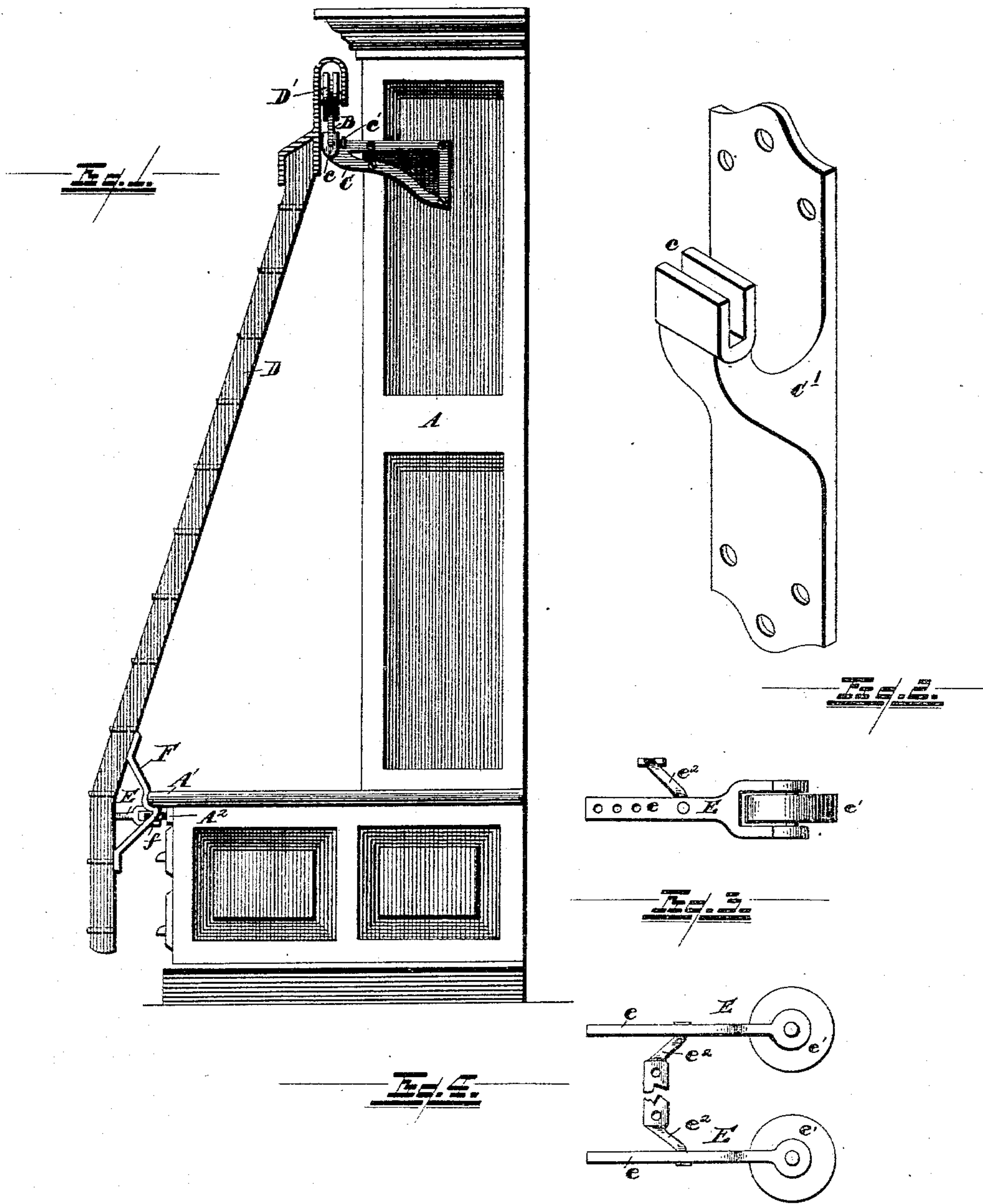


(No Model.)

T. A. HARVEY.
RAILROAD STEP LADDER.

No. 315,939.

Patented Apr. 14, 1885.



WITNESSES

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THOMAS A. HARVEY, OF EAST SAGINAW, MICHIGAN.

RAILROAD STEP-LADDER.

SPECIFICATION forming part of Letters Patent No. 315,939, dated April 14, 1885.

Application filed January 31, 1885. (No model.)

To all whom it may concern:

Be it known that I, THOMAS A. HARVEY, of East Saginaw, county of Saginaw, State of Michigan, have invented a new and useful Improvement in Railroad Step-Ladders; and I declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form a part of this specification.

My invention has for its object improvements in "railroad step-ladders," and is designed more especially, first, to provide a novel construction of the brackets for holding the rail in place; second, to provide the foot of the ladder with roller-fenders; third, to provide the ladder with a safety-guard to diminish the friction and prevent the ladder from being raised off the track above; and, fourth, my invention consists in the general arrangement, construction, and combination of devices, as hereinafter more particularly specified, and pointed out in the claims.

In the drawings, Figure 1 is a side elevation of a device embodying my invention. Fig. 2 is a modification showing the face-bracket for holding the rail. Fig. 3 is a separate view of the roller-fenders. Fig. 4 is a separate plan view showing the same with braces attached.

I carry out my invention as follows: A represents the shelving for the goods. A' is the nose of the ledge. A² represents a plain surface beneath the ledge. B represents the rail; C, a bracket for holding the rail, said bracket adapted to be secured to the side of the shelving.

C' is a bracket for holding the rail, adapted to be secured upon the face of the shelving. These brackets are provided with a chair, c, constructed as shown in the drawings, adapted to receive the rail B, so that the rail may project above it to present an even, unobstructed, and continuous surface for the sheaves.

c' represents set-screws to bind the rail in the chairs. The bracket and chair as thus constructed will hold the rail more steady, and can be more economically manufactured than as hitherto constructed.

D is the ladder; D', flanged sheaves secured thereto and adapted to traverse the rail.

E represents roller-fenders constructed with

any suitable arm, e, adapted to be secured to the ladder, and with a roller, e', secured therewith. The shelving beneath the ledge is constructed or provided with a plain face, upon which these rollers run. An additional strip may be employed for this purpose, if necessary, in applying the ladders.

e² is a brace.

F represents my improved safety-guard connected with the ladder and extended toward the nose of the ledge.

It has been common heretofore to construct these guards to run upon the nose of the ledge, the face of the guards next the ledge being curved to correspond with the shape of the nose of the ledge, bringing the weight of the ladder and of the person thereon to engage upon the upper outer face of the edge of the ledge, while not preventing the unseating of the ladder from the rail. My construction of the guard, however, and the application of the roller-fender combined reduce materially this friction upon the ledge, as it does away with the downward pressure, while the point f, extended under the lower edge of the ledge, constitutes at the same time a safety-guard, preventing any accidental unseating of the sheaves from the rail, as the foot of the ladder must be first pulled out, so as to disengage the guards from the ledge before the sheaves can be raised off the track. These safety-guards may, however, be dispensed with without departing from other features of my invention, as the roller-fenders would ordinarily answer all necessary purposes.

By employing anti-friction sheaves suitably bushed they are nearly or altogether noiseless in running.

The rails may be constructed in any suitable lengths, having their ends dressed so that they may be easily connected together. A railroad step-ladder so constructed may be applied to any kind of shelving, and may be extended to any desired height, and thereby the operator is enabled to reach goods near the ceiling in a very ready and convenient manner. Moreover, the operator, having ascended the ladder, may pull himself along in either direction upon the track without the necessity of descending and adjusting the position of the ladder, the roller-fenders obviously serving an important purpose in so doing.

The ladder is always in place, can easily be pushed aside out of the way, and prevents the scratching and marring of the shelving.

What I claim is—

5 1. In a railroad step-ladder, the combination, with a rail, of a bracket adapted to be secured to the side or front of the shelving, said bracket constructed with a chair to hold
10 the rail, and a set-screw for binding the rail in the chair, the construction being such that the rail will project above the chair, substantially as and for the purpose described.

15 2. In a railroad step-ladder, the combination, with the ladder, of roller-fenders projecting laterally from the ladder and having rollers set to run horizontally, substantially as described.

20 3. The combination, with a step-ladder, of safety-guards to extend underneath the edge of the ledge, the construction being such that any weight upon the ladder will be relieved

from the upper face of the ledge, substantially as described.

4. The combination, with a ladder provided with sheaves, of a track upon which said 25 sheaves traverse, and brackets constructed with chairs to support said rails, said ladder provided with roller-fenders, substantially as described.

5. The combination, with the shelving, of 30 brackets constructed with chairs and provided with a set-screw, a rail engaged in said chairs, and a ladder provided with flanged sheaves to ride upon said rail, said ladder provided toward its base with roller-fenders, 35 substantially as described.

In testimony whereof I sign this specification in the presence of two witnesses.

THOMAS A. HARVEY.

Witnesses:

THOMAS MCNAUGHT,
GEO. J. LITTLE.