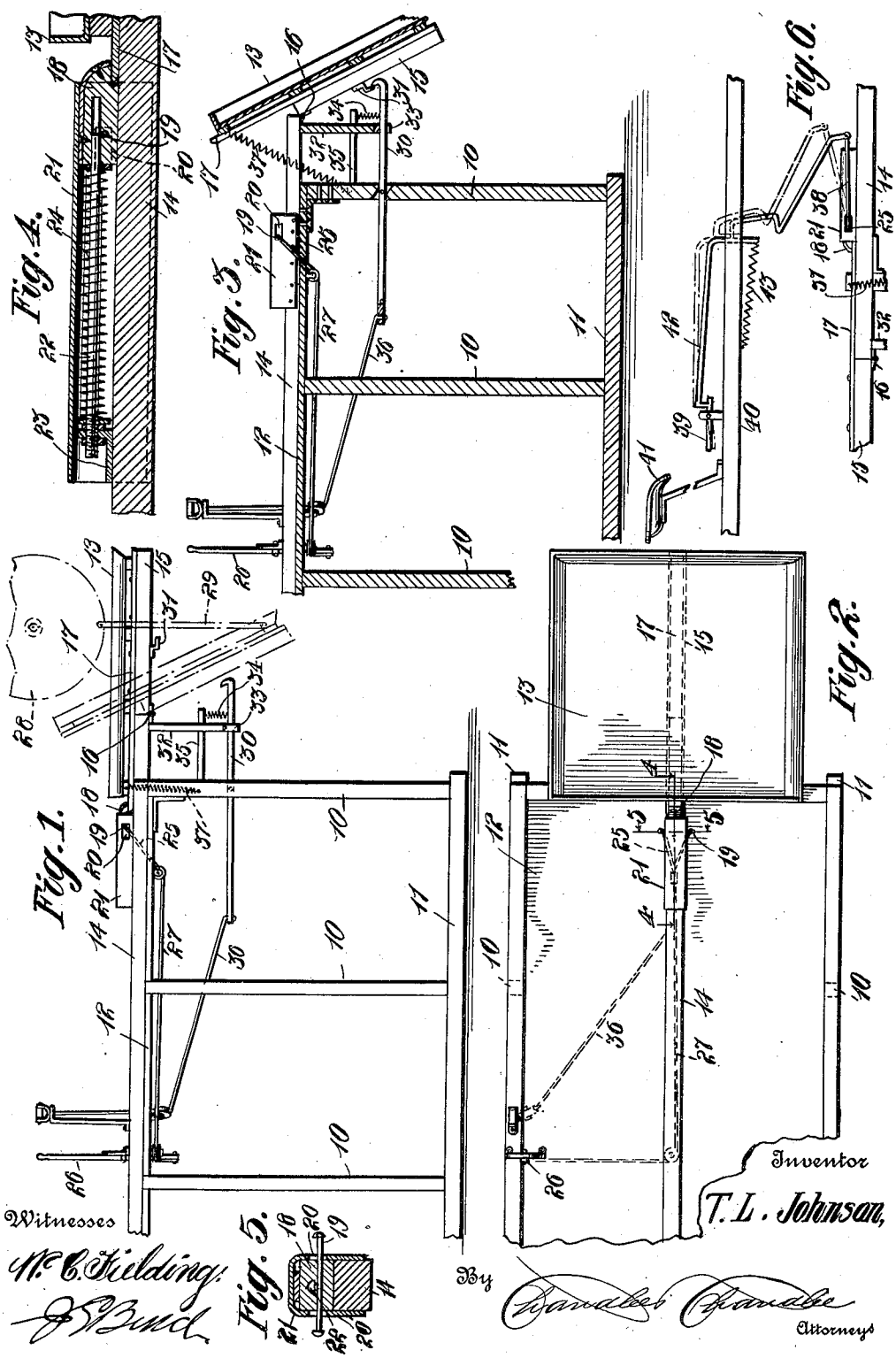
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AUTOMATIC TRIP AND SELF LOCKING DEVICE.

APPLICATION FILED AUG. 19, 1912.

1,083,494. Patented Jan. 6, 1914.



COLUMBIA PLANOGRAPH CO., WASHINGTON, D. C.

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AUTOMATIC TRIP AND SELF-LOCKING DEVICE.

1,083,494. Specification of Letters Patent. Patented Jan. 6, 1914.

Application filed August 19, 1912. Serial No. 715,903.

To all whom it may concern:

Be it known that I, THEODORE LEONARD JOHNSON, a citizen of the United States, residing at Emmetsburg, in the county of Palo Alto, State of Iowa, have invented certain new and useful Improvements in Automatic Trips and Self-Locking Devices; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention has special reference to dumping mechanisms, and more particularly to an improved automatic trip and self locking device, adapted for holding a dumping chute or the like in a raised or horizontal position and for releasing the same, for dumping the material supported thereon.

An object of the invention is to provide a specifically novel holding and releasing device adapted for use in conjunction with various dumping machines or mechanisms, but especially adapted for instance in dumping coal into a locomotive tender or wagon box and can be disposed on either side of a binder as a bundle carrier and dump on binding machines.

With the above and other objects in view, the invention consists of certain other combinations and arrangements of parts as will be hereinafter more fully described, claimed and illustrated in the accompanying drawings, in which:

Figure 1 is a side elevation of my improved automatic trip and self locking device as applied to a coal dumping mechanism. Fig. 2 is a top plan view thereof. Fig. 3 is a detail view longitudinally of the device in a tripped or dumping position. Fig. 4 is an enlarged longitudinal sectional view taken on the line 4—4 of Fig. 2. Fig. 5 is a cross sectional view taken on the line 5—5 of Fig. 2. Fig. 6 is a detail view of the device as used in connection with a binder.

As illustrated, in Figs. 1 to 5 of the drawings my improved device is shown as applied to a coal dumping structure embodying a frame formed of uprights 10 and a base 11 supporting a platform 12 having a dumping chute 13 hinged thereto. The purpose of this invention is to provide means whereby the chute may be held in a raised or horizontal position and instantaneously released for dumping the coal or other materials into a locomotive tender or wagon as occasion may arise, although it is obvious the device may be employed in connection with various dumping machanisms. For this purpose a horizontal beam 14 has a downwardly pivotable free end section 15 hinged thereto as shown at 16 and arranged with an inwardly projecting latch or locking bar 17 having a tapered free end. This tapered or downwardly and forwardly beveled free end is adapted to coact with the upwardly and rearwardly beveled free end of a sliding catch or slide-bolt 18 having an oppositely extended guide pin 19 operating in opposite slots 20 in a casing 21 secured upon the pin 14. A guide rod 22 extends into an aperture in the rear end of the spring catch or slide-bolt 18 and is secured to a bracket 23 at its rear end and a coiled spring 24 is mounted on said rod between the catch and bracket to normally force the catch over the locking bar and hold the latter in position to retain the chute in its horizontal position. The pin 19 in the slots 20 also limits the movements of the catch or latch in either direction and in order to operate the catch, a yoke 25 is connected to the oppositely extended ends of the pin 19 and a lever 26 is connected to the yoke 25 through the medium of an operating rope or cable 27 passing under sheave wheels 27′ and 27ª.

In order to intermittently operate the chute, a suitably rotatable crank disk 28 may be connected to the free extremity of the chute or beyond the pivot thereof by a pitman 29, thereby insuring of a positive dumping action. Furthermore, when the chute is dumped it may be held in such position by a spring catch 30 engaging a projection 31 carried by the chute and the catch is held in operative position by a brace 32, having a guide 33 at its lower end straddling the catch 30, auxiliated by a coiled spring 34 connected to the free extremity of a rigid brace 35 and the adjacent portion or engaging end of the lower catch or lever 30. In order to release the lower catch a cable 36 is connected thereto, and a coiled spring 27 is connected to the locking bar for retaining the chute to its horizontal position.

In the use of the device with a binder as shown in Fig. 6 of the drawings the latch is shown as of similar construction except that the pin has a pair of connecting rods 38 connected thereto on each side of the latch,

and a foot lever 39 is mounted on the platform 40 of the binder adjacent to the operator's seat 41 and connected to the rods 38 by a lever 42 to release the latch, while a spring 43 connects the platform and the lever 42 to hold the rods 38 and lever 42 in operative position.

From the foregoing description in connection with the accompanying drawings, it will be seen that I have provided an automatic trip and locking device which may be employed in connection with various forms of dumping mechanism and which will greatly facilitate such operation by permitting the same to be manually or automatically carried on in an unusually quick and efficient manner.

I claim:

1. In a dumping mechanism, a tilting platform, a beam having a pivoted section supporting said platform, a locking bar extending inwardly from the pivoted section, a casing carried by the beam, a spring catch movable in the casing and having oppositely extended pins movable therein, means for operating the catch to permit the tilting section to dump and means to automatically return the tilting section to a supporting position.

2. In a dumping mechanism, a tilting platform, a beam having a pivoted section supporting said platform, a locking bar extending inwardly from the pivoted section, a casing carried by the beam, a spring catch movable in the casing and having oppositely extended pins movable therein, means for operating the catch to permit the tilting section to dump, means to automatically return the tilting section to a supporting position and means to hold the tilting section in a dumping position.

In testimony whereof, I affix my signature, in presence of two witnesses.

THEODORE LEONARD JOHNSON.

Witnesses:

HERMAN F. JOHNSON,

F. CORA FITZKEE.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."