(No Model.)

T. SAXTON.

EXTENSION LADDER HOOK.

No. 532,709. Patented Jan. 15, 1895.

Fig. 1.

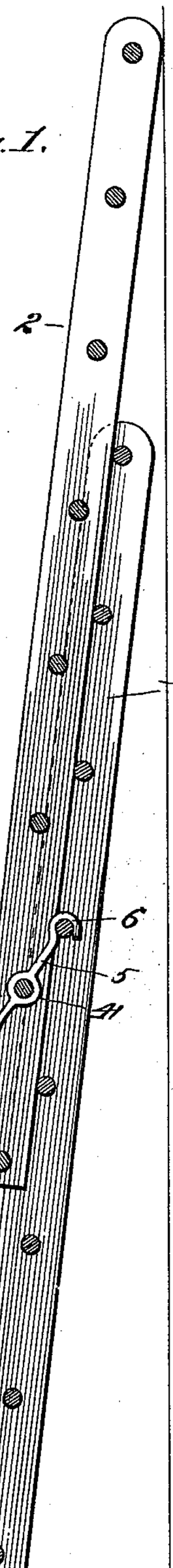


Fig. 2.

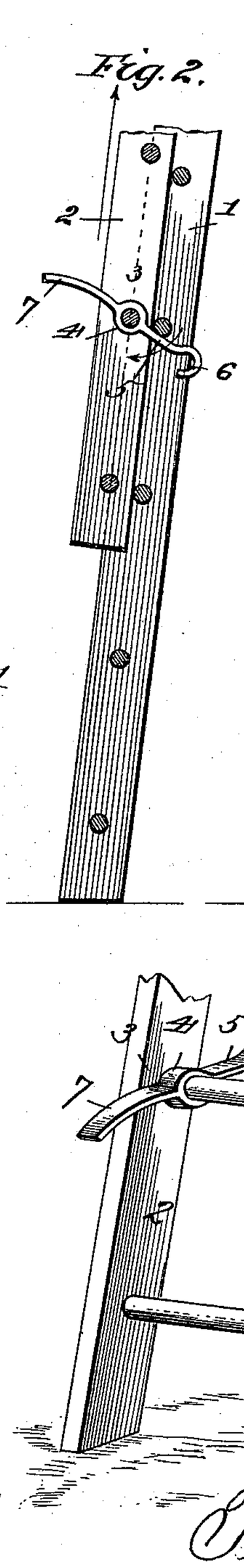


Fig. 3.

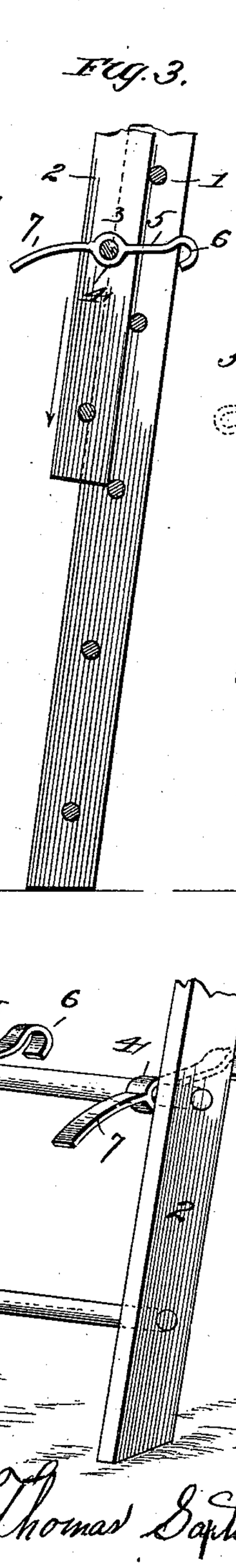
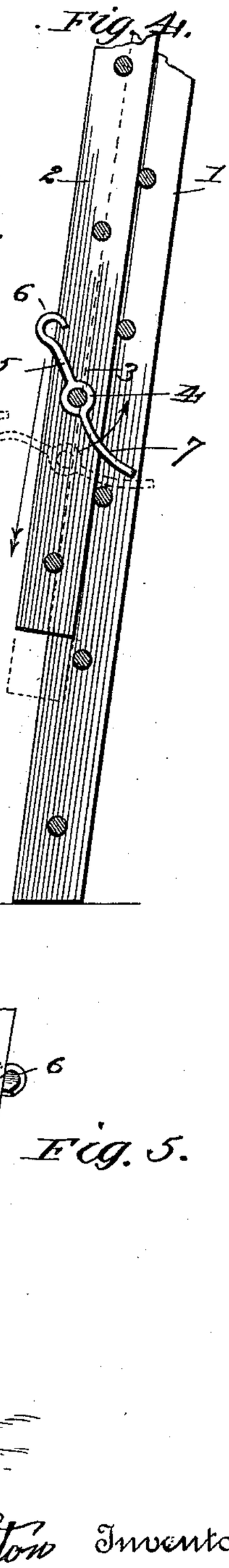


Fig. 4.



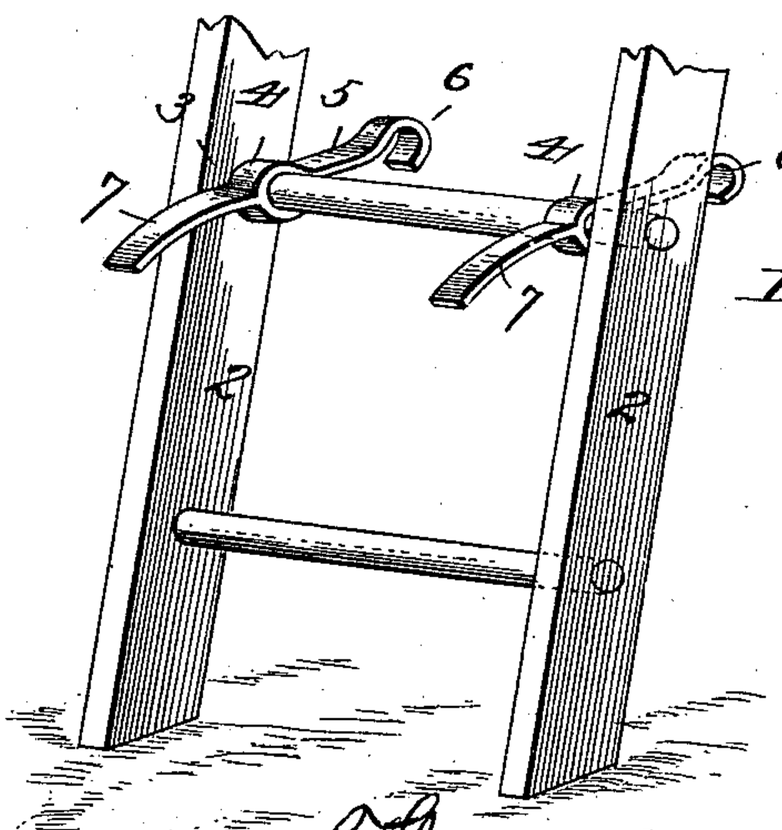


Fig. 5.

Witnesses
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UNITED STATES PATENT OFFICE.

THOMAS SAXTON, OF ELMIRA, NEW YORK, ASSIGNOR OF ONE-HALF TO THEODORE L. MINIER, OF SAME PLACE.

EXTENSION-LADDER HOOK.

SPECIFICATION forming part of Letters Patent No. 532,709, dated January 15, 1895.

Application filed May 14, 1894. Serial No. 511,194. (No model.)

To all whom it may concern:

Be it known that I, THOMAS SAXTON, a citizen of the United States, residing at Elmira, in the county of Chemung and State of New York, have invented certain new and useful Improvements in Extension-Ladder Hooks, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to a new and improved locking-hook for extension-ladders, and it has for its object to provide a hook which will be automatic in its operation and which when in its normal position is ready to engage a round of the stationary section of the ladder without the necessity of manipulating the movable section thereof except to lower it gently into place.

The invention consists in the novel formation of a self-balancing hook as will be more fully hereinafter set forth and particularly pointed out in the claim.

In the drawings:—Figure 1 is a vertical sectional view of two sections of a ladder showing my hook in operation; Fig. 2, a similar view of a portion of two sections of the ladder showing the movable section being raised; Fig. 3, a similar view showing the hook in its normal position and ready to engage the round of the stationary section; Fig. 4, a similar view showing the movable section being lowered, and Fig. 5, a detail perspective showing the hooks in place on the ladder.

Referring to the various parts by numerals 1 designates the lower stationary section of an extension ladder and 2 the movable section thereof. Mounted to freely revolve on one of the lower rounds of the movable section of the ladder are two automatic locking devices 3, 3. These devices are mounted one at each end of the round of the ladder near the side-bars thereof, and are so balanced that normally they assume a horizontal position as shown in Figs. 3 and 5. These devices are formed of malleable cast iron or other suitable material, and each consists of the central ring 4 through which a round of the ladder passes, said round supporting the hook in its operative position. Extending forwardly from this ring is a straight section 5, said section being formed long enough to extend into line with the rounds of the stationary section of the ladder when the hook is in its normal position, as shown clearly in Fig. 3. Formed on the forward end of this section is the hook 6, said hook being formed with its open side down, as shown. This hook is slightly forward of the line of the rounds of the stationary section of the ladder for a purpose which will be hereinafter fully set forth.

Extending rearwardly from the ring 4 is the section 7 which is slightly downwardly curved and is of such weight as to balance the hook 6 and section 5 and hold them normally in a horizontal position.

The operation is as follows:—When it is desired to extend the ladder the movable section thereof is moved upwardly and the hooks 6 thereby disengaged from the round of the stationary section of the ladder, and as the ladder continues to rise the devices 3 assume a horizontal position, as shown, and when they reach the next round of the stationary section, the upper sides of the straight sections 5 of the locking-devices contact therewith and said devices revolve on their supporting round, as shown in Fig. 2, and will again assume their horizontal position as they pass above this latter round. The devices are always in position to be lowered to engage their hooks over a round of the stationary section, when they assume this horizontal position. When it is desired to lower the movable section, said section is raised slightly to disengage the hooks 6 from the stationary section, and is then lowered quickly to cause the straight sections 5 of the devices 3 to contact sharply with a round of the stationary section and thereby cause the devices to revolve rearwardly, as shown in Fig. 4. As the movable section continues its downward movement the convex sides of the curved sections 7 of the devices contact with the next round below on the stationary section and cause the devices to continue their revolution as the said section decends.

From the foregoing the operation and advantages of my improved locking device will be readily understood.

Having thus fully described my invention, what I claim is—

In an extension ladder, the combination with the stationary and movable sections

thereof, of automatic locking devices loosely mounted on a round of the movable section and adapted to engage the rounds of the stationary section, said devices consisting of the ring 4 through which the supporting round passes, the section 5 extending forwardly from said ring and into line with the rounds of the stationary section, a hook 6, having its open side down, formed on the forward end of the section 5, and the rearwardly extending downwardly curved section 7, said section balancing the forward part of the device and holding it in a horizontal position, substantially as described and for the purpose set forth.

In testimony whereof I affix my signature in the presence of two witnesses.

THOMAS SAXTON.

Witnesses:
FREDERICK COLLIN,
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