

(No Model.)

2 Sheets—Sheet 1.

J. K. MCKINNON.
FUEL LOADER FOR ENGINE TENDERS.

No. 582,080.

Patented May 4, 1897.

Fig. 1

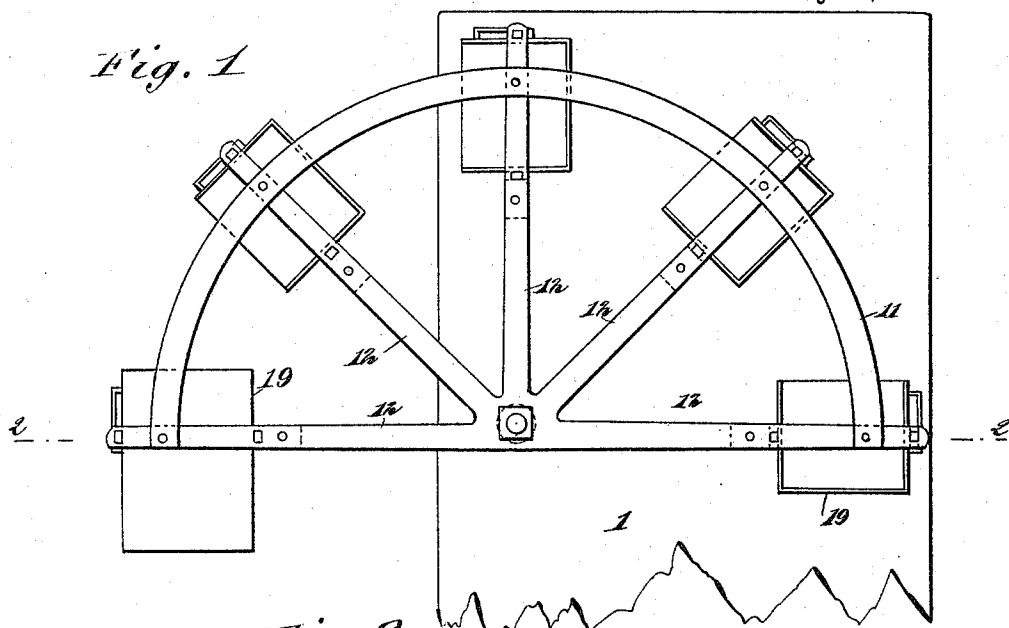
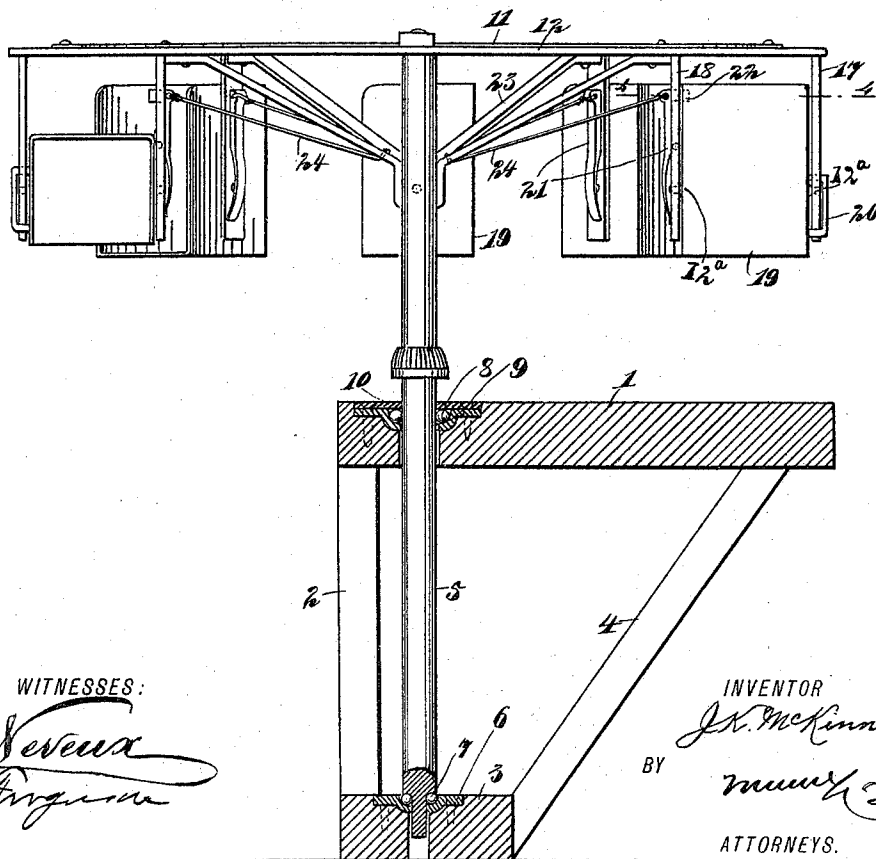


Fig. 2



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C. R. Ferguson

INVENTOR

J. K. McKinnon

BY

Murray

ATTORNEYS.

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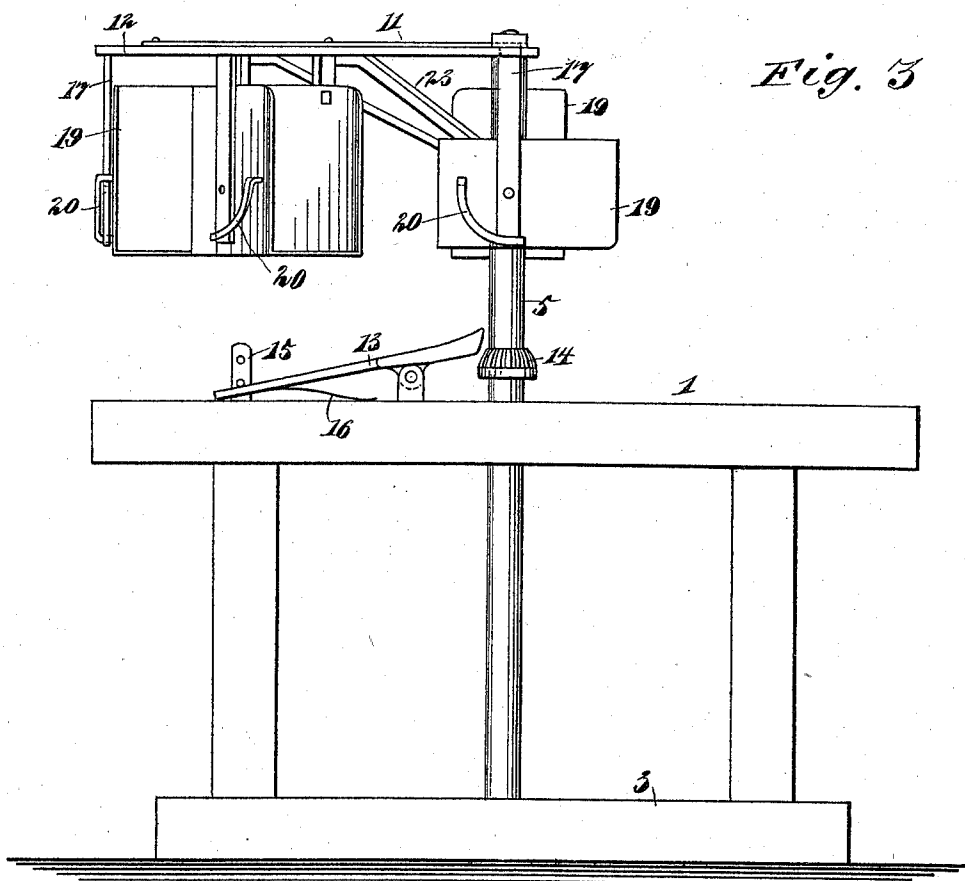
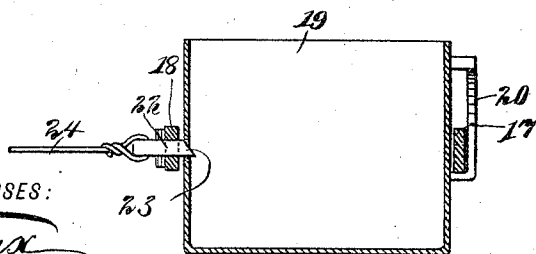


Fig. 4



WITNESSES:

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UNITED STATES PATENT OFFICE.

JOHN K. MCKINNON, OF WHITE OAK, GEORGIA.

FUEL-LOADER FOR ENGINE-TENDERS.

SPECIFICATION forming part of Letters Patent No. 582,080, dated May 4, 1897.

Application filed May 26, 1896. Serial No. 593,170. (No model.)

To all whom it may concern:

Be it known that I, JOHN K. MCKINNON, of White Oak, in the county of Camden and State of Georgia, have invented certain new and useful Improvements in Fuel-Loaders for Engine-Tenders, of which the following is a full, clear, and exact description.

This invention relates to devices for quickly depositing fuel upon the tender of a locomotive-engine, and particularly on railroads where wood is used as a fuel, which necessitates a considerable time in loading in the ordinary way, and consequently a delay for the train.

I will describe a device embodying my invention and then point out the novel features in the appended claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a plan view of a device embodying my invention. Fig. 2 is a partial elevation and partial section on the line 2 2 of Fig. 1. Fig. 3 is an elevation, and Fig. 4 is a section on the line 4 4 of Fig. 2.

Referring to the drawings, 1 designates a platform supported at its front side by legs 2, extended upward from a base-sill 3, and braces 4 extend from said base-sill to the rear portion of the platform.

A vertical shaft 5 extends through an opening in the platform 1 and has a step-bearing in the base-sill. This step-bearing comprises a concaved plate 6, secured to the base-sill and having a central perforation through which a reduced portion of the shaft projects. Surrounding the reduced portion of the shaft and seated in the concavity of the plate are antifriction-balls 7, upon which the shouldered portion of the shaft bears. I also provide antifriction-ball bearings 8 for the portion of the shaft passing through the platform 1. These balls 8 are seated in a concaved plate 9, secured in a recess on the platform and are held from upward movement by means of a plate 10 closely surrounding the shaft.

On the upper end of the shaft 5 is supported a segmental frame comprising a band 11, curved longitudinally to form a half-circle,

and arms 12, extended radially from the shaft and having connections with the band. It will be seen that the arms 12, connecting with the ends of the band, are extended from the shaft in a straight line one with the other, so that when the frame is turned to a position wholly over the platform the straight side will be somewhat rearward of the front of the platform, and therefore while in such position there will be no parts projecting over a track to interfere with the passing of a train.

The frame may be held in any of its rotated positions by means of a suitable clutch or stop. For this purpose I have here shown a fulcrumed lever 13, adapted to engage one of its ends between the teeth of a toothed wheel 14, rigidly mounted on the shaft 5. The opposite end of the lever extends across a vertical arm 15, extended from the platform and in which two pinholes are formed. The lever may be held out of engagement with the wheel 14 by pressing its outer end downward and engaging its upper side with a pin passed through the lower of the holes in the arm 15, and it may be held rigidly in engagement with the wheel by engaging its under side with a pin passed through the upper one of said holes. A spring 16, secured to the lever and bearing on the platform, will automatically turn the lever to its locking position when released.

Hangers 17 18 depend from the outer portion of each arm 12, and pivotally connected at 12^a between each pair of hangers is a fuel-carrier 19, made in the form of a rectangular box open at its top and at one side. Connected to the outer side of the carrier 19 is a curved guide 20, between which and the side of the carrier the portion of the hanger 17 below its pivotal point with the carrier extends. The end walls of this guide form stops by engaging with the hanger to limit the tilting movement of the carrier and to stop the carrier when turned to its proper vertical position.

As a means for locking a carrier in its vertical position I may employ a lever 21, pivoted between its ends to the inner hanger 18 and having at its upper end a lug 22, designed to pass through an opening in the hanger and through an opening in the inner wall of the

carrier. The lower portion of the lever is made resilient, and its end engaging with the hanger 18 will force the lug into the opening in the carrier, but will yield sufficiently to allow the lug to be drawn outward. One side of the lug 22 is beveled, as plainly shown in Fig. 4, and against this beveled side the inner side or wall of the carrier will strike while the carrier is being turned to its vertical position, and then when the opening reaches the lug the said lug will move into it.

Brace-rods 23 extend from the shaft 5 to each of the arms 12, and wires or cords 24 are connected at one end to the braces and at the other end to the levers 21. When it is desired to release a carrier to discharge its load, an upward pressure on a cord or wire 24 at a point between its ends will draw the lug 22 out of engagement with the carrier.

In operation a loading device will be placed at the side of the track at each loading-station. In a double-track system two loading devices will be employed at each loading-station. When an engine-tender is in front of the platform 1, the shaft may be rotated to bring the fuel-carriers over the tender, and as many carriers as desired may be successively dumped by an attendant on the platform. It is to be understood, of course, that the wood or other fuel is to be placed in the carriers before the arrival of a train.

It is obvious that the device embodying my invention is not confined to the loading of locomotives, as it may be used in wood or coal yards for loading wagons, and it may also be employed for loading boats with fuel or other material.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. A fuel-loader, comprising a platform, a vertical rotary shaft supported thereon, arms extended radially from the upper end of said shaft, a longitudinally-curved band secured to the ends of said arms, hangers depending rigidly from the arms, a carrier pivotally connected between each pair of hangers, and au-

tomatic locking means between the hangers and the carrier, substantially as specified.

2. A fuel-loader for locomotive-engines, comprising a vertical rotary shaft, a segmental frame on said shaft, hangers depending from the frame, a fuel-carrier having pivotal connection with each pair of hangers, stops for limiting the tilting movement of the carriers, spring-actuated locking-lugs for the carriers, and means for releasing the lugs from the carriers, substantially as specified.

3. A fuel-loader having a revoluble shaft, a frame carried by the shaft, hangers depending from the frame, a carrier pivotally mounted between the hangers, and a lever intermediately pivoted to one of the hangers, the lever having at one end a resilient portion and at the remaining end a projection, the resilient portion of the lever forcing the projection to lock the carrier with the hanger, substantially as described.

4. A fuel-loader having a revoluble shaft, a frame carried by the shaft, a hanger depending from the frame, a carrier pivotally carried in the hanger and provided with a recess, the hanger having a recess registering with the recess of the carrier, and a spring-pressed lever fulcrumed on the carrier and having a projection normally seated in the recesses, substantially as described.

5. A fuel-loader having a revoluble shaft, a segmental frame projecting from the shaft, two hangers depending from the frame, a carrier pivotally mounted between the hangers, an intermediately-fulcrumed lever on one of the hangers, and having at one end a spring portion and at the second end a projection forced by the spring portion to lock the carrier with the hanger, and a flexible connection attached to the shaft and to the end of the lever having the projection whereby said lever may be operated, substantially as described.

JOHN K. MCKINNON.

Witnesses:

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E. J. STAFFORD.