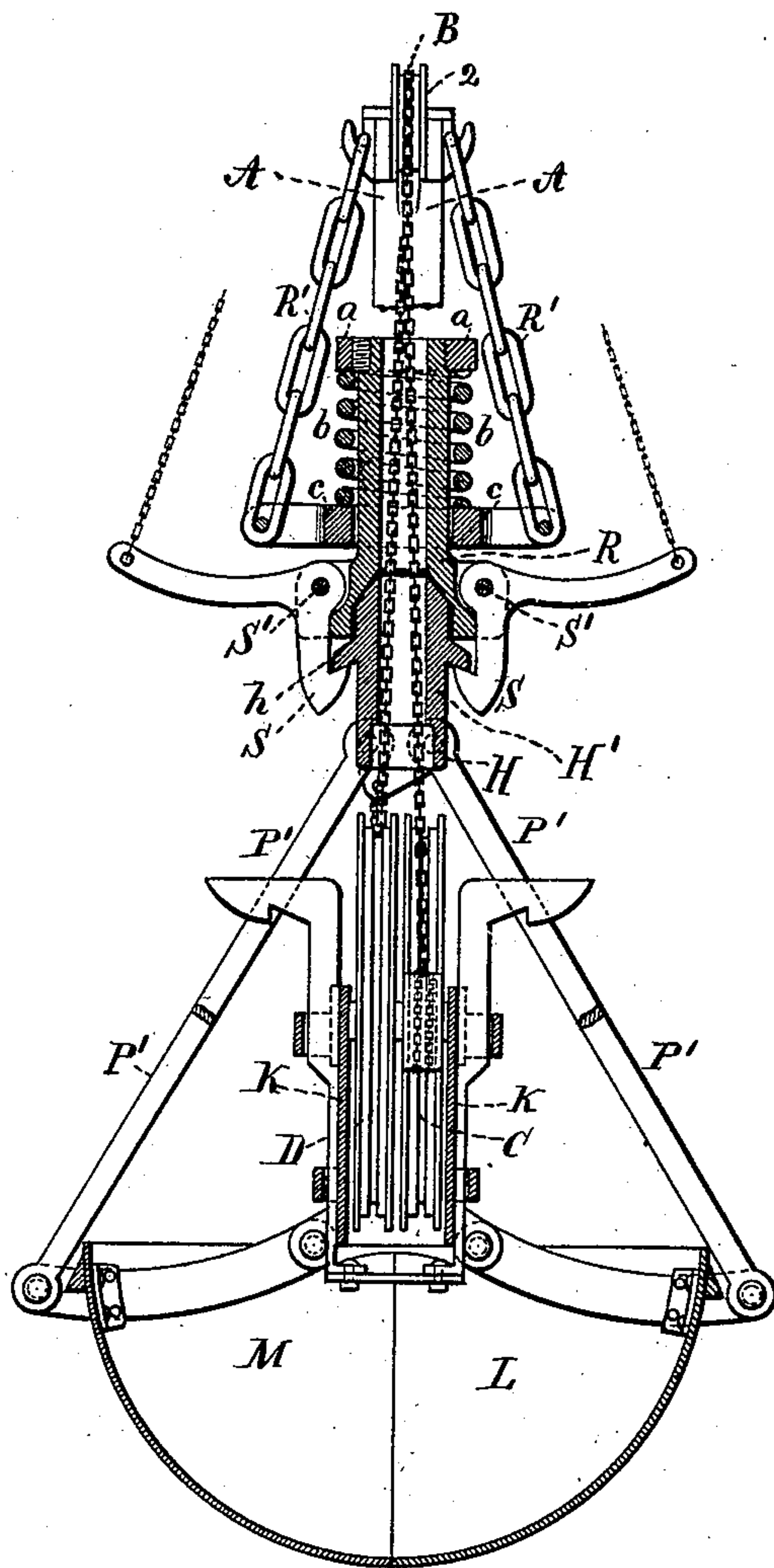


(No Model.)

C. A. MORRIS.
DREDGING BUCKET.

No. 400,936.

Patented Apr. 9, 1889.



Witnesses:
J. Stail
Chas. H. Smith

Inventor:
Charles A. Morris
per Samuel W. Terrell atty

UNITED STATES PATENT OFFICE.

CHARLES A. MORRIS, OF BLOOMFIELD, NEW JERSEY.

DREDGING-BUCKET.

SPECIFICATION forming part of Letters Patent No. 400,936, dated April 9, 1889.

Application filed July 12, 1888. Serial No. 279,730. (No model.)

To all whom it may concern:

Be it known that I, CHARLES A. MORRIS, of Bloomfield, in the county of Essex and State of New Jersey, have invented an Improvement in Dredging-Buckets, of which the following is a specification.

In my application, Serial No. 211,786, filed August 25, 1886, a dredging-bucket is represented with two sections opened and closed by the action of chain-wheels, chains, and toggle-bars, the bucket itself being what is known as the "clam-shell bucket," and there is a conical flange on the head, through which the hoisting-chain passes, and latches suspended from the boom or derrick, which catch beneath the conical flange and suspend the head and toggle-arms while the frame and hinges of the bucket descend to open the bucket and discharge the contents. In this instance there is a concussion between the conical flange and the latches as the bucket is lowered to open the same. This concussion is liable to injure the parts of the apparatus, and also to spatter or splash the muddy contents from the bucket upon surrounding objects.

My present invention is to relieve this difficulty; and it consists in the combination, with the latches and the suspending-chains, of a follower and spring intervening between the suspending-chains and the latches, so that when the bucket is lowered there is no concussion between the conical flange and the latches, because the latches yield downwardly until the spring is sufficiently compressed to support the weight of the bucket.

In the drawing I have represented my improvement by a vertical section, and a reference is hereby made to the aforesaid application for the various parts of the bucket and the devices for actuating the same, the principal parts of which are the quarter-cylindrical buckets L M, the toggle-arms P' to the head-block H, and the chain-wheels C D and frame K, and the head-block H has a cylinder, H', above the center, with the conical flange h, which flange is received between the latches S, pivoted at S' upon the runner R, and at A is represented a portion of the boom or frame supporting the hoisting-wheel 2, over which the chain B passes, and at the sides of

the boom A are hooks for the chains or links R', that suspend the runner R; but instead of the chains R' being attached directly to the runner R they are attached to the follower c, which is made with a central opening, through which passes a tubular extension forming the upper part of the runner R, and around this tube is a spring, b, resting upon the follower c, and there is a ring-flange, a, secured around the upper end of the tubular runner R, which flange is above the top end of the spring b.

It will now be understood that after the dredging-bucket has been closed and then raised by drawing upon the chain B the conical flange passes up into the lower end of the tubular runner R and the latches S catch and hold the flange, and the chain B is then lowered, and the weight of the bucket is taken upon the latches S, and these descend slightly and without concussion until the flange a of the runner has compressed the spring b sufficiently to support the weight of the bucket and its contents, and this movement takes place without concussion. By continuing to lower upon the chain B the bucket opens and the contents are discharged, as in my aforesaid patent.

I claim as my invention—

1. The combination, with the dredging-bucket, the conical flange, the runner, and the latches, of suspending chains or links, and a spring intervening between the latches and the suspending device, substantially as and for the purposes set forth.

2. The combination, with the dredging-bucket and the conical flange upon the head-block thereof, of a tubular runner, through which the hoisting-chain of the bucket passes, latches pivoted upon the said runner, a follower around the runner, links for suspending the same, a spring around the tubular runner, and a flange connected with said tubular runner and acting against the end of the spring, substantially as set forth.

Signed by me this 7th day of July, A. D. 1888.

C. A. MORRIS.

Witnesses:

GEO. T. PINCKNEY,
WILLIAM G. MOTT.