

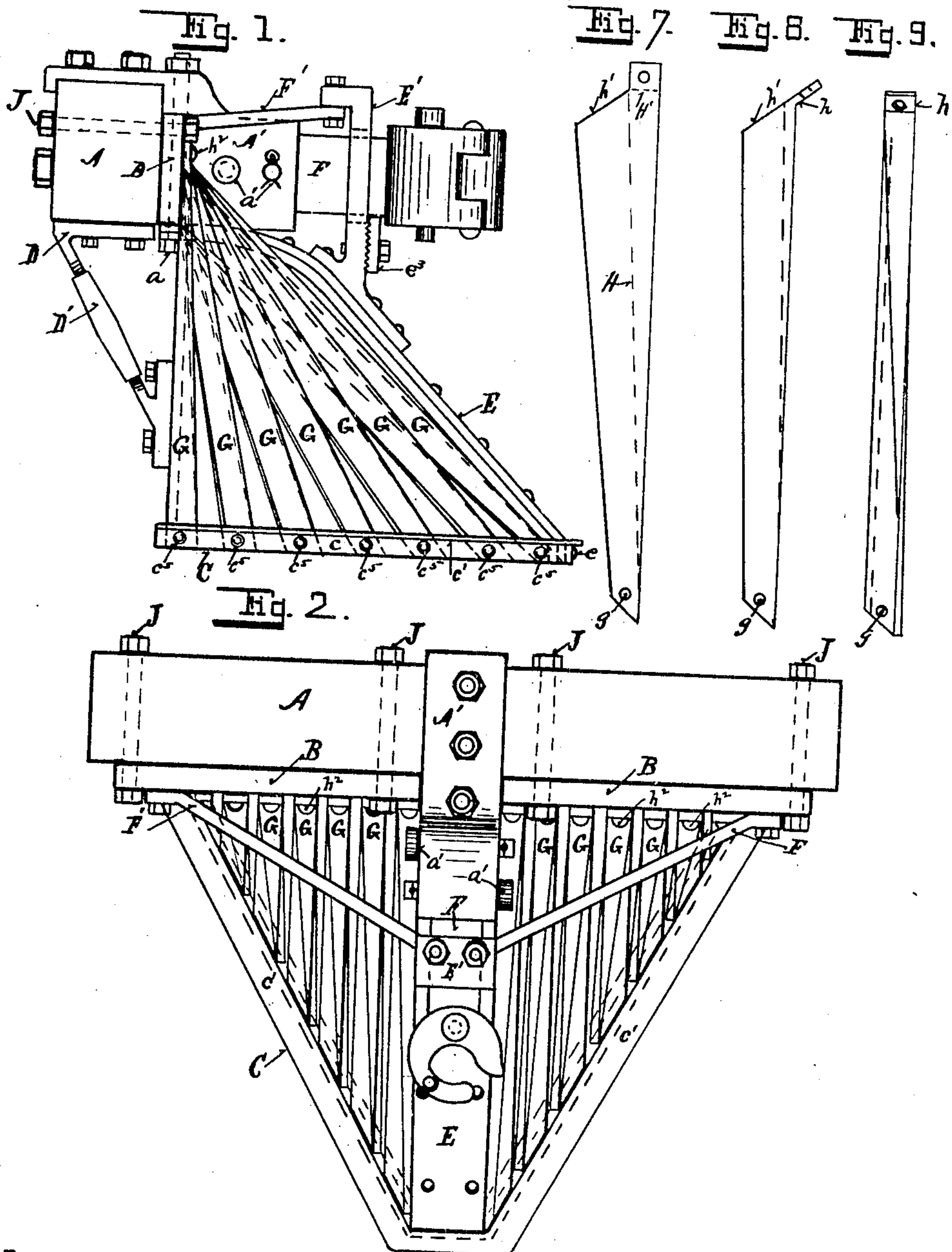
No. 871,789.

PATENTED NOV. 26, 1907.

H. J. DEAN.
LOCOMOTIVE PILOT.

APPLICATION FILED APR. 12, 1907.

2 SHEETS—SHEET 1.



Witnesses.

Florence Stockert
Robert Spittal

Inventor.

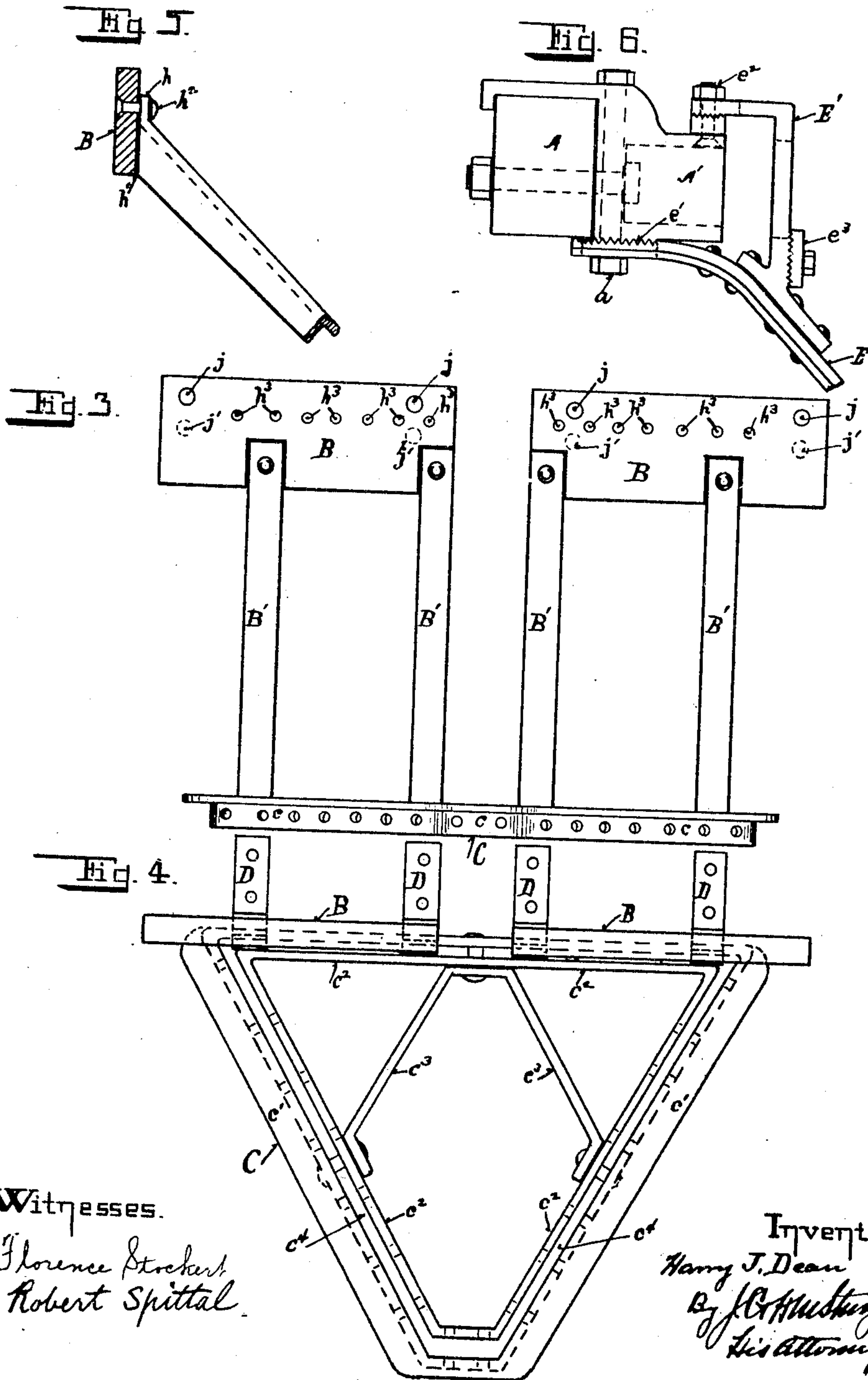
Harry J. Dean
By *J. C. Armstrong*
His Attorney

No. 871,789.

PATENTED NOV. 26, 1907.

H. J. DEAN.
LOCOMOTIVE PILOT.
APPLICATION FILED APR. 12, 1907.

2 SHEETS—SHEET 2.



Witnesses.

Florence Stocker
Robert Spittal

Inventor.

Harry J. Dean
By J. C. Huntington
His Attorney

UNITED STATES PATENT OFFICE.

HARRY J. DEAN, OF MEADVILLE, PENNSYLVANIA.

LOCOMOTIVE-PILOT.

No. 871,789.

Specification of Letters Patent.

Patented Nov. 26, 1907.

Application filed April 12, 1907. Serial No. 367,883.

To all whom it may concern:

Be it known that I, HARRY J. DEAN, a citizen of the United States, residing at Meadville, in the county of Crawford and State of Pennsylvania, have invented certain new and useful Improvements in Locomotive-Pilots; and I do hereby 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 appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, forming part of this specification.

My invention relates to locomotive pilots, and has for its object the construction of a locomotive pilot in such a manner that the nose thereof will be less inclined to sag, and to provide means whereby the pilot may be adjusted vertically on the bumper-beam of the locomotive when the springs under the locomotive have allowed the body thereof to become low. These and other features of my invention appear hereinafter in the specification and claims and are illustrated in the accompanying drawings, in which:

Figure 1 is a side view in elevation of my improved locomotive pilot. Fig. 2 is a top or plan view of the same. Fig. 3 is a front elevation of the frame of my improved pilot. Fig. 4 is a top of plan view of the frame thereof. Fig. 5 is a view of a section of the pilot-plate showing the manner of securing the slats thereto. Fig. 6 is an end view in elevation of the bumper-beam of a locomotive, showing the manner of adjustably securing the upper end of the nose-piece to the draw-bar casting, and also showing an alternative construction of the perpendicular post. Fig. 7 is a plan view of the sheet metal blank out of which my improved pilot slats are made. Fig. 8 is a side view of the same after it has been pressed into form for a slat. Fig. 9 is a plan view of the same.

In these drawings A indicates the bumper-beam of a locomotive, and A' the draw-bar casting secured thereto. To the front side of the bumper-beam A, I secure pilot-plates B B, which are preferably of metal, the draw-bar casting A' extending forward between the inner ends of the sections B B of the pilot-plates. Extending downward from the pilot-plates B B are rear supporting bars B' for the purpose of supporting the rear edge of the bottom frame C. This bottom-frame C is composed of an outer triangular

metal band *c*, preferably having an out-turned longitudinal flange *c'* on the upper edge of the two front sides of the triangle, which flange *c'* gives the frame C greater rigidity and, when desired, may support a foot-board for use of trainmen. Inside of this outer triangular band *c*, I preferably place an inner triangular band *c²*, and to give the bottom frame extra strength, I provide braces *c³* between the front sides of the bottom frame and the central part of the rear side thereof. The inner band *c²* is of such size as to leave a narrow space or slot *c⁴* between it and the outer band *c* for the purpose hereinafter set forth.

To strengthen the supporting bars B I provide braces D, see Figs. 1 and 3, which braces I preferably provide with a right and left hand screw-sleeve adjusting mechanism D'.

The front point or nose of the bottom frame C is supported by a metal nose-piece E, the lower end of which is inserted in the space *c⁴* between the inner and outer bands *c²* and *c*, where it is secured by means of bolts or rivets *e* passing horizontally through holes in said bands and said nose-piece. The upper end of the nose-piece E is secured to the under side of the draw-bar casting A' by means of a bolt *a*, shown in broken lines in Fig. 6. I preferably provide the under side of the draw-bar casting A' and upper side of the upper end of the nose-piece E, with corrugations *e'*, and I also preferably make a hole through the upper end of the nose-piece E for the bolt *a*, elongated or slotted, as shown by dotted lines in said Fig. 6, so that the height of the nose of the pilot above the railroad track may be adjusted. The nose-piece E is also provided with a perpendicular post E', through an opening in which the draw-bar F passes. From the upper end of this post E' I preferably provide braces F' which extend, and are suitably secured to the pilot-plates B B, as shown in Figs. 1 and 2. In Fig. 6 I show an alternative construction, wherein, in lieu of the braces F', I adjustably secure the upper end of the post E' directly to the upper side of the draw-bar casting A' by means of a bolt *e²*. The opening through the post E' for the draw-bar F is preferably made large enough to admit of the adjustment of the pilot vertically, and I provide an adjustable guide *e³* on the post E' for the purpose of holding the bar F level.

The draw-bar F is preferably rigidly se-

cured in the draw-bar casting A' by means of the pins a' , which I preferably pass through horizontal openings therein, but said openings may be, with equal facility, made perpendicular.

The pilot slats G are preferably formed of sheet metal of suitable thickness, as shown in Figs. 7, 8 and 9, the metal being first cut into a blank of the general form shown in Fig. 7. It is then folded on the dotted lines H and H' in Fig. 7, which produces a slat G of the shape shown in Fig. 8, and also in Figs. 1 and 2, having an ear or lip h on the upper end thereof, substantially in line with the beveled shoulder h' thereon. This ear h is securely riveted or bolted to the pilot-plate B, by means of the rivet h^2 passing through the holes h^3 in the pilot-plate B, the shoulder h' bearing against the pilot-plate B, as shown in Fig. 5. It will readily be seen that this form of slat thus secured to the pilot-plates B, is very rigid, and will strongly resist downward pressure thereon.

The slats G are each of a different length according to the position they occupy in the pilot, and the angle of the shoulders h' and ear h differ in each slat, but the general plan of the slats are the same throughout, viz: to provide each slat with a shoulder h' below the ear h , to bear against the pilot-plate B. The lower ends of the slats G are inserted into the space or slot c^4 between the outer and inner bands c and c^2 of the bottom frame C, and rivets c^5 are passed horizontally through the holes c^3 in the bottom frame, and g in the lower ends of the slats G.

In operation after the pilot-plates B, bars B' and bottom frame C have been riveted together as hereinbefore described, and the slats G, formed as shown and described herein, have been riveted to the pilot-plates B, and into the bottom frame C the pilot is secured to the locomotive bumper-beam by means of bolts J passing through holes j in the pilot plates B, the nose-piece E is then secured in the point of the pilot frame, and to the under side of the draw-bar casting A', as herein shown and described, the braces D are secured under the bumper beam A and to the backs of the supporting bars B', and the adjusting mechanism D' operated until the nose of the pilot is sufficiently raised above the railroad tracks. Now should the locomotive, through use, settle down on its springs, my improved pilot can be raised vertically on the bumper-beam A by making holes j' (shown in dotted lines in Fig. 3) below the holes j , and passing the bolts J there-through, and either readjusting the nose-piece E on the draw-bar casting A', or inserting a shorter one, as may be required. It will be noted that this adjustment of my improved pilot is affected without disturbing the fastenings of the draw-bar casting A' in any manner.

Therefore having described my invention so as to enable others to construct and use the same, what I claim as new is:

1. In a locomotive pilot, a pilot-plate composed of two sections, adapted to be secured to the bumper-beam of a locomotive on each side of the draw-bar casting, a bottom frame suspended from said pilot plates, a nose-piece secured in the front of said bottom-frame and to the draw-bar casting, and slats secured to the pilot plates by means of ears on the upper ends thereof, and to the bottom frame by means of horizontal bolts or rivets, substantially as described.

2. In a locomotive pilot, pilot plates adapted to be secured to the bumper-beam of a locomotive, on each side of the draw-bar casting, a bottom frame suspended therefrom by supporting bars, a nose-piece secured in the point of the bottom frame, and adjustably secured to the draw-bar casting, slats secured to said pilot plates and to the bottom frame, and adjustable braces under the bumper-beam and backs of the supporting bars, substantially as set forth.

3. In a locomotive pilot, a pilot plate composed of two sections, adapted to be secured to the bumper-beam of a locomotive on each side of the draw-bar casting, vertical supporting bars depending therefrom, a triangular bottom frame secured to said supporting bars, a nose-piece secured to the point of said triangular frame, and adjustably secured to the draw-bar casting, slats adapted to be secured to the pilot plates and to the front sides of said triangular frame, and adjustable braces between the under side of the bumper-beam and the rear side of the supporting bars, substantially as set forth.

4. In a locomotive pilot, a triangular bottom frame composed of a continuous band of metal, a flange along the upper edge of the two front sides thereof, and braces leading from the central portion of each front side to the central portion of the rear side of said frame, substantially as set forth.

5. In a locomotive pilot a triangular bottom frame composed of a continuous metal band, having a slot or groove on the upper side thereof adjacent to the two front sides thereof, substantially as set forth.

6. In a locomotive pilot, a pilot slat formed out of a sheet metal blank, having the lower end flat, a flat horizontal flange at the upper end, a vertical web at the upper end having a beveled shoulder thereon adapted to bear against the pilot plate, and a vertical ear in line with said beveled shoulder, substantially as set forth.

7. In a locomotive pilot the combination of a pilot-plate composed of two sections, each section adapted to be secured to the bumper-beam on each side of the draw-bar casting, a bottom frame composed of a tri-

angular metal frame having a slot in the upper surface adjacent to the front sides thereof, supporting bars to support said frame below the pilot plates, slats, having a vertical web in their upper portions, the upper end of said vertical web being beveled to fit against the pilot plates, secured to said pilot plates, and their lower ends being secured in the slot in the bottom frame, adjustable braces behind said supporting bars and under the bumper-beam, substantially as set forth.

8. In a locomotive pilot, pilot-plates adapted to be secured to the bumper-beam on each side of the draw-bar casting, vertical supporting bars depending therefrom, a triangular bottom frame secured to said supporting bars, a nose-piece secured in the front point of said bottom frame, and adjustably secured to said draw-bar casting, a vertical post on said nose piece having a draw-bar opening therethrough, and braces

between the upper end of said vertical post and said pilot plates, substantially as set forth.

25

9. In a locomotive pilot, a nose-piece having the lower end thereof secured in the bottom frame of the pilot and the upper end thereof adjustably secured to the under side of the draw-bar casting, a perpendicular post on the front of said nose-piece having a draw-bar opening therethrough, an adjustable draw-bar guide secured to said post under said draw-bar opening, and means to connect the upper end of said post with the bumper-beam of a locomotive, substantially as set forth.

30

35

In testimony whereof I affix my signature, in presence of two witnesses.

HARRY J. DEAN.

Witnesses:

C. M. BOURH,
JOHN SCHULER.