No. 865,198. PATENTED SEPT. 3, 1907.

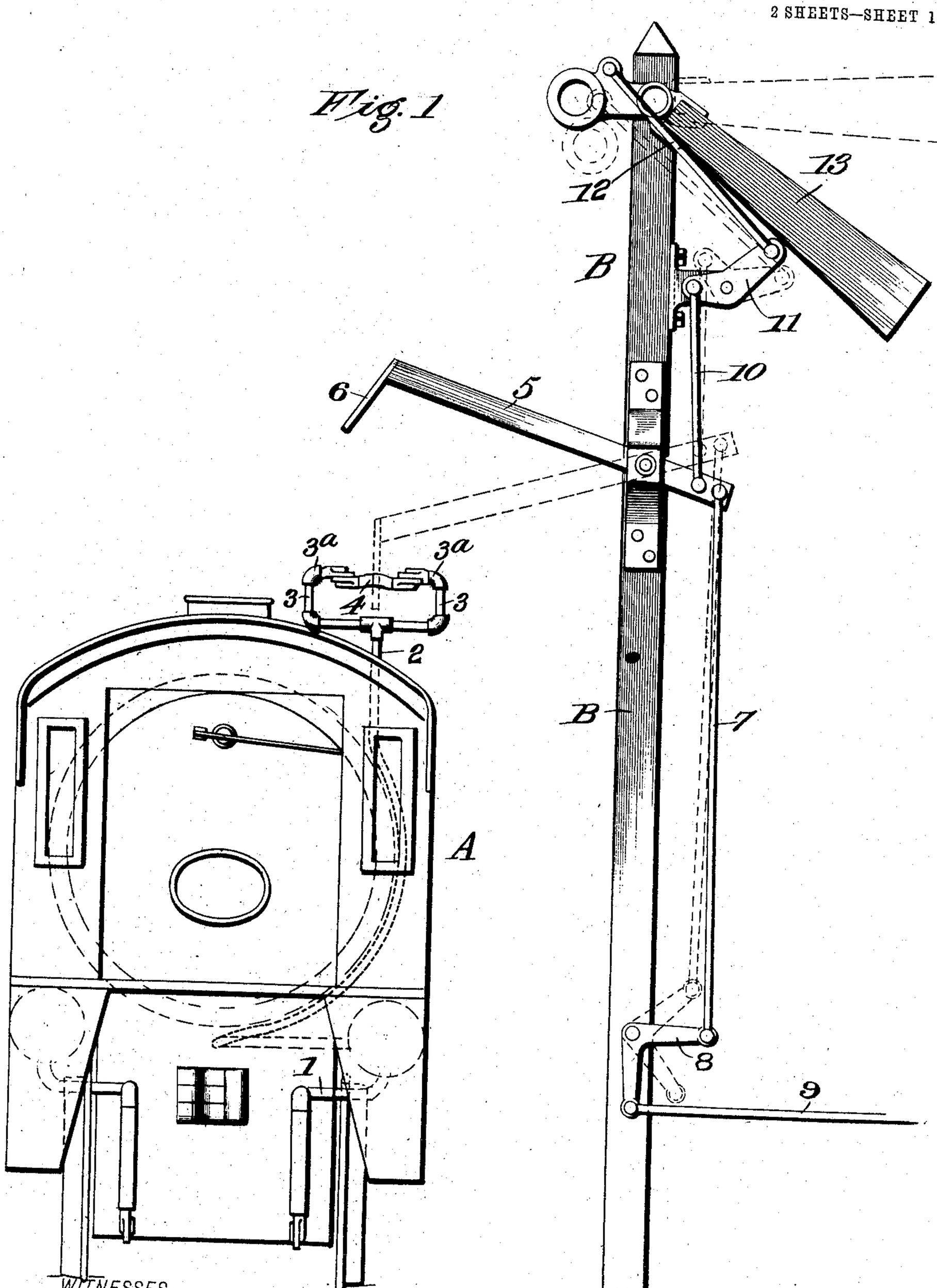
H. W. MEIGS.

EMERGENCY AIR BRAKE APPLIANCE.

APPLICATION FILED MAR. 23, 1907.

2 SHEETS—SHEET 1.

Fig. 1



WITNESSES

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2 SHEETS—SHEET 2.

Fig. 2

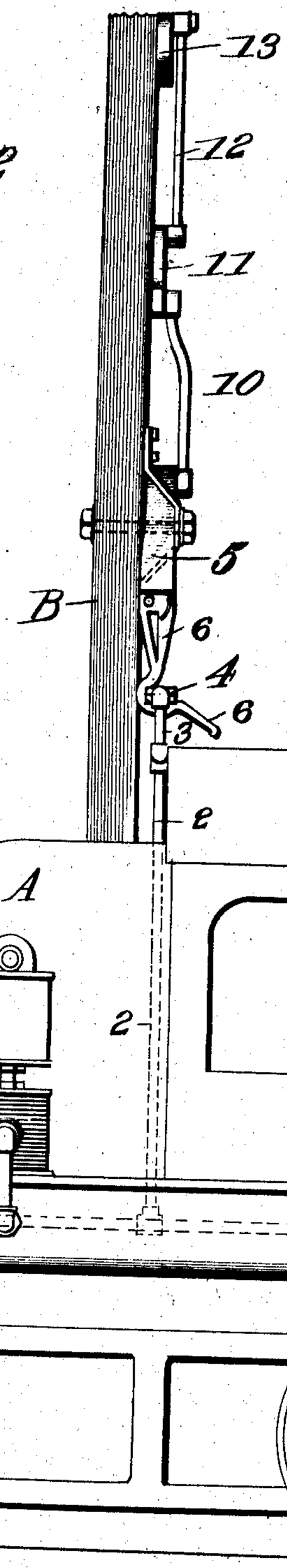
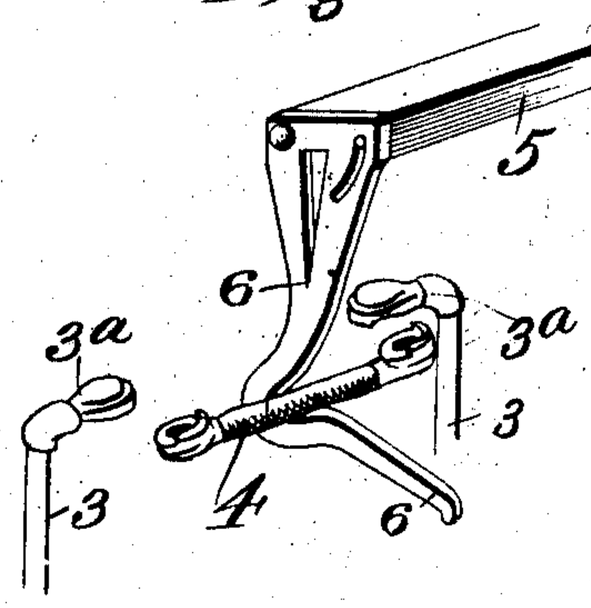


Fig. 3



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EMERGENCY AIR-BRAKE APPLIANCE.

No. 865,198. Specification of Letters Patent. Patented Sept. 3, 1907.

Application filed March 23, 1907. Serial No. 364,010.

To all whom it may concern:

Be it known that I, HIRAM W. MEIGS, a citizen of the United States, and a resident of Birmingham, in the county of Jefferson and State of Alabama, have invented an Improved Emergency Air-Brake Appliance, of which the following is a specification.

My invention is an improvement in that class of emergency stops for railway trains in which a movable device is attached to a fixed object, or structure, located alongside the track and is adapted for engagement with an attachment on the locomotive, or the cars, whereby an alarm signal may be given, or air pressure in the train be reduced so as to cause the instant application of the brakes.

The construction, arrangement, and operation of my invention are as hereinafter described, and illustrated in the accompanying drawing, in which—

Figure 1 is a view showing my emergency stop mechanism applied to a locomotive and to a signal post alongside the track. Fig. 2 is a view of the same parts, but at right angles to the view shown in Fig. 1. Fig. 3 is a perspective view of the engaging parts of the stop mechanism which are connected respectively with a train-pipe and a post arranged alongside the track.

A indicates a portion of a locomotive, which is shown in rear end view in Fig. 1 and in side view in Fig. 2. It is provided with the usual air train-pipe 1 which, in practice, connects the locomotive with the several cars of a train and in which air pressure is maintained to the degree required to hold the brakes off. A pipe 2 is attached to the train-pipe 1 and extends vertically above the cab of the locomotive where it is provided with lateral branches 3 whose upper ends curve inward toward each other, as shown in Fig. 1. To the opposite alined ends 3^a of pipes 3 is applied a connecting piece 4 which may be constructed of flexible hose whose ends are forced over the ends 3^a of the air-pipes and are thus adapted to be detached when sufficient traction is applied to the attachment. It is obvious that if the pipes 4 be detached, air will be allowed free escape from the pipes 3, 2, and 1 and the brakes will be instantly applied throughout the train. In place of applying the attachment to a locomotive it may be applied to any car of a train.

For operating, that is, for detaching, the train-pipe device 4 and thus causing automatic application of the brakes, I employ the following mechanism. Upon a vertical post B, or upon any other suitable support, arranged alongside the track I pivot a bar 5, the same being arranged in a plane at right angles to the track and having at the end that projects over the track a hook 6—see Figs. 2 and 3—which is adapted for engagement with the train-pipe attachment 4. The bar 5 is shown in Fig. 1 by full lines in the raised position and to cause its engagement with the device 4 it must obviously be lowered to the position shown by dotted lines Fig. 1 and by full lines Fig. 2. For this purpose any suitable mechanism may be employed, but in this instance I show a simple hand-operated mechanism comprising a vertical rod 7, an elbow lever 8, and a horizontal rod 9, the latter extending to any point where it may be connected with a lever or other device to be operated by a train despatcher or signalman, as the case may be. The elbow lever is pivoted to the post B and the rod 7 connects it with the shorter arm of the bar, or lever, 5. It will be seen in Fig. 2 that the point or free end of the hook 6 is depressed, or open at a wide angle, which will insure its engagement with the train-pipe attachment 4. In Fig. 3 the said attachment 4 is illustrated diagrammatically as detached or torn away from the train pipes 3^a. The bar 5 is connected by a rod 10 with an obtuse-angle lever 11 pivoted to a bracket on the post B and in turn connected by a rod 12 with a semaphore 13, which, as usual, may be painted red and thus adapted to serve as a danger signal. The dotted lines indicate the position of the semaphore when raised to give a danger signal. It is obvious that it is put in this position by the same movement of the mechanism 7, 8, 9, by which the bar 5 is lowered to the position required for engagement of its hook with the train-pipe attachment 4. In other words, the operator at the signal station always places the pipes 5, 6, in operative position at the same time that he shows the danger signal. Thus, should an engineer not heed the danger signal and stop his train before reaching the post B, the train will be automatically brought to a stop by release of the attachment 4 in the manner before described. In other words, it is thus made impossible for a train to pass a danger signal even when the engineer, from carelessness or other cause, fails to bring his train to a standstill at the required place.

What I claim is—

The combination with a track and locomotive and a pipe 2 connected with the locomotive; of an air brake system, said pipe 2 extending through the roof of the locomotive, and having branch pipes 3 whose free ends curve inward towards each other, and a detachable pipe section 4 which normally connects such ends, and an apparatus arranged alongside the track, the same comprising a vertical post and an arm pivoted thereto and provided at its free end with a hook, which, when the bar is swung down over the track, will engage the attachment 4 and release it from its connection, for the purpose specified.

HIRAM W. MEIGS.

Witnesses:
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