No. 875,414. PATENTED DEC. 31, 1907.

G. DICKSON & M. McKINNON.

RIFLE DREDGE PIPE.

APPLICATION FILED AUG. 23, 1906.

FIG. 1.

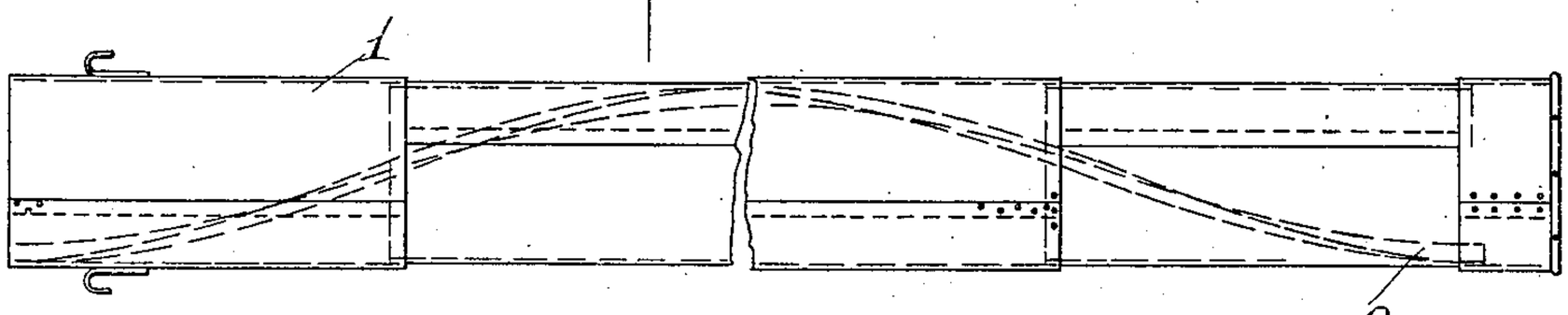
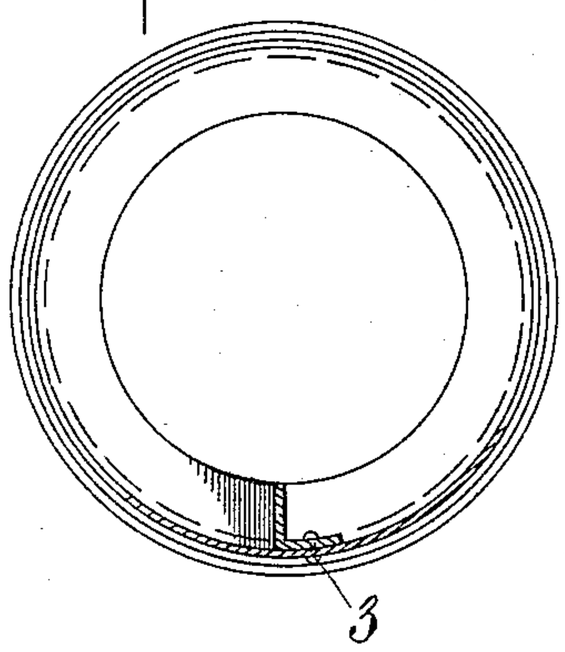


FIG. 2.



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UNITED STATES PATENT OFFICE.

GEORGE DICKSON AND MILES McKINNON, OF SACRAMENTO, CALIFORNIA.

RIFLE DREDGE-PIPE.

No. 875,414. Specification of Letters Patent. Patented Dec. 31, 1907.

Application filed August 23, 1906. Serial No. 331,794.

To all whom it may concern:

Be it known that we, GEORGE DICKSON and MILES MCKINNON, citizens of the United States, residing at Sacramento, in the county of Sacramento and State of California, have invented certain new and useful Improvements in Rifle Dredge-Pipes, of which the following is a specification.

Our invention relates to pipes for dredging machines primarily but may be used in connection with any conveyer pipe and it consists in rifling the pipe.

In the drawings, Figure 1 is a side elevation of the pipe embodying our invention. Fig. 2 is an end view of the same.

1 represents a dredging pipe of suitable construction made in section which may be riveted or otherwise secured together.

2 is a rib of angle iron secured spirally within the pipe by means of suitable rivets 3. The body of the spiral may be regulated according to the material to be passed through the pipe.

Heretofore, in dredging it has been found where the matter is passed through a pipes that sand and other heavy material settle, in the bottom of the pipe and the water passes over it, whereby the sand finally accumulates to such an extent as to reduce the capacity of the pipe.

The object of my invention and the effect of the spiral 2 is to give the water a rotary whirling and progressive motion which carries with it the sand and causes the sand to be thoroughly mixed and flow freely through the long line of pipe under a low pressure.

The spiral path given the dredging within the pipe not only prevents the settling of sand and other heavy matter in the bottom of the pipe but accelerates the movement of the dredging matter through the pipe. Therefore, a further advantage resulting from such construction is that the capacity of the machine is materially increased. The spiral course given the dredging matter does not increase the friction in the pipe but on the contrary, it has been found that, if any thing, the friction is reduced as the full capacity of the pipe can at all times be utilized for the passage of the material. With the pipe formerly in use, as above stated, the sand or other heavy material would settle to the bottom of the pipe, which as would be readily understood, decreases the diameter of the pipe, thereby increasing the friction of the matter passing through the pipe.

While we have shown the rib as consisting of angle iron, it is of course obvious that any suitable rib may be employed and in fact may be cast or formed integral with the pipe.

It is, of course, obvious that our rifled conveyer pipe may be used to convey various materials and substances.

Having now described our invention, what we claim is:—

A conducting pipe provided with a radial spiral vane or rib.

In testimony whereof we affix our signatures in presence of two witnesses.

GEORGE DICKSON.
MILES McKINNON.

Witnesses:
A. B. REYNOLDS,
HERBERT CLARKE.