

William Henry's Improved Folding-step for Carriage.

No. 120,517.

Patented Oct. 31, 1871.

Fig. 1.

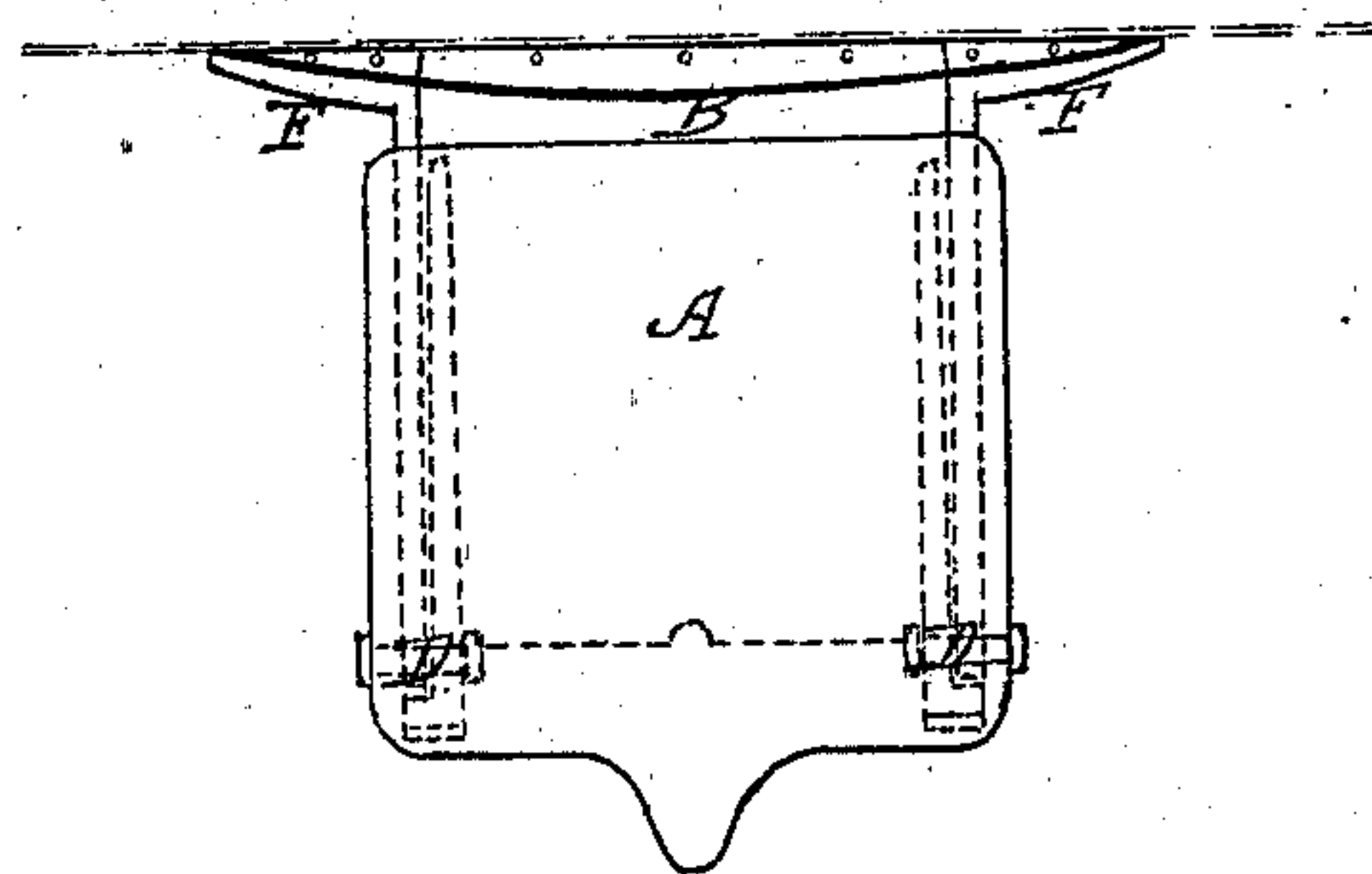


Fig. 2.

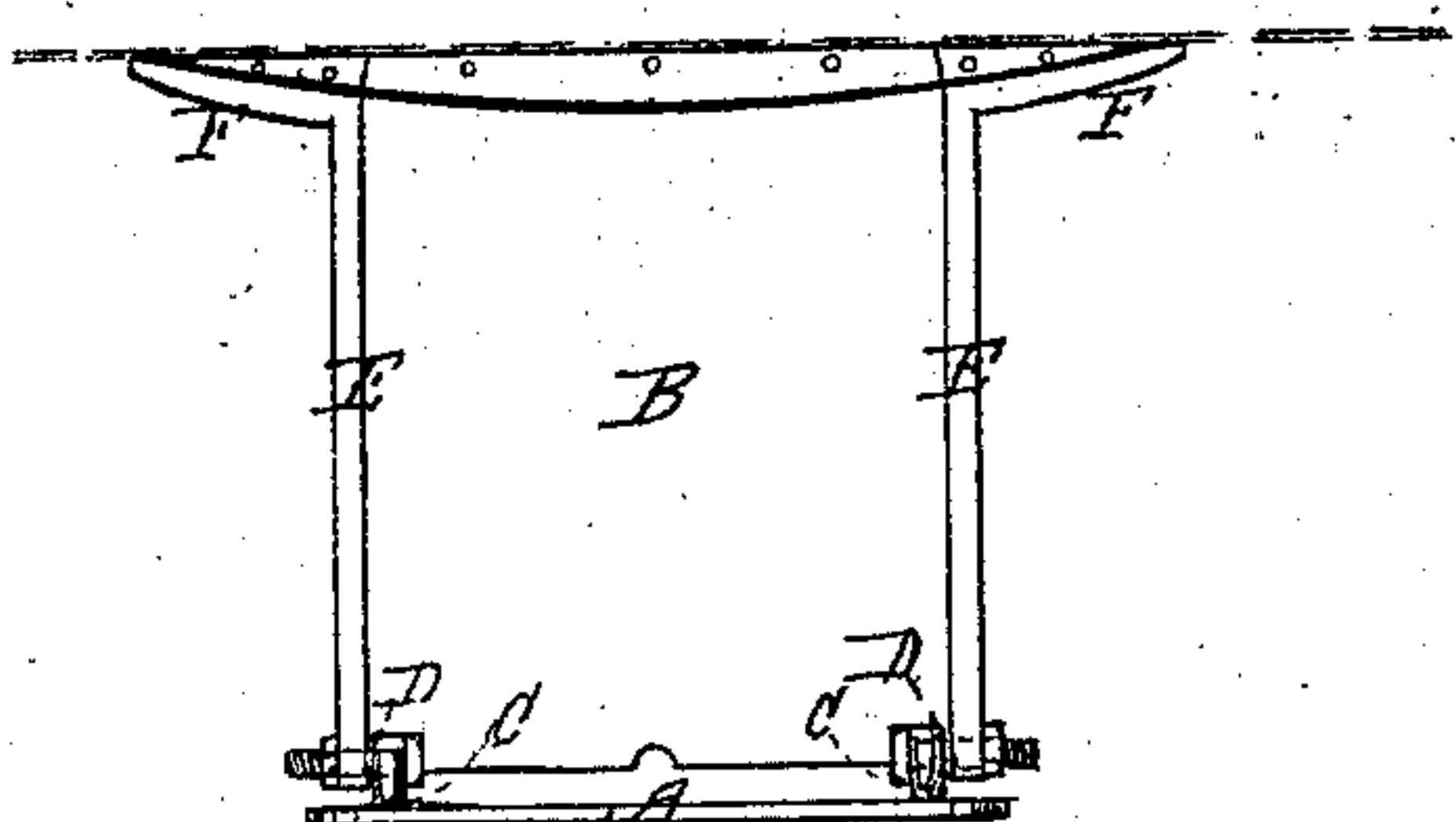
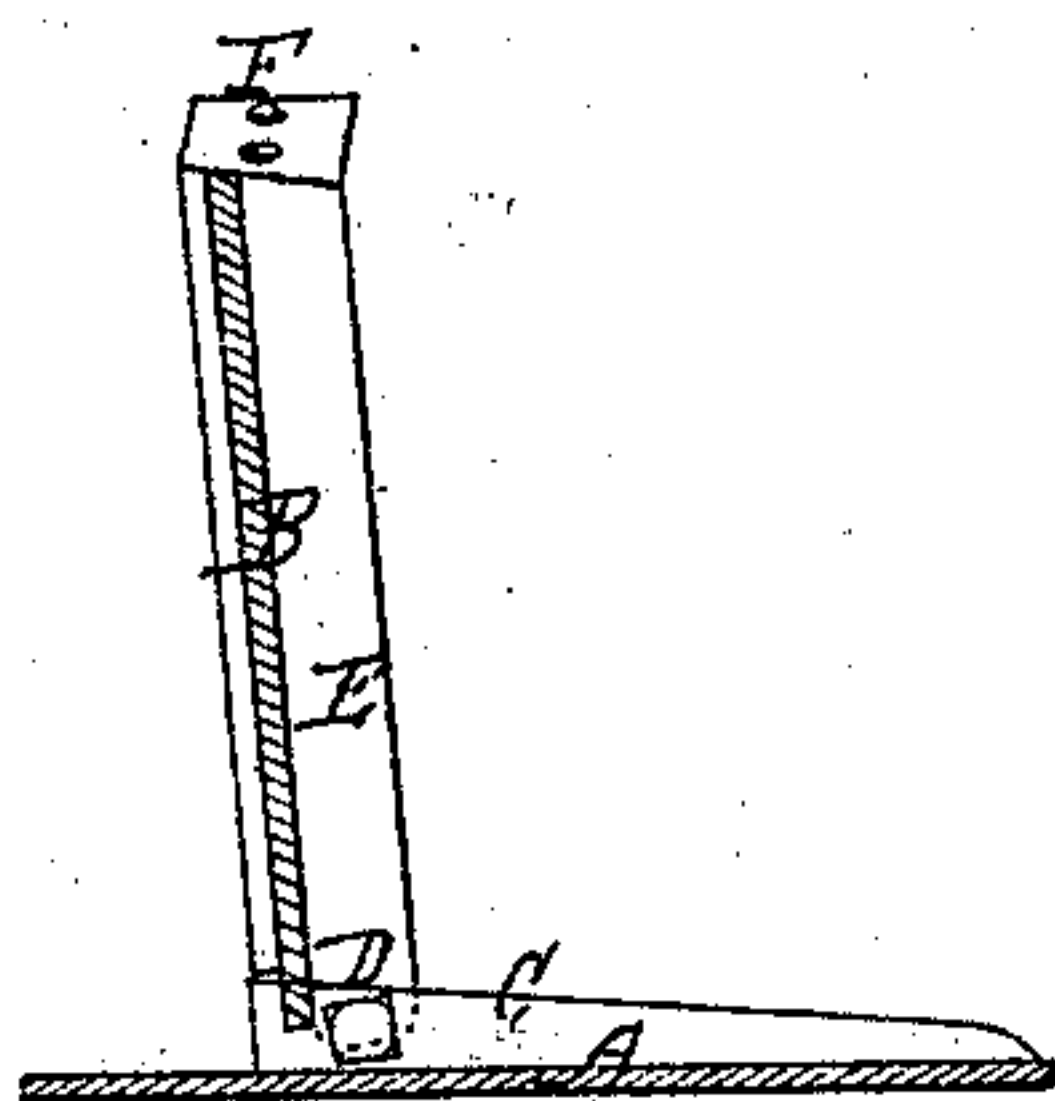


Fig. 3.



Witnesses:

William S. Kingston
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Inventor:

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UNITED STATES PATENT OFFICE.

WILLIAM HENRY, OF NEW YORK, N. Y.

IMPROVEMENT IN FOLDING-STEPS FOR VEHICLES.

Specification forming part of Letters Patent No. 120,517, dated October 31, 1871.

To all whom it may concern:

Be it known that I, WILLIAM HENRY, of the city, county, and State of New York, have invented a new and useful Improvement in Folding-Steps for Carriages, &c.; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation thereof, sufficient to enable others skilled in the art to make and use the same, reference being had to the accompanying drawing forming a part of this specification, in which—

Figure 1 is a front view of my improved carriage-step, showing the same folded. Fig. 2 is a front view, showing the step unfolded or open; while Fig. 3 is a transverse central section of the step thrown open as in Fig. 2.

Heretofore folding-steps for carriages, &c., have been constructed; and even though a tread and rise were employed, they, in their arrangement of parts for operation, necessitated the employment of frames, backs, supports, stays, rivets, bolts, screws, &c., which, owing to their complexity, render the steps costly, and, at the same time, owing to the diminution of the several parts by friction, they become loose and rattle; hence cause an unpleasant noise when the vehicle is in motion.

Being a carriage manufacturer and aware of the defects in the class of folding-steps now in use I have experimented with and improved such steps; and to this particular end my invention consists of two metallic plates produced by casting them in suitable molds, one of which plates is termed or known as the tread, while the other is likewise called the rise. These two plates are united by a hinge or other suitable joint, by which means the tread is adapted to fold or unfold and assume a vertical or horizontal position in reference to the rise, the connection between the two being such that noise or rattling is obviated. The construction of which parts and the manner by which the result is obtained will now be set forth in detail.

In the drawing, A designates what is termed the tread and B the rise. The two may be formed of any suitable metal, but by preference are produced from cast-iron. The tread A is formed with ribs or ears C C, which, being arranged at or near the sides of the said tread, serve as a guard, preventing a person's foot from slipping

off laterally when in the act of entering a carriage. These ribs or ears are provided with an opening, through which passes a bolt, D, by which means the tread is hinged or pivoted to the rise. Thus it will be seen that by providing the tread with the ribs C a guard for the foot and ears for the hinge are formed in the one and the same piece. The rise B is provided with the ribs E E, which form ears for the hinge and walls for shielding or protecting the inner face of the step from dirt when folded. The said ribs E are provided with openings, which, when coincident with the openings in the ears C, admit of the passage of the bolt D, by which means the hinged connection is produced and the tread adapted to fold and unfold, the bolt being retained in place by a nut. The space between the ribs C C and E E, either or both upon the face of the steps, may be completed, hiding from view the hinge and ribs, and hence render the whole neat and attractive when the tread is unfolded. The rise B is formed with the arms F F, which are so formed as to be easily connected with the body of the carriage by suitable bolts or screws. The rise B, when attached to a carriage or other vehicle, projects outwardly at its lower edge, so as to form an angle with a vertical line, thus causing the tread A, when folded upon the rise, to remain closed by its own gravity.

When the tread is unfolded the ribs of the same abut against the rear of the rise, and thus form a substantial landing.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The castings A B, forming the tread and rise of folding-steps, arranged and operating as set forth.

2. The improved metallic folding-steps for carriages, &c., consisting of the tread A having the ribs C, in combination with the rise B provided with the ribs E and arms F F, the said tread and rise pivoted together and arranged to operate substantially as described.

In testimony whereof I have hereunto set my signature this 23d day of November, 1870.

WILLIAM HENRY.

Witnesses:

WILLIAM J. FINEGEN,
ARTHUR NEILL.

(31)