

No. 741,108.

PATENTED OCT. 13, 1903.

J. E. CAMP.
PORTABLE ELEVATOR.
APPLICATION FILED MAR. 30, 1903.

NO MODEL.

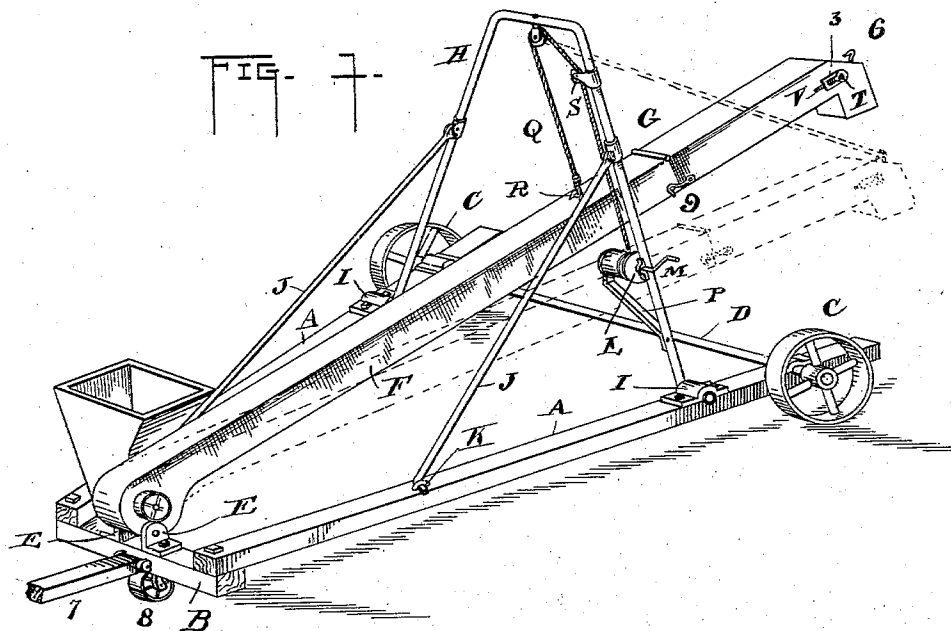


FIG. 2.

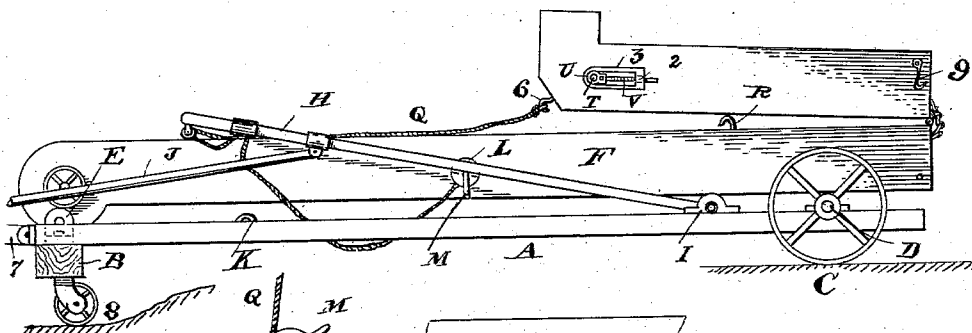


FIG. 4.

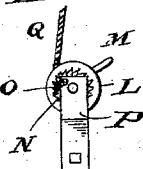
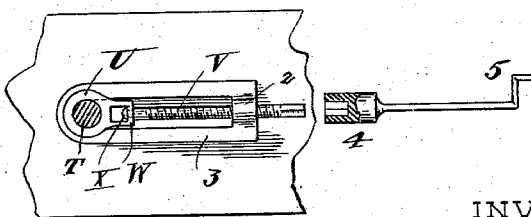


FIG. 7.

WITNESSES
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PORTABLE ELEVATOR.

SPECIFICATION forming part of Letters Patent No. 741,108, dated October 13, 1903.

Application filed March 30, 1903. Serial No. 150,202. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH E. CAMP, a citizen of the United States, residing at Washington, in the county of Tazewell and State of Illinois, have invented certain new and useful Improvements in Portable Elevators; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same.

This invention pertains to a portable elevator for use in handling grains.

The object of the invention is to provide a portable elevator more particularly for use about the farm, the same being employed in transferring grains from one bin to another or from wagons or threshers into bins or other receptacles.

A further object is to provide a carriage by which elevators of considerable size may be transported from one place to another.

A still further object is to so mount an elevator that it may be folded into a small space for transportation and shipping.

In the appended drawings, Figure 1 is a perspective view of my improved portable elevator. Fig. 2 is a side elevation of the same folded for transportation. Fig. 3 is an enlarged view of a chain-tightening device used at the head of the elevator. Fig. 4 is a detail view of a windlass, showing a ratchet-and-pawl mechanism therefor.

A A indicate two divergent beams connected at their adjacent ends to a cross-beam B. The separated end of each beam A has a wheel C, which may be carried on a bar D, from which the beams are hung. Upon the cross-beam B is secured a pair of ears E, between which the elevator F is pivoted. Said elevator may be made of considerable length and much longer than shown in the drawings, if desired, and the same is disconnected and provided with a hinge, as at G, the outer portion being adapted to fold back upon the main body portion, as shown in Fig. 2. Upon the frame A is mounted an A-frame H, composed of a bent rod or pipe, or may be made of wood, if desired. This frame is mounted in bearings I on the frame, as shown, and is designed to fold down out of the way when not in use, as shown in Fig. 2. Said frame

is supported in an upright position by means of two braces J, which are pivoted in suitable manner to said frame H and whose lower extremities are bent to form hooks to enter staples K, secured in the beams A, only one of which is shown. A windlass L is journaled on the frame H and operated by a crank M. Said windlass is provided at one end with a ratchet-wheel N, as shown in Fig. 4, while a pawl O on the bracket P, which supports the windlass, engages with said ratchet and serves to hold the same wherever placed. At the top of the frame H, overhanging the elevator F, is a pulley through which a rope Q runs, said rope having connection at one end with a hook R on the said elevator, while the opposite end of such rope passes around and is fastened to the windlass L. A pulley S at the side of the frame H serves to guide the rope and keep it in line with the windlass, as will be understood.

The shaft T at the head of the elevator is carried in a sliding bearing U, to which is loosely attached a thread-bar V. The end of such thread-bar passes through a portion W of the bearing and is headed, as at X. This permits the bar to turn, and in thus turning the shaft is carried one way or the other by reason of the said bar being carried in a threaded enlargement 2 of a stationary guide 3. The free end of the bar is made square to receive a socket-wrench 4, operated by means of a crank 5. The purpose of this construction will appear presently. It will now be seen that when the frame H is erected to constitute what I shall term a "derrick" the elevator may be raised or lowered by means of the rope and windlass, and no matter what the length and weight of that member may be it can be freely and easily operated. By hinging the head of the elevator at G that portion can be folded back upon the main body F, as shown in Fig. 2. In doing this after the portion F has been allowed to reach its lowest position the end of the rope is attached to the hook 6 on the head of the elevator, as shown by broken lines in Fig. 1. Then by turning the windlass to wind the rope upon it the said head is raised, and when it has reached its highest position it will pass over the center of gravity by reason of the position it occupies with reference to the said

derrick. Then by unwinding the rope from the windlass said head will be lowered upon the portion F. Now by releasing the lower ends of the braces J from the staples K the derrick may be lowered upon F, as shown in Fig. 2. Thus the implement is collapsed in condition for transportation. In moving the implement from place to place a tongue 7 is provided, to which a team of horses may be attached, a caster-wheel 8 serving as the support at the front of the machine. However, the machine may be moved about by hand, in which case the tongue may be dispensed with, as also the wheel 8, since in this case the front end may be lifted and the device pushed or pulled by means of the wheels C C. In folding back the head of the elevator the chain for elevating the grain must be slackened, and to accomplish this I provide the movable shaft and its mechanism already described. By attaching the socket-wrench 4 the shaft may be moved toward the foot of the elevator a sufficient distance to loosen the chain, and thus permit the head to fold back, as described. A hook at 9 serves to lock the head securely in operative position, as will be understood.

Various changes may be made in my portable-elevator mechanism without departing from the spirit of the invention, as is evident.

I claim—

1. In a portable elevator, a supporting-frame carried on wheels, an elevator pivotally mounted thereon for vertical movement, said elevator being foldable substantially as set forth, a collapsible derrick pivoted on the frame above the elevator, winding mechanism for raising and lowering the elevator and sustaining it in whatever position placed for the purposes indicated.

2. In a portable elevator, a supporting-frame carried on wheels, an elevator pivoted thereto, the same being foldable for the purposes described, a collapsible derrick pivoted on the frame above the elevator for supporting the latter, winding mechanism on said derrick for raising and lowering the elevator and folding the same all being arranged substantially in the manner described.

3. In a portable elevator, a supporting-platform, wheels for supporting said platform, a derrick mounted to pivot on the platform, the same being collapsible upon the platform by means of its pivots, means for supporting the derrick in the raised position and also per-

mitting the same to be lowered to its collapsed position, an elevator pivoted at one end on the platform, a hinged portion on the said elevator adapted to be folded back upon the main portion for the purposes described, and means for raising and lowering the elevator which consists of a windlass on said derrick and a rope wound thereon, the opposite end of said rope having an attachment with the elevator substantially as set forth.

4. In a portable elevator, a platform, carrying-wheels therefor, one of which is a caster-wheel for guiding purposes, an elevator pivotally mounted at one end on the platform the same being jointed, one part being hinged on the other, a collapsible derrick pivotally mounted on the platform, supports for sustaining the derrick in raised position but permitting the derrick to lower, a windlass having bearings on the derrick, a rope attached to the elevator at one end, and connected at the other end to the windlass, and a pulley on the derrick above the elevator, said windlass and rope for raising and lowering the elevator.

5. In a portable elevator a platform, wheels for carrying it, one of such wheels being a caster-wheel for guiding purposes, an elevator pivotally mounted at one end on the platform and adapted for a rising-and-falling movement and comprising two sections, one hinged to the other, a collapsible derrick pivoted on the platform, arms on the derrick for engaging the platform to support the derrick, a windlass on the derrick, a rope for the former, the same being connected to the elevator and by which the latter is raised and lowered, said rope being employed for holding the hinged section of the elevator over upon the main portion in folding the device for transportation.

6. In a portable elevator, a carrying-frame A, wheels C C and 8 for carrying the same, the elevator F pivoted to the frame, said elevator being foldable for the purposes set forth, a collapsible derrick H pivoted on the frame above the elevator, winding mechanism L, Q, for raising and lowering the elevator and folding the same and a draft attachment for transporting the machine as set forth.

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

JOSEPH E. CAMP.

Witnesses:

E. J. ABERSOL,
L. M. THURLOW.