

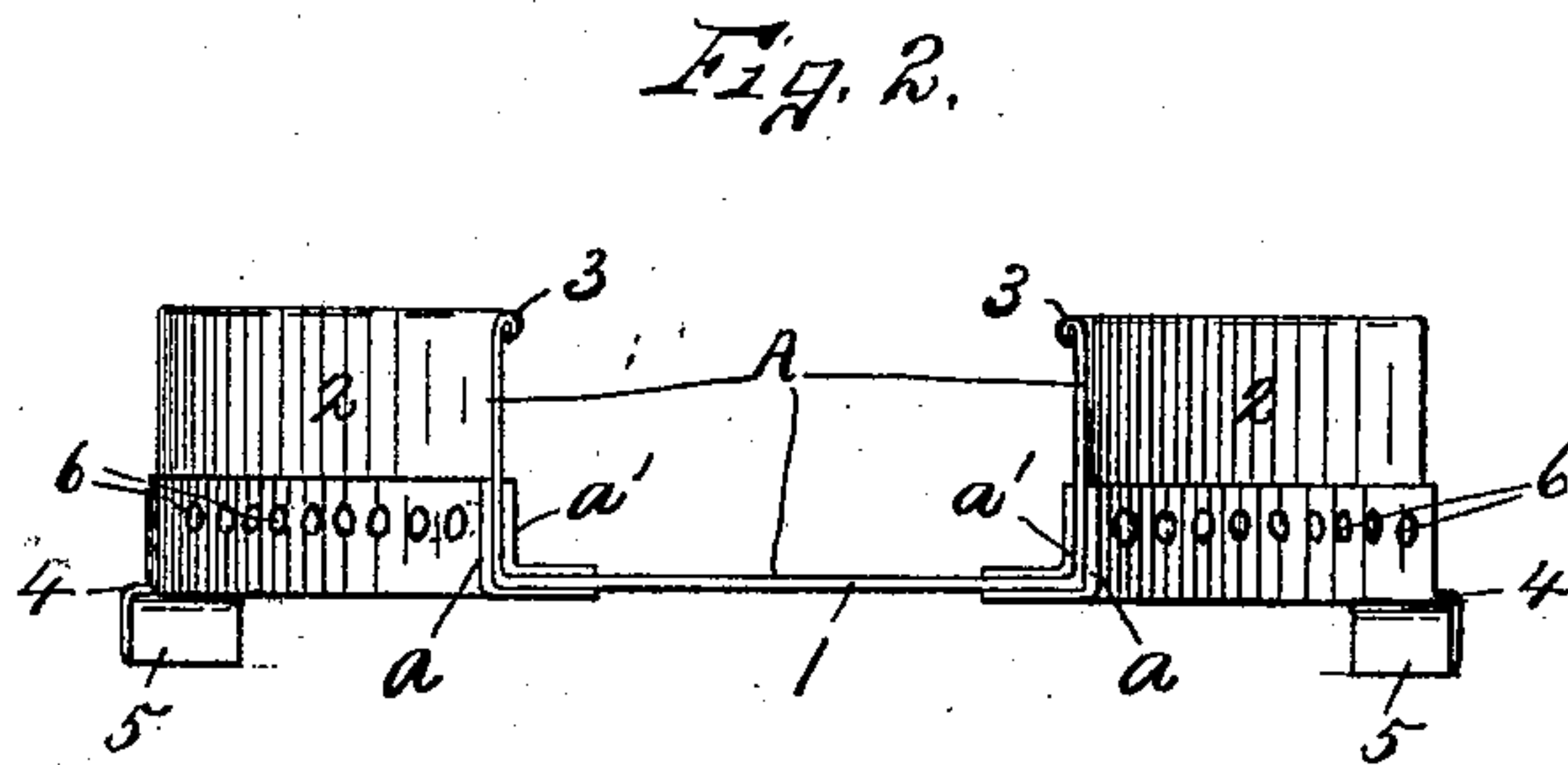
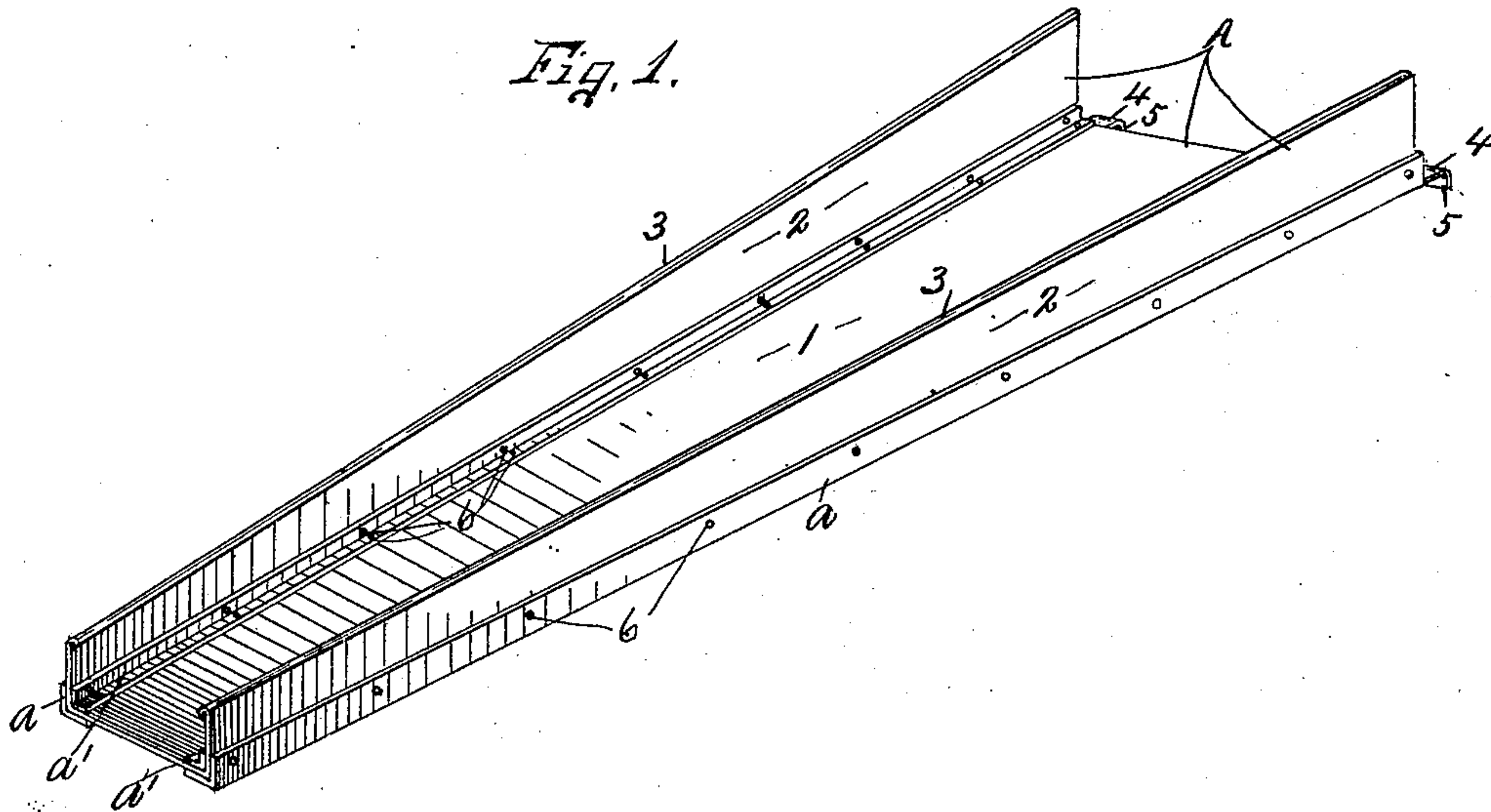
No. 686,452:

Patented Nov. 12, 1901.

**J. W. HAYWOOD.
CHUTE.**

(Application filed Feb. 20, 1901.)

(No Model.)



WITNESSES:

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JOHN W. HAYWOOD, OF SYRACUSE, NEW YORK.

CHUTE.

SPECIFICATION forming part of Letters Patent No. 686,452, dated November 12, 1901.

Application filed February 20, 1901. Serial No. 48,058. (No model.)

To all whom it may concern:

Be it known that I, JOHN W. HAYWOOD, of Syracuse, in the county of Onondaga, in the State of New York, have invented new and useful Improvements in Chutes, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

This invention relates to improvements in chutes, and particularly to coal-chutes, the object being to form a chute of a single piece of sheet metal and to reinforce the corners of said chute, particularly the outer corners, whereby the chute is strengthened and its life materially increased.

To this end the invention consists in the construction, combination, and arrangement of the parts of a chute, as hereinafter fully described and claimed.

Referring to the drawings, Figure 1 is a perspective view of a chute embodying my invention. Fig. 2 is an enlarged end view of the chute seen in Fig. 1.

Similar reference characters indicate corresponding parts in both views.

A represents a chute formed of a single piece of sheet metal and consisting of a bottom wall 1 and side walls 2, the bottom wall 1 being of less width at one end than the other and the side walls 2 being bent at substantially right angles with the bottom wall 1 and having their upper edges bent inwardly for forming beads 3, said beads serving to stiffen the side walls of the chute.

α and α' represent outer and inner angle-bars arranged lengthwise of the chute and preferably extending from end to end, the outer angle-irons being secured to the opposite longitudinal corners or meeting edges of the bottom and side walls 1 and 2 and are provided at one end with extensions 4, having downturned extremities 5, which are adapted to engage any suitable support upon a car or vehicle for holding the chute in its operative position. The inner angle-irons α' also extend from end to end of the chute and are adapted to closely fit against the inner faces of the meeting edges of the bottom and side walls 1 and 2 for additionally stiffening the chute, although the inner angle-irons may be dispensed with, if desired, the essential purpose of the outer angle-irons being not only

to stiffen the chute, but to form a suitable wearing-surface, which when worn and rendered useless may be readily removed and new ones secured in position without injuring the chute.

I am aware that chutes formed of a single piece of sheet metal have been in use, and it is well known that those chutes soon become battered and bent and even worn through, thereby necessitating considerable expense in replacing the same. My invention is designed to prevent the wear of the chute and to materially stiffen the same for preventing its being battered or bent and the downturned extremities or hooks 5 being formed integral with the angle-irons α . It is evident that the wear of the chute incidental to its use is reduced to a minimum. The ends of the angle-irons which extend from end to end of said chute prevent the battering of the end edges of the chute, and the hooks 5 form a particularly strong support for the larger end of the chute.

Although I have shown outer and inner angle-irons at the corners of the chute secured by rivets or other fastening means 6, it is obvious that the inner angle-iron may be dispensed with and the outer angle-iron secured directly to the bottom and side walls of the chute.

The operation of my invention is apparent from the foregoing description and the accompanying drawings, and it is thought unnecessary to further illustrate or describe the same.

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

1. A chute formed from a single piece of sheet metal having its longitudinal edges bent at substantially right angles to its intermediate portion, in combination with reinforcing-pieces lapped upon the outer faces of the meeting edges of the bottom and side walls, said reinforcing-pieces being extended beyond the chute and provided with downturned extremities for the purpose described.

2. A chute consisting of a single piece of sheet metal having its opposite longitudinal edges bent in substantially the same direction, in combination with inner and outer reinforcing-pieces lapped respectively upon the

inner and outer faces of the meeting edges of the bottom and side walls of the chute.

3. A chute consisting of a single piece of sheet metal having its opposite longitudinal edges bent in substantially the same direction, in combination with inner and outer reinforcing-pieces lapped respectively upon the inner and outer faces of the meeting edges of the bottom and side walls of the chute, said outer reinforcing-pieces being provided with extensions projecting beyond one end of the chute and having downturned flanges for the purpose described.

4. A chute consisting of a single piece of sheet metal having its opposite edges bent in substantially the same direction and formed with lengthwise beads or rolls in combination with reinforcing-pieces formed of substantially the same length as the chute and secured to the outer faces of the meeting edges

of the bottom and side walls for the purpose described.

5. A chute consisting of a single piece of sheet metal having its opposite edges bent in substantially the same direction and formed with lengthwise beads or rolls in combination with reinforcing-pieces formed of substantially the same length as the chute and secured to the outer faces of the meeting edges of the bottom and side walls, the lower flanges of said reinforcing-pieces being extended beyond the side flanges and provided with downturned extremities for the purpose described.

In witness whereof I have hereunto set my hand this 24th day of January, 1901.

JOHN W. HAYWOOD.

Witnesses:

H. E. CHASE,
MILDRED M. NOTT.