## F. W. COOLBAUGH. BRAKE BEAM.

(Application filed Mar. 20, 1900.)

(No Model.)

WITNESSES:

## United States Patent Office.

FRANK W. COOLBAUGH, OF EASTON, PENNSYLVANIA.

## BRAKE-BEAM.

SPECIFICATION forming part of Letters Patent No. 649,568, dated May 15, 1900.

Application filed March 20, 1900. Serial No. 9,363. (No model.)

To all whom it may concern:

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

This invention relates to improvements in brake-beams.

The object of my invention is to provide a new and improved brake-beam which is simple in construction, light, strong, and durable.

In the accompanying drawings, forming a part of this specification, and in which like letters of reference indicate like parts in all the views, Figure 1 is a side view of my improved brake-beam. Figs. 2 and 3 are transverse sectional views of the same on the lines 20 2 2 and 3 3, respectively. Fig. 4 is a side view of a slightly-modified form of the beam.

The brake-beam, which is preferably made of rolled steel, is provided with the web a, the flange b along one edge of the web, and the lead or bulb c along the other edge. The width of the beam increases from the two ends toward the center, and the thickness of the web decreases from both ends to the center of the beam in the same proportion as the web increases in width, so that the transverse sectional area of the web will be the same throughout the entire beam. Near the ends of the beam the web has less height than at the center, but is thicker in proportion than it is at

the center. In order to provide for this 35 greater width at the center of the beam, either the edge toward the wheels must be curved outward and the other edge remain straight, as shown in Fig. 1, or this edge toward the wheels remains straight and the opposite edge 40 is curved outward, as shown in Fig. 4.

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

1. A flanged brake-beam increasing in 45 width from the ends toward the center and decreasing in thickness from the ends toward the center substantially as herein shown and described.

2. A flanged brake-beam increasing in 50 width and decreasing in thickness from the ends to the center and having one edge straight and the other curved, substantially as herein shown and described.

3. A flanged brake-beam increasing in 55 width and decreasing in thickness from the ends to the center and having a uniform transverse sectional area throughout its entire length substantially as herein shown and described.

Signed at New York, in the county of New York and State of New York, this 6th day of February, A. D. 1900.

FRANK W. COOLBAUGH.

Witnesses:

OSCAR F. GUNZ, H. M. FLANNERY.