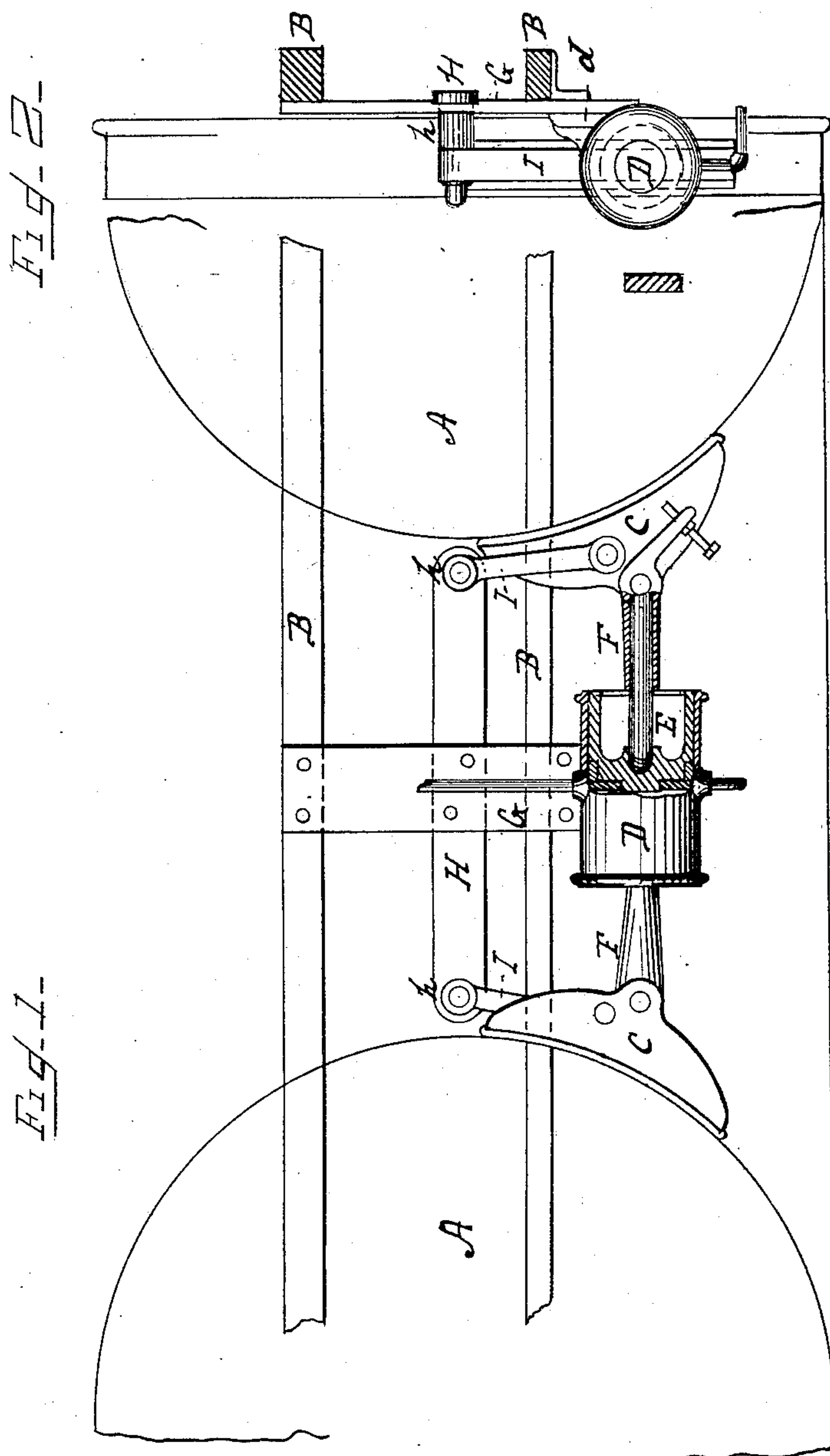


(No Model.)

G. H. POOR.  
LOCOMOTIVE BRAKE.

No. 315,163.

Patented Apr. 7, 1885.



Witnesses.

G. C. Tauberschmidt  
Kirkdale

Inventor

George H. Poor  
by F. M. Ritter atty

# UNITED STATES PATENT OFFICE.

GEORGE H. POOR, OF ST. LOUIS, MISSOURI, ASSIGNOR TO THE AMERICAN BRAKE COMPANY, OF SAME PLACE.

## LOCOMOTIVE-BRAKE.

SPECIFICATION forming part of Letters Patent No. 315,163, dated April 7, 1885.

Application filed August 4, 1884. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE H. POOR, a citizen of the United States, residing at St. Louis, in the State of Missouri, have invented certain new and useful Improvements in Locomotive-Brakes; and I hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, wherein—

Figure 1 is a side elevation of the locomotive frame and brake mechanism, showing my improved method of hanging the brake-heads. Fig. 2 is a view at right angles thereto, the piston-rod and brake-head of that side having been removed.

Like letters refer to like parts wherever they occur.

My present invention relates to the manner of and means for supporting or hanging the brake-heads on locomotives where the space on and between the locomotive-frame is so occupied that the ordinary channel-irons, brackets, and like means cannot be employed.

The construction of the locomotives used on the different railroads varies so greatly that no single known manner of hanging the brake-heads can be adapted to all constructions; but each and every method has to be more or less modified to suit the special construction or class of locomotive, accordingly as the obstructions are on the upper frame, the lower frame, or between the frames. In some instances the obstructions are due to the location of piping; in others to expansion-plates, rocker-boxes, &c.

The object of the present invention is to provide a construction which will be of almost universal application to the known construction of locomotives, and can be generally employed, so as to avoid all the obstructions commonly encountered.

To this end it consists, broadly stated, in a cross-bar bolted or otherwise secured to the face-plate which supports the brake-cylinder in a horizontal plane intermediate of the frames and just above the upper ends of the brake-heads, the arms of the cross-bar being extended to points contiguous to the brake-heads, whereby all obstructions on the frames are avoided, and the pivotal points of the

hangers are brought near the brake-head, so as to reduce the swing of the heads and the strain on the hangers to the minimum. In the present instance, for purposes of illustration, it is shown in connection with brake-heads arranged between the drive-wheels and operated by a horizontal cylinder, though I do not propose or intend to limit the invention to use in conjunction with such an arrangement of cylinder and brake-heads.

In the drawings, A A indicate the drive-wheels of a locomotive; B B, the locomotive-frames; C, the brake-heads suspended between the drive-wheels; D, a horizontal cylinder having two pistons with piston-rods E and push-bars F for applying the brakes.

G indicates the face-plate for supporting the horizontal cylinder D, which face plate or bracket is arranged midway between the drivers A A, and firmly bolted or otherwise secured to the locomotive-frames B B. To the lower end of this face-plate G the cylinder D is secured by bolts which pass through the tangential flange *d* of the cylinder.

At a suitable distance above the cylinder D a horizontal or cross bar, H, is firmly bolted to the face, and may either be supported by shoulders on the face-plate or by being let into the face-plate, being strengthened, if required, by longitudinal ribs and braced by transverse ribs, which bear against the edges of the face-plate. The length of the cross-bar H will depend on the distance between the drive-wheels and the points from which it is found advisable to suspend the brake-heads.

Near the outer ends of the cross-bar H are bosses or hanger-studs *h*, and from said studs the brake-heads are suspended by means of the hangers I.

By the means specified supports for the brake-heads can be obtained adapted to almost all known constructions of locomotive, and supports which can be rendered as rigid and strong as if the supports were bolted directly to the frames B.

I am aware that in the patent of D. S. Randolph, No. 241,511, dated May 17, 1881, a hanger-bracket having a flat portion the width of the face-plate, by which it was secured to the face-plate, and bent portions projecting at



right angles to the face-plate and terminating in pivot-lugs, to which the hangers were pivoted, said bracket secured to the face-plate in juxtaposition to the upper frame, has been  
5 described and claimed—its purpose and sole function being to obviate the necessity of bending the hangers—and do not herein claim the same, because it has neither the object nor function of the present devices. First, its location  
10 in juxtaposition to the frame would not avoid obstructions thereon, and, secondly, its distance from the brake-heads would not prevent the extended swing of the brake-heads or relieve the hangers, &c., of strain.

15 Having thus described the nature and advantages of my invention, what I claim, and desire to secure by Letters Patent, is—

In locomotive-brakes, the combination, with the face-plate which supports the brake-cylinder and the brake-heads actuated thereby, of a cross or hanger bar secured to the face-plate  
20 in a plane parallel with the locomotive-frame and in juxtaposition to the brake-heads, and the outer ends of which are provided with hanger-studs, to bring the hangers in alignment with the center of the shoes, substantially as and for the purposes specified. 25

In testimony whereof I affix my signature, in presence of two witnesses, this 1st day of August, 1884.

GEORGE H. POOR.

Witnesses:

E. B. LEIGH,

H. A. WAHLERT.