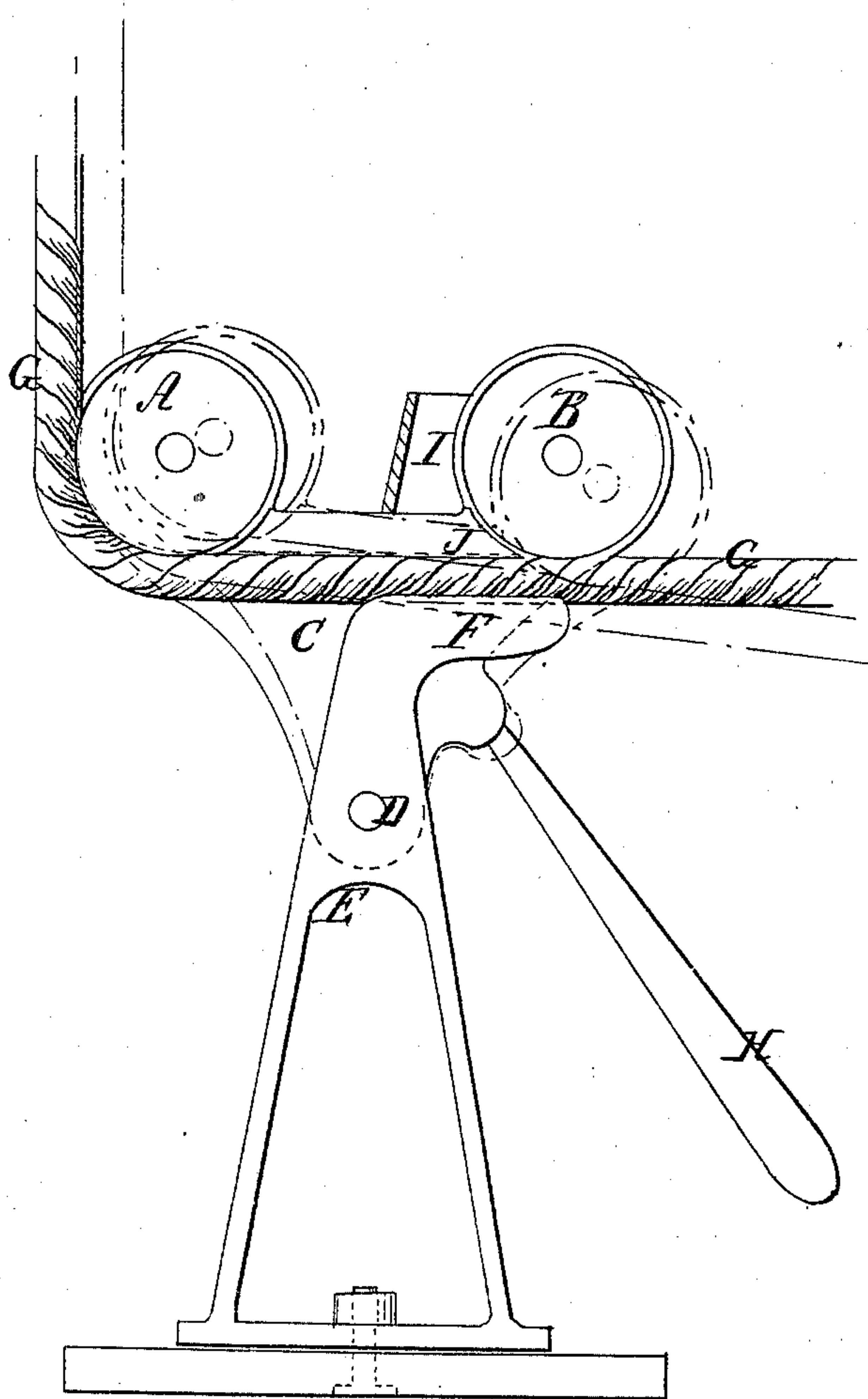


W. Waley,
Tackle Block,
Nº 10,997, Patented May 30, 1854.



UNITED STATES PATENT OFFICE.

WILLIAM WALEY, OF NEW LONDON, CONNECTICUT, ASSIGNOR TO JONATHAN WHIPPLE, JR., OF HOPEDALE, MASSACHUSETTS.

SELF-ACTING NIPPER-BLOCK.

Specification of Letters Patent No. 10,997, dated May 30, 1854.

To all whom it may concern:

Be it known that I, WILLIAM WALEY, of New London, in the county of New London and State of Connecticut, have invented a
5 new and Improved Self-Acting Block for Falls; which improved block I term a "Nipper-Block;" and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the
10 annexed drawing, making a part of this specification, said drawing being a side elevation, with the side of the case nearest the eye removed.

15 The nature of my improvement consists in placing two pulleys and a nipper within a case, or between two cheek plates; said cheek plates being attached by a joint to a suitable standard or framework, permanently attached to the ground. The upper
20 part of the standard is curved, and projects upward between the cheek plates, and terminates a short distance from the under surface of one of the pulleys above mentioned. The rope passes under the two pulleys, and between the curved part of the
25 standard and the pulleys and nipper.

By the above arrangement, as will be presently shown, the horse or other power
30 required to elevate the weight, will, when the draft commences, keep the two pulleys and nipper in a horizontal line, and allow the rope to run freely under the pulleys; but when the draft is checked or stopped,
35 the weight at the opposite end of the rope will throw the pulleys in an oblique line, and cause the nipper to bind the rope firmly between said nipper and the curved end of the standard, and prevent the weight from
40 being lowered.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

45 A, B, represent two pulleys placed between two cheek plates, C, C; one only is seen in the drawing. The axes of the pulleys pass through the cheek plates. The lower ends of the cheek plates are secured by a joint, D, to a standard, E; said standard having its upper end, F, curved or bent
50 in a horizontal position and under the pulley, B; sufficient space being between the curved end, F, and the pulley, B, to allow the rope, G, to pass between them, as seen
55 in the drawing.

J represents a nipper placed horizontally between the pulleys, A, B. The rope, G, passes under the two pulleys, A, B. The horse is attached to the end of the horizontal portion; and the opposite end passes
60 up over a pulley, and the weight to be raised is attached to it. When the power is applied to the horizontal portion, it will be seen that the two pulleys and nipper J will be kept in a horizontal line; because the
65 cheek plates are secured by the joint, D, to the standard, E; and the pulley, B, is prevented from being depressed, by the tension of the horizontal portion of the rope. But, when the draft is checked, the horizontal
70 portion of the rope is slackened; and the weight at the opposite end raises the pulley, A, and throws the pulley, B, downward, so that the rope is clamped between one end of the nipper J, and the end,
75 F, of the standard; see red lines. The rope is thereby prevented from moving, and the weight may be lowered with the speed desired, by means of a lever, H. By elevating this lever by hand, the nipper J, may be
80 raised sufficiently to partially relieve the rope of the pressure, and allow the weight to descend with the desired rapidity.

I, is a socket, at the upper part of the cheek plates, in which socket a lever may be
85 inserted, for the same purpose as the lever, H. In some cases, the upper lever may be more convenient for use than the lower one, H.

It will be seen that the block is perfectly
90 self-acting; for, when the draft is applied, the horizontal portion of the rope becomes "taut," and elevates the end of the nipper J in line with the other pulley, A; and consequently there is sufficient space between the
95 pulley, B, nipper J and the curved end, F, of the standard, E, to allow the rope to pass or run freely. But, when the weight at the opposite end of the rope is sufficiently elevated, the draft is checked or
100 stopped, and the weight raises the pulley, A, and throws the pulley, B, and nipper J downward, and binds the rope between the nipper J, and the curved end, F, of the standard; the rope being relieved of the
105 pressure sufficiently to cause the weight to descend with the desired rapidity, by means of the levers, one or both, as before stated and shown.

Having thus described my invention, what 110

I claim as new, and desire to secure by Letters Patent, is—

The construction and arrangement of the block, as herein shown and described, viz.,
5 placing the two pulleys, A, B, and nipper J
between the cheek plates, C, and attaching
said cheek plates by a joint, D, to a stand-
ard, E, the upper part, F, of which is curved
or bent, and is placed a short distance be-
10 low the pulley, B, and nipper J so as to al-

low sufficient space for the rope, G, to pass
between the pulley, B, nipper J and the end,
F, when the two pulleys are in a horizontal
line. By which arrangement and construc-
tion, the block is made self-acting, operat- 15
ing in the manner as set forth.

WILLIAM WALEY.

Witnesses:

O. D. MUNN,
EL. POLHAMUS.