H. P. KOCHSMEIER.

Extensible Step-Ladder.

No. 197,146. Patented Nov. 13, 1877.

Fig 1

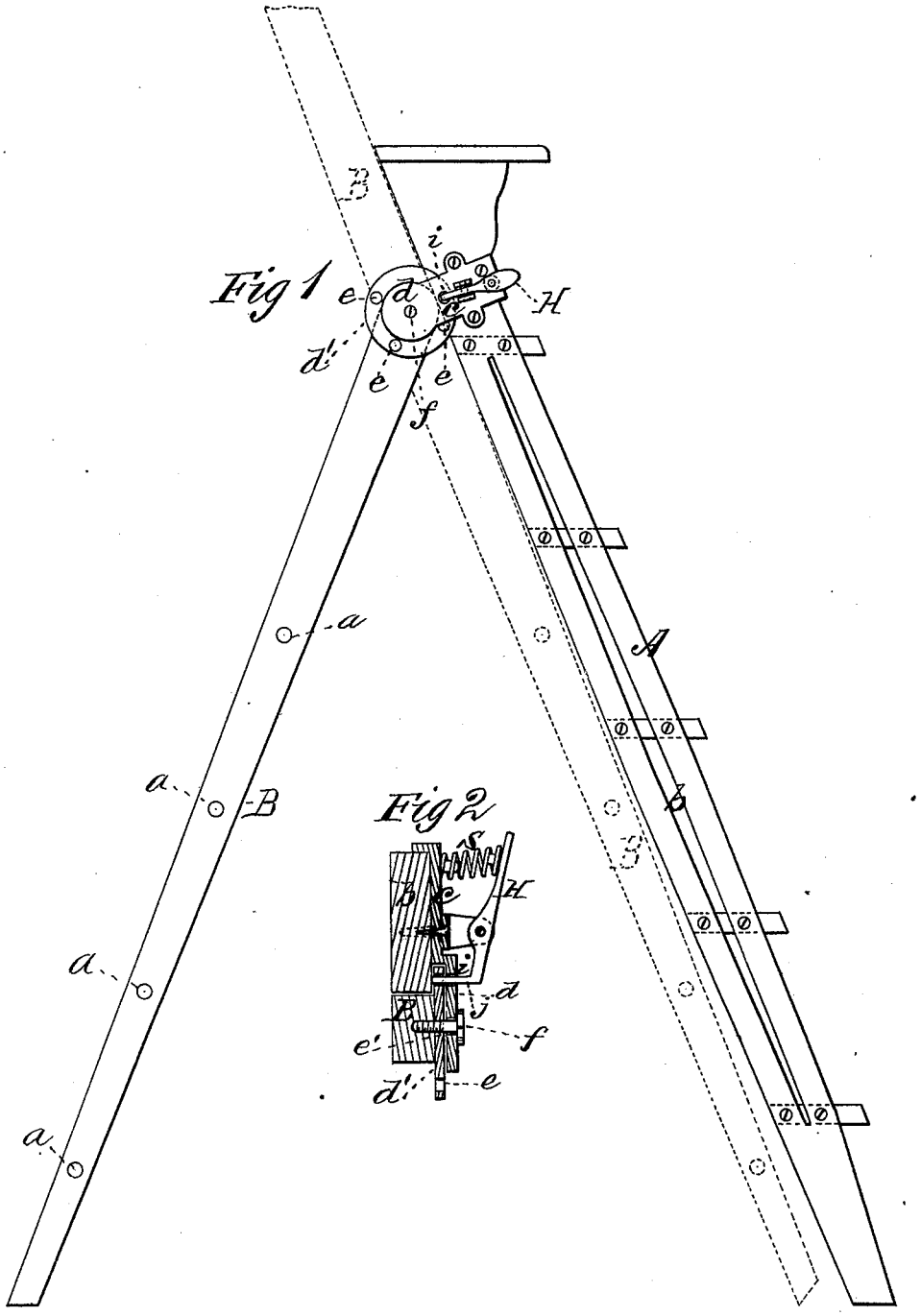

Fig 2

WITNESSES

Villette Anderson.

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INVENTOR

Henry P. Kochsmeier,

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N. PETERS, PHOTO-LITHOGRAPHER, WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

HENRY P. KOCHSMEIER, OF FREEPORT, ILLINOIS, ASSIGNOR OF ONE-HALF HIS RIGHT TO WILLIAM P. EMMERT, OF SAME PLACE.

IMPROVEMENT IN EXTENSIBLE STEP-LADDERS.

Specification forming part of Letters Patent No. **197,146**, dated November 13, 1877; application filed August 25, 1877.

To all whom it may concern:

Be it known that I, HENRY P. KOCHSMEIER, of Freeport, in the county of Stephenson and State of Illinois, have invented a new and valuable Improvement in Extensible Step-Ladders; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a side view of my improved ladder, and Fig. 2 is a detail sectional view thereof.

This invention has relation to improvements in extension-ladders.

The object of my invention is to devise a ladder of the usual step-ladder form, the vibrating rear support of which may be swung out as a continuation of the main ladder, and, being provided with rounds, form an extension thereof; and also to provide means for rendering the joint or hinge of the two sections rigid, whereby the upper end of the vibrating support may rest against a wall, and the device thus formed be, to all intents and purposes, an ordinary ladder.

The nature of the invention will be fully understood from the following description.

In the annexed drawings, the letter A designates the ladder portion of an ordinary step-ladder, and B its folding and extensible prop or support. This latter is provided with rounds or rungs *a*, of any known form.

The side rails *b* of the lower ladder are provided with metallic disks *d* at their upper ends, secured to the said rails so as to project beyond them by means of a tongue or tang, *c*. The runged support B has similar disks, *d'*, connected therewith in a similar manner, and provided with spaced perforations *e* along its edge, and a central perforation, *e'*. The disks *d d'* are hinged together by means of a pivot-bolt, *f*, extending centrally through them, thus forming a strong and reliable hinge.

It is evident that this hinge will allow the support B to be folded up against the ladder A, or to be swung up so as to form a continuation thereof, either in the same line therewith, or at an angle thereto. It is adjusted in any desired position by means of a spring-actuated catch or dog, H, pivoted upon plates or disks *d*, and having one end extending through a perforation, *i*, at the same radial distance from the pivot *f* as the spaced perforations *e* aforesaid on disks *d'*. When the perforations *e* and *i* are in line with each other, the latching end *j* of the dog H will be driven through them by the spring S, and the ladder-sections will thus be locked to each other in the position of adjustment, whether the support be folded in upon the ladder A or be extended in the same line therewith, or at an angle thereto.

It will be seen from the above description that by the employment of the means above set forth I have improved the construction of step-ladders, and rendered them susceptible of all ordinary uses, and capable of being extended at pleasure, thus adding to its usefulness and extending its scope.

What I claim as new, and desire to secure by Letters Patent, is—

The combination, with the ladder-section A, having disks *d* projected backward from its upper end, and provided with perforation *i*, and a spring-actuated lever-catch extending through said perforation, of the rear support B, having disks *d'*, with spaced perforations *e* and pivot-bolt *f* connecting said disks, all constructed and arranged substantially as specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

HENRY P. KOCHSMEIER.

Witnesses:
CHARLES T. GREEN,
W. P. EMMERT.