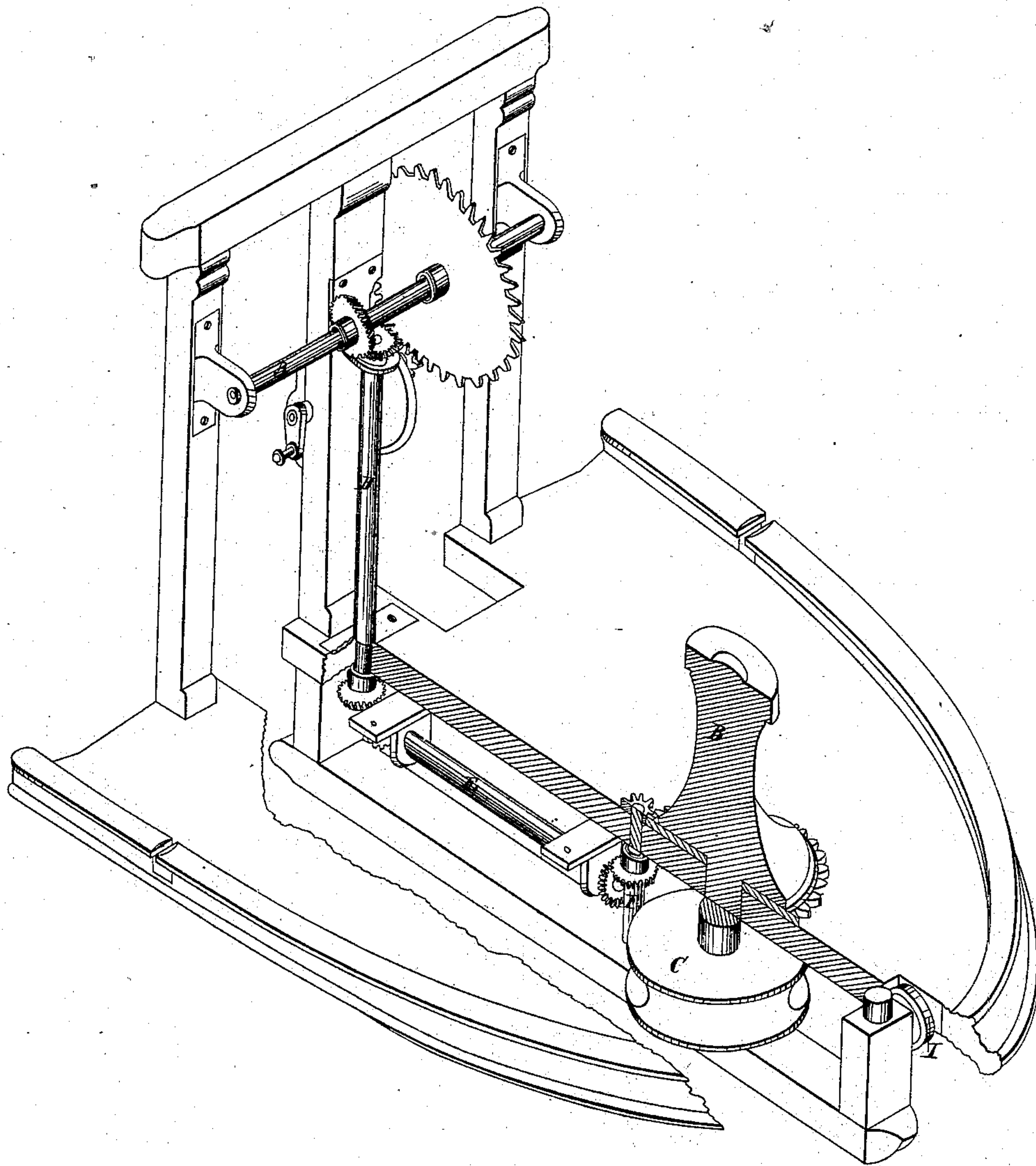


J. SCHAFFER.
Capstan for Steamboats.

No. 15,954.

Patented Aug. 25, 1857.



UNITED STATES PATENT OFFICE.

JOHN SCHAFFER, OF MANCHESTER, PENNSYLVANIA.

CAPSTAN FOR STEAMBOATS.

Specification forming part of Letters Patent No. 15,954, dated October 21, 1856; Reissued August 25, 1857, No. 488.

To all whom it may concern:

Be it known that I, JOHN SCHAFFER, of Manchester, Allegheny county, in the State of Pennsylvania, have invented a new and
5 useful Improvement in Perpendicular Capstans and Operating the Same, Especially for Western Steamboats; and I do hereby declare the following to be a full, clear, and exact description of the same, reference be-
10 ing had to the annexed drawing, made part of and lettered to correspond with this specification.

The nature of my invention consists in the mechanical arrangement connecting the
15 shaft (A) usually driven by the "little nigger" with a perpendicular capstan (B) arranged with a drum (C) below deck, by means of the shaft (D) (E) and (F) suitably geared to convey motion to the cap-
20 stan so that the steam-boat can be rapidly shoved or otherwise handled in navigating the western waters, without the necessity of having "hands" with handspikes to op-
25 erate the capstan and without having the rope as thrown off from the capstan above deck piled up on and obstructing the deck.

The drawing shows in isometrical per-
spective the bow of a western steam-boat and back to the "little nigger" shaft (A)
30 the deck being partly broken out at the near side and centrally in section—the capstan being also in central and vertical section and the section of the moving parts di-
35 rectly connected to it being also in section as low as the thickness of the deck the shaft (D) is perpendicular and driven and driving by mitered wheels.

The shaft (E) is horizontal and below
40 the deck and geared with miter wheels like (D). The shaft (F) is below deck and per-
pendicular and extends up through the deck so as to drive the capstan by a pinion wheel.

The drum (C) is carried by the shaft of the capstan (B) and a pulley (I) guides the shoving or other rope from the capstan
45 to the drum as fast as the rope is drawn in, a hand below deck attending to the rope or other arrangement being made as circumstances may require.

It will be obvious to persons acquainted
50 with the mode of navigating for instance the Ohio River, that in passing a shoal, the boat universally grounds at low stages of water. Under such circumstances and as
55 at present practiced, all hands are called to man the capstan and a crowd is collected at the very spot where the long "shore" rope (generally as large as a "cable") has to be
60 thrown on the deck, coiled in shapes and looseness as it falls from the hands of the man reeling it off the capstan. Again it is
often necessary to shove the boat, and this must be done quickly. Now it takes all
65 hands, frequently captain, clerks, deck and fire-hands, when the river is low. I obviate all this and leave the men free to hand
ashore and receive baggage, cargo, &c.

It will be obvious therefore that my im-
provement (and I am an engineer of some
70 years' experience on western steam-boats) is no trifling matter.

What I claim is—

The drum (C) on the shaft of the cap-
stan (B) as arranged, the capstan being
75 steam driven by geared shafting connecting it with the "little nigger" and the whole being combined and made operative through the pulley (I) substantially in the manner and for the purpose described.

JOHN SCHAFFER.

Witnesses:

JAMES J. JOHNSTON,
JAMES GRANT.