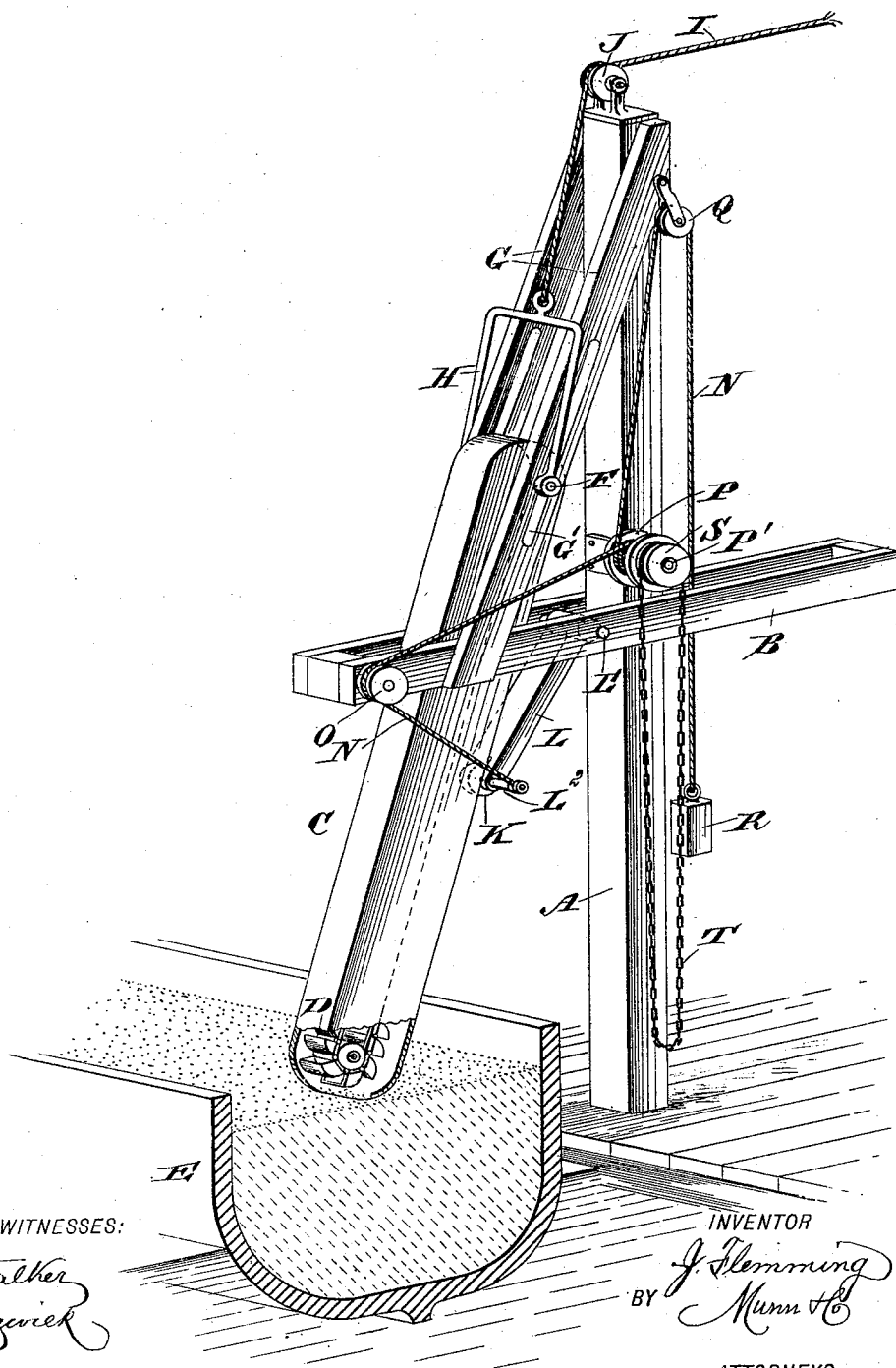


(No Model.)

J. FLEMMING.
SHIFTING DEVICE FOR ELEVATORS.

No. 487,559.

Patented Dec. 6, 1892.



THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

JAMES FLEMMING, OF BUFFALO, NEW YORK.

SHIFTING DEVICE FOR ELEVATORS.

SPECIFICATION forming part of Letters Patent No. 487,559, dated December 6, 1892.

Application filed August 29, 1892. Serial No. 444,388. (No model.)

To all whom it may concern:

Be it known that I, JAMES FLEMMING, of Buffalo, in the county of Erie and State of New York, have invented a new and Improved Shifting Device for Elevators, of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved shifting device, which is simple and durable in construction, more especially designed for grain-elevators used to load or unload vessels, and arranged to conveniently shift the elevator-leg to hold the same in contact with the grain.

The invention consists in the peculiar and novel combination of parts hereinafter described and claimed.

Reference is to be had to the accompanying drawing, forming a part of this specification, in which the figure is a perspective view of the improvement as applied.

On the post A is secured a horizontally-extending frame B, in which is fitted to slide the elevator-leg C of any approved construction and containing the usual buckets D for engaging the grain in the hold of the vessel E, the lower end of the said leg being open to permit the buckets to fill in the usual manner.

On the upper end of the leg C are formed or secured the transversely-extending trunnions F, passing through slots G', formed in braces G, connecting the front end of the frame B with the upper end of the post A. The outer ends of the trunnions F are engaged by eyes formed on the ends of a bail H, connected with a rope I, extending upwardly and passing over a pulley J, journaled on top of the post A. The rope I is connected with a suitable device for pulling the leg C up or down, the leg being guided by the trunnions F in the slots G' of the braces G. The back of the leg C is supported below the trunnions F by a friction-roller K, journaled in the free end of the pusher-arm L, pivoted at L' on the frame B.

On the free end of the arm L is arranged a pin or projection L², connected with one end of a rope N, extending forwardly and upwardly and passing over a pulley O, journaled in the outer end of the frame B. The rope N extends from the pulley O onto a drum P, mounted to turn on a stud P', secured to and

projecting from the post A. The rope after being wound several times around the drum P extends upwardly and passes over a sheave Q, held on one of the braces G near the upper end of the post A. The end of the rope N, extending downward from the sheave Q, supports a weight R for counterbalancing the weight of the elevator-leg C to permit of easily imparting a swinging motion to the arm L to shift the leg C.

On the drum P is formed or secured a pulley S, over which passes a chain or rope T, extending to within a short distance of the ground, so as to be within convenient reach of the operator, who in manipulating the chain or rope T causes the pulley S and drum P to rotate, so that the forward end of the rope N is wound up or unwound on the said drum to impart a forward or backward swinging motion to the pusher-arm L. It will be seen that the leg C can be lowered or raised by slackening or pulling the rope I, and the free or downwardly-extending end of the said leg C can be swung forward or backward, the trunnions F being the fulcrum, by shifting the pusher-arm L, in the desired direction. In order to impart the necessary motion to the pusher-arm L the operator manipulates the chain or rope T, as above described, so that the lower end of the leg C can always be held in contact with the grain to permit the buckets D to readily take up the grain.

Having thus fully described my invention, I claim as new and desire to secure by Letters Patent—

1. In combination, the frame, the elevator-leg pivoted at its upper end to the frame, a swinging arm pivoted to the frame, its free end engaging the back of the elevator-leg, a counterweight for holding such free end up against the leg, and means, substantially as shown and described, for operating the swinging arm, for the purposes set forth.

2. The combination, with a frame having slotted braces and an elevator-leg provided with trunnions engaging the slots in the said braces, of a pusher-arm mounted to swing and engaging the back of the said elevator-leg and a rope and pusher mechanism for actuating the pusher, substantially as shown and described.

3. The combination, with a frame having

- slotted braces and an elevator-leg provided with trunnions engaging the slots in the said braces, of a pusher-arm mounted to swing and engaging the back of the said elevator-leg, the rope and pulley mechanism for actuating the said arm, and a rope carrying a bail engaging with the said trunnions to move the elevator-leg up and down, substantially as shown and described.
- 10 4. The combination, with a frame having slotted braces and an elevator-leg provided with trunnions engaging the slots in the said braces, of a pusher-arm mounted to swing and engaging the back of the said elevator-leg, a rope carrying a bail engaging with the said trunnions to move the elevator-leg up and down, and a rope and pulley mechanism, substantially as described, and connected with the said pusher-arm to impart a swinging motion to the latter, as set forth.
- JAMES FLEMMING.
- Witnesses:
THOS. PINCK,
F. SCHOONHART.