No. 872,136. PATENTED NOV. 26, 1907.

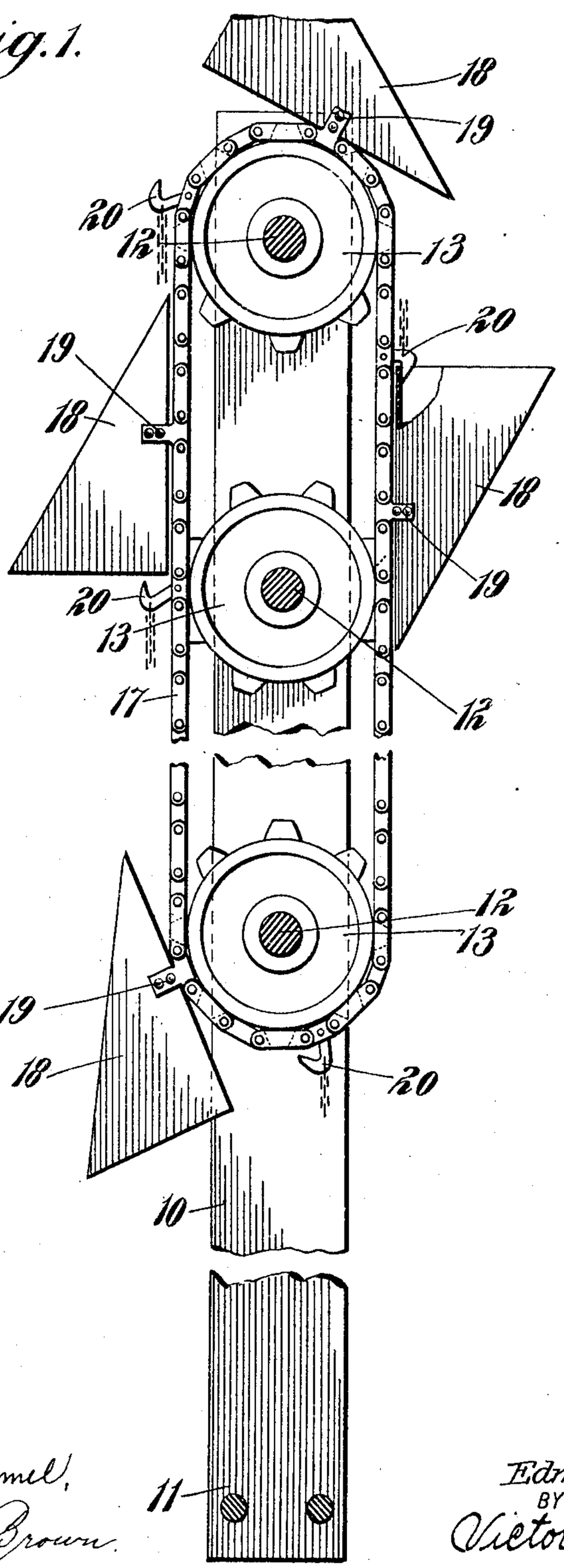
E. G. KRAFT.

CARRIER AND ELEVATOR.

APPLICATION FILED FEB. 14, 1907.

2 SHEETS—SHEET 1.

Fig. 1.



WITNESSES

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2 SHEETS—SHEET 2.

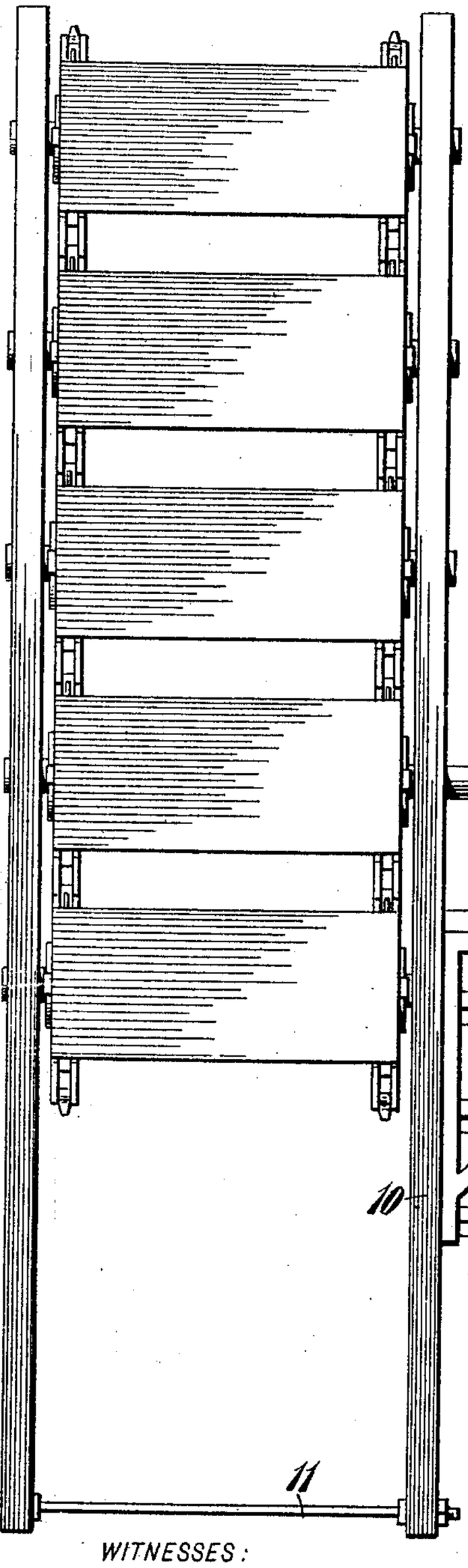


Fig. 2.

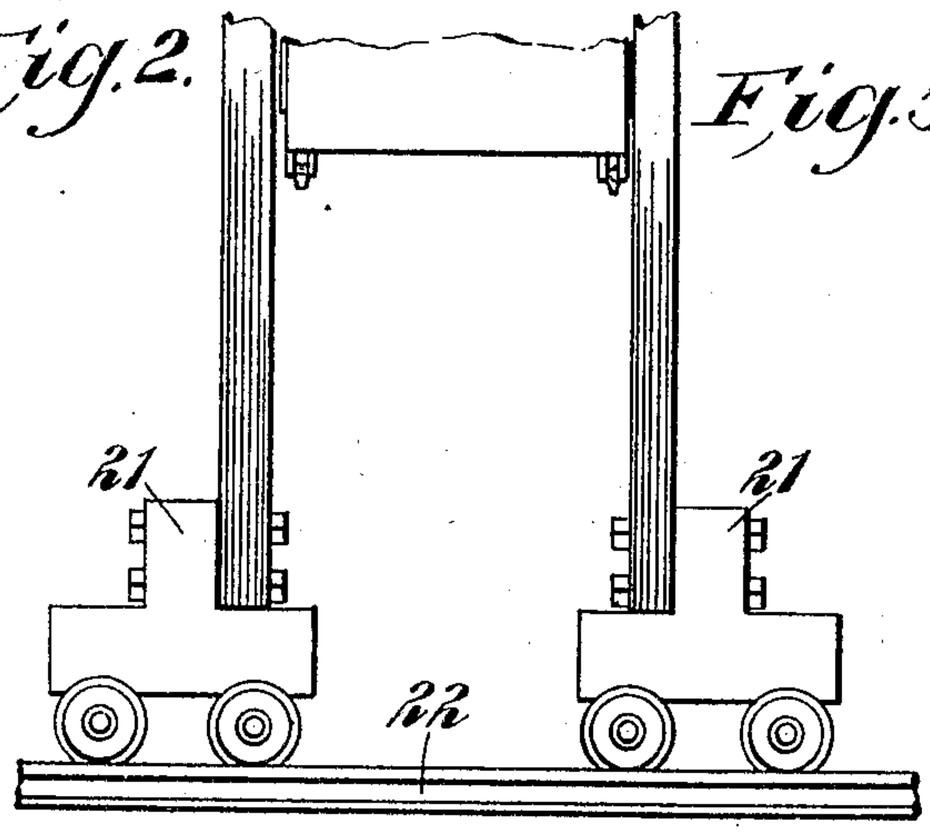


Fig. 5.

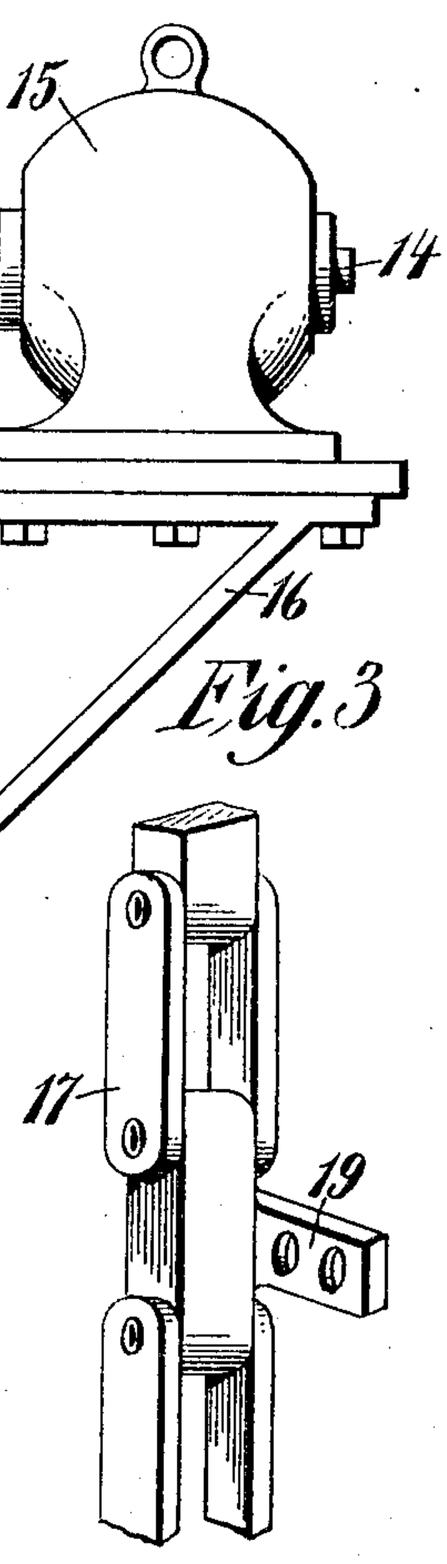
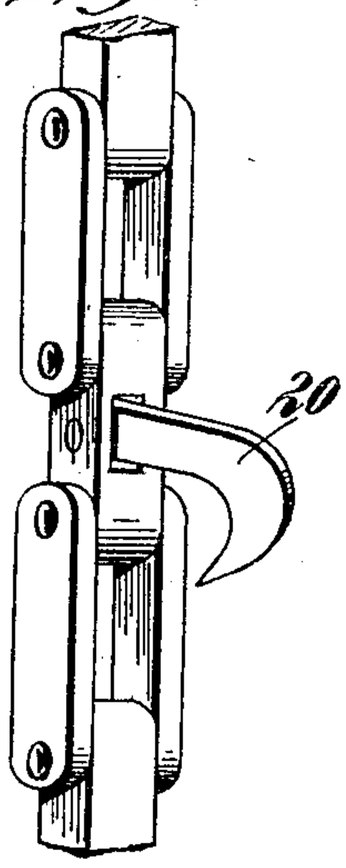


Fig. 3

Fig. 4



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UNITED STATES PATENT OFFICE.

EDMUND G. KRAFT, OF SOMERVILLE, NEW JERSEY.

CARRIER AND ELEVATOR.

No. 872,136. Specification of Letters Patent. Patented Nov. 26, 1907.

Application filed February 14, 1907. Serial No. 357,299.

To all whom it may concern:

Be it known that I, EDMUND G. KRAFT, a citizen of the United States, residing at Somerville, in the county of Somerset and State New Jersey, have invented new and useful Improvements in Carriers and Elevators, of which the following is a specification.

This invention relates to carriers or elevators for coal and similar material and has for its object the economical and compact construction of a portable device for operating in connection with barges, vessels and docks as will be more fully described in the following specification, set forth in the claims and illustrated in the accompanying drawings where it will be seen that like reference characters are used to designate the same parts in the several figures.

Figure 1 represents a vertical sectional view of the device. Fig. 2 is a front elevation of the same. Figs. 3 and 4 are details of the elevating chain. Fig. 5 illustrates a modified construction.

The invention is intended to provide a portable elevator and is composed of upright beams 10 of a length sufficient to be lowered into the hold of a vessel or barge or it may be located upon the ground and rest over the side of the vessel or any point necessary to store the material which is being elevated.

The beams 10 are united at the lower end by the rods 11 and throughout its length it is provided with cross-shafts 12 which carry sprocket wheels 13. One of these shafts may be provided with a pulley or may be the continuation of the armature shaft 14 of the motor 15 which represents an electrical motor supported upon brackets 16 carried by the upright timber of that side of the device. This arrangement of the motor provides a very compact and simple means for constructing such a device and it is obvious that any other form of motor may be so located to drive the sprocket wheels on the shaft 14 which in turn move the chain 17 which is provided with buckets 18 that are in an upright position while moving up one side of the device but are reversed in the downward movement. These buckets are secured to the chain as shown in Figs. 1 and 3 where it will be seen that a lug 19 with the perforations for bolts projects from certain links of the chain and to these the buckets are secured.

The buckets while moving upward are firmly locked in position by means of hooks 20 carried by links immediately above the upper edge of the bucket and fall by gravity into a position causing them to engage the bucket and prevent it from moving or swinging outwards. In Fig. 1 it will be seen that one of these buckets has reached the upper end of the elevator and that its latch has dropped back releasing it so that it is about to dump its load towards the left-hand side of the figure. This release continues until the bucket starts upward when the latch falls into its place at the time when the greatest strain is put upon the bucket.

The lower ends of the device may be sunk directly into the pile of coal grain or other material and started when it will continue its work until the material in its vicinity has been disposed of. It may then be moved laterally to take up more material. In case that the device is too large to readily handle, the lower ends of the beams 10 may be mounted upon trucks 21 which are adapted to run along a rail 22 which may be located in the hold of the vessel or in the place where the load is carried and as the material is cleared away from that point it may be run along the track until new material is encountered. The arrangement of the motor on the device itself readily permits of this operation as the wires for the motor may be readily carried along with the device or in case an air-motor or steam engine is used the air or steam may be provided by means of flexible hose.

It is obvious that various other details of construction may be resorted to without departing from the essential features above described.

What I claim as new and desire to secure by Letters Patent is:

1. In an elevator and carrier the combination with uprights, of a motor carried by one of the uprights, sprocket wheels on the motor shaft, uniting shafts carrying sprocket wheels, chains passing over the sprockets, buckets carried by the chains and latches on the chains adapted to drop and hold the buckets while they are moving upward.

2. An elevator including a chain, a bucket secured to the chain, and a latch pivotally secured to the chain, said latch being adapted to engage the bucket.

3. An elevator including a chain, a bucket secured to one of the links of the chain, and a latch pivotally secured to one of the links of the chain, said latch being adapted to engage the bucket.

4. An elevator including a chain, a bucket fixedly secured to one of the links of the chain, and a latch pivotally secured to one of the links of the chain, said latch being adapted to engage the bucket.

5. An elevator including a chain, a bucket secured to one of the links of the chain, and a latch secured to one of the links of the chain, said latch being adapted to engage the bucket.

6. An elevator including a chain having one of its links provided with a lug, a bucket secured to said lug, and a latch secured to one of the links of the chain, said latch being adapted to engage the bucket.

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

EDMUND G. KRAFT.

Witnesses:

JOS. M. LAMHUSKINS,

JNO. N. TORPEY.