

R. Francis,

Water Engine.

No. 109,311.

Patented Nov. 15, 1870

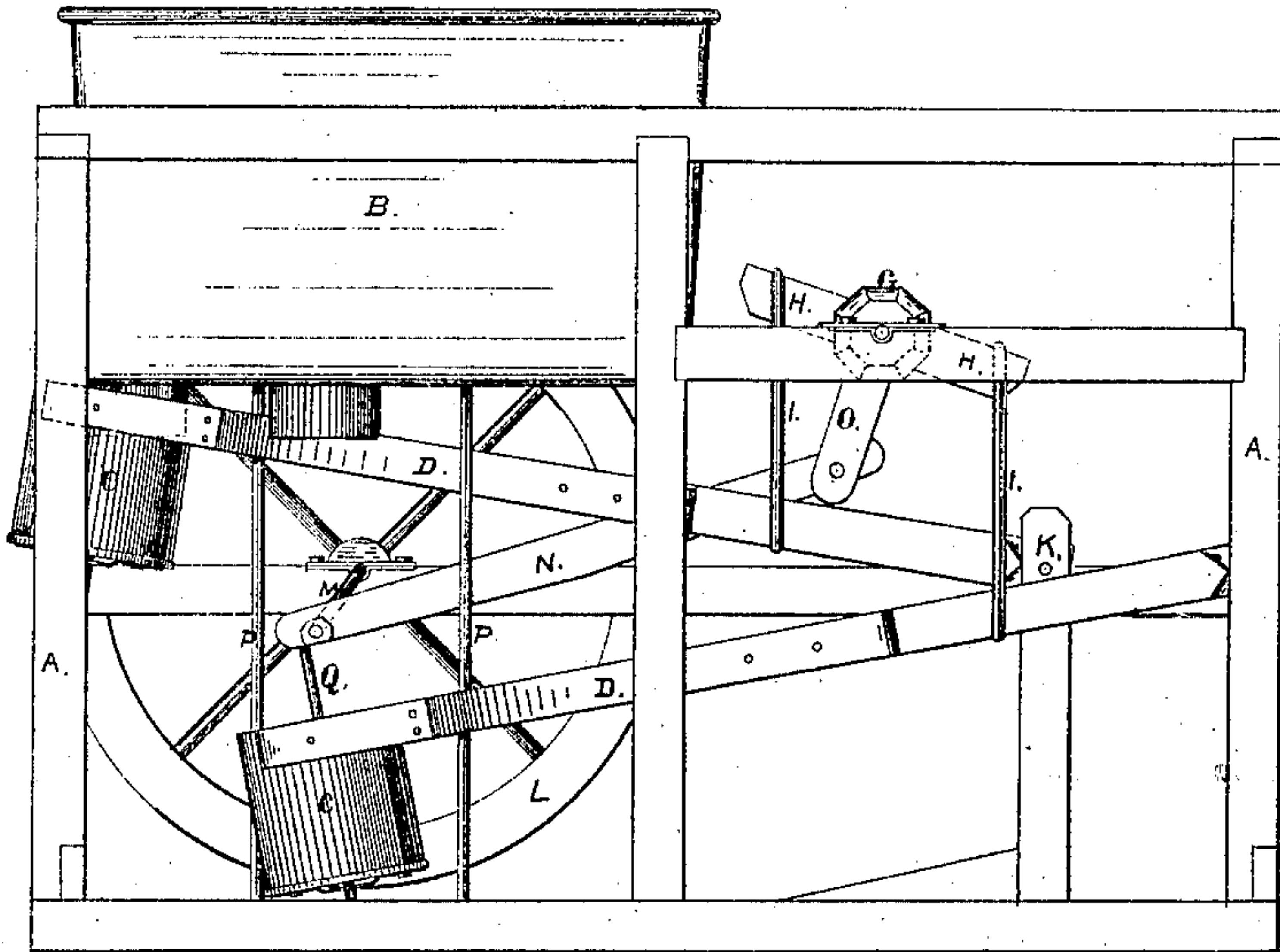


FIG. I.

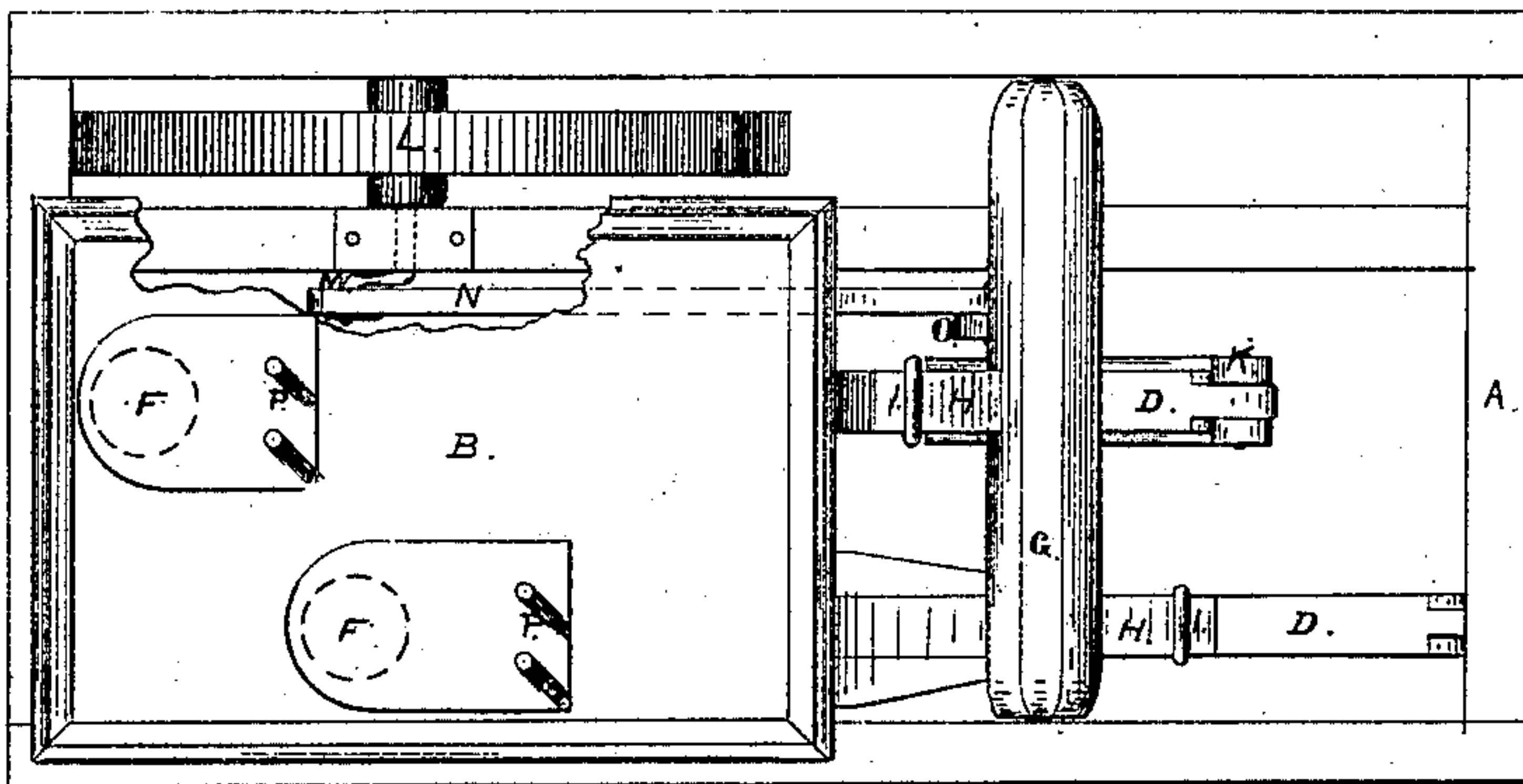


FIG. II.

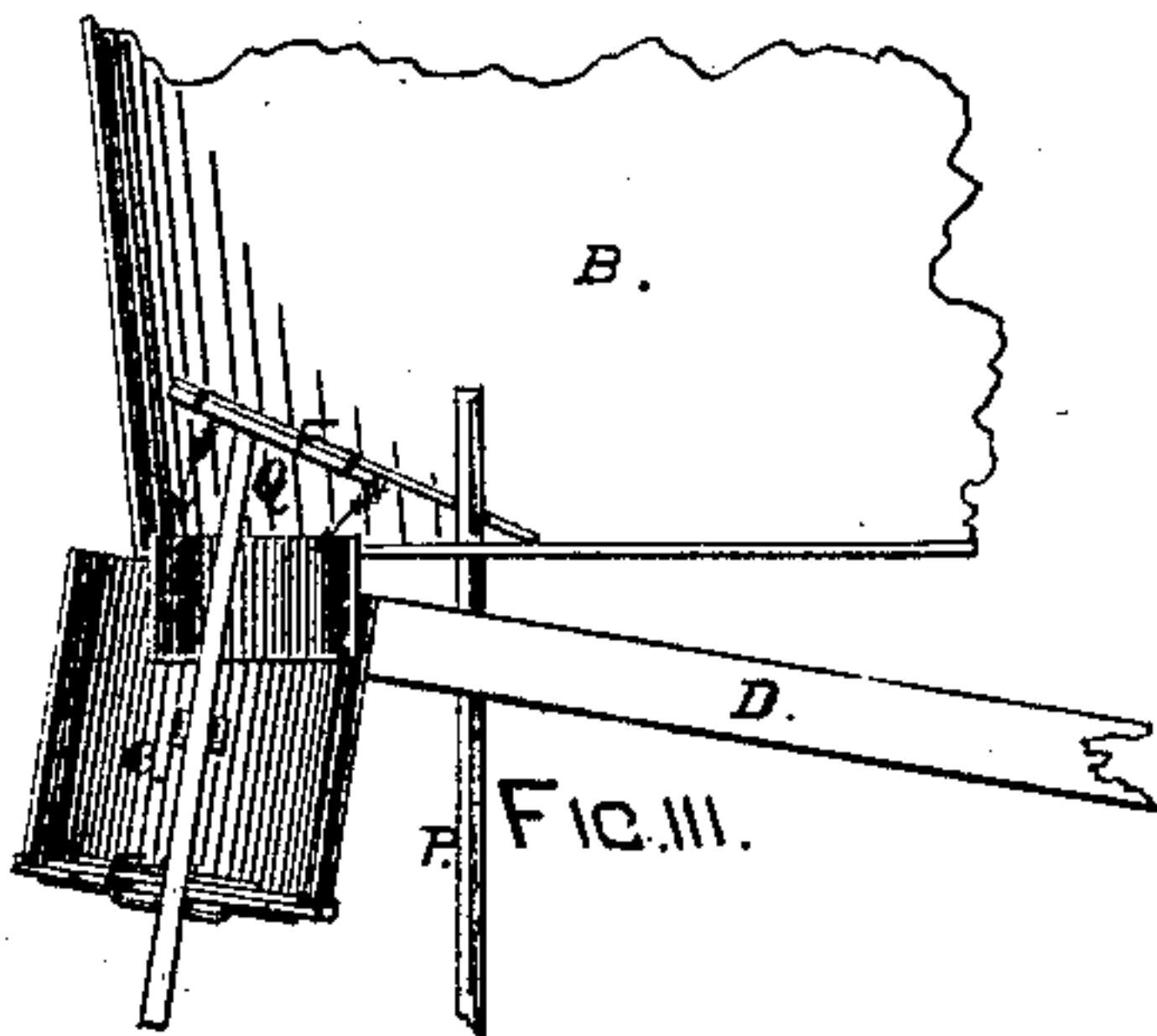


FIG. III.

WITNESSES:

J. A. Trench
W. M. Sarno

INVENTOR:

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B. B. Smith
his atty in fact

United States Patent Office.

RUSSEL FRANCIS, OF WOODSTOCK, WISCONSIN.

Letters Patent No. 109,311, dated November 15, 1870.

IMPROVEMENT IN WATER-ENGINES.

The Schedule referred to in these Letters Patent and making part of the same.

I, RUSSEL FRANCIS, of Woodstock, in the county of Richland, in the State of Wisconsin, have invented certain Improvements in Water-Engines, of which the following is a specification.

Nature and Object of the Invention.

The nature of my invention is to provide for the use of water in small streams, and when the head is low in large streams, so as to make it available for running machinery.

Description of the Drawing forming part of this Specification.

Figure I is a side view of my invention.

Figure II, a top view, with a portion of the tank broken out.

Figure III, a sectional view of the tank and one of the cups.

General Description.

A is the frame of the engine.

B, the tank or flume from which water is taken.

C C, the cups or buckets which receive the water from the flume or tank, with valves in their bottoms.

D D, the levers, on the end of which the cups or buckets are held.

E E, valves in the cups or buckets.

F F, valves in the tank or flume B.

G, rocker.

H H, arms on the rocker.

I I, connections from levers D to arms H.

K, parts to which the inner ends of the levers D are pinned, and on which they oscillate.

L, fly-wheel.

M, crank.

N, pitman.

O, arm on the rocker, to which pitman N is connected.

P, rods from the bottom of frame, running up through the bottom of tank or flume B to guide the levers D D.

To operate this engine, let the water into the cup that shall be up, which will carry it down, and as it goes down it will oscillate the rocker G and carry up the other cup, and the pin in the cup will open the valve in the tank or flume and let the water into that cup, and the pin in the bottom of the first cup will strike the bottom and raise the valve in that cup and the water will pass out, and the other cup will come down, carrying that cup up again, and so on alternately revolving the fly-wheel L, and thus giving out power.

Claim.

I claim as my invention—

Flume or tank B, cups or buckets C C, levers D D, valves E E and F F, rocker G, pitman N, and crank M, substantially as described.

RUSSEL FRANCIS.

Witnesses:

WM. H. JOSLIN,

G. W. ALABACK.