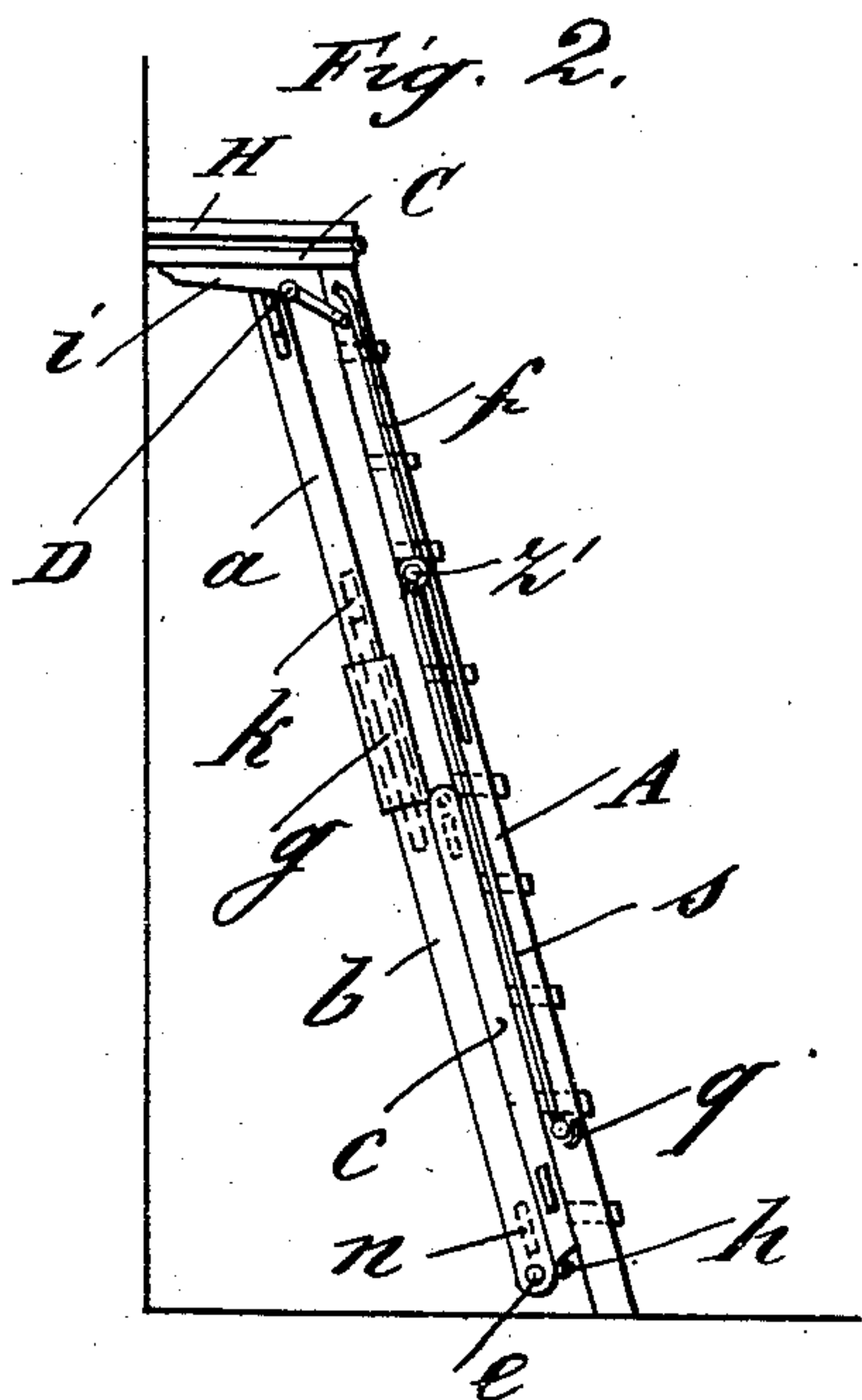
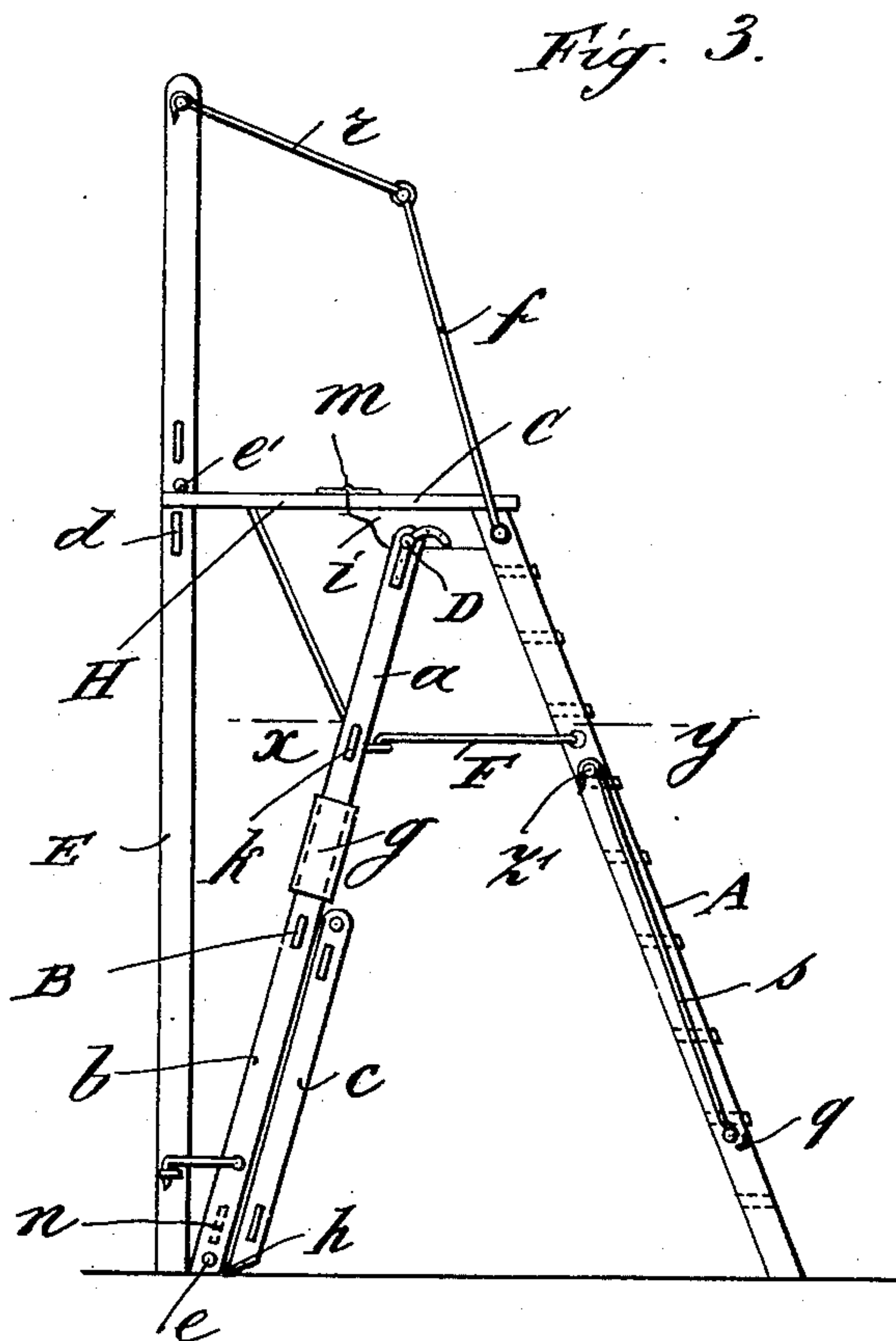
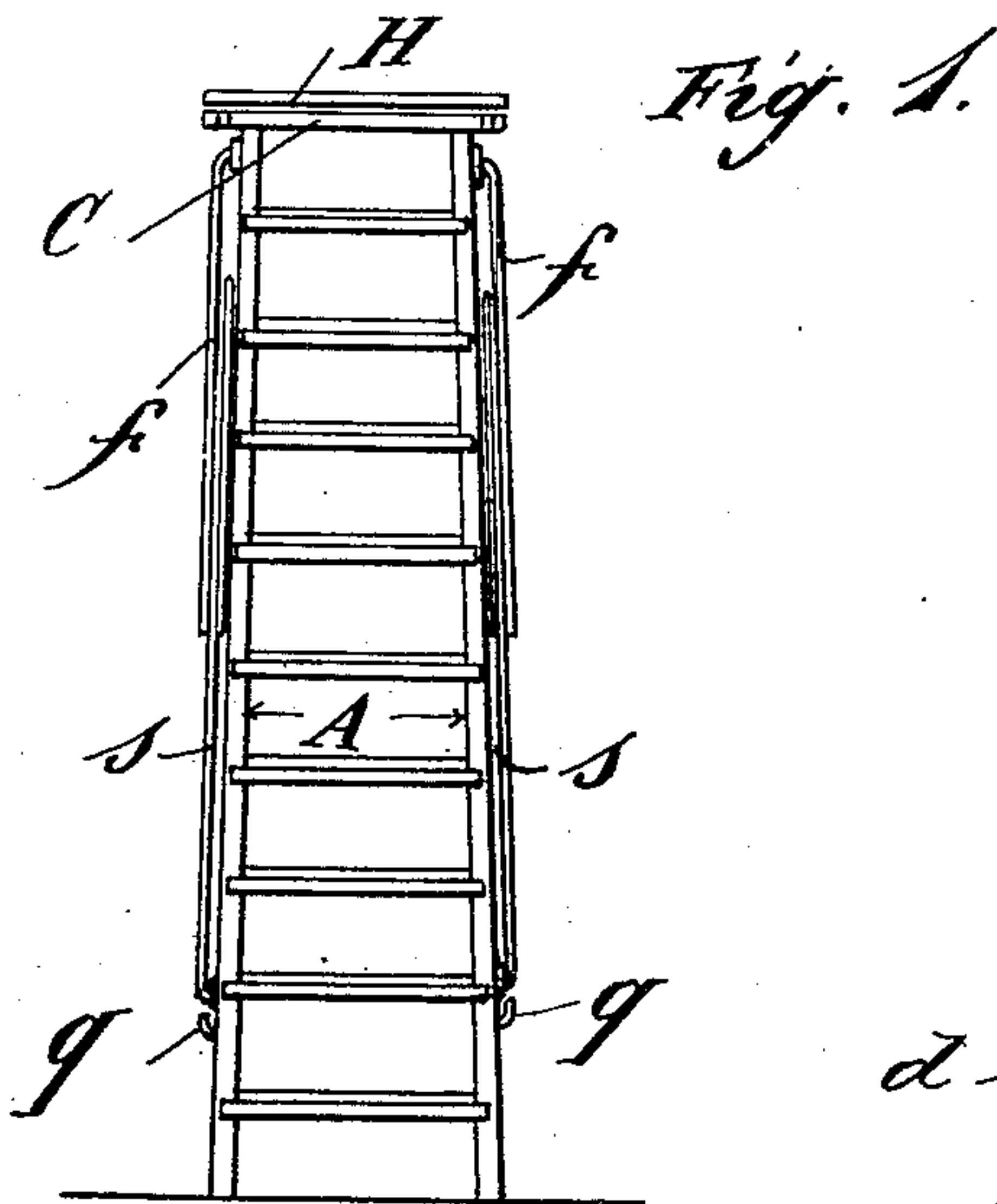


G. FORNARI.
LADDER.

APPLICATION FILED APR. 16, 1907.

917,576.

Patented Apr. 6, 1909.
2 SHEETS—SHEET 1.



Witness
S. L. Harnken
Chas. E. Collins

Gaudenzio Fornari
Inventor
by
Stewart & Stewart
Attorneys

G. FORNARI.

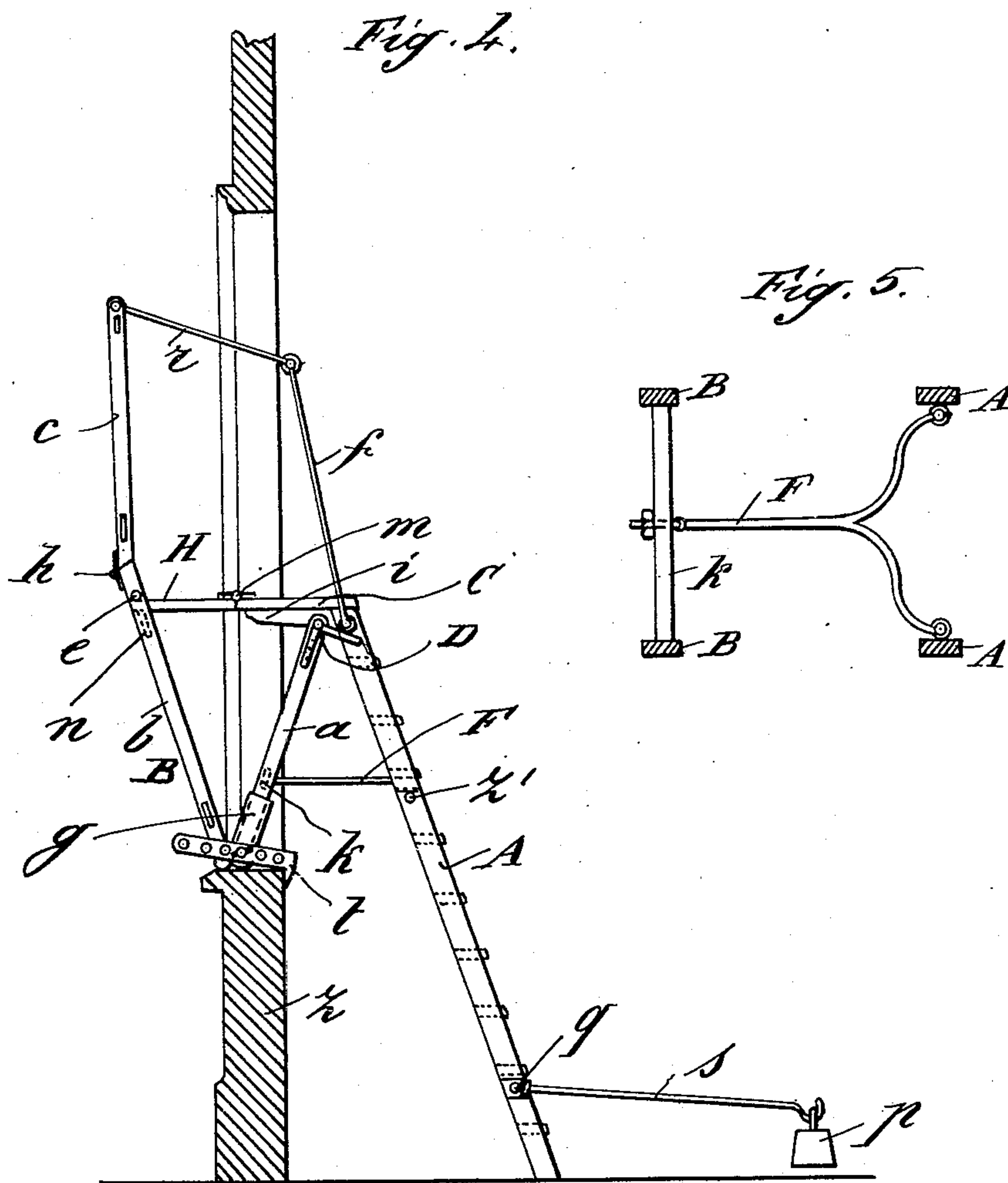
LADDER.

APPLICATION FILED APR. 16, 1907.

917,576.

Patented Apr. 6, 1909.

2 SHEETS—SHEET 2.



Witness
 J. R. Warkner
 Chas. E. Collins

Gaudenzi Fornari
 Inventor
 by
 Stuart & Stuart
 Attorneys

UNITED STATES PATENT OFFICE.

GAUDENZIO FORNARI, OF MILAN, ITALY.

LADDER.

No. 917,576.

Specification of Letters Patent.

Patented April 6, 1909.

Application filed April 16, 1907. Serial No. 368,491.

To all whom it may concern:

Be it known that I, GAUDENZIO FORNARI, porter, a subject of the King of Italy, residing at No. 13 Corso Porta Romana, Milan, Italy, have invented certain new and useful Improvements in Ladders, of which the following is a specification.

The ladder which forms the object of the present invention can be a wooden one with iron ties, or made entirely of iron and can be used as a common hand ladder, or as a scaffolding ladder and it can be easily and rapidly transformed into a staging, in order to allow of work being done outside a window, or at other openings of a building of any kind.

In the annexed drawing by way of example the said ladder is shown in one of the forms in which the same can be carried out, and looking into the same it will be understood in what the invention substantially consists.

Figure 1 is a front view of the ladder when same is made use of as an ordinary hand ladder; Fig. 2 is a lateral view of the ladder as shown in Fig. 1; Fig. 3 is a lateral view of the ladder serving as a scaffold; Fig. 4 shows the ladder used as a staging, so as to allow of work being done outside a window; Fig. 5 is a section on a larger scale on line *x-y* of Fig. 3.

As it will be seen the ladder consists of two uprights *A A* joined together by the steps. The actual ladder at its upper end is provided with a platform *C* screwed upon the uprights and also supported by two brackets *i*. To the consoles *i* by means of strong hinges are joined the counter-uprights *B*, which are made use of when the ladder is open. Every upright *B* consists of three distinct pieces *a b c* joined together by means of hinges. These pieces can be folded one upon the other and the adjoining ends of pieces *b* and *c* are shaped in such a way as to be alined in a plane inclined to their length so that they rest evenly on the floor or other support when the ladder is set up, as in Fig. 3. When the ladder has to be used as scaffold (Fig. 3), additional uprights *E* conveniently joined together by cross-pieces are used. Their feet are placed against the feet of the counter-uprights *B*, to which they are joined as shown in the drawing or by equivalent means. The frame formed by the uprights *E* is provided with a cross-piece *d* which serves as a sup-

port to a board *H* joined to the beam *C* by means of the hinge *m*. The uprights are also provided with two eyes *e* to receive a bolt by which the board "*H*" is fastened and held against the cross-piece "*d*." The frame *E E* extends above the board *H* and forms the front piece of a parapet, the walls of which are formed by the poles *f* fixed to the uprights *A A* and hooking in at the upper ends of the uprights *E E* by means of their pieces *r*, which can be folded up.

When the ladder is in closed position (Figs. 1 and 2), by means of hooks joining together the uprights the whole is kept stiff, as will be easily understood.

When the device is to be used as a scaffold the counter-uprights *B* are made stiff by means of sockets or sleeves *g* which may be shifted along the uprights *a* and *b* in the space between the cross-pieces of the said uprights. The supports *c* are folded upon their hinges *h* and placed within the uprights *A* and *B*.

When the ladder has to be put in the open position, the uprights *A A* and *B B* are fastened, by means of the hooking piece *F*, Fig. 5, in order to give to the whole the necessary rigidity.

To bring the ladder in the position shown by Fig. 4, in which it acts as a staging, in order to allow of the work being executed outside a window the sockets *g* of the uprights *B* are moved upward and the pieces *b* folded upward so that the two bolts fixed near the lower cross-piece *n* of the pieces *b* are situated at the same height as the eyes *e* of the board *H* of the beam *C*, where same is fastened. The frame formed by the supports *c* and the poles *f r* forms the parapet analogously to what has been explained with respect to Fig. 3.

To the lower part of the uprights *A* are pivoted two bars *s* provided at their free ends with a hook. These bars are kept in the position shown by Figs. 1, 2, and 3 by means of a bolt or in some other way. When the ladder is made use of as a window staging (Fig. 4), the two poles *s* are lowered so they rest against the lugs *q* and provided at their free end with a suitable counterweight. The lower end of the piece *a* stands upon the window-ledge. To avoid the sliding of the ladder on the window-ledge, the sockets *g* are provided with two hooks *t*. These are susceptible of being turned and moved at pleasure and the aim of same is to cling to

the interior of the window-ledge, as shown by Fig. 4.

Having now fully described my said invention and the manner in which the same is to be used, what I claim and desire to secure by Letters Patent of the United States is:

1. A combined ladder, scaffold and window staging consisting of a platform, uprights secured to the platform at their upper extremities and carrying steps, counter uprights pivoted to the platform and each formed of several sections pivotally connected at their extremities, a sleeve mounted on each counter upright for securing the sections of the counter uprights in extended position so the ladder will stand on a level surface and means for securing the sections in folded position so that the upper sections may rest on a surface raised above that upon which the upright rest, and a hook carried by each sleeve to secure the counter upright to the raised surface.

2. A combined ladder, scaffold and window staging consisting of a platform, uprights secured to the platform at their upper extremities, steps carried by the uprights, counter uprights pivoted to the platform, each formed of a plurality of sections, the sections pivotally connected at their extremities, means for securing the sections of the counter uprights in extended position so the ladder will stand on a level surface and means for securing the sections in a position at an angle to each other so the upper section may rest on a window sill or other surface elevated above the surface which supports the uprights and means on another section by which it is made to engage the platform and support the same.

3. A combined ladder, scaffold and window staging consisting of a platform, up-

rights secured to the platform at their upper extremities, steps carried by the uprights, counter uprights pivoted to the platform, each in a plurality of sections, the latter pivotally connected at their extremities, means for securing the sections of the counter uprights in extended position so the ladder will stand on a level surface, means for securing the sections in a position at an angle to each other so the upper section may rest on a window sill or other surface elevated above the surface which supports the uprights, means on another section by which it is made to engage the platform and support the same, another section of the counter upright extending upward from the platform and a pivotally jointed rod secured to this section near its upper extremity and to the platform where the latter section is supported in upright position.

4. A combined ladder, scaffold and window staging consisting of a platform, uprights secured to the platform at their upper extremities, steps carried by the uprights, counter uprights pivoted to the platform, each in a plurality of sections, the latter pivotally connected at their extremities, means for securing the sections of the counter uprights in extended position so the ladder will stand on a level surface, means for securing the sections in a position at an angle to each other so the upper section may rest on a window sill or other surface elevated above the surface which supports the uprights, means on another section by which it is made to engage the platform and support the same and a weight to counter balance the ladder and platform.

GAUDENZIO FORNARI.

Witnesses:

B. CARLO SALVOTTI,
M. SIENDOFFER.