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PLAT POCKET LOADER

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1 Claim. (Cl. 214—17)

This invention relates to new and useful improvements in plat pocket loaders, for loading ore or other materials into measuring pockets. One object of my invention is to provide a plat pocket loader that will eliminate the necessity, at the pit, for a large storage pocket, into which certain ores have a tendency to pack and delay loading into the measuring pockets, thus holding up and increasing cost of production.

A further object of my invention is to provide a plat pocket loader of the character specified that will reduce the sinking of the shaft to a considerable extent by doing away with the storage pocket into which the haulage tram car dumps its ore.

With the foregoing and other objects in view that will appear as the nature of my invention is better understood, the same consists in the novel features of construction, combination and arrangement of parts illustrated in the accompanying drawings and more particularly pointed out in the appended claim.

In the accompanying drawings, which are for illustrative purposes only and are therefore not drawn to scale:

Figure 1 is a side elevation of a plat pocket loader, constructed in accordance with my invention.

Figure 2 is a vertical sectional view, taken through the storage pit, measuring pocket, skip and associated parts.

Figure 3 is an enlarged horizontal section of the loader.

Figure 4 is a vertical longitudinal section, taken on line 4—4 of Figure 3, and Figure 5 is a diagrammatic view.

Referring to the drawings for a more particular description of my invention, and in which drawings like parts are designated by like reference characters throughout the several views, the numeral 1 designates the haulage tram car, 2 my plat pocket loader, as a whole, 3 a shallow steel lined storage pit extending along the shaft side of the haulage track, 4 and 6 the measuring pockets situated below the bottom of the storage pit, 5 the skip and 6 the shaft.

The loader comprises the hollow carriage 7, mounted on the trucks 8 and 9, which travel back and forth on the track rails 10, over the storage pit 3.

The loader carriage is driven by two independent motors 11 and 12, which are geared to the pinions 13 and 14 of the truck shafts.

Eight and left-hand scrapers 15 and 16, respectively, of substantially U-shape form, are arranged with their inwardly tapered side members 17 and 18 straddling opposite ends of the loader carriage 7, and with their extreme inner ends pivoted, as at 19 and 20, to opposite sides of the latter. The outer ends of the scrapers 15 and 16 are provided with the scraper blades 21 and 22, respectively, which are raised and lowered by the independent right and left-hand feed motors 23 and 24, geared by means of the transverse shafts 25, gears 26 and pinions 27 to the perpendicular arc-shaped rack bars 28, carried by opposite sides of the scrapers.

With the use of my invention, the ore is dumped into the storage pit 3 and the loader scrapes the ore into the corresponding measuring pockets while the skip in that shaft compartment is ascending to surface, the measuring pocket holding exactly one skip of ore, which is ready to be deposited in the skip on its arrival at the mouth of the pocket. In operation, with the right-hand scraper up, the loader carriage is run to the right until over the ore in the storage pit, when the aforesaid scraper is lowered by reversing the right-hand feed motor 23 and forced into the ore.

The loader motors 11 and 12 are then reversed and the loader carriage caused to travel to the left with the left-hand scraper up, until the ore is carried by means of the right-hand scraper into the corresponding measuring pocket. The right-hand scraper is then raised and the left-hand scraper lowered and forced into the ore, after which operation the loader motors are again reversed to cause the loader carriage to travel to the right until the ore is carried by the left-hand scraper into the corresponding measuring pocket, thus completing one cycle.

Figure 5 is a diagrammatic view, showing the circuits to the feed and loader motors, and the reversing switches, indicated by the reference numerals 29, 30 and 31, respectively.

From the foregoing description taken in connection with the drawings, it is thought that the construction, operation and advantages of my invention will be readily understood, without requiring a more extended explanation.

Various changes in the form, proportions and minor details of construction may be resorted to without departing from the principles or sacrificing any of the advantages of my invention, as defined in the appended claim.

Having described my invention, what I claim as new and desire to secure by Letters Patent is:

A plat pocket loader for loading ore into measuring pockets, comprising a movable carriage adapted to travel back and forth over the storage
pit, right and left-hand scrapers of substantially U-shape form, arranged with their side members straddling opposite ends of the loader carriage and with the inner ends of said side members pivoted to opposite sides of the latter, motors 5 geared to the trucks of the carriage, perpendicular arc-shaped rack bars carried by the scrapers, independent motors geared to the rack bars of the right and left-hand scrapers, for raising and lowering the latter, and switches for controlling 10 said first and second mentioned motors.

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