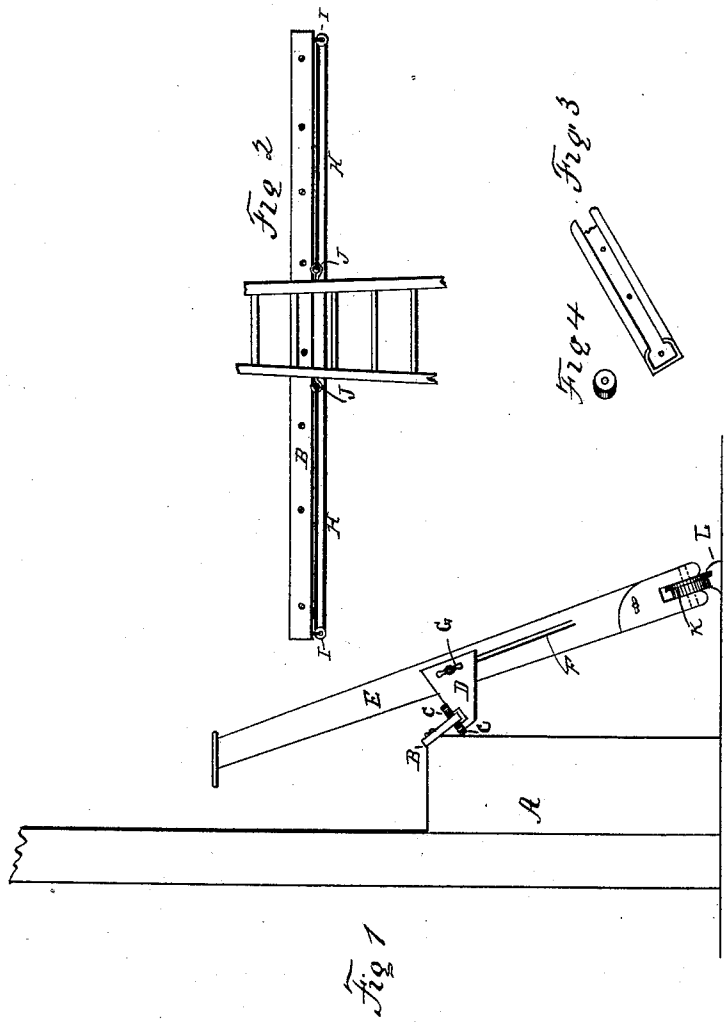
(No Model.)

C. L. SMITH.

STEP LADDER.

No. 423,962 Patented Mar. 25, 1890.



Witnesses.
Geo. H. Harvey
A. C. Johnston

Inventor.
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UNITED STATES PATENT OFFICE.

CHARLES L. SMITH, OF PITTSBURG, PENNSYLVANIA.

STEP-LADDER.

SPECIFICATION forming part of Letters Patent No. 423,962, dated March 25, 1890.

Application filed July 12, 1889. Serial No. 317,289. (No model.)

To all whom it may concern:

Be it known that I, CHARLES L. SMITH, of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Step-Ladders; and I do hereby declare the following to be a full, clear, and exact description thereof.

My invention relates to an improvement in step-ladders for stores; and it consists in the combination and arrangement of the parts, hereinafter described, and shown in the accompanying drawings.

To enable others skilled in the art with which my invention is most nearly connected to make and use it, I will proceed to describe its construction and operation.

In the accompanying drawings, which form part of my specification, Figure 1 is a view of the ladder attached to the shelves. Fig. 2 is a view of the ladder, showing its connection with ropes for propelling it along the shelves. Fig. 3 is a modified form of a metal groove attached to the floor for a pulley-wheel connected to the lower ends of the legs of the ladder to move in. Fig. 4 is a modified form of a roller to be attached to the lower end of the legs of the ladder.

In the drawings, A represents the ordinary shelving used in stores. Along the edge of the platform of the shelves is secured an inclined metal strip B, held in position by means of bolts.

E is the ladder, the legs of which have a slot F, in which an adjustable piece D moves up and down, said adjustable piece being held in the desired position by means of a set-screw G. To this adjustable piece is attached rollers C C, which roll along the upper and lower face of the inclined metal piece B. In the lower end of the legs of the ladder is secured flanged wheels K, working in the groove of the metal piece L, secured to the floor. To each end of the inclined metal piece B is secured pulley-wheels I I, over which runs a rope or cord H, the ends of which are attached to the legs of the ladder by means of hooks J.

The operation is as follows: The ladder E being placed in position against the shelves A, the adjustable piece D is set to the required height of the platform of the shelves and held in position in the slot F by means of the set-screw G, the rollers C C resting on the upper and lower faces of the inclined metal piece B, the flanged wheel K resting in the groove of the metal piece L. The salesman can, by taking hold of the rope or cord H, transfer himself along the shelving without getting down off the ladder.

If desired, the flanged wheel K can be dispensed with and an ordinary roller—such as shown in Fig. 4—be used in its place. In that case the metal groove-piece shown in Fig. 3 can be attached to the floor for the roller to move in.

What I claim is—

In a step-ladder, the inclined metal piece B, rollers C C, adjustable piece D, slots G, flanged wheel K, cord H, pulleys I I, and metallic groove L, combined, arranged, and operating with relation to each other substantially as herein described and shown, and for the purpose set forth.

In testimony whereof I have hereunto set my hand this 16th day of May, A. D. 1889.

CHARLES L. SMITH.

Witnesses:

A. C. JOHNSTON,

C. S. JOHNSTON.