

G. KING.
STEP-LADDER.

No. 175,467.

Patented March 28, 1876.

Fig. 1

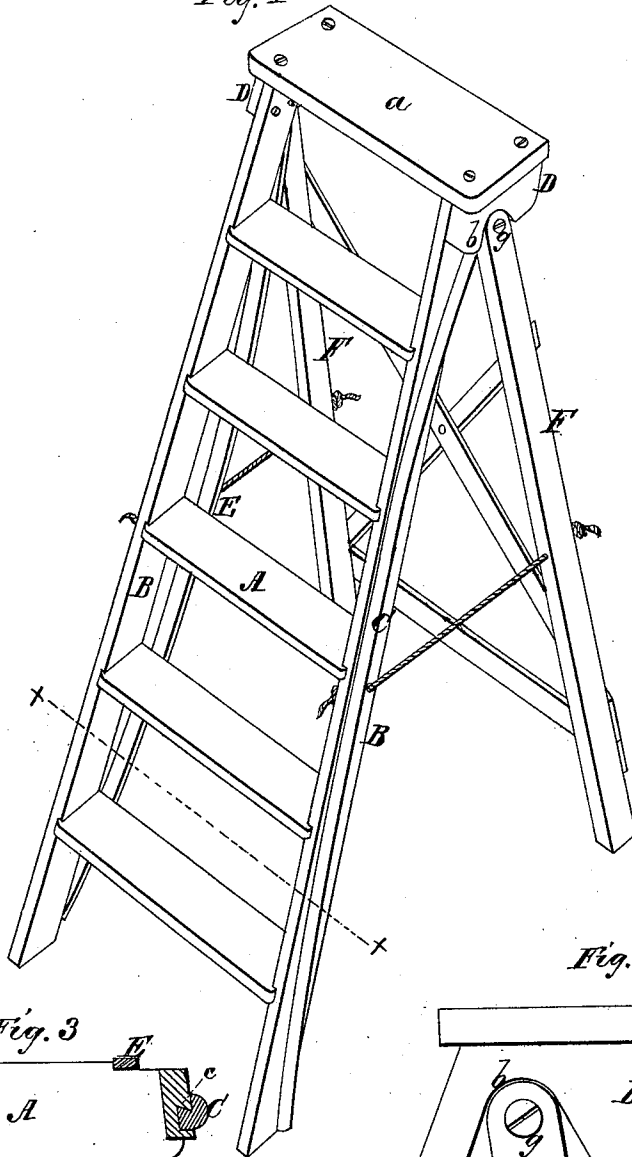


Fig. 2

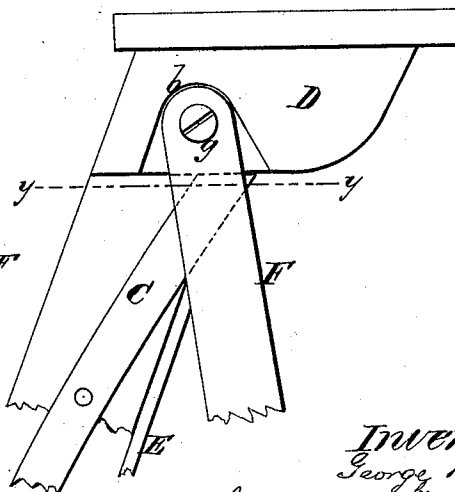


Fig. 3

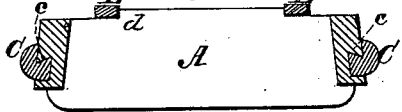
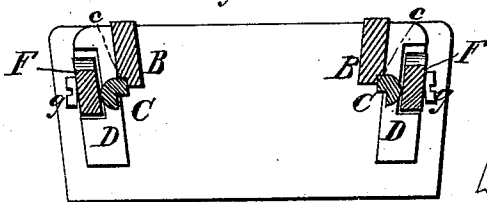


Fig. 4



Witnesses:
James Martin for
G. H. King, Secy.

Inventor:
George King
by
Mason, Fenwick Lawrence

UNITED STATES PATENT OFFICE.

GEORGE KING, OF FREDERICK, MARYLAND, ASSIGNOR TO HIMSELF, JOHN H. KELLER, AND DAVID W. BROOKS, OF SAME PLACE.

IMPROVEMENT IN STEP-LADDERS.

Specification forming part of Letters Patent No. **175,467**, dated March 28, 1876; application filed August 24, 1874.

To all whom it may concern:

Be it known that I, GEORGE KING, of Frederick, county of Frederick and State of Maryland, have invented a new and useful Improvement in Step-Ladders; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a perspective view of my improved ladder. Fig. 2 is a side elevation of the upper portion of the same. Fig. 3 is a detailed horizontal section of the carriage in the line *xx* of Fig. 1. Fig. 4 is an inverted sectional view taken in the line *yy*, Fig. 2.

The object of this invention is to strengthen and support the carriage of a step-ladder in such a manner as to prevent lateral or vertical displacement of its parts without adding to the weight of the ladder.

My improvement consists in arched braces in combination with the side or carriage pieces of the ladder proper, and with the hinging-blocks at the upper end of said side pieces, said arched braces being tongued into the grooved carriage-pieces and abutting against the hinging-blocks, as will be presently described.

To enable others skilled in the art to understand my invention, I will proceed to describe it.

In the accompany drawings, A represents a step-ladder of usual form; B B, the carriage-pieces, constructed with steps in the ordinary manner, but supported on their outer sides with braces C C. These braces are of arched form, tongued into the sides of grooved carriage-pieces, as shown at *c*, and abutting at their upper ends against the hinging-blocks D D. E E are rear arched braces, bearing laterally inward against shoulders *d* formed

on the steps, and fastened at their opposite ends to the rear side of the carriage-pieces, as shown. The hinging-blocks D D are constructed with flaring knuckle-sockets *b b* on their outer sides, as shown in Fig. 2 of the drawings, and into these sockets the upper ends of the supporting-legs F F are fitted, and connected to the carriage-pieces by pivot-screws *g g*. The hinging-blocks are rigidly secured to the sides of the carriage-pieces, and upon the tops of these blocks a stand-board, *a*, is firmly attached. The supporting-legs are constructed in the usual manner, and their swinging distance may be regulated by the means shown.

It will be seen that the hinging-blocks of the carriage-pieces are strengthened and supported against vertical pressure by the arched braces tongued into the sides of the carriage, said braces abutting at their upper ends upon the under side of the hinging-blocks, and bearing laterally against the sides of the grooves in the carriage-pieces, whereby the hinging-blocks and carriage-pieces are sustained in position.

It will also be seen that the carriage is sustained laterally by the rear arched braces bearing against the steps, and bowed inwardly, so as to resist the outward pressure upon the carriage.

Having described my invention, what I claim as new is—

The combination of the tongued arched braces C C, side-grooved carriage-pieces B B, and hinging-blocks D D, in a step-ladder, substantially as described.

GEORGE KING.

Witnesses:

E. SHRIVER,
W. MAHONY.