W. M. FAWCETT.

LOCOMOTIVE.

APPLICATION FILED APR. 22, 1915.

1,166,751.

Patented Jan. 4, 1916.

2 SHEETS—SHEET 1.

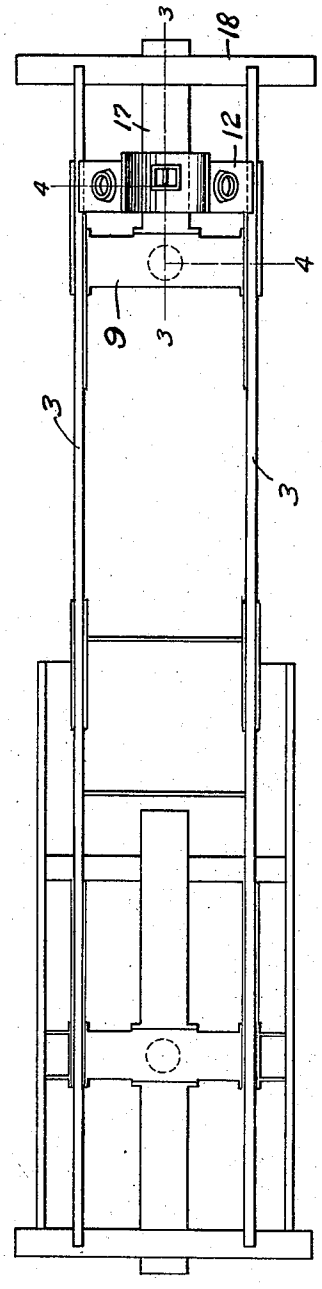

FIG. 1.

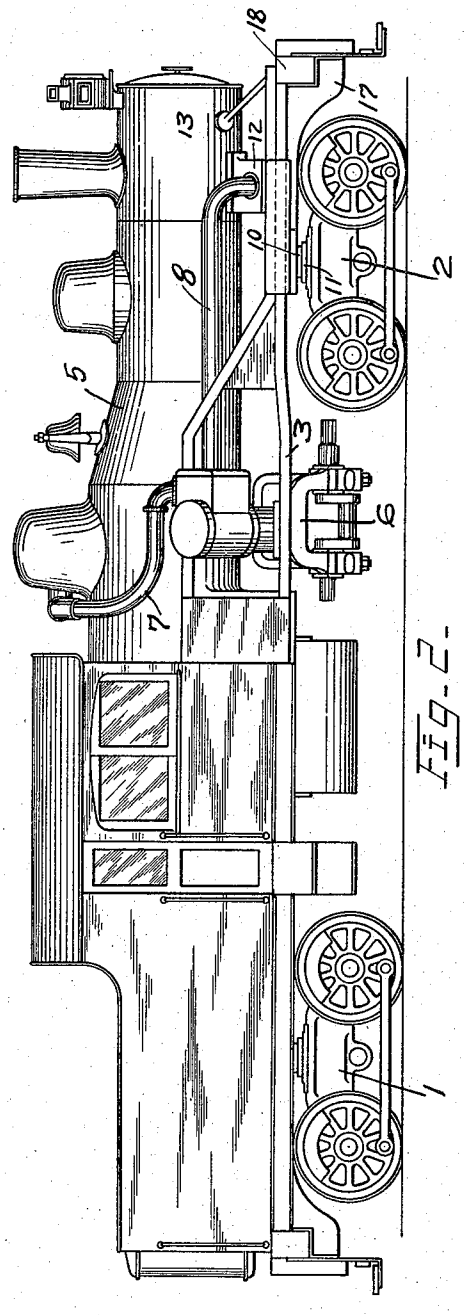

FIG. 2.

Witnesses

B. M. Hartman

Mrs. B. A. Brugger

Inventor

William M. Fawcett

By

Attorneys

W. M. FAWCETT.

LOCOMOTIVE.

APPLICATION FILED APR. 22, 1915.

1,166,751.

Patented Jan. 4, 1916.

2 SHEETS—SHEET 2.

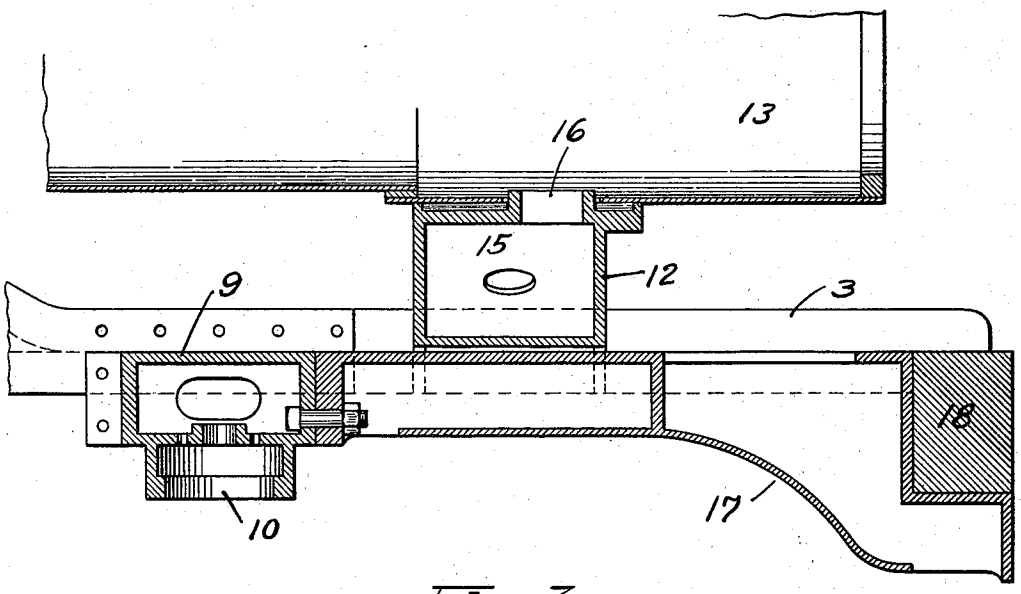

Fig. 3.

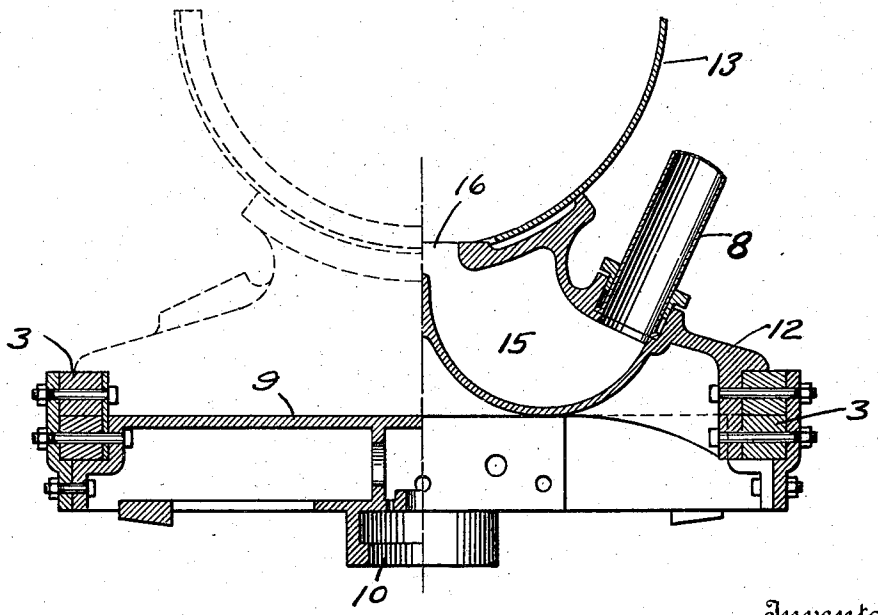

Fig. 4.

Witnesses

B. M. Hartman

Mrs. B. G. Brugger

Inventor

William M. Fawcett

By W. D. Lee

Attorneys

UNITED STATES PATENT OFFICE.

WILLIAM M. FAWCETT, OF ERIE, PENNSYLVANIA, ASSIGNOR TO HEISLER LOCOMOTIVE WORKS, OF ERIE, PENNSYLVANIA, A CORPORATION OF PENNSYLVANIA.

LOCOMOTIVE.

1,166,751. Specification of Letters Patent. Patented Jan. 4, 1916.

Application filed April 22, 1915. Serial No. 23,052.

To all whom it may concern:

Be it known that I, WILLIAM M. FAWCETT, a citizen of the United States, residing at Erie, in the county of Erie and State of Pennsylvania, have invented new and useful Improvements in Locomotives, of which the following is a specification.

This invention relates to locomotives and consists in certain improvements in the construction thereof as will be hereinafter fully described and pointed out in the claims.

More particularly the invention relates to the type of locomotive utilizing the trucks for drivers. Commonly these have been used for logging purposes and are ordinarily driven by a geared longitudinal shaft. It is desirable to distribute the weight on these locomotives so as to have equal weight on all the drivers. It is often also desirable to extend the boiler and in this connection it is desirable to have the front saddle operate on the smoke box rather than the boiler in order that the joints may not interfere with the boiler. In the present invention these desirable features are carried out.

The invention is illustrated in the accompanying drawings as follows:—

Figure 1 shows a plan view of a locomotive frame. Fig. 2 a side elevation of a locomotive. Fig. 3 a central vertical section of the front end of the locomotive frame, boiler and smoke box, the section being on the line 3—3 in Fig. 1. Fig. 4 a section on the lines 4—4 in Fig. 1.

1 marks the rear truck of the locomotive, 2 the front truck and 3 the side bars of the locomotive frame. This frame is ordinarily formed of two bars 3 trussed in the center, the bars being brought together at the front end. 5 marks the boiler and 6 the engine, the engine being arranged with cylinders placed at an angle operating at a centrally located longitudinal shaft as shown in Fig. 2. The shaft, however, in this figure is not carried into the trucks but this will be understood from this common type of locomotive. Steam is carried from the boiler through the pipe 7 to the engine and is exhausted by way of the pipe 8. The front bolster 9 extends between the side frames 3 and is provided with the swivel 10 which operates in connection with the spring bar 11 of the truck in the ordinary manner. The front saddle 12 is arranged between the side frames and is off-set from the bolster being arranged in front of the bolster. It is secured to the smoke box 13.

The exhaust pipe 8 enters the passage 15 in the saddle 12 and by way of the opening 16 enters the smoke box. A bar 17 extends from the bolster to the buffer bar or front bar 18 of the locomotive frame. This is carried under the saddle.

In the ordinary construction the saddle 12 is placed directly over the bolster. This reduces the weight carried by the front trucks so that there is ordinarily an improper distribution of weight. The present construction permits the extension of the boiler still retaining the trucks at the original position so that there is a greater proportionate weight on the front trucks than before the extension. It also permits, with this extension, the connection of the saddle with the smoke box so there is no difficulty of weakening the joints of the boiler itself. Furthermore, there is a slight spring in the frame between the point of support of the bolster and the saddle which relieves the boiler of some of the shock. This is particularly advantageous where the frame is made of the double bars 3 with the double bars brought together toward the forward end of the frame.

What I claim as new is:—

1. In a locomotive, the combination of a front truck; a frame; a boiler; a smoke box in front of the boiler; a bolster on the frame resting on the truck; and a saddle carrying the boiler off-set in front of the bolster.

2. In a locomotive, the combination of a front truck; a frame; a boiler; a smoke box in front of the boiler; a bolster on the frame resting on the truck; and a saddle secured to the smoke box for carrying the boiler, said saddle being off-set in front of the bolster.

3. In a locomotive, the combination of a front truck; a frame formed of two parts separated through the central portion and brought together along the forward end of the frame; a boiler; a smoke box in front of the boiler; a bolster on a portion of the frame in which the bars are together, said bolster resting on the truck; and a saddle carrying the boiler and secured to the frame in front of the bolster.

4. In a locomotive, the combination of a front truck; a frame; a boiler; a smoke box

in front of the boiler; a bolster on the frame resting on the truck; a saddle carrying the boiler off-set in front of the bolster; and a bumper bar extending centrally from the bolster under the saddle to the forward end of the frame.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

WILLIAM M. FAWCETT.

Witnesses:
H. R. JEFFS,
D. E. SHREVE.