No. 647,034. Patented Apr. 10, 1900.

M. B. SCHAFFER.

LOCOMOTIVE PILOT OR FENDER.

(Application filed Jan. 24, 1900.)

(No Model.)

Fig. 1.

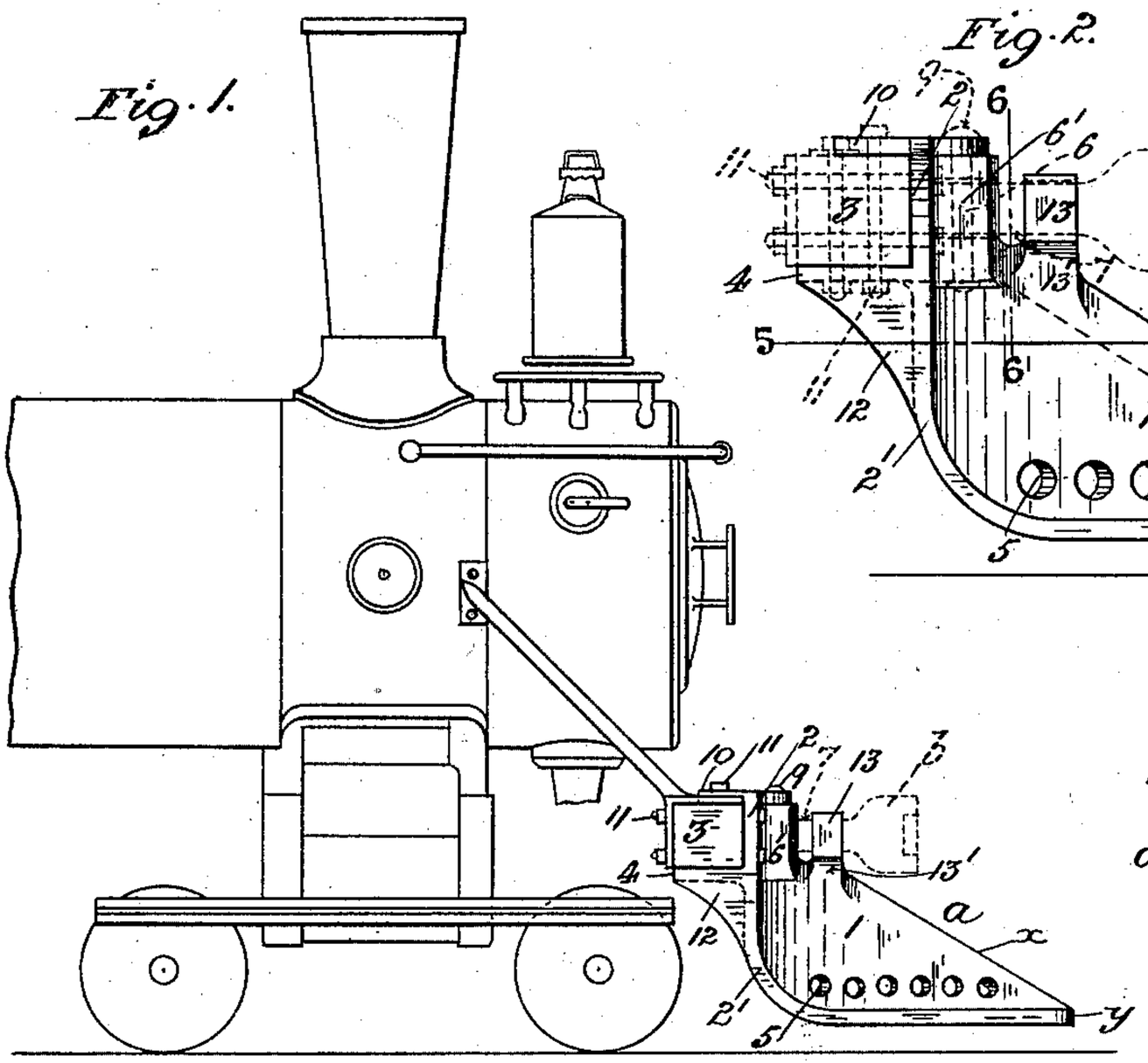


Fig. 2.

Fig. 6.

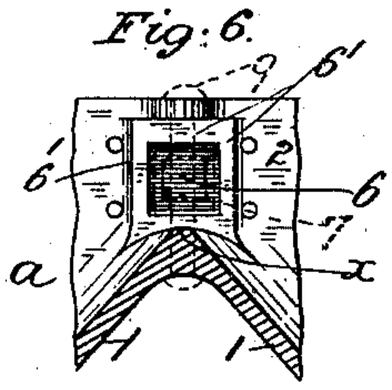


Fig. 3.

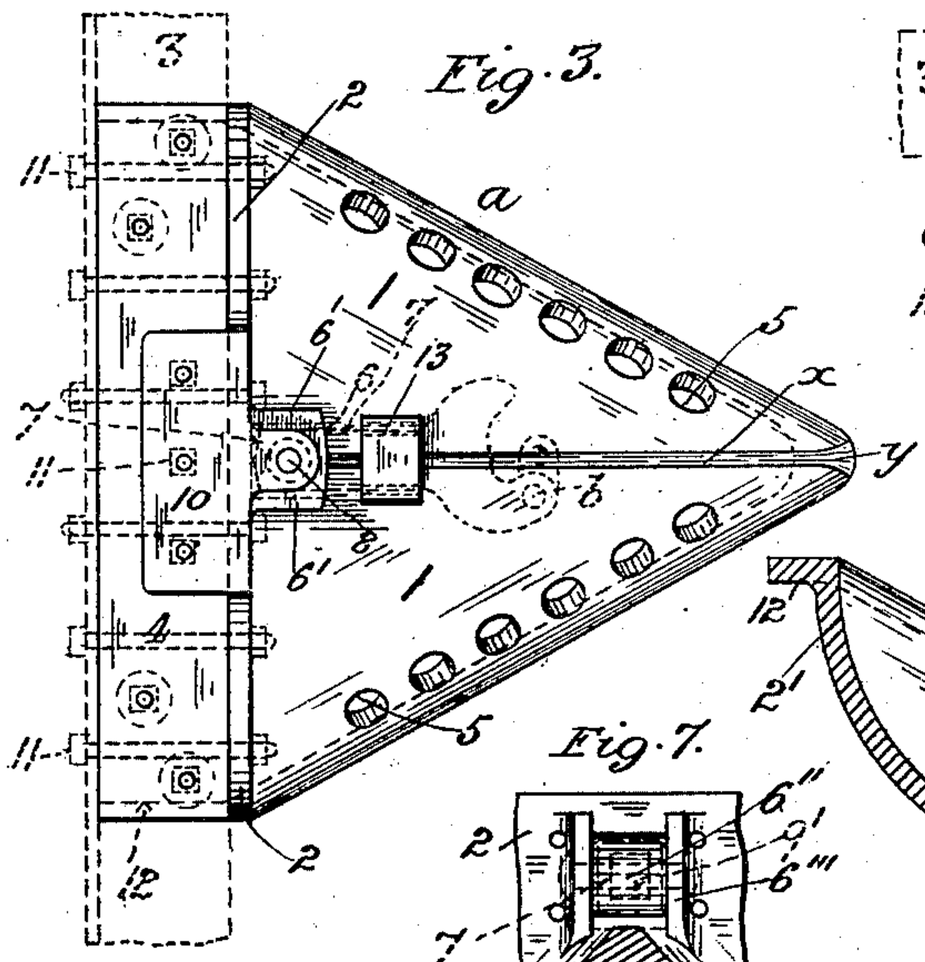


Fig. 4.

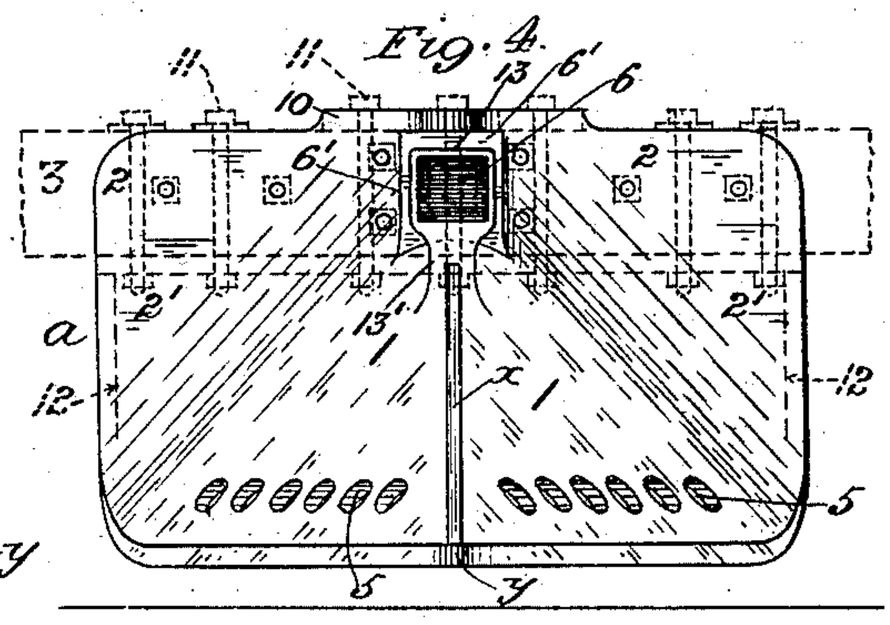


Fig. 5.

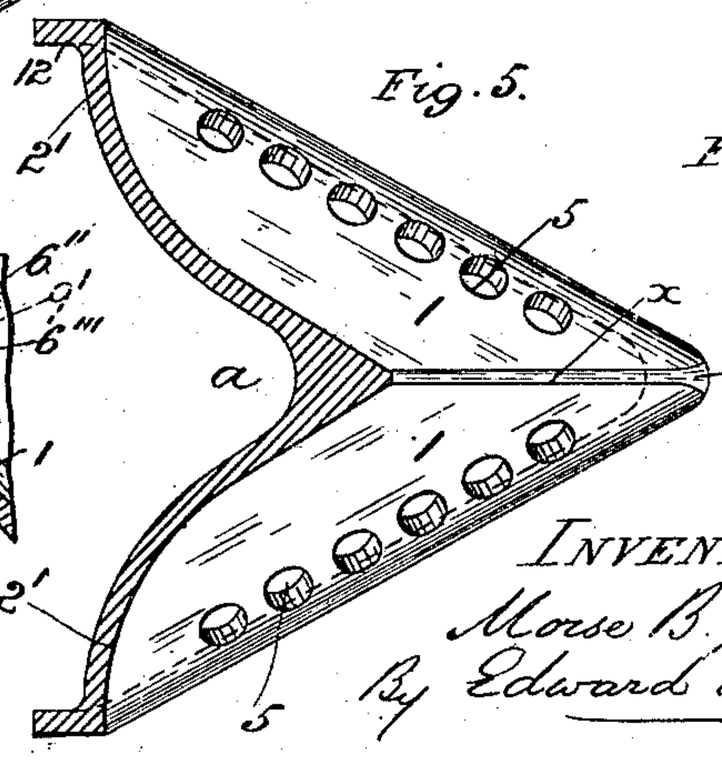
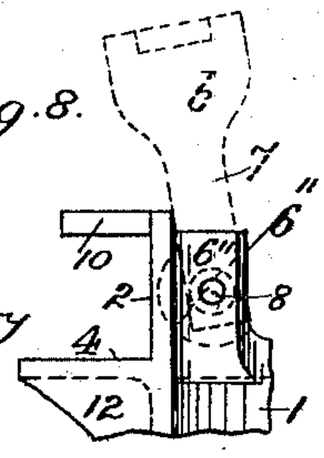


Fig. 7.

Fig. 8.



WITNESSES
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MORSE B. SCHAFFER, OF ST. LOUIS, MISSOURI.

LOCOMOTIVE PILOT OR FENDER.

SPECIFICATION forming part of Letters Patent No. 647,034, dated April 10, 1900.

Application filed January 24, 1900. Serial No. 2,666. (No model.)

To all whom it may concern:

Be it known that I, MORSE B. SCHAFFER, a citizen of the United States, residing at St. Louis, in the State of Missouri, have invented a new and useful Improvement in Locomotive Pilots or Fenders, of which the following is a specification.

My invention relates to a locomotive-engine pilot or fender, and has for its object to simplify its construction, to increase its rigidity and durability, and to adapt the pilot to receive the shank of the pilot-coupler in lieu of the separate pocket and yoke castings, with their fastenings, now used for that purpose.

The invention consists in features of novelty, as hereinafter described and claimed, reference being had to the accompanying drawings, forming part of this specification, whereon—

Figure 1 is a side elevation of the head end portion of a locomotive-engine fitted with my improved pilot; Fig. 2, a side elevation, to enlarged scale, of the pilot detached; Fig. 3, a top plan of the pilot; Fig. 4, a front elevation thereof; Fig. 5, a sectional plan of the pilot on line 5 5 in Fig. 2; Fig. 6, a transverse section through the upper part of the pilot, broken away, on line 6 6 in Fig. 2; Fig. 7, a similar view to Fig. 6, showing a modification of part of my invention; and Fig. 8, a side view thereof.

Like letters and numerals of reference denote like parts in all the figures.

a represents my improved pilot, which is made, preferably, of cast-steel integral throughout.

The body of the pilot *a*, which is of the usual wedge shape or analogous configuration externally, consists of two triangular-shaped sides or plates 1, which are united to each other along one edge *x*, respectively inclining upward from the front end or nose *y* of the pilot *a* and in alinement with the longitudinal center of the pilot *a*, the sides 1 diverging thence downward and rearward. The rear ends of the sides 1 are preferably curved outwardly and formed thereat with upright top and side flanges 2 2′, respectively, which are continuous and flush with each other on their outer faces, the top flange 2 extending across the pilot *a* at its widest part thereat and bearing against the outside face of the sill or pilot-beam 3 of the locomotive-framing and the side flanges 2′ extending laterally outward from the sides 1 to the ends, respectively, of the flange 2, the space between the sides 1 thereat and throughout the length of the pilot *a* being open. From the outer face of the flange 2, at its lower part, projects a rib or web 4, which is at right angles to the flange 2 and bears against the under side of the sill 3.

Through the sides or plates 1 are formed circular (or other shaped) holes 5, or in lieu of the holes 5 rectangular or other shaped slots may be formed longitudinally, transversely, or otherwise through the sides 1, the intermediate solid parts forming bars which may be arranged similarly to the ordinary pilot-bars or otherwise, as desired.

On the top of the pilot *a*, at or near to its rear end, is formed a square or rectangular shaped pocket or recess 6, open at its front side and having its walls 6′ united with the sides 1 of the pilot *a*. The pocket 6 is located, preferably, in front of the flange 2, immediately opposite to the sill or pilot-beam 3, and is adapted to receive the rear end of the shank 7 of the automatic coupler *b*, (indicated by broken lines,) with which the pocket 6 is alined. Through the top and bottom walls 6′, respectively, of the pocket 6 is a vertical hole 8, through which and through a corresponding hole in the shank 7 of the coupler *b* passes the king-bolt (or rivet) 9 for holding the coupler *b* in place in the usual manner. The pocket 6, which is also adapted to receive the shank of the old-style link-and-pin coupler, corresponds to the separate pocket-casting now used and secured by bolts to the ordinary pilot for receiving the shank of the coupler. From the upper part of the flange 2 projects a rib or web 10 of suitable length, which extends part way across and bears upon the top of the sill 3, the rib 10, conjointly with the flange 2 and rib 4, serving as a bracing to the pilot *a*.

By means of bolts 11 (or rivets) passing through the flange 2, ribs 4 and 10, and sill 3, as shown, the pilot *a* is firmly secured to the sill or pilot-beam 3, the pilot *a* being further braced, preferably by ribs 12, which unite the side flanges 2′ with the rib 4, as shown, or the ribs 12 may be otherwise disposed for bracing the pilot *a*, as found most efficient.

In front of the pocket 6, at a suitable distance therefrom, is formed a yoke or carrier 13, through which the shank 7 of the coupler *b* passes and is thereby guided and supported. The yoke 13 is preferably formed with a stem 13′, which is united with the sides 1 of the pilot *a*, as shown, or, if desired, the yoke 13 may be dispensed with as an integral part of the pilot *a*.

Figs. 7 and 8 show a modified form of pocket 6″, in which the top wall (in pocket 6) is eliminated and the shank 7 of the coupler *b* pivoted by the horizontal king-bolt 9′ between the side walls 6‴ in lieu of vertically, as in the pocket 6, whereby the coupler *b* may be thrown upward against the rear of the pilot *a* when the coupler is not in use, or the coupler *b* may be swung horizontally to one side, if desired, in which case the corresponding side 6‴ of the pocket 6″ is eliminated and the top retained.

The pilot *a*, with all its various parts and appendages, as above described, is integral throughout, and by making the coupler-pocket and yoke integral parts of the pilot instead of separate parts fastened thereto by bolts, as heretofore, the combined structure is simplified and the rigidity and durability of the pilot increased.

I do not limit myself to the use or particular arrangement of the flanges 2 2′ and ribs 4 10 in securing the pilot *a* to the pilot-beam 3, as either or all of these flanges and ribs may be substituted by lugs or brackets formed integrally with the pilot for the purpose; nor do I limit myself to the particular disposition of the metal or configuration of the pilot *a* as shown on the drawings, as these may be modified according to the pattern and strength of the pilot required.

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

1. A locomotive-pilot made in one piece and adapted to be secured to the pilot-beam, and having a pocket or recess adapted to receive the shank of the pilot-coupler, the walls of the said pocket being integral with the pilot, substantially as described.

2. A locomotive-pilot made in one piece and formed with a rear flange adapted to be secured to the pilot-beam, and having a pocket or recess adapted to receive the shank of the pilot-coupler, the walls of the said pocket being integral with the pilot, substantially as described.

3. A locomotive-pilot made in one piece and adapted to be secured to the pilot-beam, and having a pocket or recess, and a yoke, adapted respectively to receive the shank of the pilot-coupler, the walls of the said pocket, and yoke, being integral with the pilot, substantially as described.

4. A locomotive-pilot made in one piece and formed with a rear flange, and a rib at right angles to the flange, the said flange and rib being adapted to be secured to the pilot-beam, and the said pilot having a pocket or recess adapted to receive the shank of the pilot-coupler, the walls of the said pocket being integral with the pilot, substantially as described.

MORSE B. SCHAFFER.

Witnesses:
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