H. R. KEES AND E. F. THOMAS.

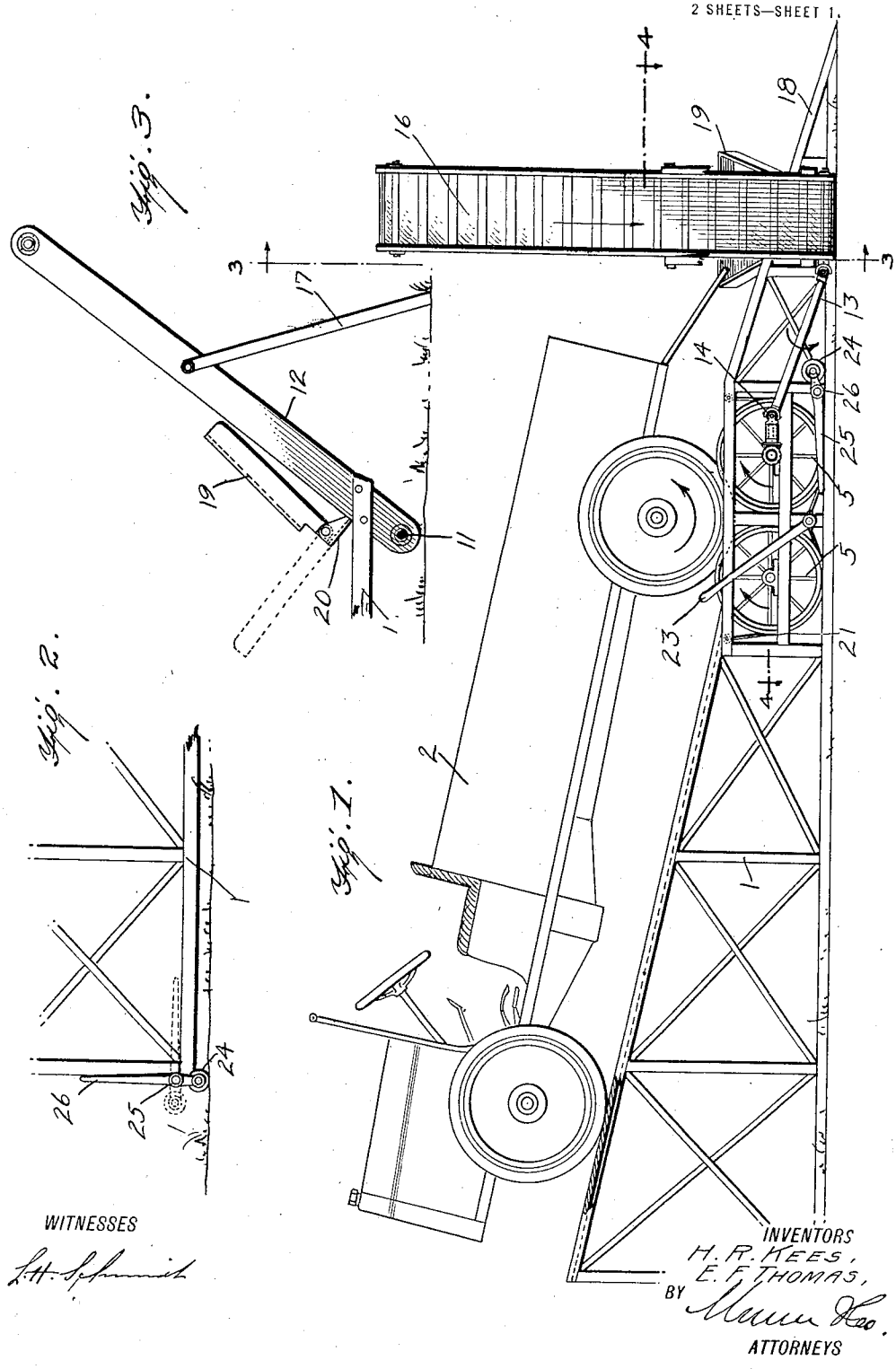
PORTABLE ELEVATOR.

APPLICATION FILED APR. 30, 1919.

1,329,084.

Patented Jan. 27, 1920.

2 SHEETS—SHEET 1.



H. R. KEES AND E. F. THOMAS.

PORTABLE ELEVATOR.

APPLICATION FILED APR. 30, 1919.

1,329,084.

Patented Jan. 27, 1920.

2 SHEETS—SHEET 2.

Fig. 5.

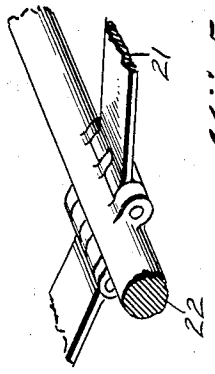
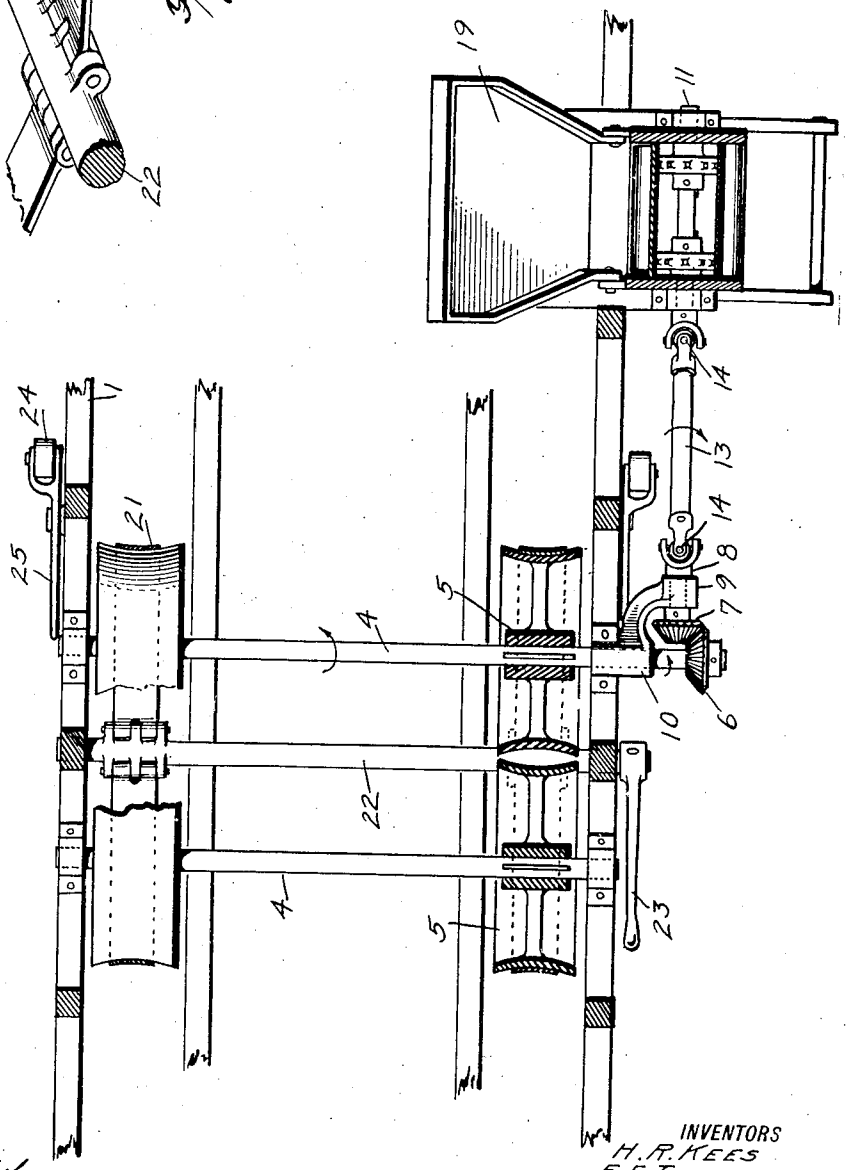


Fig. 4.



WITNESSES

L. H. Schmidt

INVENTORS

H. R. KEES

E. F. THOMAS.

BY Munn & Co.

ATTORNEYS

UNITED STATES PATENT OFFICE.

HOMER ROBERT KEES AND ELBERT FRANKLIN THOMAS, OF PAMPA, TEXAS.

PORTABLE ELEVATOR.

1,329,084. Specification of Letters Patent. Patented Jan. 27, 1920.

Application filed April 30, 1919. Serial No. 293,699.

To all whom it may concern:

Be it known that we, HOMER R. KEES and ELBERT F. THOMAS, citizens of the United States, and residents of Pampa, in the county of Gray and State of Texas, have invented certain new and useful Improvements in Portable Elevators, of which the following is a specification.

Our invention is an improvement in portable elevators, and has for its object to provide a cheaply constructed, simple, yet efficient device of the character specified, capable of being transported from place to place, and especially designed for unloading trucks.

In the drawings:—

Figure 1 is a side view of the improved elevator,

Fig. 2 is a partial side view at the end remote from the elevator.

Figs. 3 and 4 are sections on the lines 3—3 and 4—4, respectively of Fig. 1.

Fig. 5 is a perspective view of a portion of the brake construction.

In the present embodiment of the invention, a suitable supporting frame 1 is provided for the truck 2 to be unloaded, the upper surface of the said frame being inclined as shown, so that when the truck is on the frame, it will incline downwardly toward its rear end. At the low end of the frame there is mounted a plurality of pairs of peripherally grooved wheels 5, each pair of wheels being secured to a shaft 4, and the corresponding wheels of the shafts are in register and are adapted to receive the rear wheels of the truck to permit said wheels to rotate forwardly without driving the truck.

The shafts are journaled in bearings in the frame 1, and one of the shafts is extended beyond the frame at one side thereof and is provided with a bevel gear 6 which meshes with the gear 7 on a stub shaft 8 journaled in a bearing 9 extending outwardly from the bearing 10 for the shaft 4 at that end of the shaft. This stub shaft is connected to a shaft 11 journaled at the lower end of an elevator frame 12, by means of shaft 13, the said shaft being connected to the shafts 8 and 11 by universal joints 14, the arrangement being such that the relative position of the shafts 8 and 11 my be varied without affecting the connection.

A second shaft 15 is journaled at the other end of the elevator frame 12 from the shaft 11, and an endless belt 16 is supported by the shaft, the said shafts carrying rollers, and the belt has transverse slats as shown. The elevator frame is adapted to be arranged in inclined position as shown, and it is supported by inclined braces 17, which are pivoted at their upper ends to the sides of the elevator frame intermediate the ends of the said sides, and are adapted to rest upon the ground at their lower end.

The lower end of the elevator frame is connected to an extension 18 from the frame, 1, and a tray or chute 19 is pivotally connected with the lower end of the elevator frame to deliver the material thereto as it passes from the truck. This chute as shown is of greatest width at the end remote from the elevator frame, and inclines downwardly toward the said frame. The chute is pivoted to extensions 20 from the elevator frame, and the material delivered thereon will slip down onto the belt 16, which will deliver the material to the place desired.

Means is provided for braking the wheels, the said means comprising brake bands 21 which are connected at the outer sides of the wheels to the frame 1 and which pass downwardly and inwardly beneath the wheels to a connection with the brake shaft 22 journaled in the frame 1 between the wheels.

A lever 23 is secured to one end of this shaft, for oscillating the shaft, and it will be evident that when the lever is swung in the proper direction, the brake bands will be tightly applied to the wheels, while when the lever is swung in the opposite direction, the bands will be loosened. Mechanism is provided for lifting the frame 1 and extension 18, together with the elevator frame and for supporting the parts on the wheel for transportation.

Said mechanism comprises wheels 24 which are journaled between the arms of forks on levers 25. These levers 25 are pivoted intermediate their ends as indicated at 26 to the frame 1, the arrangement being such that by swinging the levers the wheels may be moved into contact with the ground to lift the frame or may be swung upwardly out of contact with the ground to permit the frame to set directly on the ground.

One of these levers is arranged at each side of the frame at the end adjacent to the elevator, and another is arranged at the center of the other end. The two wheels at the end adjacent to the elevator have the weight

so balanced upon them that there is very little weight on the other wheel. The said other wheel is detachable, being entirely removed from the frame when the device is fixed. In operation, to transport the frame the levers 25 are operated to cause the wheels 24 to engage the ground and to lift the frame out of contact with the ground. When the frame has been transported to the desired point, it is lowered into contact with the ground. The loaded truck is run upon the incline as shown in Fig. 1, with each rear wheel resting upon the adjacent pair of grooved wheels.

Now when the motor of the truck is running, the rear wheels of the truck will rotate rotating the wheels 5 which in turn will drive the elevator. The rear gate of the truck is lowered, so that the material therein will flow thereover into the chute 19 and into contact with the elevator belt.

It will be noted that the two wheels toward which the truck is inclined, are idlers, thus making it impossible for the elevator to lock the truck to run off the platform. The endless belt 16 is preferably formed from a pair of chains connected by cups for carrying the material, and small sprocket wheels are provided for pulling the chain.

The wheel 24 at the end of the frame remote from the elevator is preferably held in a socket, so that it may be easily detached.

We claim:—

1. A device of the character specified, comprising a supporting frame having an inclined top for holding a truck in inclined position, a pair of wheels for supporting each rear wheel of the truck, shafts journaled in the frame at the low end, the corresponding wheels of the pairs being secured to the respective shafts, an elevator supported at the low end of the frame, and a driving connection between one of the shafts and the elevator, said connection comprising a shaft and a universal joint connection at each end of the shaft.

2. A device of the character specified, comprising a supporting frame having an inclined top for holding a truck in inclined position, a pair of wheels for supporting each rear wheel of the truck, shafts journaled in the frame at the low end, the corresponding wheels of the pairs being secured to the respective shafts, an elevator supported at the low end of the frame, and a driving connection between one of the shafts and the elevator, and braking mechanism for braking the truck wheel supporting wheels.

3. A device of the character specified, comprising a supporting frame having an inclined top for holding a truck in inclined position, a pair of wheels for supporting each rear wheel of the truck, shafts journaled in the frame at the low end, the corresponding wheels of the pairs being secured to the respective shafts, an elevator supported at the low end of the frame, and a driving connection between one of the shafts and the elevator, wheels at the corners of the frame, and means for mounting the wheels to move them in contact with the ground and lifting the frame, or to move them out of contact with the ground to permit the frame to rest thereon.

4. A device of the character specified, comprising a supporting frame having an inclined top for holding a truck in inclined position, a pair of wheels for supporting each rear wheel of the truck, shafts journaled in the frame at the low end, the corresponding wheels of the pairs being secured to the respective shafts, an elevator supported at the low end of the frame, and a driving connection between one of the shafts and the elevator.

HOMER ROBERT KEES.
ELBERT FRANKLIN THOMAS.

Witnesses:
I. E. DUNCAN,
C. VOLLMERT.