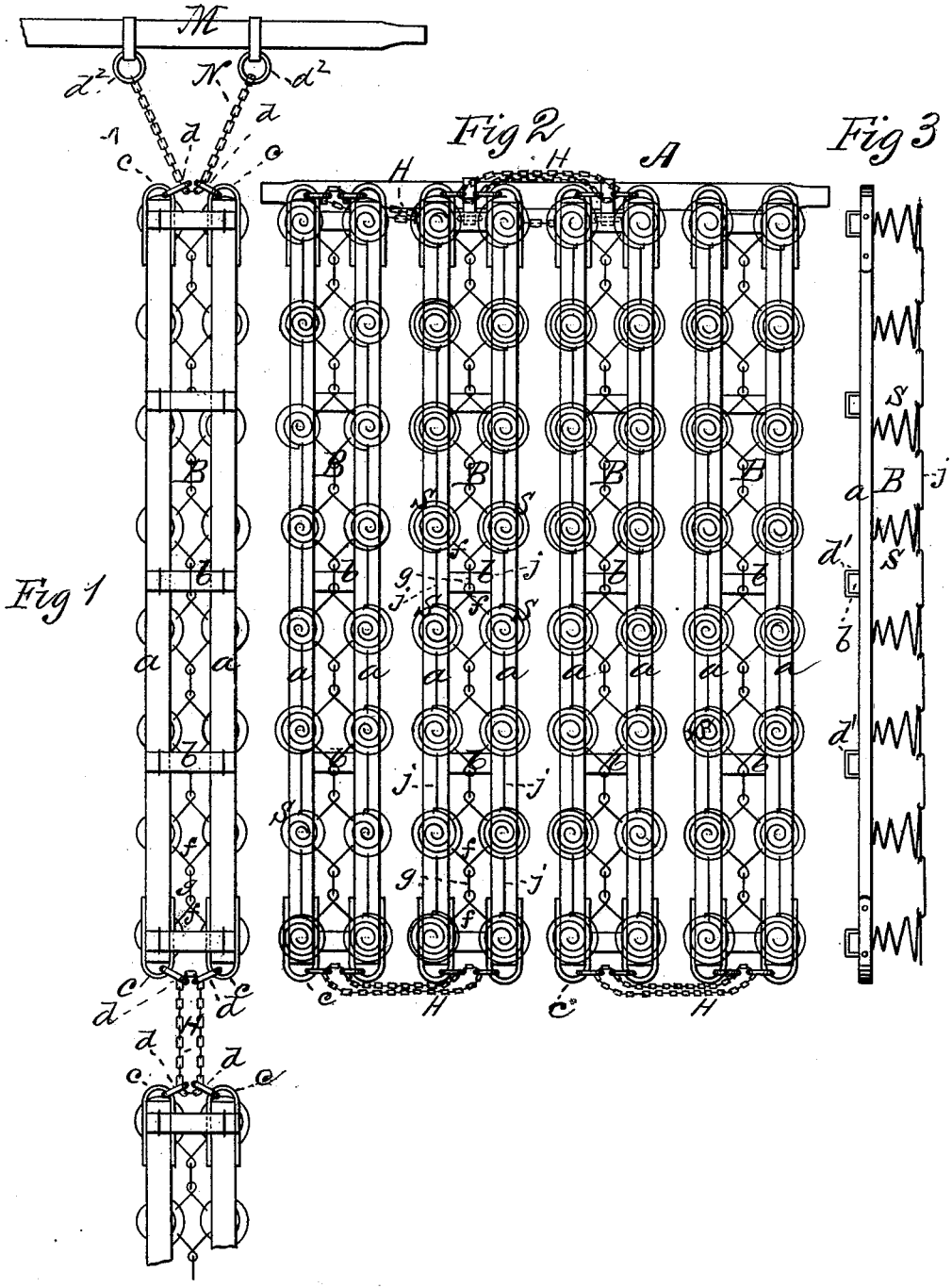
R. H. McGINNIS & C. T. MAUS.

Combined Fire-Escape and Spring-Bed.

No. 206,811. Patented Aug. 6, 1878.



WITNESSES

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UNITED STATES PATENT OFFICE.

ROBERT H. McGINNIS AND CHARLES T. MAUS, OF GOSHEN, IND., ASSIGNORS OF ONE-THIRD THEIR RIGHT TO FRANK H. GROW, OF SAME PLACE.

IMPROVEMENT IN COMBINED FIRE-ESCAPE AND SPRING-BED.

Specification forming part of Letters Patent No. **206,811**, dated August 6, 1878; application filed November 10, 1877.

To all whom it may concern:

Be it known that we, ROBERT HENRY MCGINNIS and CHARLES TALCOTT MAUS, of Goshen, in the county of Elkhart and State of Indiana, have invented a new and valuable Improvement in Spring-Bed and Fire-Escape Combined; and we 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 front view of the spring bed-bottom converted into a fire-escape. Fig. 2 is a top view of the bed-bottom, and Fig. 3 is a side view of one of the ladder-sections.

This invention has relation to improvements in spring bed-bottoms that are convertible at pleasure into fire-escapes.

The nature of the invention consists in the arrangement and novel combination of the parts of the bottom, as will be hereinafter more fully set forth.

In the annexed drawings, the letter A designates our improved spring bed-bottom, made up of a number of sections B, arranged side by side in a suitable frame, and each composed of two spaced rails, *a*, connected together at intervals by tread-bars *b*. Each section is thus converted into a ladder. At each end of the rails *a* a loop, *c*, is formed, carrying a ring, *d*, by bending a sufficiently strong piece of strap-iron in U form, and bolting the ends to the sides of the rails, as shown in Figs. 2 and 3.

The treads are secured to the rails by means of strong staples d^1, that straddle the said treads, extend through the rails, and are clinched on the reverse side thereof. Upon these rails are secured the conical helical springs S, apexes downward, the extreme end being carried through the said rails, and attached thereto by means of a staple straddling the last convolution of the said springs, driven through the rails, and clinched upon the opposite side thereof. These springs, upon each section of the bed-bottom, are connected together by angular looped coupling-rods *f*, uniting each parallel set of springs, and link-rods *g*, connecting each set of contiguous coupling-rods, and with each other by a rod, *j*. This construction is rendered necessary by reasons hereinafter explained.

The sections are laid side by side, and connected together by a flexible chain, H, at alternate ends. This chain is passed through each of the rings *d*, and its ends connected together by a link or other equivalent device. The alternate ends of the sections are thus flexibly connected together, and when not in use can be readily placed side by side in a frame. These chains also materially lengthen the ladder—a weighty consideration in descending from a lofty building, since not more than four or five of the sections, each something less than six feet long, can be fitted in the widest bed-frame. The ladder-sections are suspended from the window-frame, with the springs bearing against the wall, and serving as fenders by means of a bar, M, and a chain, N. This chain passes through the rings *d* at the free end of one of the side sections of the bottom, and its ends are rigidly secured to spaced rings d^2 upon the bar M. This bar reaches across the window-frame, with its ends bearing against the jamb-posts.

The use of the rings *d* and the connecting-chains passing through said rings brings the line of strain exactly in the central line of the fire-escape, thus preventing the side rails from spreading when under strain and releasing the rounds. The springs S being connected together, as above described, by the rods *j*, the angular couplings *f*, and the link-rods, the strain brought thereon when the fire-escape is in use is distributed over several of the said springs. The ladder is thus prevented from tilting to one side, owing to the undue yielding of the springs.

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

1. A bed-bottom composed of ladders having helical springs adapted to support the bedding, and serve as fenders to hold the ladder from the wall, substantially as specified.

2. In a combined fire-escape and bed-bottom, the combination, with the ladder-sections B, having loops *c* and carrying-rings *d*, of the connecting-chain H, passing through said

rings, and bringing the line of strain in the central line of the ladder, substantially as specified.

3. The combination, with the ladder-sections B and their flexible connections H, of the fender-springs S, the connecting-rods *j*, the angular couplings *f*, and the links *g*, substantially as specified.

4. The bed-bottom and fire-escape consisting of the ladder-sections A, the fender-springs S, the loops *e*, the rings *d*, the chains H N, and the holding-bar M, all combined, arranged, and operating substantially as set forth.

In testimony that we claim the above we have hereunto subscribed our names in the presence of two witnesses.

ROBERT HENRY McGINNIS.
CHARLES TALCOTT MAUS.

Witnesses:
JOSIAH B. COBB,
GEORGE DAY.