

F. W. COOLBAUGH.
SILL STEP.
APPLICATION FILED MAR. 14, 1912.

1,046,981.

Patented Dec. 10, 1912.

Fig. 1.

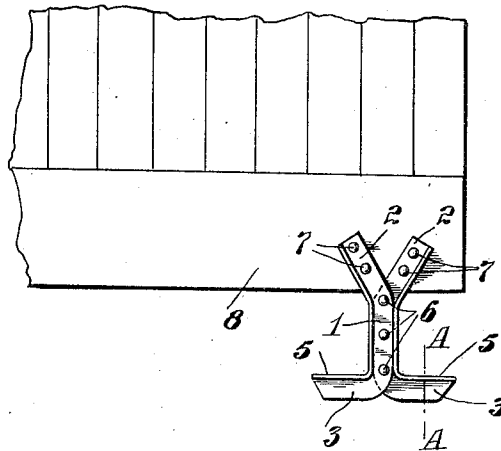


Fig. 2.

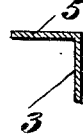


Fig. 3.

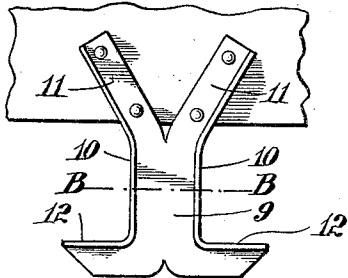


Fig. 4.

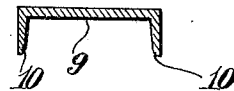


Fig. 6.

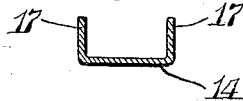


Fig. 7.

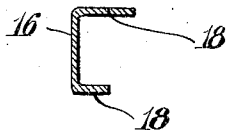
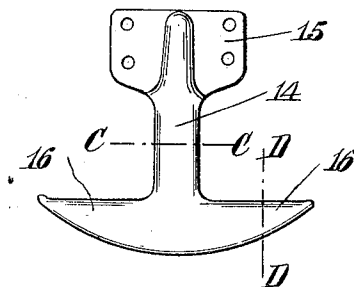


Fig. 5.



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UNITED STATES PATENT OFFICE.

FRANK WILLIAM COOLBAUGH, OF PHILADELPHIA, PENNSYLVANIA.

SILL-STEP.

1,046,981.

Specification of Letters Patent.

Patented Dec. 10, 1912.

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To all whom it may concern:

Be it known that I, FRANK W. COOLBAUGH, a citizen of the United States, and a resident of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Sill-Steps, of which the following is a specification.

This invention relates to new and useful improvements in sill-steps, such as are attached to the side or end sills of freight cars, etc., and project down from the same to facilitate mounting or jumping upon the car.

The object of my invention is to provide a new and improved sill-step which is simple in construction, strong and durable, not expensive and which permits the train men to mount and dismount the car with greater safety.

In the accompanying drawings in which like letters of reference indicate like parts in all the figures: Figure 1 is a side view of my improved sill step made of two angle irons. Fig. 2 is a cross sectional view on the line A—A of Fig. 1. Fig. 3 is a side view of a modification made from a channel bar. Fig. 4 is a sectional view of the same on the line B—B of Fig. 3. Fig. 5 is a side view of another modification made from pressed metal, in one piece. Fig. 6 is a cross sectional view on the line C—C of Fig. 5. Fig. 7 is a cross sectional view on the line D—D of Fig. 5.

My improved sill-step is composed of a downwardly extending member provided at its upper end with a flaring member or members by means of which the sill-step can be riveted or bolted to the sill of a car and at the lower end the downwardly projecting member is provided with two step portions, extending horizontally in opposite directions from the lower end of the main member, in the direction of the length of the car when the sill-step is attached to the side sill or transversely to the length of the car when the sill-step is attached to the end sill.

As shown in Fig. 1 my improved sill-step is made of two angle irons each being bent to form a vertical portion 1, from the upper end of which an arm 2 is inclined upward and at the lower portion of which a horizontal arm 3 is formed, the top edge of which is formed by the flange 5 of the angle iron. The portions 1 of the two angle irons are overlapped so that the flanges are at the

outer edges and then these overlapping portions are riveted together by rivets 6, the upper portions 2 being inclined upward or from each other or flared and are secured by bolts or rivets 7 to the sill 8 of the car.

In the modification shown in Figs. 3 and 4 the sill step is made from a channel bar 9, the flanges 10 of which extend outward. At the upper end the channel bar is split to form the two inclined arms 11 extending oppositely and the lower end of the bar 9 is slitted and bent in opposite directions horizontally to form the step portions 12, the flange of the channel bar here likewise being at the top. In the construction shown in Figs. 5, 6 and 7 the step is made in pressed metal, and is also composed of the main portion 14, the flaring top 15 and the horizontal step portions 16 extending in opposite directions from the main body portion 14. The main body portion 14 is provided with the flanges 17 and the step portion with the top and bottom flanges 18. It will thus be seen that in all constructions the body portion, the top flaring portion for attaching the sill-step to the sill by means of bolts or rivets and the horizontal step portions are all provided with flanges.

The conventional type of step used heretofore consists of a U-shaped step riveted or bolted to the sill and made of wrought-iron or steel and can be used easily by the train-men when the train is at rest, but when the train is in motion this step is exceedingly dangerous as the man in mounting must place his foot in between the two uprights in order to catch the tread. This conventional step is also weak in the direction of the length of the car and is apt to be bent and twisted. My sill step, in all constructions is stiff and rigid and presents a sure step to the brakeman or train-man for his foot in whichever direction the car may be moving. It is much safer because the train-man need not insert his foot in between the two bars and this is of particular importance when the train is in motion, and insures against accident in descending from the top of the car as the train-man need only feel with his foot for the vertical central member, and is then assured of a foot-hold beneath.

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

1. A sill step for railway cars, composed

of a vertical body portion, a top portion
for attaching the sill step to the sill of a car,
two horizontal step portions at the bottom of
the vertical portion, said horizontal step
5 portions extending in opposite directions
from each other at the lower end of the body
portion, and said step portions, body por-
tion, and top being all in substantially the
same vertical plane, substantially as set
10 forth.

2. A sill step for railway cars, composed
of a vertical body portion, a top portion
for attaching the sill step to the sill of a
car, two horizontal step portions at the bot-
15 tom of the vertical portion, said horizontal
steps extending in opposite directions at the
lower end of the body portion and each
horizontal step portion having a flange at
its upper edge, and said body portion, steps

and top being all in substantially the same 20
vertical plane, substantially as set forth.

3. A sill-step for railway cars composed
of a vertical body portion, having flanges
along the edges, a flanged top portion for
attaching to the cars, extending from the 25
upper end of the body portion, and two step
portions at the bottom of the body portion
and extending in opposite directions, said
step portions having flanges on their upper
edge, substantially as set forth. 30

Signed at Philadelphia in the county of
Philadelphia and State of Pennsylvania this
5th day of March, A. D. 1912.

FRANK WILLIAM COOLBAUGH

Witnesses:

K. M. COOLBAUGH,
JOSEPH KLAPP NICHOLLS.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,
Washington, D. C."