

C. A. PERFECT.
AUTOMATIC LOADER.
APPLICATION FILED OCT. 20, 1916.

1,218,580.

Patented Mar. 6, 1917.
2 SHEETS—SHEET 1.

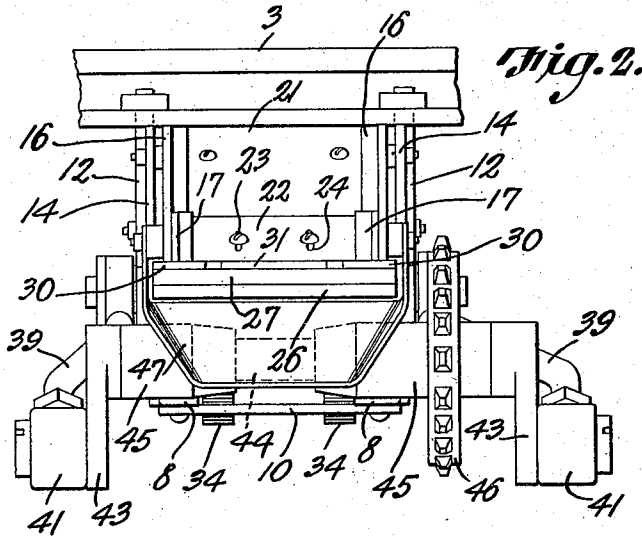


Fig. 2.

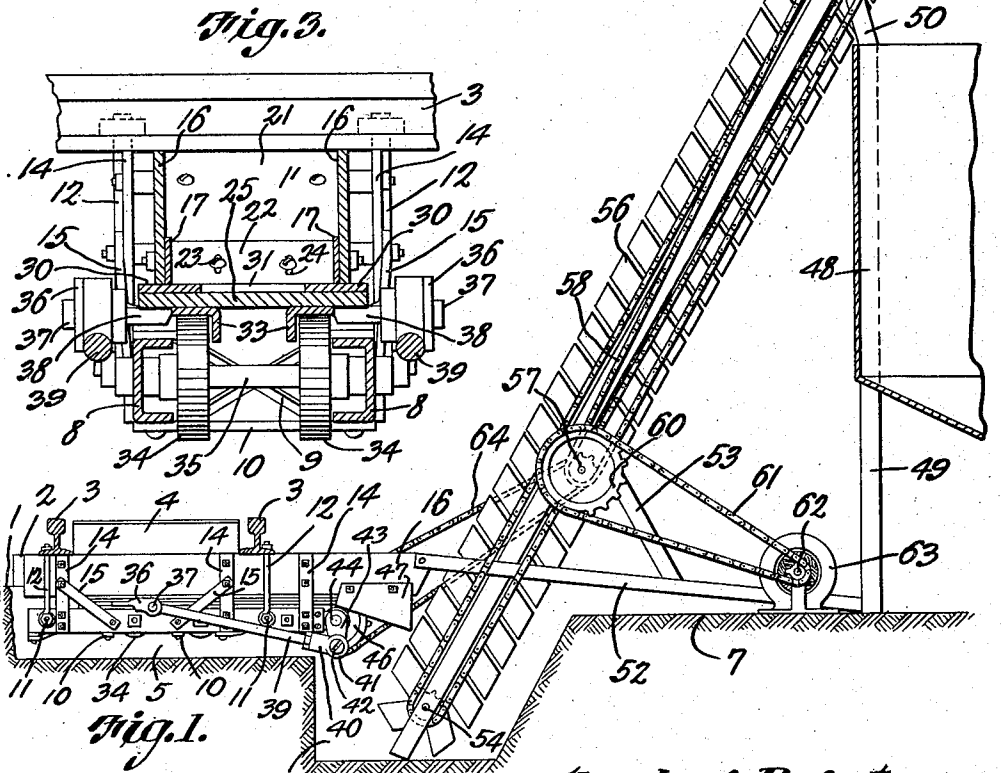


Fig. 3.

Fig. 1.

Witnesses

J. R. Dunlop
R. L. Parker

Charles A. Perfect Inventor

by

C. A. Snow & Co.
Attorneys

C. A. PERFECT.
AUTOMATIC LOADER.
APPLICATION FILED OCT. 20, 1916.

1,218,580.

Patented Mar. 6, 1917.

2 SHEETS—SHEET 2.

Fig. 4.

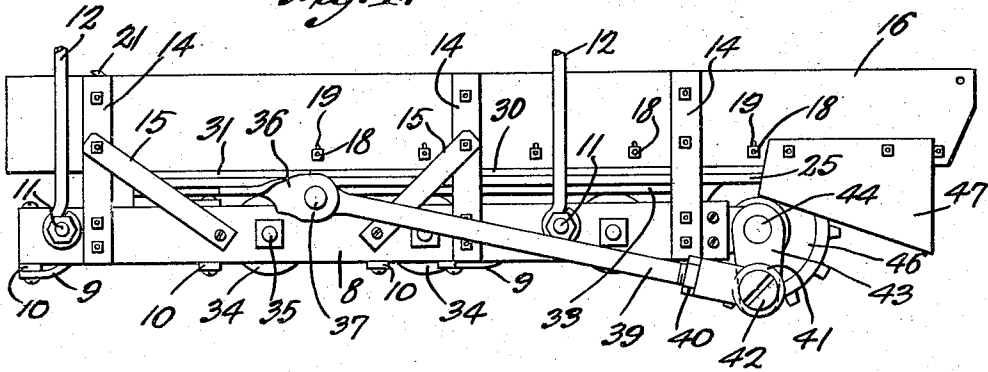


Fig. 5.

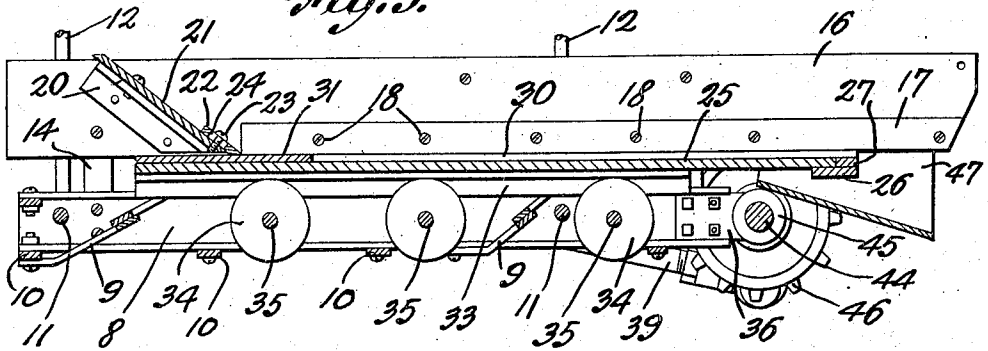
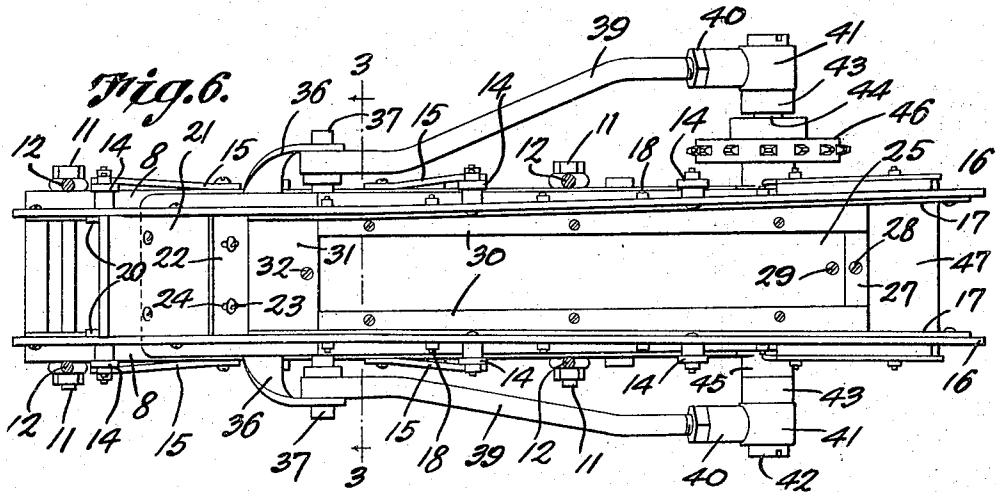


Fig. 6.



Witnesses

J. P. Loney
W. L. Parker

Charles A. Perfect Inventor

by

C. A. Snow & Co.

Attorneys

UNITED STATES PATENT OFFICE.

CHARLES A. PERFECT, OF SUNBURY, OHIO, ASSIGNOR TO THE SUNBURY MFG. CO., OF
SUNBURY, OHIO.

AUTOMATIC LOADER.

1,218,580.

Specification of Letters Patent.

Patented Mar. 6, 1917.

Application filed October 20, 1916. Serial No. 126,739.

To all whom it may concern:

Be it known that I, CHARLES A. PERFECT, a citizen of the United States, residing at Sunbury, in the county of Delaware and State of Ohio, have invented a new and useful Automatic Loader, of which the following is a specification.

The device forming the subject matter of this application is adapted to be employed for unloading from railroad cars on a track, broken stone, gravel, sand, screenings or other loose material.

The invention aims to provide novel means for securing a reciprocation of a feeder, to provide novel means whereby the feeder and attendant parts may be adjusted, and to provide novel means whereby the material is conveyed upwardly to a suitable receiving bin, from the feeder.

It is within the province of the disclosure to improve generally and to enhance the utility of devices of that type to which the present invention appertains.

With the above and other objects in view which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of the invention herein disclosed can be made within the scope of what is claimed without departing from the spirit of the invention.

In the accompanying drawings, Figure 1 is a transverse sectional view showing an automatic loader embodying the improvements hereinafter described, certain parts appearing in elevation;

Fig. 2 is an end elevation showing the receiver and attendant mechanisms;

Fig. 3 is a cross section taken through the receiver on the line 3—3 of Fig. 6;

Fig. 4 is a side elevation of the receiver;

Fig. 5 is a longitudinal section of the receiver; and

Fig. 6 is a top plan of the receiver.

In the accompanying drawings, the numeral 1 indicates a suitable support, such as a road bed, upholding cross ties 2, carrying the rails 3 of a track or tramway. Mounted on adjacent cross ties 2 are inclined deflectors 4. When the material is dumped out of a car, the deflectors direct the material between the cross ties 2. Between the cross ties 2, a channel 5 is formed

in the road bed 1, transversely of the rails 3, the channel 5 communicating with a pit 6 formed in the road bed 1 on one side of the track rails 3. Beyond the pit 6 and to one side of the track 3—3 is a support 7.

A receiver is located between the cross ties 2, and the material dumped from a car is directed by the deflectors 4 into the receiver. The receiver is a composite structure, and its construction will now be set forth.

The receiver embodies a pair of side bars 8 preferably in the form of channels, the side bars 8 being connected by upwardly inclined crossed braces 9 and by transverse braces 10. The side bars 8 carry bolts 11 supporting hangers 12 which may be connected with the rails 3. Any other desired means, however, may be employed for holding the channels or side bars 8 in place. Secured to the side bars 8 are uprights 14 sustained from the side bars by means of braces 15. Attached to the uprights 14 are side plates 16. Guide strips 17 are attached to the inner faces of the side plates 16 by means of securing elements 18. The slots 19 in the side plates 16 through which the securing elements 18 pass, preferably are elongated vertically as clearly indicated in Fig. 4, so that the guide strips 17 may be adjusted vertically.

Connected with the side plates 16 near to their rear ends are angle bars 20 to which is secured a forwardly and downwardly inclined wall 21 supporting a foot 22 held in place on the wall 21 by securing elements 23. The slots 24 in the foot 22 through which the securing elements 23 pass are elongated vertically, so as to permit an adjustment of the foot 22.

The receiver above alluded to includes a reciprocating feeder embodying a base plate 25 in slidable coöperation with the guide strips 17 which are secured to the side plates 16. Attached by means of a securing element 29 to the forward end of the base plate 25 is a bar 26 supporting a removable lip 27 held in place by a securing device 28, the construction being such that the lip may be renewed readily when worn. Extended longitudinally of the base plate 25 and secured thereto are wear strips 30 which bear immediately upon the lower edges of the guide strips 17. Secured to the rear end of the member 25 is a plate 31 held in place by securing elements 32, the plate 31 operating

beneath the lower end of the inclined foot 22.

At this place it may be noted that the foot 22 is so mounted on the wall 21 that the foot may be raised and lowered to cooperate with the plate 31, it being possible to adjust the guide strips 17 vertically so that they will cooperate with the wear strips 30, and all of these elements may be detached and be replaced when worn.

Fixed to and depending from the base plate 25 of the feeder are angle members 33, the vertical flanges of which lie between rollers 34, the horizontal flanges of which constitute tracks cooperating with the rollers, as shown best in Fig. 3. The rollers 34 are carried by axles 35 supported in the channels or side bars 8. It will now be clear that when the feeder comprising the plate 25 and attendant parts is reciprocated, the plate slides to and fro on the rollers 34, the rollers constituting an anti-frictional mounting for the plate.

Attached to the base plate 25 of the feeder are laterally offset brackets 36 carrying pins 37 which are mounted upon the base plate 25 of the feeder, as indicated at 38 in Fig. 3. The pins 37 support pivotally, the rear ends of pitmen 39 united by adjustable connections 40 with eyes 41 pivoted on wrist-pins 42 carried by cranks 43 constituting a part of a shaft 44 journaled in bearings 45 secured to the forward ends of the channels or side bars 8. Fixed to the shaft 44 is a sprocket wheel 46. A downwardly inclined chute 47 is attached to the forward ends of the side plates 16 of the receiver.

In Fig. 1 of the drawings there is shown a bin 48 supported on posts 49, the upper ends 50 of which are connected to a conveyor supporting frame 51. Braces 52 are connected at one end to the posts 49 and at their other ends are connected to the side plates 16 of the receiver, as clearly shown in Fig. 1. Braces 53 extend between the braces 52 and the conveyor frame 51. Journaled for rotation in the lower end of the conveyor frame 51 (which projects into the pit 6) is a shaft 54. A shaft 55 is journaled in the upper end of the conveyor frame 51. Trained about the shafts 54 and 55 and operatively connected therewith is a belt conveyor 56 adapted to operate in the pit 6. Journaled in the conveyor frame 51 intermediate its ends is a shaft 57 connected by means of a chain 64 with the sprocket wheel 46 on the shaft 44 whereby the feeder plate 25 is actuated. A sprocket chain 58 forms an operative connection between the shaft 57 and a sprocket wheel 59 carried by the shaft 55. The shaft 57 carries a sprocket wheel 60 connected by means of a sprocket chain 61 with the shaft 62 of a motor 63 mounted on the support 7.

In practical operation, the material

dumped from a car is received by the deflectors 4 and is directed between the side plates 16 of the receiver. When the feed plate 25 is reciprocated, the material is advanced into the chute 47, owing to the fact that the material tends to bank up on the inclined wall 21, and because the tendency of the inclined wall is to coact with the feeder plate 25 in advancing the material. From the chute 47, the material is received by the belt conveyor 56 and is carried upwardly by the belt conveyor and dumped into the bin 48.

When the motor 63 is operated, motion is transmitted to the shaft 57 by the sprocket chain 61, and from the shaft 57, motion is transmitted to the shaft 55 and the belt conveyor 56 by the chain 58. From the shaft 57, motion is transmitted by the sprocket chain 64 to the sprocket wheel 46 on the shaft 44 and when the shaft 44 is rotated, the pitmen 39 will be actuated, the same imparting a sliding movement to the feeder plate 25 through the pins 37.

Having thus described the invention, what is claimed is:—

1. In a device of the class described, a receiver comprising a bed frame; side plates connected with the bed frame; a feeder mounted to reciprocate beneath the side plates; an inclined end wall connecting the side plates; a foot plate cooperating with the feeder and slidable for adjustment on the inclined end wall; and means for connecting the foot plate adjustably with the end wall.

2. In a device of the class described, a bed frame; side plates assembled with the bed frame; a feeder mounted to reciprocate beneath the side plates; guide strips carried by the side plates and coacting with the feeder; and means for connecting the guide strips with the side plates adjustably, whereby the guide strips may be raised and lowered, to cooperate with the feeder.

3. In a device of the class described, a bed frame; side plates carried by the bed frame; a feeder mounted to reciprocate beneath the side plates; wear strips removably mounted on the upper face of the feeder; guide strips carried by the side plates and coacting with the wear strips; and means for connecting the guide strips with the side plates for vertical adjustment, whereby the guide strips may be made to cooperate with the wear strips.

4. In a device of the class described, a bed frame; side plates carried by the bed frame; a feeder supported for sliding movement on the bed frame and operating beneath the side plates; an inclined end wall connecting the side plates; a foot plate slidable for adjustment along the wall; means for securing the foot plate to the wall in adjusted positions; a removable wear strip disposed below the foot plate; and means for securing the wear strip to the feeder.

5. In a device of the class described, a bed frame; side plates connected with the bed frame; a feeder mounted to reciprocate on the bed frame beneath the side plates; removable wear strips mounted on the upper face of the feeder; guide strips mounted on the side plates and coacting with the wear strips; means for connecting the guide strips with the side plates for raising and lowering, whereby the guide strips may be made to cooperate with the wear strips; an inclined wall connecting the side plates; a foot slidable for adjustment on the end wall; means for securing the foot in adjusted positions on the end wall; and a removable wear plate carried by the feeder and operating beneath the foot.

6. In a device of the class described, a bed frame including side bars; axles carried by

the side bars; rollers mounted on the axles; a feed plate disposed above the rollers; angle members secured to the feed plate and including horizontal flanges forming tracks engaging the rollers, the angle members including depending flanges located between the rollers and constituting means for directing the sliding movement of the feed plate; side plates beneath which the feed plate operates; and means for connecting the side plates with the side bars.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

CHARLES A. PERFECT.

Witnesses:

R. O'BRIEN,

C. O. HUMPHREY.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."