-ladder provided with hooks according to my invention. Fig. 2 is a side view of one of the hooks of Fig. 1, as seen looking in the direction of the arrow in Fig. 1, on a larger scale. Fig. 3 is a reverse side view of said hook, also on a larger scale; and Fig. 4 is a front elevation of the hook, also on a larger scale.

A represents the side bars of the lower section of the ladder, and *b* the rounds of the same. *c* represents the side bars of the upper section of the ladder, and *f* the rounds of the same. The upper section is sufficiently narrower than the lower section to lie on the rounds *b* inside of the bars A for sliding up and down, and is confined therein by the clips *e* and the bar *d*. A cord *g* and pulley *h* are employed in the usual way for hoisting and lowering the extension part of the ladder. Near the upper end of the lower part I attach a hook to the inside of each bar A for holding the extension part up, said hooks consisting of a base-plate *i*, having perforated ears *j* for securing to the side of the bars by screws and being of slightly greater thickness than the thickness of the bars *c*, said plate being preferably trough-shaped for economy of metal and for lightness, with the open face placed on the side bar A, and the web forming the bottom of the trough about flush with the inside of the bar *c* lying in front of it, said hooks which are so located on the bars A that they are behind bar *c* when said bars rest on the rounds *b* of the lower part of the ladder; but the base-plate may be otherwise constructed, as desired, provided that the inner surface is flush with or slightly more dis-

tant from the inside of bar A than the inside of bar *c*.

On the inner face of the base-plate *i* and near the lower end and preferably within a pocket *k*, formed on the side of the plate, is pivoted at *l* a hook *m*, projecting upward and forward, as represented in Figs. 2 and 3, said hook having the inclined edge *n*, against which the rounds *f* of the upper section of the ladder bear to press the hook back for passing it upward when the said upper section is being raised, and said hook also being provided with a spring *o* to press it forward under the rounds *f* when they pass the point *p'* to engage the rounds *f* and hold the extension part of the ladder up. The spring is preferably inclosed in the chamber of the base-plate, and is supported on the stud *p* with one arm bearing on a support at *q* and the other arm bearing against a stud *s* of the hook projecting through a slot *t* of the base-plate into the spring-chamber for such connection with the spring. *f'* in Fig. 2 represents one of the rounds *f* so engaged in a hook to hold up the extension part of the ladder.

For releasing the rounds *f* from the hooks when the extension part of the ladder is to be lowered each hook has a prong *u*, extending upward back of the seat of the hook, on which a latch *v* is pivoted at *w*, which has a weighted arm *x*, that normally holds the point of the latch upward, as represented in the full lines in Fig. 3, so that on raising the extension part of the ladder the round *f'* presses the hook back and passes above it, as indicated at *f''*, when the hook swings forward again, so that on lowering the extension part the latch will be turned down and caused to bear on the point of the hook by the several rounds successively pushing said point back and guarding it against obstructing the descent of the passing rounds.

It will be seen that the hooks being arranged inside of the bars A and attached to them behind the bars *c* and so as to hook on the rounds of the extension part of the ladder close to the inside of its bars is a simple reliable compact arrangement not liable to get out of order.

I am aware that automatic ladder-hooks have been constructed in various ways, and I do not claim such hooks broadly.

I claim—

The combination with the lower and upper sections of an extension ladder, of the ladder hook consisting of the trough shaped base plate attached with its open side to the inside of the side bar of the lower ladder section, and behind the bar of the upper ladder section, the upwardly and forwardly extended hook pivoted on the bottom web of said trough shaped base plate flush with the inside of the bar of the upper ladder section so as to swing forward and backward, the spring inclosed in the chamber of the base plate and adapted to press the hook forward, the upwardly ex-

tended prong of the hook back of the seat of the hook, and the automatically opening latch pivoted on said prong and adapted to be pressed down on the point of the hook by the descending rounds of the upper section of the ladder substantially as described.

Signed at New York city, in the county and State of New York, this 19th day of March, A. D. 1895.

CHARLES JOHAN BURGEDAHL.

Witnesses:

W. J. MORGAN,
S. H. MORGAN.