

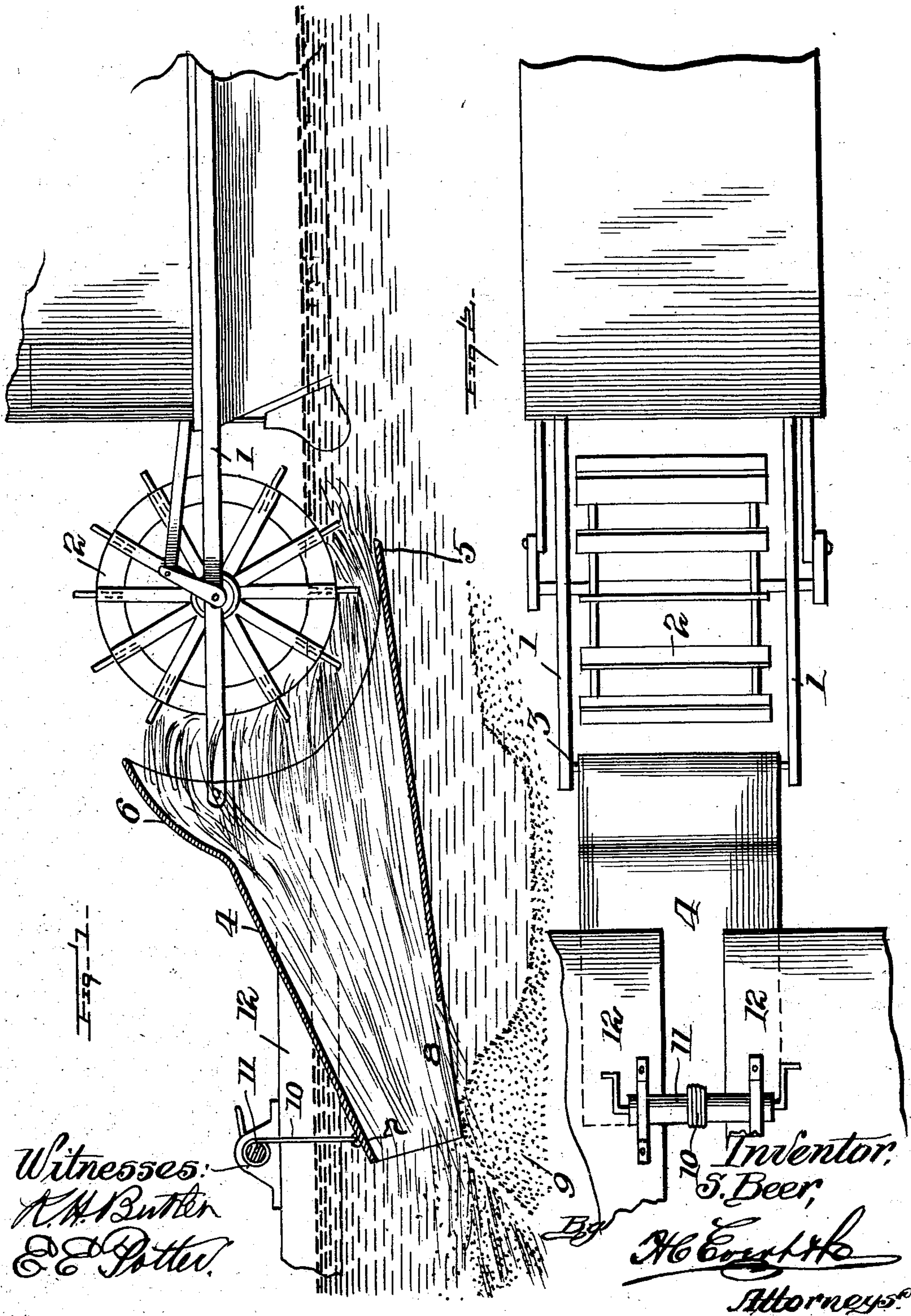
No. 726,213.

PATENTED APR. 21, 1903.

S. BEER.
DREDGER.

APPLICATION FILED OCT. 4, 1902.

NO MODEL.



UNITED STATES PATENT OFFICE.

STEWART BEER, OF PITTSBURG, PENNSYLVANIA.

DREDGER.

SPECIFICATION forming part of Letters Patent No. 726,213, dated April 21, 1903.

Application filed October 4, 1902. Serial No. 125,899. (No model.)

To all whom it may concern:

Be it known that I, STEWART BEER, a citizen of the United States of America, residing at Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Dredgers, of which the following is a specification, reference being had therein to the accompanying drawings.

10 This invention relates to certain new and useful improvements in dredgers, and has for its object the provision of means whereby the force of the water projected by means of the ordinary paddle-wheel of a steamboat may
15 be employed for reducing sand-bars in the bed of a river and leveling the same to an extent which will permit of the passage of boats of greater draft than is possible without the removal of sand-bars or like obstructions.
20

My invention is particularly adapted for use in connection with steamboats of the stern-wheel type, which are generally employed in rivers and channels where the water is of a comparatively shallow depth; and
25 the invention comprises an attachment in the form of a chute which is pivotally suspended from the supporting-beams for the water-wheel and receives the water as it is projected rearwardly from the wheel, causing the same to be projected with considerable force to the outlet of the chute, which in practice is placed on top or directly in front of the sand-bar or other like obstruction
30 which is desired to be removed. Means is provided for adjustably supporting the rear end of the chute whereby the same may be elevated or lowered, so as to bring the same into proper position with respect to the sand-bar or like obstruction.
40

In describing the invention in detail reference is had to the accompanying drawings, forming a part of this specification, and wherein like numerals of reference indicate
45 like parts throughout the several views, in which—

Figure 1 is a side elevation of a part of a steamboat, showing my improved device attached thereto, the chute being in longitudinal section. Fig. 2 is a top plan view of the device, the supports in the rear end of the chute being partly broken away.

In order to put my invention into practice, I preferably extend the supporting means 1, in which the water-wheel 2 is journaled, 55 to a point some distance beyond said wheel, and I pivotally attach to the outer end of these beams by means of the rod 3 or other suitable means the chute 4. This chute has a flaring forward end, the lower wall 5 of the chute 60 extending some distance in under the wheel 2 and the upper wall or cover of the chute terminating at its forward end in a hood 6. The walls are inclined toward each other, so that the outlet 7 of the chute is of a considerable less size than the intake or mouth of the chute, and I may also cut away the bottom, as shown at 8, adjacent to the discharge or outlet of the chute in order that the projected water will have more force upon the sand-bar or quicksand 9, which it is desired to remove. The chute 4 is supported at the rear end at the desired elevation in a suitable manner, a convenient form being that of attaching a rope, cable, or like device 10 to 75 the chute and winding the same upon the ordinary crab 11, supported by two flats or scows 12. In practice the chute is placed in proper position on the sand-bar, quicksand, or the like, and the water which is projected 80 by the wheel in its revolution is confined and forced through the chute, striking the top of the sand-bar with great force and forcing the same into the deeper water at the side thereof, as is illustrated in Fig. 1 of the drawings. 85 The opening in the lower side of the chute at the rear end thereof causes the water to be discharged directly upon the top of the sand-bar or like obstructions, and the force of this water at the point discharged serving to level 90 the sand-bar or quicksand and force the same into the deeper water beyond. By this means it will be observed that the channel may be easily deepened to permit of the passage of boats of greater draft than would otherwise 95 be possible.

The obstruction to be removed having once been located, the chute may be easily positioned by elevating and lowering the same, the crab being operated, preferably, from 100 either end of the drum.

In the practice of the invention it will be noted that various slight changes may be made in the details of construction without

departing from the general spirit of the invention.

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

1. In combination with a wheel, supports therefor, and operating means for the wheel, of a chute pivotally suspended from the supports of the wheel having an enlarged mouth
10 and a contracted discharge, and means for supporting said chute at its rear or discharge end, substantially as described.

2. In combination with a wheel, and means for supporting the same, of a chute having
15 an enlarged flaring mouth or intake, and a contracted discharge or outlet, and means for supporting the outlet or discharge end of the

chute at the desired elevation, substantially as described.

3. In combination with a wheel and the supports therefor, a chute suspended from the supports of the wheel, said chute provided with an enlarged flaring mouth or intake adjacent to the wheel and having a contracted discharge or outlet, and means for
25 adjustably supporting the outlet or discharge end of the chute, substantially as described.

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

STEWART BEER.

Witnesses:

A. M. WILSON,
WM. F. BRUNNER.