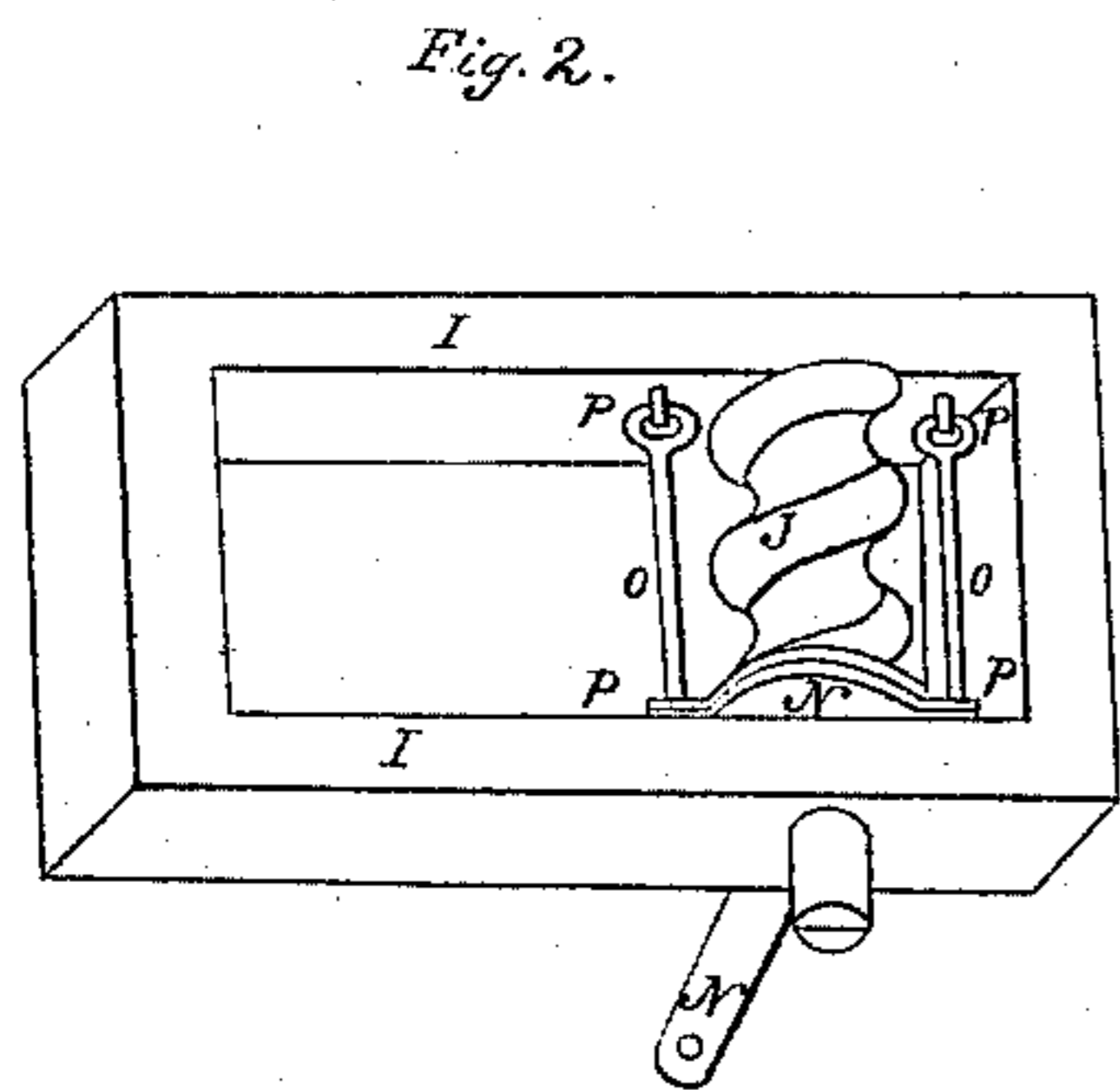
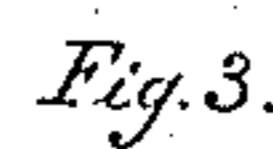


Patented Mar 19, 1850.



UNITED STATES PATENT OFFICE.

SANDY HARRIS, OF PHILADELPHIA, PENNSYLVANIA.

HOISTING-MACHINE.

Specification of Letters Patent No. 7,188, dated March 19, 1850.

To all whom it may concern:

Be it known that I, SANDY HARRIS, of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented
5 a new and Improved Mode of Constructing Hoisting-Machines and More Especially in Reference to Their Backward Action; and I do hereby declare that the following is a full and exact description.

10 The nature of my invention consists, in this connection, in applying to hoisting machines, the twist break, as a means of checking or controlling the velocity, when in action, which I will proceed to explain in the
15 following, which I do hereby declare, is a full, clear, and exact description of the construction and operation of the same, reference being had by letters, to the annexed drawings, making a part of this specifica-
20 tion, in which—

Figure 1, is a perspective view of one of my screw hoisting machines, with the twist break attached, Fig. 2, a perspective view, looking down upon the screw, supports,
25 twist break with its links and joints, and a part of the uprights which sustain the supports, Fig. 3, a perspective view, showing the inner part of the twist break.

Fig. 1, represents one of my screw hoist-
30 ing machines, intended to stand on one side of a hatchway, and lean against a wall on the other, so as to bring the roller A, immediately over the center of the hatchway. The shears B, support as well the roller A,
35 as the essential machinery for bringing the power to bear, which is combined in what may be termed, the hollow square, C, D, E and F. G, is the rope cylinder, H, the cogwheel, both running upon the same pivot,
40 in sockets at D and E. The supports I, are connected together as well by bolts passing through D and E, as by one between them; and sustain the screw J, within the worm of which the cogs of the wheel
45 immediately above fall. The screw and its pivot, are either solid or connected together, and work in a socket at the short end of the latter, while the other end rests upon, or passes through its supporter, to receive the
50 crank K, or a rope wheel if preferred. L, is a weight attached to the rope M, which, when power is applied to the crank, will rise or fall, but will remain stationary when the crank is quitted.

55 When constructed as above described, my screw hoisting machine, will enable the

laborer to hold all he gets; but it being desirable that weight should run down in hoisting machines, with as little labor as possible, after being put in motion for that
60 purpose, I have thought it best so to construct them, as barely to prevent the backward action, until some force is applied. This, in its turn, making it possible for the weight, after acquiring velocity while run-
65 ning down, not only to continue on, but to become too much accelerated; I have attached to the end of the screw, movable on its pivot, the twist break N. This is a piece of metal, placed upon the pivot of the screw,
70 so as to move easily, and constructed so as to admit of its being brought in close contact with the shoulder of the screw. This is connected in two places, with the sup-
75 porter I, at the opposite end of the screw, by the links, O, running parallel with the screw, and each having two joints, P, so that when partially turned either way, by means of its lever, it will close upon the shoulder
80 of the screw, and thereby check its revolutions.

My twist break will apply to others than the screw hoisting machine, and as it will when turned upon the machine, so that the
85 backward revolutions of the latter, will favor the twist, not only check the velocity, but stop it altogether, it will be of great utility in machines where cogwheels are used in lieu of other gearing. The twist break
90 will also apply to rail road cars, and locomotives; and, in fact, to any sort of machinery or rotary motion, when it may be desirable to check velocity.

Though two links are considered sufficient, a greater number may be used, and con-
95 nected at a variety of points, both with the break and with the stationary piece at the other end. It is the length of the links that increases the purchase, as the longer they are, the more gradual will be the approach
100 of the check.

What I claim as my invention, and desire to secure by Letters Patent, is—

The twist break, whether constructed as set forth, or in any other way, substantially
105 the same; and whatever the nature or purpose of the machine to which it may be attached.

SANDY HARRIS.

Witnesses:

PETER LAMB, Jr.,
WILLIAM GREEN.