

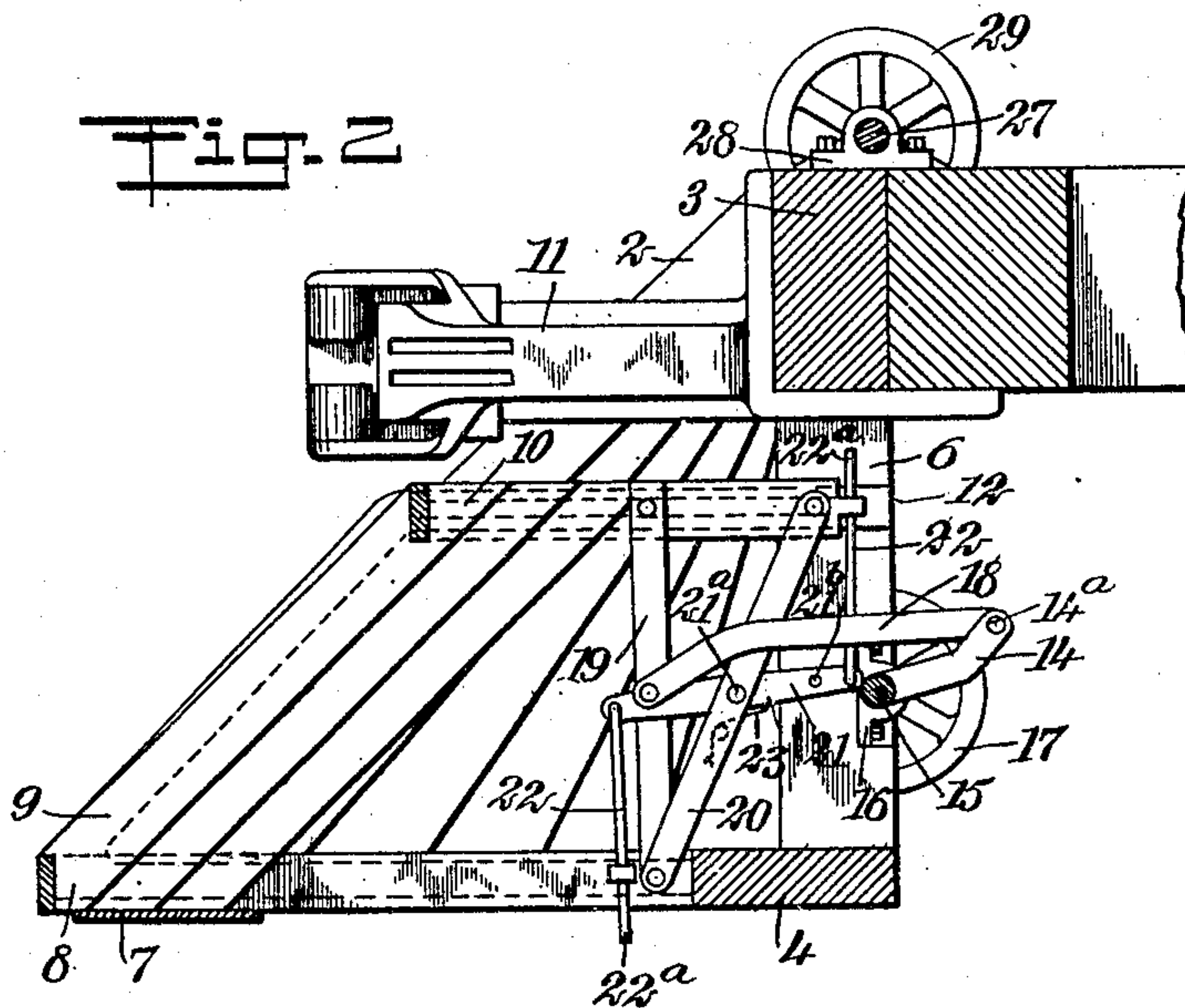
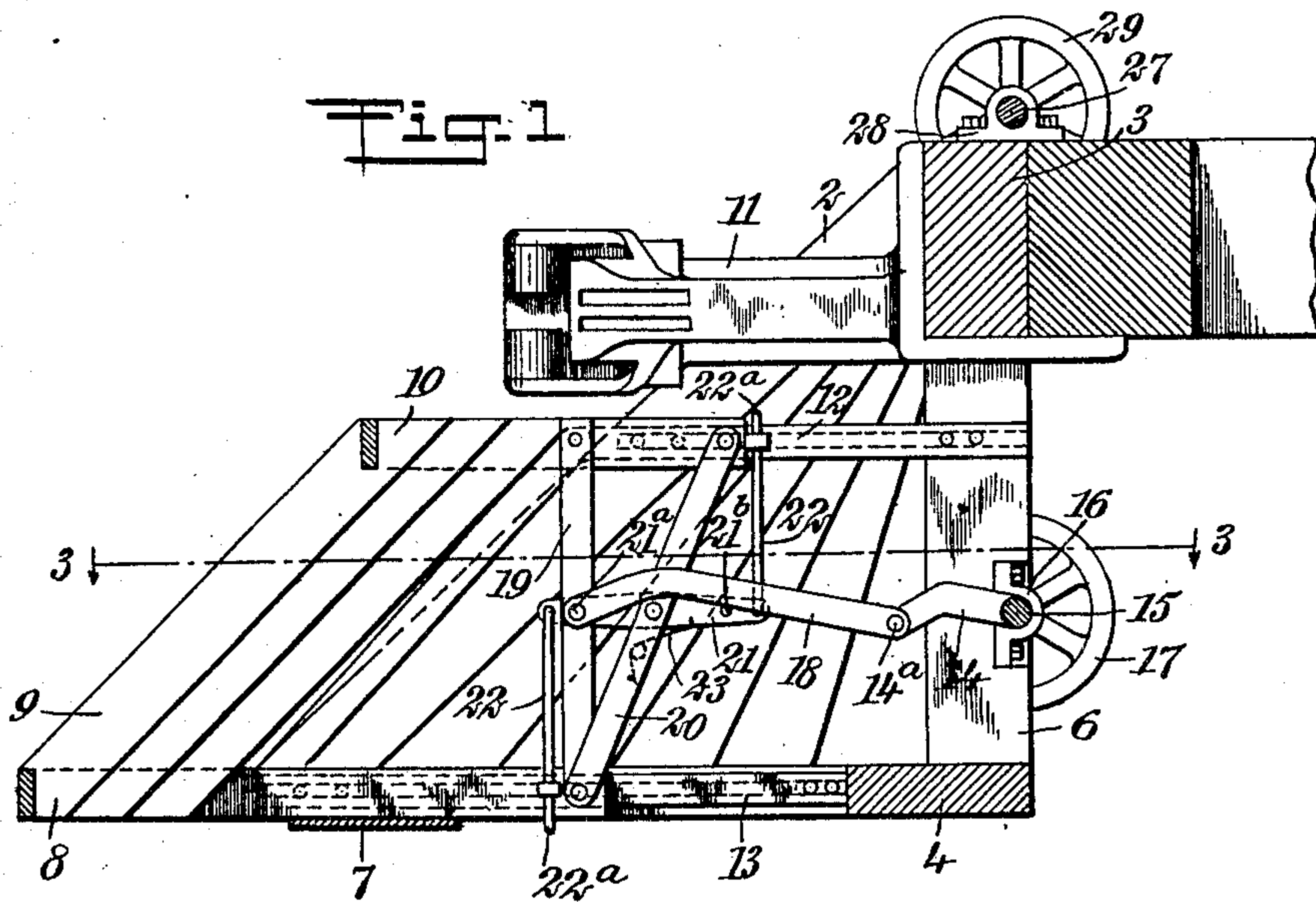
No. 860,373.

PATENTED JULY 16, 1907.

B. T. HAMILTON.
LOCOMOTIVE PILOT.

APPLICATION FILED NOV. 21, 1906.

2 SHEETS—SHEET 1.



WITNESSES

F. D. Sweet.
R. W. Hardie.

INVENTOR

Benjamin T. Hamilton

BY *Mumma & Co.*

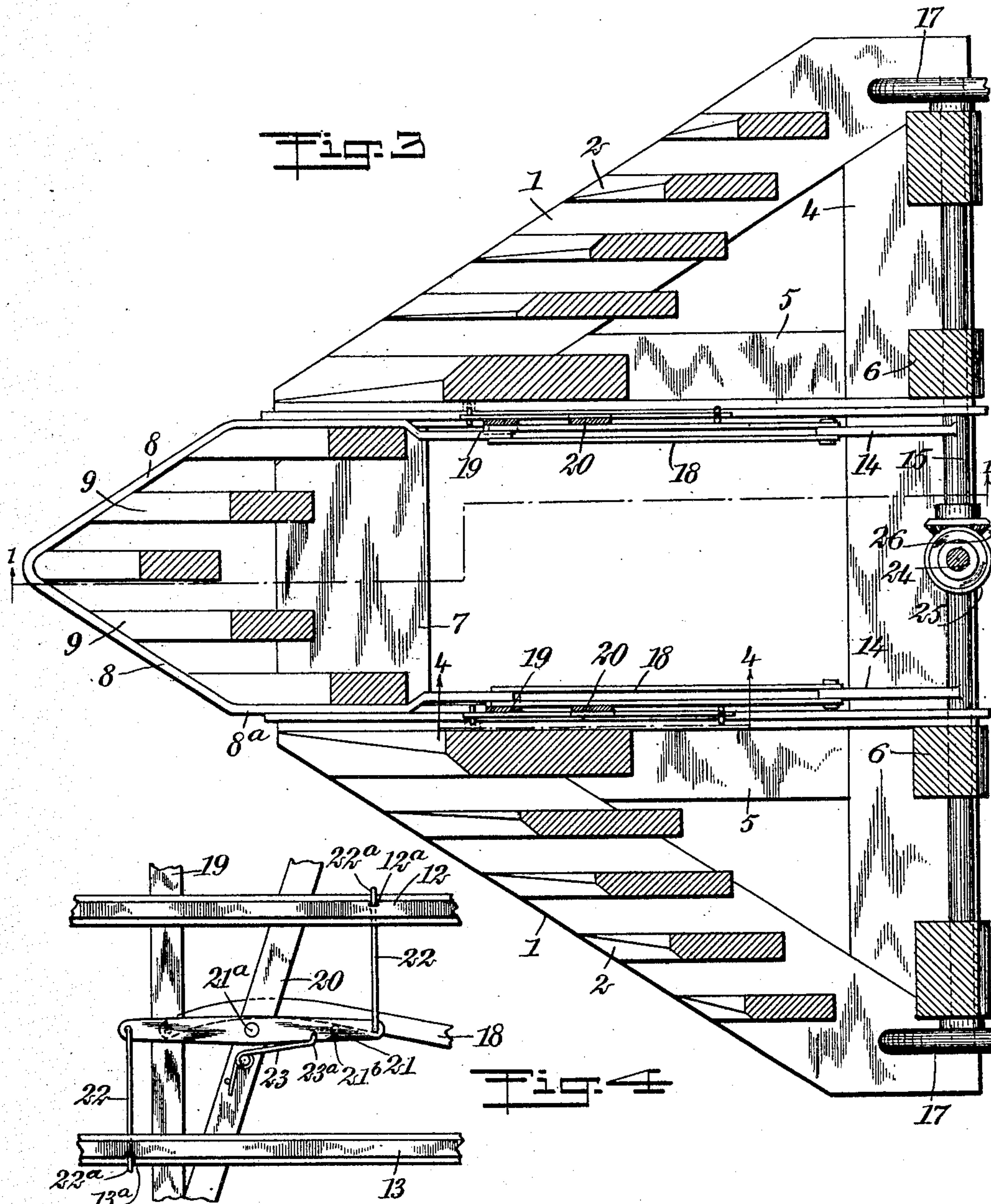
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UNITED STATES PATENT OFFICE.

BENJAMIN TOLIVER HAMILTON, OF FORT SMITH, ARKANSAS.

LOCOMOTIVE-PILOT.

No. 860,373.

Specification of Letters Patent.

Patented July 16, 1907.

Application filed November 21, 1906. Serial No. 344,395.

To all whom it may concern:

Be it known that I, BENJAMIN TOLIVER HAMILTON, a citizen of the United States, and a resident of Fort Smith, in the county of Sebastian, and State of Arkansas, have invented a new and Improved Locomotive-Pilot, of which the following is a full, clear, and exact description.

This invention relates to pilots designed to be used on locomotives, and particularly on those engines used for both switching and road service.

Switching engines are provided on their forward ends with a draw beam having a coupling attached thereto adapted to be connected with a car in front of the engine, and such engines are generally used without a pilot or with a stub pilot so as not to interfere with coupling the engine to a car on its forward end. Where no pilot is used the engine is not suitable for road service, for the reason that live stock when struck by the engine going at a high rate of speed are liable to be thrown under the train thereby often causing serious accident. When, moreover, a stub pilot is used the draw beam projects so far beyond the face of the pilot that the live stock when struck frequently become lodged under the draw beam and fall off the pilot on to the track, frequently derailing the engine.

My invention has for its object, therefore, to provide a pilot adapted to be used on an engine designed for either switching or road service. Such objects I accomplish by the means illustrated in the accompanying drawings, in which drawings like characters of reference indicate like parts throughout the views, and in which

Figure 1 is a vertical section of a pilot embodying my invention, taken on the line 1—1 of Fig. 3; Fig. 2 is a similar view of the pilot shown in Fig. 1 with the parts differently arranged; Fig. 3 is a horizontal section taken on the line 3—3 of Fig. 1; and Fig. 4 is a detail taken on the line 4—4 of Fig. 3.

As illustrated in the drawings, my invention comprises a pilot having a main and an auxiliary section. The main section comprises diagonally arranged side bars 1 having slats 2 of ordinary construction secured thereto at their lower ends, and at their upper ends connected in any suitable manner with a pilot beam 3 attached to the forward end of the engine. The rear ends of the side beams 1 are connected together by means of a transverse beam 4 having parallel longitudinal braces 5 connected therewith, and with the forward ends of the beams 1. The rear beam 4 is secured to vertical beams or hangers 6 attached at their upper ends to the pilot beam. A transverse plate or beam 7 is secured to the forward ends of the main section, adapted to support an auxiliary section composed of side bars 8 having slats 9 connected therewith at their lower ends, the upper ends of said slats being connected with side bars 10. The slats 9 are shorter in length than the slats 2 of the main frame, and terminate

below the plane of the lower surface of a draft beam 11 secured to the pilot beam 3, so as to enable the auxiliary section of the pilot to be folded into the main section below said draw beam, as shown in Fig. 2.

The side beams 8 of the auxiliary section are provided with parallel extensions 8^a, and the upper side beams 10 of the auxiliary sections are also provided with parallel extensions, which have a sliding engagement with upper stationary guide bars 12 extending longitudinally of the pilot. The lower extensions 8^a of the auxiliary frame have a similar sliding engagement with longitudinal guide bars 13. The auxiliary central section of the pilot is movable longitudinally of the main frame of the pilot by means of crank arms 14 mounted upon a shaft 15 which is journaled in boxes 16 secured to the hangers 6, as shown in Fig. 1. The shaft 15 is provided with hand wheels 17 and the cranks 14 are pivotally connected by means of pivot pins 14^a with links 18 which are pivoted at their forward ends to brackets 19 secured to the upper and lower portions of the auxiliary frame.

A locking device is mounted upon brackets 20, secured to the auxiliary frame, and consists of beams 21 mounted upon pivot pins 21^a and provided on their ends with links 22 having hooked ends 22^a adapted to loop the upper and lower edges of the guide bars 12 and 13 and engage sockets 12^a and 13^a formed in said bars respectively. The looped ends of the links 22 are held in engagement on the guide bars 10 and 13 by means of the links 18 which bear against pins 21^b attached to the beams 21, thereby preventing the beams 21 from tilting on their pivots and holding the links on said guide bars, when the auxiliary section of the pilot is projected, as shown in Fig. 1. When, however, said auxiliary section is folded into the main section, as shown in Fig. 2, the links 22 are released from engagement with the guide bars 12 and 13 by means of springs 23, which are secured to the brackets 20 and bear at their ends 23^a against said beams, so as to release the links from engagement with the guide bars 12 and 13 and permit the auxiliary frame to be drawn into the main frame, as illustrated in Fig. 2.

The shaft 15, provided with the lower hand wheels 17, may be connected with a vertical shaft 24 by means of a bevel gear 25 secured to said shaft, and a similar gear wheel 26 secured to the shaft 15, and the vertical shaft 24 may be connected by means of similar bevel gears with a shaft 27 journaled in bearing boxes 28 supported upon the pilot beam 3 and provided with hand wheels 29 so as to enable the auxiliary section to be operated by either the upper hand wheels 29 or lower hand wheels 17 located on both sides of the pilot.

When the device is in use for road service, the auxiliary frame is extended on the main frame, as shown in Figs. 1 and 3. When in such position the auxiliary frame is held against a backward movement by means

of the links 18 and cranks 14. The auxiliary frame is further locked in position by means of the links 22 connected with the pivoted beams 21 and the guide bars 12 and 13.

5 When the engine is to be used for switching, the auxiliary section may be folded into the main section by rotating either the hand wheels 29 or the wheels 17, thereby raising and drawing backward the cranks 14 and links 18, and also the auxiliary frame of the pilot, 10 as shown in Fig. 2. As the cranks 14 and link 18 are raised and drawn backward, said links are released from the pins 21^b of the pivot beams 21, thereby allowing the springs 23 to release the ends of the links 22 from engagement with the guide bars, as shown in Fig. 2.

15 In the construction herein shown and described, I have embodied my invention in its preferred form. I do not desire to be limited to this construction, however, as other means having similar capabilities may be used without departing from the spirit of my invention, 20 and in some instances I prefer to dispense with the tubular section shown herein, and substitute therefor other devices having similar capabilities, consisting of wooden or iron slats working in keepers of any suitable construction.

25 Having thus described my invention, what I claim as new and desire to secure by Letters Patent is:

1. The combination of a draw beam, and a pilot having a stationary main frame and an auxiliary frame adapted to be folded into the main section below said draw beam.
- 30 2. The combination with a draw beam, of a pilot having a main frame provided with slats extending upward to the plane of said draw beam, and an auxiliary section adapted to be folded into the main frame and provided with slats stopped below said draw beam.
- 35 3. The combination with a draw beam, of a pilot having oppositely disposed stationary sections provided with slats extending to the height of said draw beam, and an intermediate auxiliary frame adapted to slide between said sta-

tionary sections and provided with slats stopped short of said draw beam.

4. A locomotive pilot comprising horizontally inclined side sections, and a central section adapted to be folded between or projected beyond said side sections.

5. A locomotive pilot comprising horizontally inclined side sections connected together at their forward ends by means of a transverse bar, and an auxiliary section provided with vertically inclined slats adapted to be retracted between or projected beyond said sections.

6. A locomotive pilot comprising horizontally inclined stationary side sections, and a central auxiliary section mounted to slide between the side sections or be projected therefrom, and means for locking said auxiliary frame in its projected position.

7. A locomotive pilot comprising horizontally inclined side sections provided with longitudinal guide bars, and an auxiliary section provided with slides adapted to engage said guide bars and enable the auxiliary frame to be projected beyond or retracted between said side sections.

8. A locomotive pilot comprising stationary side sections horizontally inclined and provided with vertically inclined slats, an auxiliary section provided with vertically inclined slats adapted to be projected beyond or retracted between said side sections, a rotatable shaft, and links connected with said shaft and said auxiliary section.

9. In a locomotive pilot, the combination with horizontally inclined side sections provided with vertically inclined slats, of an auxiliary section provided with vertically inclined slats adapted to be retracted between or projected beyond said side sections, and locking levers connected with said auxiliary section adapted to hold said section in its projected position.

10. A locomotive pilot having horizontally inclined side sections provided with vertically inclined slats, and a central section provided with inclined slats and adapted to slide longitudinally between said side sections.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

BENJAMIN TOLIVER HAMILTON.

Witnesses:

BEN CROVENT,
A. C. CUNKLE.