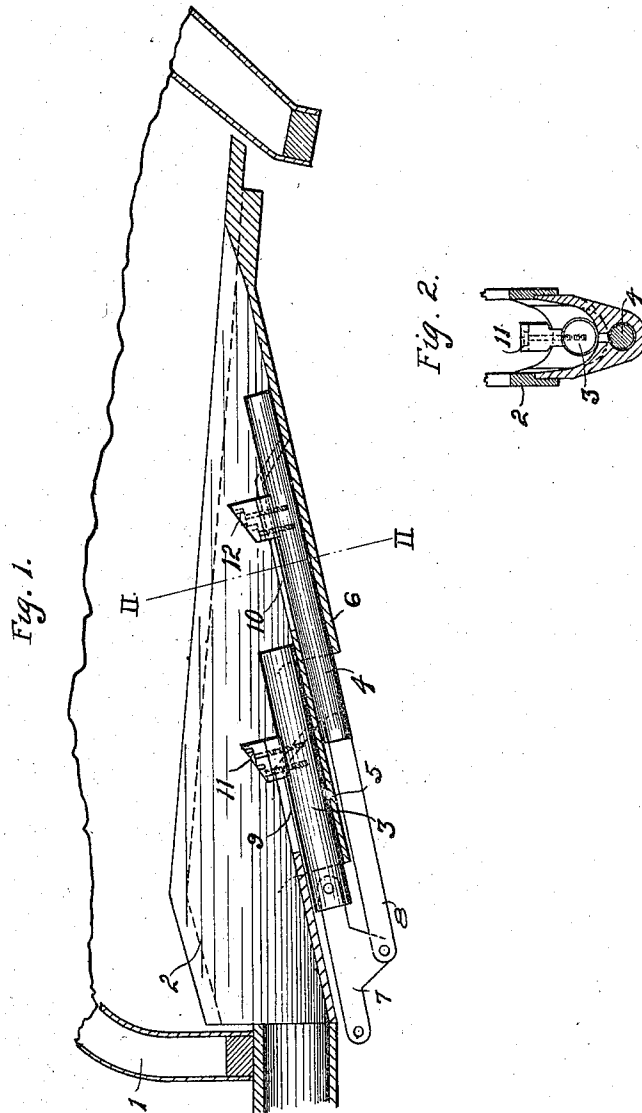


C. W. KINNAR.
FEEDING DEVICE FOR UNDERFEED STOKERS.
APPLICATION FILED NOV. 7, 1910.

984,568.

Patented Feb. 21, 1911.



WITNESSES

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FEEDING DEVICE FOR UNDERFEED STOKERS.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, CARLTON W. KINNEAR, a citizen of the United States, residing at Columbus, in the county of Franklin and State of Ohio, have invented certain new and useful Improvements in Feeding Devices for Underfeed Stokers, of which the following is a specification.

The invention relates to feeding devices for use in underfeed stokers, and has for its primary objects; the provision of an improved form of underfeed trough and piston or plunger; the provision of an auxiliary feed plunger provided with means for agitating the fuel above the plunger and preventing packing; and the provision of an auxiliary feed plunger designed to secure both more effective forward feed and an agitation of the fuel in the trough. One embodiment of the invention is illustrated in the accompanying drawings, wherein—

Figure 1 is a longitudinal section through the center line of a trough having the improved construction, and

Figure 2 is a section on the line II—II of Figure 1.

The invention is shown as applied to the underfeed trough of a locomotive stoker, but it will be understood that the device is of general application. In the construction as illustrated and as shown in the drawings, 1 is the water leg of the fire-box; 2 is the trough extending longitudinally of the furnace; 3 and 4 are auxiliary feed plungers working in the plunger guideways 5 and 6 formed in the bottom of the trough; and 7 and 8 are links pivoted to the plungers and operated from power mechanism not shown. The upper walls of the plunger guideways are slotted at 9 and 10, and the agitating blocks 11 and 12 are secured to the upper sides of the plungers 3 and 4 and are mounted for movement in the slots. As indicated in Fig. 2, the agitating blocks are provided at their lower portions with shanks fitting the slots while the upper portions are of greater width and have rearwardly inclined upper faces. The blocks are held in position by means of the bolts indicated.

The blocks 11 and 12 serve as agitating means for preventing the fuel from packing in the trough above the plungers and also assist in giving a forward feed to the fuel. The block 12 also serves to loosen the fuel immediately in front of the plunger 3, so

that a more effective feed of such plunger 3 is secured, and similarly the block 11 serves to loosen the fuel in front of the main plunger.

Having thus described my invention and illustrated its use, what I claim as new and desire to secure by Letters Patent is the following:—

1. The combination of an underfeed trough, a plunger guideway at the bottom thereof opening at its forward end into the trough and having a slot in its upper wall, and a fuel feeding plunger mounted for reciprocation in the said guideway, and provided upon its upper face with a fuel agitator working in the said slot.

2. The combination of an underfeed trough, a plunger guideway at the bottom thereof opening at its forward end into the trough and having a slot in its upper wall, a fuel feeding plunger mounted for reciprocation in the said guideway, and a fuel agitator upon the upper side of the plunger having a shank working in the said slot and a head of greater width than the shank lying above the said slot.

3. The combination of an underfeed trough, a plunger guideway at the bottom thereof opening at its forward end into the trough and having a slot in its upper wall, a fuel feeding plunger mounted for reciprocation in the said guideway, and a fuel agitator block working in said slot, and detachably secured to the plunger.

4. The combination of an underfeed trough, a plunger guideway at the bottom thereof opening at its forward end into the trough, a fuel feeding plunger mounted for reciprocation therein, a second plunger guideway to the front of the first guideway opening at its forward end into the trough and having a slot in its upper wall and a fuel feeding plunger mounted for reciprocation in said second guideway and provided upon its upper face with a fuel agitator working in the said slot and in its rearmost position lying adjacent the front end of the first mentioned plunger.

In testimony whereof I have hereunto signed my name in the presence of the two subscribed witnesses.

CARLTON W. KINNEAR.

Witnesses:

H. S. NEEDHAM,
H. G. VERCOR.