Oct. 27, 1931. G. F. BECKER 1,828,797

TAIL GATE LATCH

Filed April 19, 1928

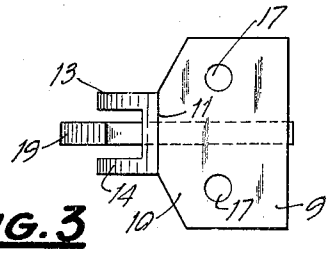


FIG. 3

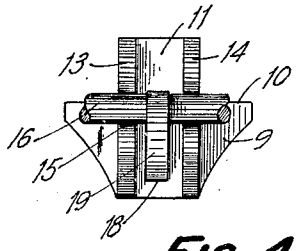


FIG. 4

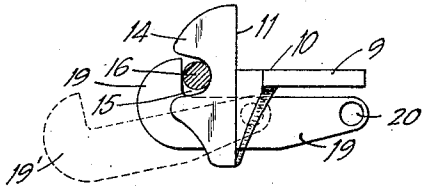


FIG. 2

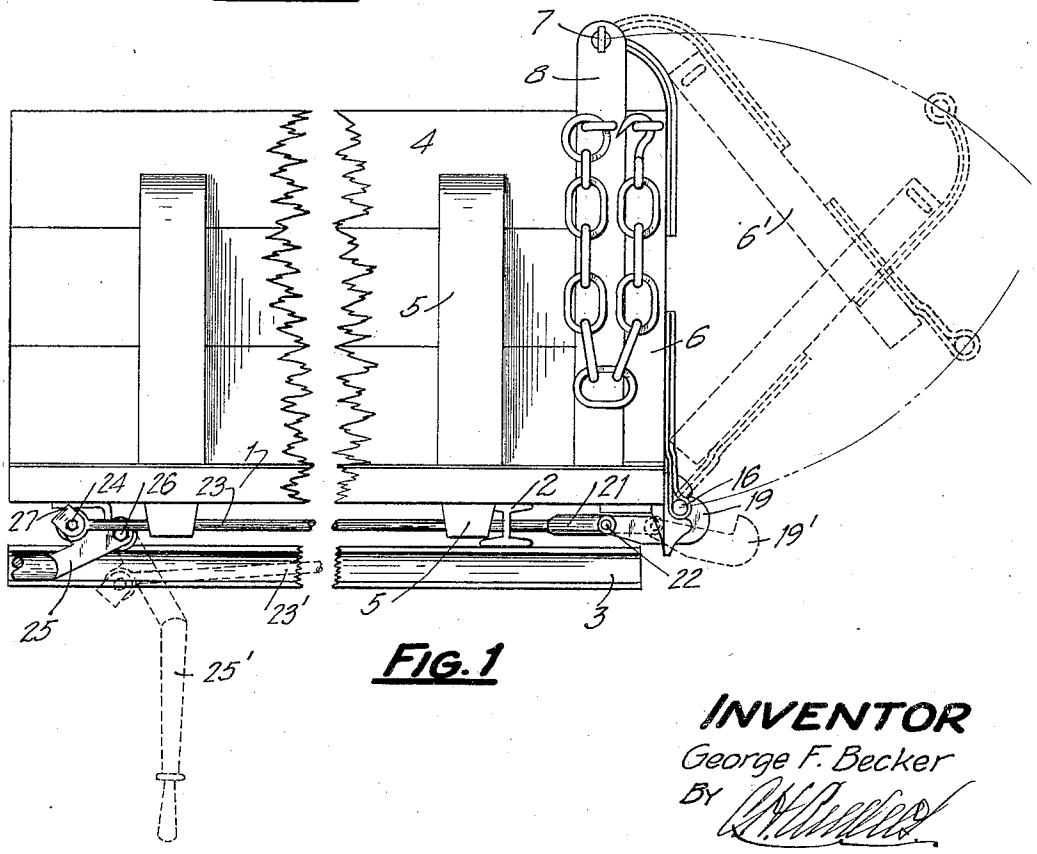


FIG. 1

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UNITED STATES PATENT OFFICE

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TAIL GATE LATCH

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My invention relates to latches and particularly to a latch for the lower edge of the tail gate of a dump truck.

In dump trucks of the present type it is usual to have a tail gate which is pivotally connected with the body both at the top and the bottom. In other words, for some uses it is desirable that the tail gate should be lowered about a hinge at the bottom, and in other cases raised about a hinge at the top. Where the truck is used for hauling stone, gravel and the like it is usual to provide some means whereby the front end of the body may be raised and when in this position the lower edge of the gate unlatched so that it will swing open and permit the contents of the truck to slide out.

Many motor trucks now in use have sides which may be removed thereby forming what is called a platform truck. In such a case it is desirable that there should be nothing projecting above the plane of the platform. It is also highly desirable that any latch or hinge for the tail gate should be wholly independent of the removable sides so that it is unnecessary to dismantle the latching mechanism when the sides are removed.

There are many kinds of tail gate latches, most of which, so far as I am aware, have elements attached to the removable sides of the truck, and in many instances when the sides and tail gate are removed, some of the latch mechanism projects above the level of the truck platform making it impossible to slide anything on or off the platform without lifting over the projections.

My invention contemplates the elimination of these difficulties by providing a latching mechanism which is substantially independent of the removable sides, and the objects of my invention are as follows: to provide a combined hinge and latch for the lower edge of a truck tail gate; to provide such a combined hinge and latch as will be wholly independent of the removable sides of the truck; to provide a latch which will have a minimum of movement to effect the locking and unlocking thereof; to provide means for operating the latch form a point near the front of the truck, and to combine with this means a means for positively locking the tail gate in closed position; to provide a latch all parts of which will lie below the plane of the truck platform; and to provide a latch of extremely simple character which may be cheaply manufactured and applied to substantially any truck.

With these objects in view my invention includes the novel elements and the combination and arrangements of elements described below and illustrated in the accompanying drawings in which—

Fig. 1 is a fragmentary side view of the rear end of a truck;

Fig. 2 is an enlarged side view of my latch;

Fig. 3 is a plan view of Fig. 2; and

Fig. 4 is a rear elevation view of the latch.

Referring to the drawings, 1 represents the platform of a truck which is supported upon the transverse members, 2, which in turn are supported by the longitudinal members, 3. 4 represents a removable side of the truck which is secured to the platform by means of the posts, 5, extending downwardly through openings provided in the truck platform. 6 represents generally the tail gate which is hingedly connected as at 7, to a metal strap, 8, attached to each side of the truck body. In addition to being hinged at the top, the tail gate is also hinged and latched at the bottom by my device which will be now explained in detail.

My combined latch and hinge comprises an element, 9, having angularly disposed portions, 10 and 11, respectively, which are adapted to embrace the lower rear edge of the truck platform. The portion, 11, has the spaced members, 13 and 14, projecting outwardly therefrom and which are provided with the similar recesses, 15, adapted to receive the hinge pin, 16, attached to the tail gate of the truck. The portion, 10, is provided with openings, 17, for the reception of bolts whereby the device may be bolted to the lower side of the truck platform.

Between the spaced members, 13 and 14, and below the recesses, 15, an opening, 18, is provided in the element, 9, and slidably mounted in this opening is the hook element, 19. This element is adapted to be moved to-

ward and away from the recesses, 15, as will appear from examination of Figs. 1 and 2. The front portion of the hook element, 19, (that is, the portion which is nearest the front of the truck) is tapered in a vertical plane so that when moved outwardly to the position, 19′, as shown in Figs. 1 and 2, it will drop down slightly as shown. The purpose of this taper is to lessen the distance which the element, 19, must be moved in order to provide clearance for the pin, 16, when the gate swings to the position, 6′, as shown in Fig. 1.

The front end of the hook element, 19, is provided with an opening, 20, and this end of the hook is embraced by a clevis, 21, connected thereto by means of the pin, 22, extending through the opening, 20, in the hook. This clevis is connected to the operating rod, 23, which extends longitudinally beneath the platform of the truck to some point such as, 24, where it is attached to the operating handle, 25. The operating handle, 25, is pivotally connected, as at 26, to the bottom of the truck and the rod, 23, is pivotally connected to the operating handle at the point, 24.

When the operating handle is in the position shown at, 25, the movement of the portion, 27, thereof is limited by contact with the bottom of the truck platform and inasmuch as the pull upon the rod, 23, is then above the pivotal connection, 26, the hook element is positively locked against the hinge pin. When the handle is moved down to the position, 25′, the rod, 23, assumes the position, 23′, and the hook, 19, moves outwardly and downwardly to the position, 19′, thus releasing its engagement with the hinge pin, 16, and permitting the tail gate to swing outwardly to the position, 6′.

From the foregoing it will be obvious that the sides, 4, of the truck body, and the tail gate, 6, may be removed without dismantling the latching mechanism, and that no part of the latching mechanism will project above the level of the platform, 1. In other words, with my device it is possible to remove the sides of the truck and the tail gate leaving a perfectly smooth platform on the truck.

It is to be understood that each truck is provided with two latches, one at each end of the tail gate, and while I have shown only one side of the truck it will be understood that the handle, 25, is rigidly connected to a shaft, 26, which operates a rod, 23, on the opposite side of the truck.

While I have described my invention in its preferred embodiment it is to be understood that the words which I have used are words of description rather than of limitation and that changes within the purview of the appended claim may be made without departing from the true scope and spirit of my invention.

What I claim is—

In a tail gate latch, comprising a hinge pin and a fixed element having a recess therein adapted to receive said pin, a hook element slidably mounted in a passage provided in said fixed element below the recess, and adapted to be moved toward and away from said recess; said hook element closely fitting said passage when in proximity to the recess but being tapered to drop downwardly as it is moved away therefrom.

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