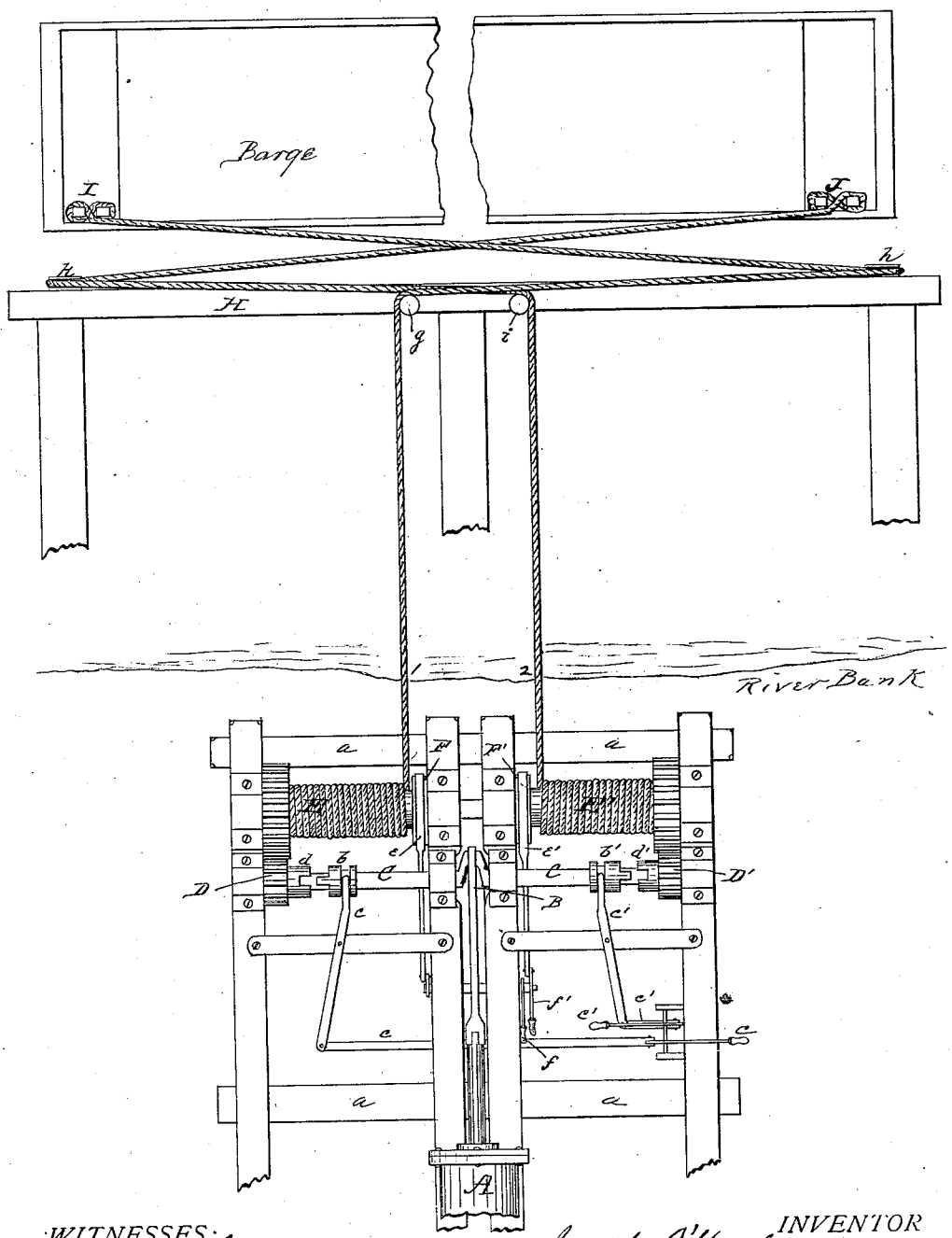
(No Model.)

J. O'HANLON.

APPARATUS FOR MOVING BARGES AT COAL TIPPLES.

No. 247,680. Patented Sept. 27, 1881.



WITNESSES:

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UNITED STATES PATENT OFFICE.

JOSEPH O'HANLON, OF PITTSBURG, PENNSYLVANIA.

APPARATUS FOR MOVING BARGES AT COAL-TIPPLES.

SPECIFICATION forming part of Letters Patent No. 247,680, dated September 27, 1881.

Application filed March 10, 1881. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH O'HANLON, of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Apparatus for Moving Barges at Coal-Tipples; 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, reference being had to the accompanying drawing, which forms a part of this specification.

The object of my invention is to provide steam machinery for conveniently moving coal boats and barges under coal-tipples while loading them, instead of effecting this by hand-power, as is now generally practiced. These coal-tipples are constructed in the form of a high trestle-work projecting out over the river-bank, the coal being brought out to the brink on cars and dumped into a chute, which guides the coal so as to fall on one side or the other of the barge; but as the barge becomes loaded it is necessary to move the barge lengthwise for more coal, and sometimes to turn it entirely end for end. The usual custom is to wind up a rope by hand-power, the rope being fixed to some one or more "check-posts" on the barge; but this process is very slow and laborious, and in times of high-water or ice-floes it becomes impossible, particularly if the high water come suddenly while a barge is being loaded, for there may be five or six feet depth of coal in a great portion of the barge, and hand-labor is futile. Consequently the works must be stopped until the river recedes again, and this is a great loss of time and money.

My invention enables me to load at any time, and to effectually and quickly move, a barge in all kinds of water; and it consists in the combination and arrangement of a steam-engine with a pair of winding-drums and clutches and brakes for starting or stopping the same, and with two ropes connected to the drums, tipple, and barge, all substantially as hereinafter fully described and claimed.

The figure represents a plan view of the invention, the track-beams of the coal-tipple being broken away to show the engine and apparatus underneath, and a barge in position for loading.

The engine A is set on a suitable frame-work, *a a*, under the tipple, and the crank B is connected to a shaft, C, which runs the length of the frame *a a*. Near the two ends of shaft C are the crabs or clutches *b b'*, respectively, both being keyed on the said shaft, or otherwise so arranged that while they always turn with the shaft they are capable of being moved along it. This is effected by the forked lever *c c c*, pivoted to the frame-work at one side, and the similar lever *c' c' c'*, pivoted at the other side, said levers controlling respectively the clutches *b* and *b'*.

At the ends of shaft C are the two pinions D D', respectively, loose on the shaft, and provided with clutches *d d'*, which match clutches *b b'*, respectively. The pinions D D' mesh respectively with geared drums E E', to which the ropes 1 and 2 are respectively attached, and preferably so that when one rope is winding the other is unwinding or paying off.

The inner ends of the drums E E' have the respective brake-wheels F F' keyed or fastened thereto, with the brake-straps *e e'* and brake-levers *f f'*.

Rope 1 passes from drum E to and around a sheave, *g*, on the "sheave-arm" H of the trestle-work forming the tipple, thence along the arm H to a sheave, *h*, after which it returns downstream to the check post or stem I at the stern of the barge. Rope 2 passes from drum E' to sheave *i* on the sheave-arm, thence to a sheave, *k*, from which it runs upstream to the bow of the barge to a check-post, J.

The engine being constantly in motion, the barge is motionless so long as the clutches *b b'* are not engaged in the corresponding clutches *d d'*, respectively, the drums being controlled by the brake-straps *e e'*.

To move the boat up the river I operate the levers *c c c* so as to cause clutch *b* to catch in clutch *d*, at the same time releasing strap *e*. The drum E at once begins to wind up rope 1 and draw the barge upstream. The rope 2 is paid out by the pull of the barge, and is controlled by the workman operating the brake-lever *f'*. Drum E is stopped by disconnecting the clutch *b d* and controlling the drum by brake-strap *e* and lever *f*. By thus winding on one drum and paying out from the other the barge is rapidly and easily handled until

loaded, and being done by steam-power, the condition of the river is immaterial, whether high or not.

I claim as my invention—

1. The combination of the engine A, crank B, shaft C, adjustable clutches *b b'*, loose pinions D D', having the clutches *d d'*, drums E E', having the brake-wheels F F', brake-straps *e e'*, levers *f f'* and *c c*, with the ropes 1 and 2, substantially as described.

2. The combination of the steam-operated drums E E, ropes 1 and 2, and sheaves *g h i k* on sheave-arm H, said ropes being adapted to connect with the barge, substantially as set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

JOSEPH O'HANLON.

Witnesses:

T. J. McTIGHE,

T. J. PATTERSON.