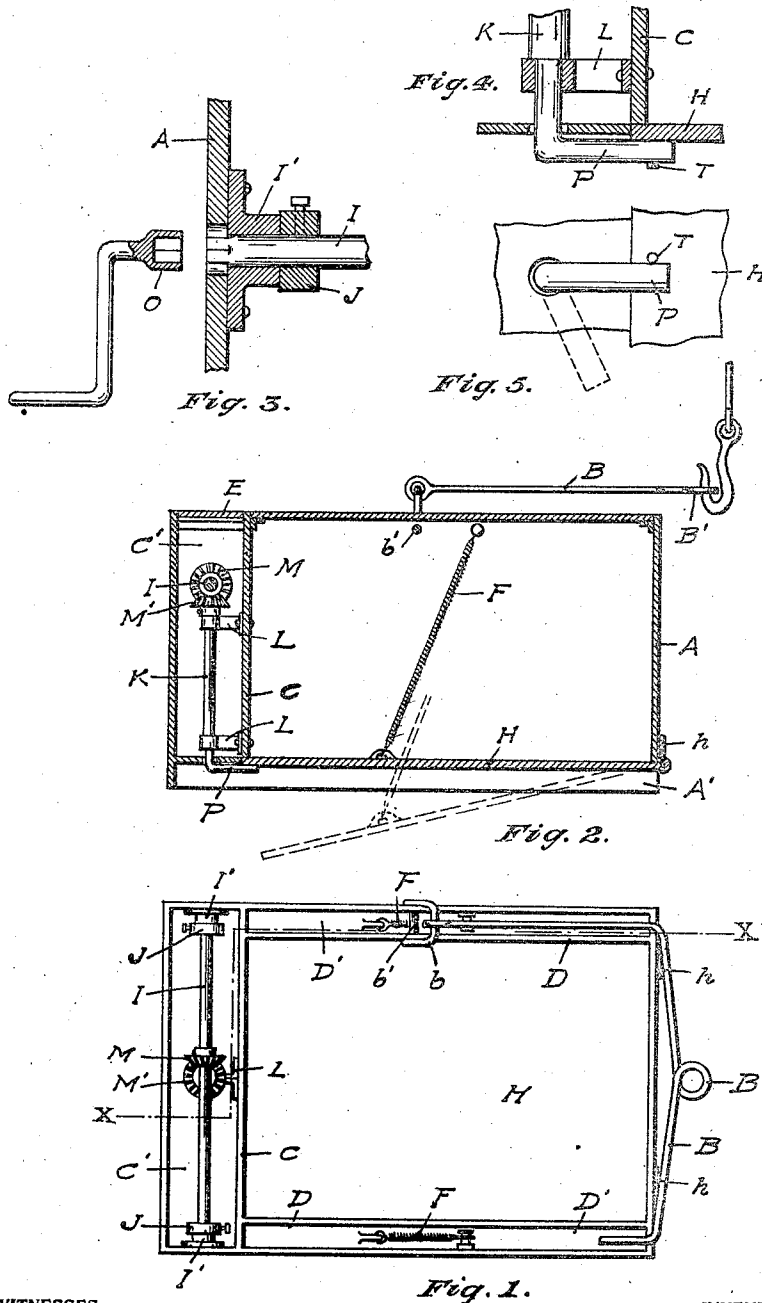


J. HERKS.
SHIFTABLE INSTANTANEOUS UNLOADING DEVICE.
APPLICATION FILED APR. 15, 1909.

940,811.

Patented Nov. 23, 1909.



WITNESSES:

A. B. Cornelius
Pearl St. Clair

INVENTOR:

Jefferson Herks
BY *Engene Ayres*

ATTORNEY.

UNITED STATES PATENT OFFICE.

JEFFERSON HERKS, OF ST. JOSEPH, MISSOURI, ASSIGNOR OF ONE-HALF TO CHARLES WIENSHIENK, OF ST. JOSEPH, MISSOURI.

SHIFTABLE INSTANTANEOUS UNLOADING DEVICE.

940,811.

Specification of Letters Patent.

Patented Nov. 23, 1909.

Application filed April 15, 1909. Serial No. 490,084.

To all whom it may concern:

Be it known that I, JEFFERSON HERKS, a citizen of the United States, residing at 814 South Sixth street, St. Joseph, in the county of Buchanan and State of Missouri, have invented certain new and useful Improvements in a Shiftable Instantaneous Unloading Device, of which the following is a specification.

10 The object of my invention is to provide a means by which a very large per cent. of manual labor may be obviated in loading coal and other ores at mines and unloading the same, as well as hard brick, granite
15 blocks, and other heavy material, from the flat cars on which carried to engines, from barges to sugar plantations, and from any vehicle in which the device can be carried to any receptacle or place which is in proximity to a point that can be reached by a
20 boat, car or other vehicle.

I accomplish my object by the mechanism illustrated in the accompanying drawings in which:—

25 Figure 1 is a top view of the device with lids removed; Fig. 2 is a longitudinal section of same cut on line *x-x* in Fig. 1; Fig. 3 is an enlarged sectional detail of a crank shaft and a crank key; Fig. 4 is a detail of the lower end of an upright shaft
30 showing a toe locking arrangement, and Fig. 5 is a bottom view of Fig. 4.

Similar letters refer to similar parts in the several views, A being an open top detached movable box having a heel A' underneath each side. Any desired number of these boxes may be carried on a barge, flat car or on any suitable conveyance. A heavy iron bail G has connection with the top of
40 said box by means of a clevis *h* on each side of the box held in position by means of a bolt *h'*. Said bail is provided with an integral loop B' to allow it to be engaged by a derrick or any suitable hoisting and shifting mechanism when it is desired to lift a
45 loaded box from a car or other vehicle and swing it off over the receptacle or place where it is desired to dump the contents of the box. The inside of the box is provided
50 with a division wall C forming a gear chamber C' in the front of the box. A lining D is spaced from each side of the box forming side chambers D' D' which are closed at the tops. These linings are connected with

the rear of the box and with division wall 55 C. The top of said gear chamber C' is provided with a hinged lid E. The bottom H of the receptacle part of the box is provided with hinges *h h* at its rear edges. Spiral springs F F are attached at their
60 lower ends to said hinged floor their upper ends extending at an angle to connection with the top of chamber C' C', as shown in Figs. 1 and 2, thus operating between the sides of the box and linings D D. 65

I is a crank shaft revoluble in the sides of the box. Its ends are provided with sleeves I' I' and with collars J J thus preventing the shaft sliding from side to side. An upright shaft K sets vertically in gear
70 chamber C'; it is held in position revoluble therein by guides L L which have rigid connection with division wall C.

M is a gear wheel on crank shaft I and M' is a gear wheel rigidly attached on the
75 top of upright shaft K which engages with gear wheel M.

O is a detachable key adapted to engage with either end of shaft I.

P is a toe rigid on the bottom of upright 80 shaft K. When hinged floor H is in normal shut position as shown in Fig. 2 this toe clamps underneath the front edge of said hinged floor. When it is desired to
85 unload the coal or other contents of the box the key is connected with either end of the horizontal shaft and the shaft is revolved thereby. Gear wheel M, thus revolved on shaft I, revolves gear wheel M' which being
90 rigidly attached to the top of upright shaft K in its turn revolves said shaft K, and toe P, rigid on the bottom of shaft K, is thus unclamped from connection with hinged
95 floor H and the weight of the coal, or other contents of the receptacle, instantly presses said hinged floor down and open as shown by dotted lines in Fig. 2. The instant the
100 contents of the box drop out spiral springs F F automatically draw the hinged floor up shut and a partial revolution of the gear- ing by the use of key P turns said toe to the
105 position that locks said adjustable floor. A lug T on the underside of the floor prevents the toe making more than a half turn and the stoppage of the toe is a notice to the person turning the key that the floor is clamped. The box receptacle is then ready to be refilled.

What I claim and desire to secure by Letters Patent is:—

1. In a shiftable instantaneous unloading device the combination of a box, a division wall forming an open top receptacle, and a front chamber in said box, side linings in said receptacle spaced from the sides of the box forming side chambers provided with closed tops, a horizontal crank shaft revoluble in said front chamber having sleeves and collars and a gear wheel rigid thereon, an upright shaft and a gear wheel rigid on the top thereof engaging the other gear wheel, a hinged lid to inclose said gearings, the adjustable floor of the receptacle and side chambers, spiral springs in said side chambers engaging with said floor and the top of said side chambers, a toe rigid on the bottom of said upright shaft and a key to engage with an end of the horizontal shaft

and lock and unlock said hinged floor, substantially as described and shown.

2. The combination with a box, of an adjustable floor hinged on one side to the bottom of a side of the box, oppositely placed spiral springs having upper connection at the top of the box, and bottom connection with the adjustable floor, horizontal and upright revoluble shafts, the gear wheels thereon, a toe on the bottom of said upright shaft and a key by which to revolve said horizontal shaft rotating said toe back and forth beneath the free side of the floor, substantially as set forth and shown.

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

JEFFERSON HERKS.

Witnesses:

TOM WELTON,
E. H. MYERS.