



No. 744,400.

PATENTED NOV. 17, 1903.

J. PLAYER.  
LOCOMOTIVE FRAME.

APPLICATION FILED AUG. 29, 1903.

NO MODEL.

2 SHEETS—SHEET 2.

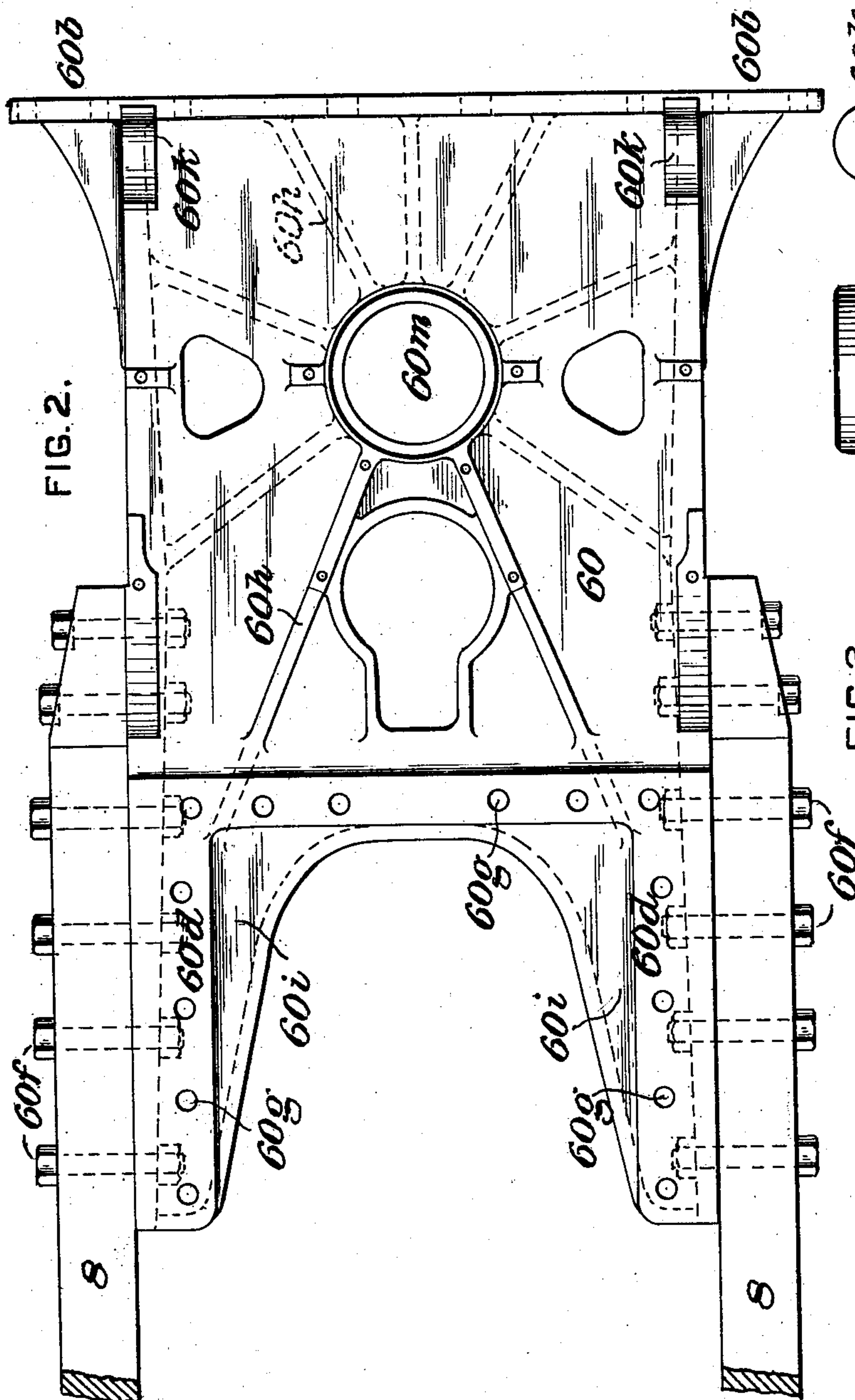


FIG. 2.

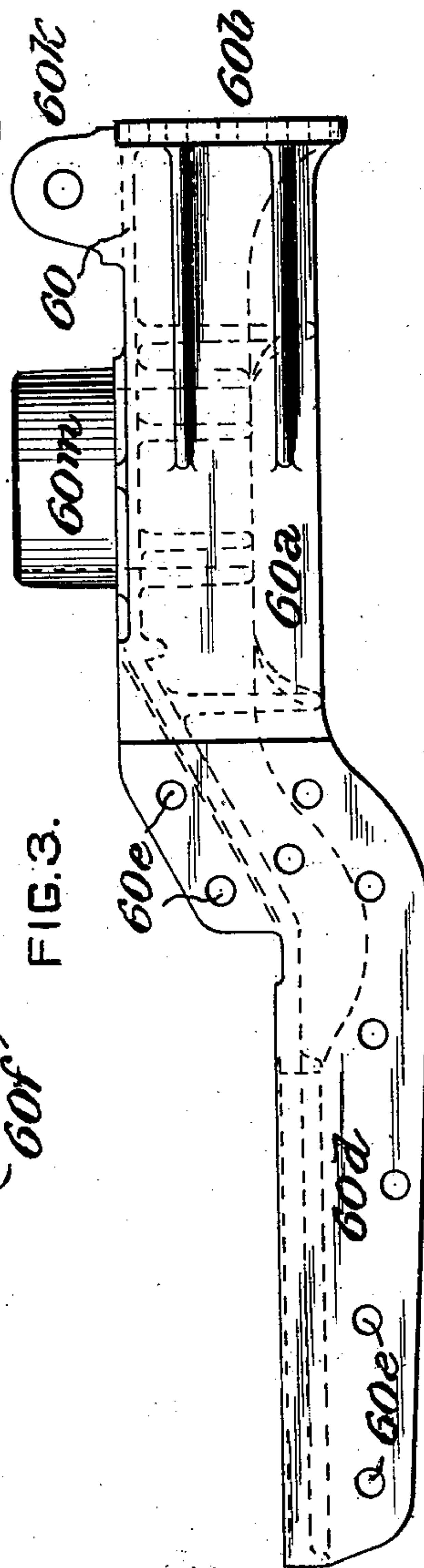


FIG. 3.

WITNESSES

James C. Herrow.  
S. R. Bell.

INVENTOR

John Player  
by J. H. Bell.  
Att'y.



# UNITED STATES PATENT OFFICE.

JOHN PLAYER, OF DUNKIRK, NEW YORK, ASSIGNOR TO AMERICAN LOCOMOTIVE COMPANY, OF NEW YORK, N. Y., A CORPORATION OF NEW YORK.

## LOCOMOTIVE-FRAME.

SPECIFICATION forming part of Letters Patent No. 744,400, dated November 17, 1903.

Application filed August 29, 1903. Serial No. 171,218. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN PLAYER, of Dunkirk, in the county of Chautauqua and State of New York, have invented a certain new and useful Improvement in Locomotive-Frames, of which improvement the following is a specification.

The object of my invention is to simplify, economize, and strengthen the construction of the front ends of the frames of locomotive-engines by the provision of means whereby the side frame members may be firmly connected one to the other and to the cylinder-saddles and buffer-beam without necessitating the splices ordinarily employed in the main frame between the cylinders and the front pedestals or involving the objection of integral front end extensions of the main frame, which require the whole frame to be taken down in the event of damage at the front end.

The improvement claimed is hereinafter fully set forth.

In the accompanying drawings, Figure 1 is a side view, in elevation, of the forward portion of a locomotive-engine, illustrating an application of my invention; Fig. 2, a plan or top view, on an enlarged scale, of the bumper-bracket; and Fig. 3, a side view in elevation of the same.

My invention is herein exemplified as applied in a locomotive-engine, the front end of the boiler 4 of which is supported upon cylinder-saddles 12 of the ordinary construction, upon the lower end portions of which the cylinders 12<sup>a</sup> are formed, and which abut on their inner sides and are connected at top to the smoke-box 4<sup>a</sup> of the boiler, which is supported upon them, and at their lower outer sides to the side frame members 8 in the usual or any preferred manner.

In lieu of employing separate front frame-sections and splicing them to the main side frame members 8, between the front pedestals 8<sup>a</sup> and the cylinder, or of extending the side frame members integrally to connections with the buffer-beam, both of which plans have heretofore been adopted in practice, the side frame members 8 are under my invention extended without connected front bars or sections from the front pedestals to a

transverse plane which is only slightly in advance of the cylinder-saddles—that is to say, only so far as will admit of a sufficient amount of metal to properly back up the lugs 8<sup>c</sup>, which form bearings for the keys 8<sup>d</sup>, which are employed in the connection of the saddles with the frame members. The forward ends of the side frame members 8 are connected one to the other, braced and squared, and connected to the buffer-beam 8<sup>b</sup> by a bumper-bracket which is an integral casting, consisting of a main body-plate 60, having downwardly-extending flanges 60<sup>a</sup> on its sides and a downwardly-extending and laterally-projecting flange 60<sup>b</sup> on its forward end, to which the buffer-beam 8<sup>b</sup> is secured by bolts 60<sup>c</sup>, thus dispensing with the heavy plate which is ordinarily placed behind the buffer-beam. Longitudinal lateral extensions 60<sup>d</sup>, which are downwardly flanged, project rearwardly from the body-plate 60. The outer faces of the flanges of said extensions are trued off and abut against the side frame members 8 and are perforated with horizontal bolt-holes 60<sup>e</sup> for the reception of bolts 60<sup>f</sup>, by which the bumper-bracket is connected to the forward portions of the side frame members. Vertical bolt-holes 60<sup>g</sup> are also formed in the rear extensions 60<sup>e</sup> and in the adjoining rear end of the body of the bumper-casting for the reception of bolts, by which the latter is connected to the bottoms of the cylinder-saddles 12. The body-plate of the bumper-casting is strengthened and stiffened by ribs 60<sup>h</sup> and the rear extensions by ribs 60<sup>i</sup>. Lugs 60<sup>k</sup> are formed upon the forward portion of the body-plate, to which are connected smoke-box braces 60<sup>l</sup>; the upper ends of which are secured to the smoke-box, thus further supporting the bumper-bracket to resist shocks. Where a two-wheeled leading-truck is employed, as is indicated in the instance herein exemplified, a spindle-guide 60<sup>m</sup> is formed upon the body-plate.

It will be seen that under the above construction the cylinder-saddles and side frame members are firmly secured together and their connection to the buffer-beam effected by a single member, which is thoroughly supported and braced, and, further, that the expense and inconvenience of separate front frame-



bars or forward extensions of the main frame members to the buffer-beam are wholly obviated. It will also be obvious to those skilled in locomotive-engine construction that while  
 5 my improvement is herein set forth as applied in connection with cylinder-saddles, each of which carries a cylinder and forms the half of a bed-plate intermediate between the cylinders, it is equally applicable where a central  
 10 bed-plate and separate cylinders connected to the sides thereof are employed, as is practiced in some cases, said single central bed-plate being the recognized mechanical equivalent of two centrally-connected cylinder-saddles.  
 15

I claim as my invention and desire to secure by Letters Patent—

1. In a locomotive-frame, the combination of cylinder-saddles, two side frame members  
 20 which extend integrally from the front pedestals to the front of the cylinder-saddles, a buffer-beam, and a bumper-casting interposed between and constituting the longitudinal connection of the side frame members and  
 25 the buffer-beam.

2. In a locomotive-frame, the combination of cylinder-saddles, two side frame members which extend integrally from the front pedestals to the front of the cylinder-saddles, a  
 30 buffer-beam, and a bumper-casting interposed between the side frame members and the buffer-beam and secured at its rear to the side frame members and cylinder-saddles and at its front to the buffer-beam.

3. In a locomotive-frame, the combination of cylinder-saddles, two side frame members which extend integrally from the front pedestals to the front of the cylinder-saddles, a  
 35 buffer-beam, and a bumper-casting having rearward extensions which are interposed be-  
 40

tween and secured to the side frame members and are also secured to the cylinder-saddles, and a transverse front flange which is secured to the buffer-beam.

4. In a locomotive-frame, the combination  
 45 of cylinder-saddles, a smoke-box supported on and secured thereto, two side frame members which extend from the front pedestals to the front of the cylinder-saddles, a buffer-  
 50 beam, a bumper-casting interposed between the side frame members and the buffer-beam and secured at its rear to the side frame members and cylinder-saddles and at its front to the buffer-beam, and braces connecting the  
 55 bumper-casting to the smoke-box.

5. A bumper-casting for locomotive-frames comprising a ribbed plate having downwardly-  
 60 extending flanges on its sides, a downwardly-extending and laterally-projecting flange on its forward end for connection to a buffer-  
 beam, and rearward downwardly-flanged lateral extensions in position to abut vertically against side frame members and horizontally against cylinder-saddles.

6. A bumper-casting for locomotive-frames  
 65 comprising a ribbed plate having downwardly-extending flanges on its sides, a downwardly-extending and laterally-projecting flange on its forward end for connection to a buffer-  
 70 beam, rearward downwardly-flanged lateral extensions in position to abut vertically against side frame members and horizontally against cylinder-saddles, and lugs on the upper portion of its body for connection to smoke-box braces.

JOHN PLAYER.

Witnesses:

F. D. LIGHT,

A. S. WIRTNER.