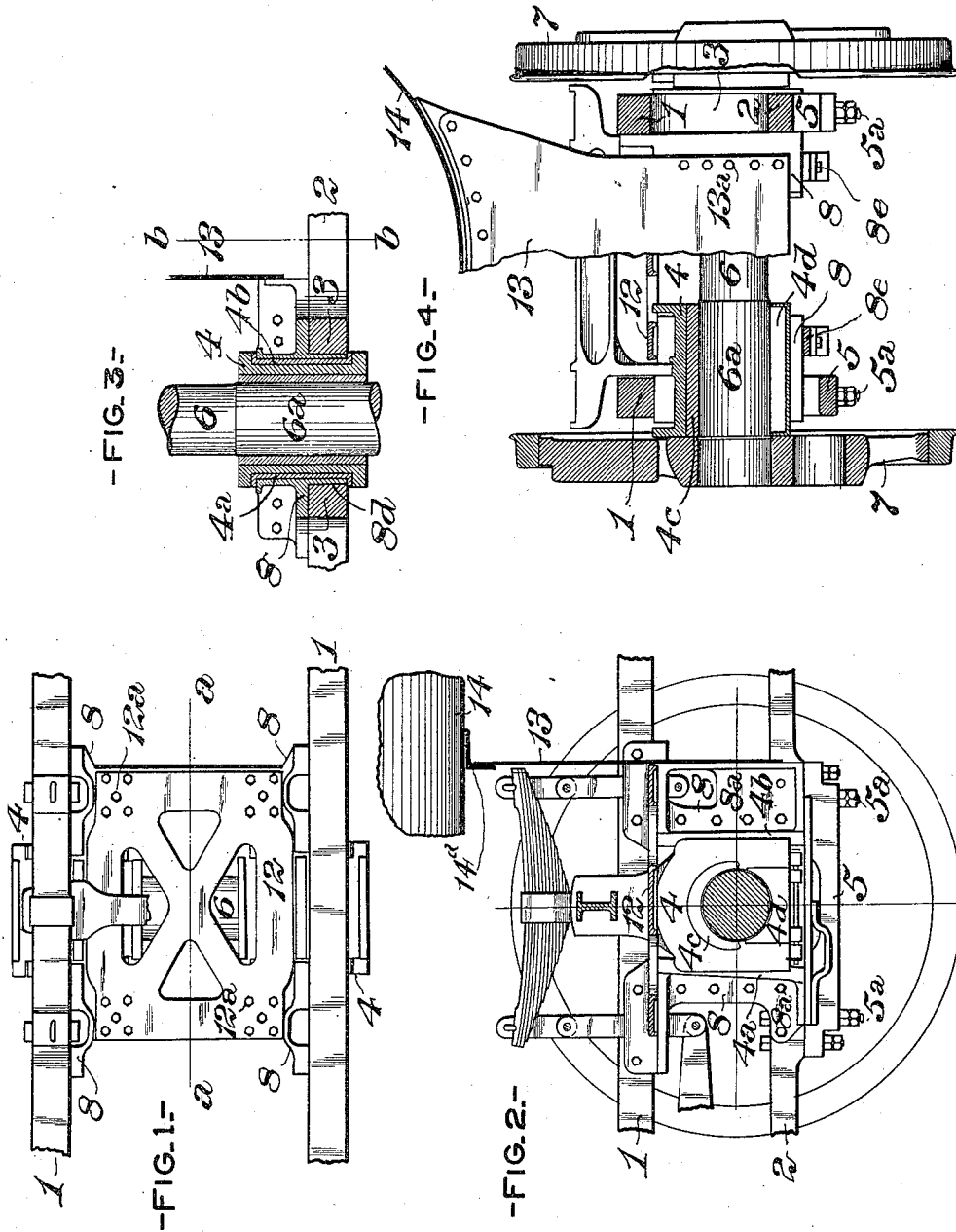


F. J. COLE.
LOCOMOTIVE ENGINE.
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1,060,230.

Patented Apr. 29, 1913.



WITNESSES:

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LOCOMOTIVE-ENGINE.

1,060,230.

Specification of Letters Patent.

Patented Apr. 29, 1913.

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To all whom it may concern:

Be it known that I, FRANCIS J. COLE, of Schenectady, in the county of Schenectady and State of New York, have invented a certain new and useful Improvement in Locomotive-Engines, of which improvement the following is a specification.

My present invention relates to means for providing increased area of bearing surface on the driving axles of locomotive engines, and is an improvement in the structural detail of that set forth in Letters Patent of the United States No. 1,024,620, granted and issued to me under date of April 30, 1912.

The object of my invention is to provide a construction of the type exemplified in said Letters Patent, in which the auxiliary pedestal jaws, pedestal shoes, and wedges may be properly fitted up on the side frame members before the locomotive is erected and the transverse bracing connected thereto after the frame members are set in position, thereby correspondingly facilitating shop operation.

The improvement claimed is hereinafter fully set forth.

In the accompanying drawings: Figure 1 is a plan or top view of a portion of a locomotive frame and accessory members thereof, illustrating an application of my invention; Fig. 2, a vertical longitudinal section, on the line *a a* of Fig. 1; Fig. 3, a half horizontal section, taken on the axial line of the driving axle; and, Fig. 4, a vertical transverse section, the left hand half of which is taken on the axial line of the driving axle, and the right hand half on the line *b b* of Fig. 3.

My invention is herein exemplified as applied in a locomotive engine, the frame of which is of the standard "bar" type, and comprises two side members which are, as in present practice, spaced at the maximum distance apart available under the necessary limitation imposed by the width between driving wheel hubs. Each of the side frame members, comprises, so far as the portion thereof in which the driving axles are fitted is concerned, the usual top rail, 1, bottom rail, 2, and connecting vertical pedestals, each of which consists of a pair of pedestal jaws, 3, in which a driving box, 4, is fitted between a wedge, 4^a, and a shoe, 4^b, in the usual manner. The driving box is provided with a bearing, 4^c, for one of the journals, 6^a, of a driving axle, 6, upon which are secured

a pair of driving wheels, 7, and with a lubricant cellar, 4^d, located below the journal. The open space between the sections of the lower rail, at the bottom of the pedestal, is spanned by a pedestal tie, 5, secured removably in position by bolts, 5^a.

In the practice of my invention, the driving boxes, 4, and driving axle journals, 6^a, are, as in Patent No. 1,024,620 aforesaid, made of materially increased length, as compared with the ordinary practice prior to the invention of said patent, and the bearing surfaces thereof on the frame members are correspondingly increased by extensions of the pedestals, provided in and by supplemental or auxiliary pedestal jaws, 8, each comprising a plate extending transversely to the locomotive, and providing a bearing face for a driving box wedge or shoe, and a plate extending longitudinally of the locomotive for connection to one of the side frame members thereof. The supplemental pedestal jaws are fixed to the main pedestal jaws, 3, with their inner transversely extending bearing faces parallel with those of the main pedestal jaws, so as to present continuous plane surfaces for contact with those of the outer surfaces of the wedges and shoes.

Each of the supplemental pedestal jaws, 8, projects inwardly from, and is connected to, the inner sides of the adjacent frame member, and is secured thereto by a plurality of horizontal bolts, 8^a, and, for the purpose of reinforcing said bolts, so as to firmly resist the action of the horizontal forces resultant upon the movements of the pistons, it also projects outwardly across the adjacent pedestal jaw, 3, by being provided with an outward extension, 8^a, on its transversely extending member, which outward extension abuts against the inner face of said pedestal jaw, and is of length not less than the thickness of the bar frame of which said jaw forms part. In addition to the strengthening effect imparted by the outward extension, 8^a, it will be seen that continuous bearing faces, of materially greater length than is practicable under the ordinary construction, or in connection with plate or slab frames, are provided for the wedges and shoes throughout their entire length between their flanges.

The supplemental pedestal jaws are braced, transversely of the locomotive, by a horizontal deck plate, 12, preferably of skeleton

form, which is secured to their tops by bolts, 12^a, and those on one side of the axle are also transversely braced by being secured by bolts, 13^a, to a vertical waist sheet, 13, which is secured at its top to the adjacent waist sheet, 14, of the boiler, the connection being ordinarily made through the intermediation of an angle iron, 14^a. The supplemental pedestal jaws on each side of the locomotive may also be connected one to the other by a lower brace, 8^e, as in Patent No. 1,024,620.

It will be seen that under a construction substantially as above described, the accessories of each of the side frame members may be fitted up independently of the other, and that, when assembled in the erection of the locomotive, a strong and rigid structure is presented.

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

1. The combination, with a locomotive frame of bar type, of supplemental pedestal jaws, secured independently to the main pedestal jaws, each of said supplemental pedestal jaws extending inwardly from a main pedestal jaw and outwardly across said jaw, a driving box between said supplemental pedestal jaws, and a driving axle journaled in said driving box.

2. The combination, with a locomotive frame of bar type, of supplemental pedestal jaws, secured independently to the main pedestal jaws, each of said supplemental pedestal jaws extending inwardly from a main pedestal jaw, a horizontal deck plate

secured detachably to the tops of the supplemental pedestal jaws, a driving box between the supplemental pedestal jaws, and a driving axle journaled in said driving box.

3. The combination, with a locomotive frame of bar type, of supplemental pedestal jaws, secured independently to the main pedestal jaws, each of said supplemental pedestal jaws extending inwardly from a main pedestal jaw, a vertical waist sheet adapted to be secured at its top to a locomotive boiler and secured detachably to the supplemental pedestal jaws, a driving box between said jaws, and a driving axle journaled in said driving box.

4. A supplemental pedestal jaw for bar type locomotive frames, comprising a plate adapted to extend longitudinally on a locomotive and to be secured to the inner side of a bar type locomotive side frame member, an integral plate, at a right angle thereto, constituting the inner portion of a longitudinally extended bearing for a pedestal wedge or shoe, and an opposite or outward extension, in line therewith, of length not less than the transverse dimension of the bar pedestal to which the supplemental pedestal jaw is to be secured, and presenting, with said integral plate, a continuous unbroken bearing surface for contact with a wedge or shoe of corresponding length.

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Witnesses:

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