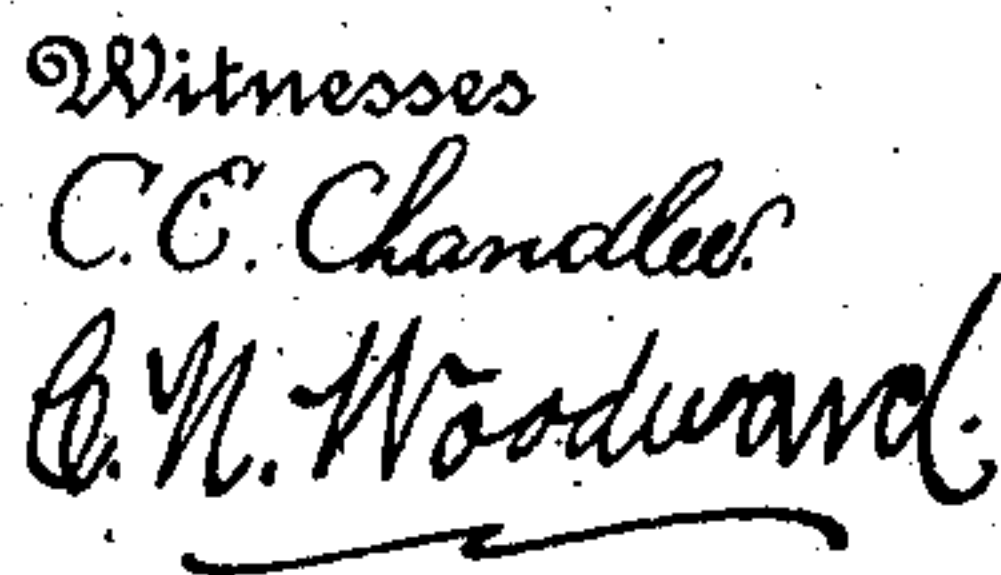


978,844.

2 SHEETS—SHEET 1.



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V. C. CALHOUN.
AUTOMATIC CAR DUMPER.
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2 SHEETS—SHEET 2.

Fig. 3.

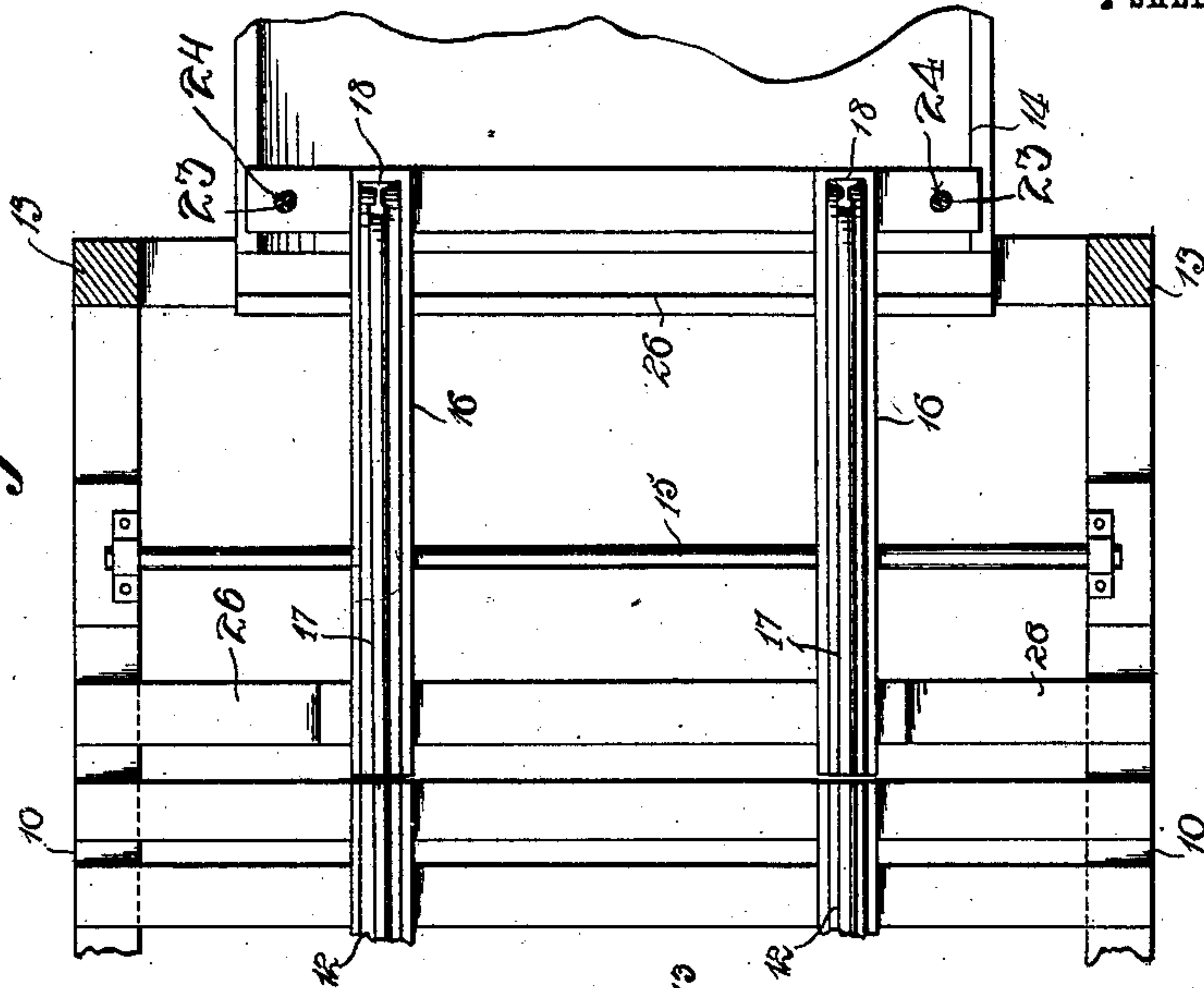
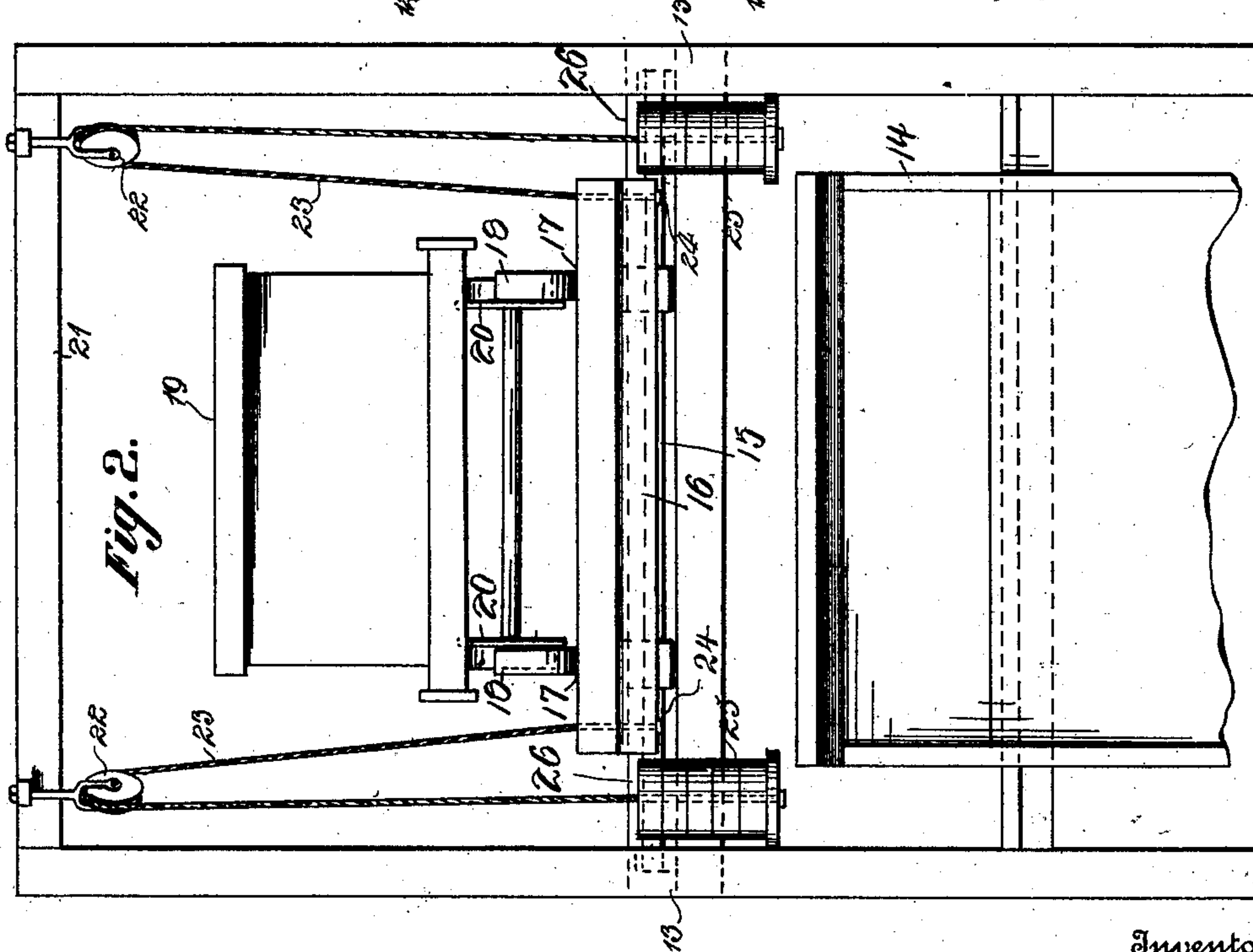


Fig. 2.



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UNITED STATES PATENT OFFICE.

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AUTOMATIC CAR-DUMPER.

978,844.

Specification of Letters Patent.

Patented Dec. 20, 1910.

Application filed January 3, 1910. Serial No. 535,989.

To all whom it may concern:

Be it known that I, VAN C. CALHOUN, a citizen of the United States, residing at Paris, in the county of Logan, State of Arkansas, have invented certain new and useful Improvements in Automatic Car-Dumpers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to devices for dumping cars, more particularly to devices of this character employed in connection with coal mining operations and in similar localities, and has for one of its objects to provide a simply constructed device whereby the labor incident to handling the cars is lessened and the cost of construction correspondingly lessened.

Another object of the invention is to provide a simply constructed device which is automatic in its operation both as to the dumping of the car and the returning of the empty car to its former position.

With these and other objects in view, the invention consists in certain novel features of construction as hereinafter shown and described and then specifically pointed out in the claim; and, in the drawings illustrative of the preferred embodiment of the invention, Figure 1 is a sectional side elevation of the improved device, Fig. 2 is an end elevation of the same, Fig. 3 is a plan view with the frame work in section on the line 3—3 of Fig. 1.

The improved device is designed for use more particularly in connection with coal mining operations, but may be employed in any locality where it is required to dump coal or like material from cars, and comprises in general a supporting frame work 10 having a railway track located thereon, the track being arranged with the major portion thereof inclined in one direction, a section of the major portion of the track being represented at 11 and with the minor portion of the track slightly inclined in the opposite direction, as shown at 12. The section 12 is somewhat longer than the car which is employed upon the improved device, the object to be hereinafter explained. The frame work 10 with its tracks 11—12 is arranged to terminate at

the point where the cars are to be dumped, and the frame work 10 is provided at the terminal of the tracks with an extension frame 13 with the receiving chute 14 supported from the extension frame, as shown.

Mounted for rotation upon the extension frame 13 is a rock shaft 15, and supported upon this rock shaft is a tilting frame 16, the tilting frame being provided with a section of railway track 17 with the terminals of the rails upturned at one end as shown at 18 to form stops for the wheels of the car. Any suitable form of dump car may be employed, but for the purpose of illustration a conventional car is represented at 19 and provided with the usual flanged carrier wheels 20. The shaft 15 is so located that the frame 16 is supported thereon intermediate the ends thereof and nearest to one end, so that the major portion of the frame is located in advance of the shaft.

The frame 13 is extended as shown at 21 above the line of the car 19 and is provided with two cable sheaves 22 at opposite sides of the tilting frame 16, and over these sheaves cables 23 are arranged to operate. Each of the cables is connected as represented at 24 to the tilting frame 16 and provided with counter-weights 25 at the opposite ends. The counter-weights thus exert their force to maintain the tilting frame 16 in its elevated position as shown in full lines in Fig. 1, and will be sufficient to overcome the inertia of the empty car, but will be overcome by the weight of the car when loaded, as hereinafter explained.

The frame 13 is provided with a stop timber 26 upon which the shorter end of the tilting frame 16 rests when in its elevated position, as shown in full lines in Fig. 1. The frame 16 is so constructed and arranged that the rails 17 will be in longitudinal alinement with the rail sections 12 when the frame 16 is in position to receive the car 19. The weights 25 will thus be sufficient to maintain the frame 16 in its elevated or car-receiving position, and when a loaded car is caused to pass down the inclined track 11 its momentum will be sufficient to carry it over the slightly inclined rails 12 and 17 until the forward wheel 20 engages the upturned terminals 18. This movement of the car will dispose its major portion in ad-

vance of the shaft 15 and the weight of the loaded car will be sufficient to overcome the inertia of the weights 25 and cause the frame 16 to be tilted downwardly and discharge the load of the car into the chute 14.

As soon as the load is discharged from the car the weights 25 will be sufficient to restore the frame 16 to its upward position and also return the car 19 to its upward position, with the rails 17 inclined toward the rails 12 so that the car will immediately run down the inclined rails 17—12 until the rear wheel 20 reaches the beginning of the rail 11 up which they will run for a short distance and then if not disturbed will settle back with one of the wheels located in the "pocket" or hollow between the rails 11—12. The rails 12 will be greater than the length of the car, so that when the car thus runs down upon the rails 12 a sufficient space will be left for the operator to mount the frame work 10 and thus be in position to push the car up the inclined portion 11, or to attach the pulling mechanism if power is employed for accomplishing this result. The double inclined arrangement of the tracks 11—12 coacting with the inclined track portion 17 is thus an important feature of the improved device and adds materially to its efficiency and utility as the inclining of the tracks renders the operation entirely automatic. The cars are thus caused to be automatically dumped and the

cars returned to position upon the frame work 10.

What is claimed is:—

A car dumping apparatus comprising continuous supporting rails having the major portion thereof inclined in one direction and the minor portion inclined in the opposite direction, a frame supported for tilting with the support located rearwardly of the center of the frame, tracks carried by said tilting frame and normally in alinement with the minor inclined rail portions and with stops at their forward ends, weights connected to said frame at its forward end and operating to maintain said platform yieldably in its upper position, and a car having bearing wheels spaced apart and movable over said rails, the stops of said tilting frame rails being so arranged that when the car is located upon said tilting frame rails the major portion thereof will be disposed in advance of the supporting point of the tilting frame, to cause the car to be automatically dumped and the empty car returned to its upper position to run down the tilting frame track and upon the minor portion of the inclined rails.

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

VAN C. CALHOUN.

Witnesses:

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