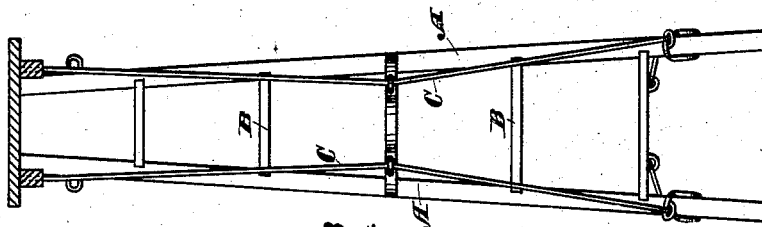
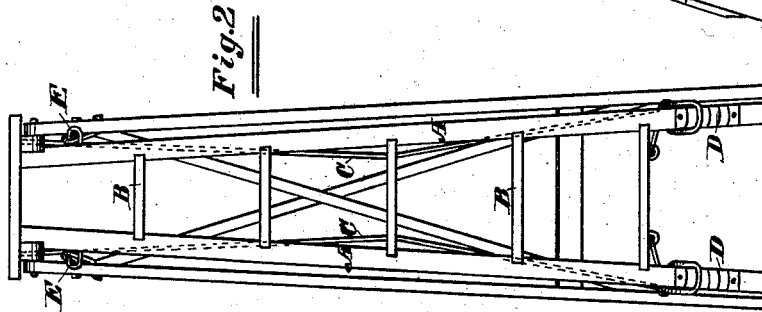
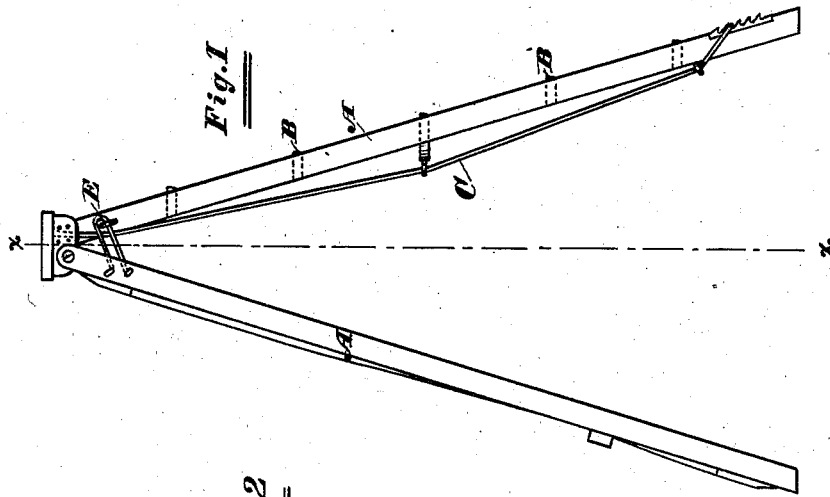


T. DUNCAN.
STEP-LADDERS.

No. 194,588.

Patented Aug. 28, 1877.



Attest

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UNITED STATES PATENT OFFICE.

THOMAS DUNCAN, OF CHICAGO, ILLINOIS.

IMPROVEMENT IN STEP-LADDERS.

Specification forming part of Letters Patent No. **194,588**, dated August 28, 1877; application filed June 20, 1877.

To all whom it may concern:

Be it known that I, THOMAS DUNCAN, of the city of Chicago, in the county of Cook, and in the State of Illinois, have invented certain new and useful Improvements in Step-Ladders; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing, and to the letters of reference marked thereon, forming a part of this specification.

The nature of my invention consists in the construction and arrangement of a step-ladder, as will be hereinafter more fully set forth and claimed, by which a more effective device of this character is produced than is now in ordinary use.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figure 1 is a vertical side view of the ladder. Fig. 2 is a perspective view of the same. Fig. 3 is a sectional view looking from the back side.

A A represent the stiles of my ladder, which

do not differ materially from other inventions of this class; B B, steps of ladder; C C, wire or iron brace running lengthwise of stiles A A, for the purpose of imparting additional strength and firmness, and allowing lighter material to be used in the construction of the ladder; D D, ratchet-plate, for the purpose of keeping the metallic brace C C perfectly taut; E, locked or sliding staple connecting front and back of ladder, also to prevent the ladder from spreading beyond a certain point.

I am aware of numerous other patents for a similar purpose as my invention. I therefore do not, broadly, claim the stiles A A and steps B B, but use them in combination.

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

In a step-ladder, the locked or sliding staple E, the metallic brace C C, and ratchet-plate D D, arranged, connecting, and operating as specified.

THOMAS DUNCAN.

Witnesses:

CHAS. E. SINCLAIR,
L. B. COUPLAND.