

G. W. Hill.
Saw-Mill Dog.
No 14,844. Patented May 6, 1856.

Fig. 2.

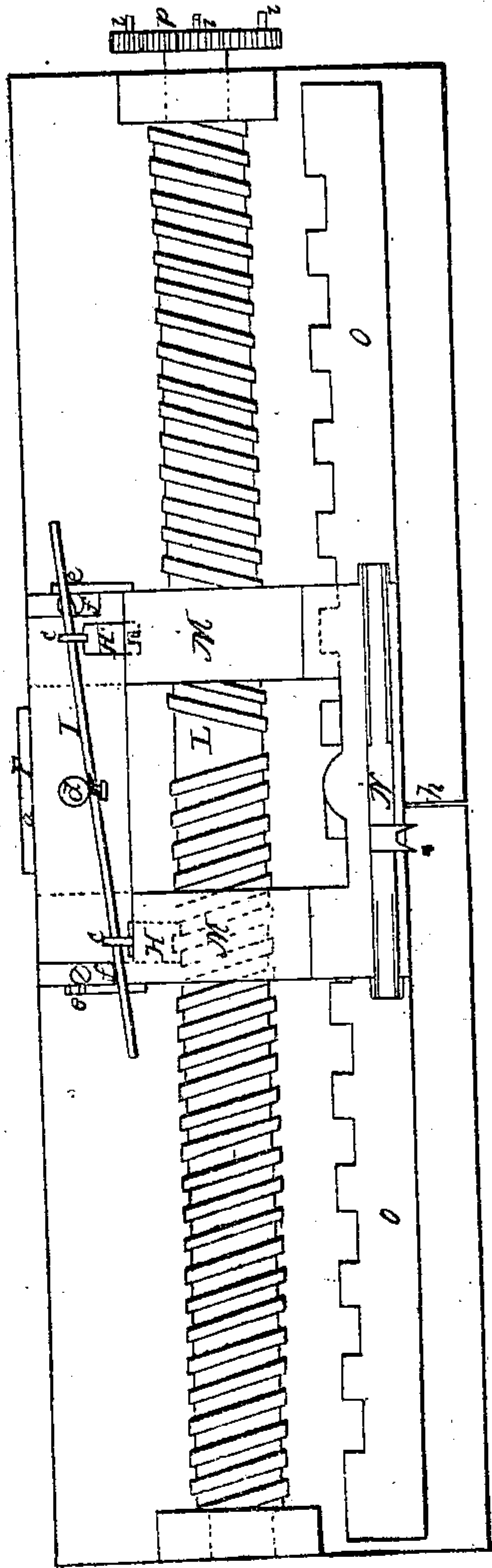


Fig. 1.

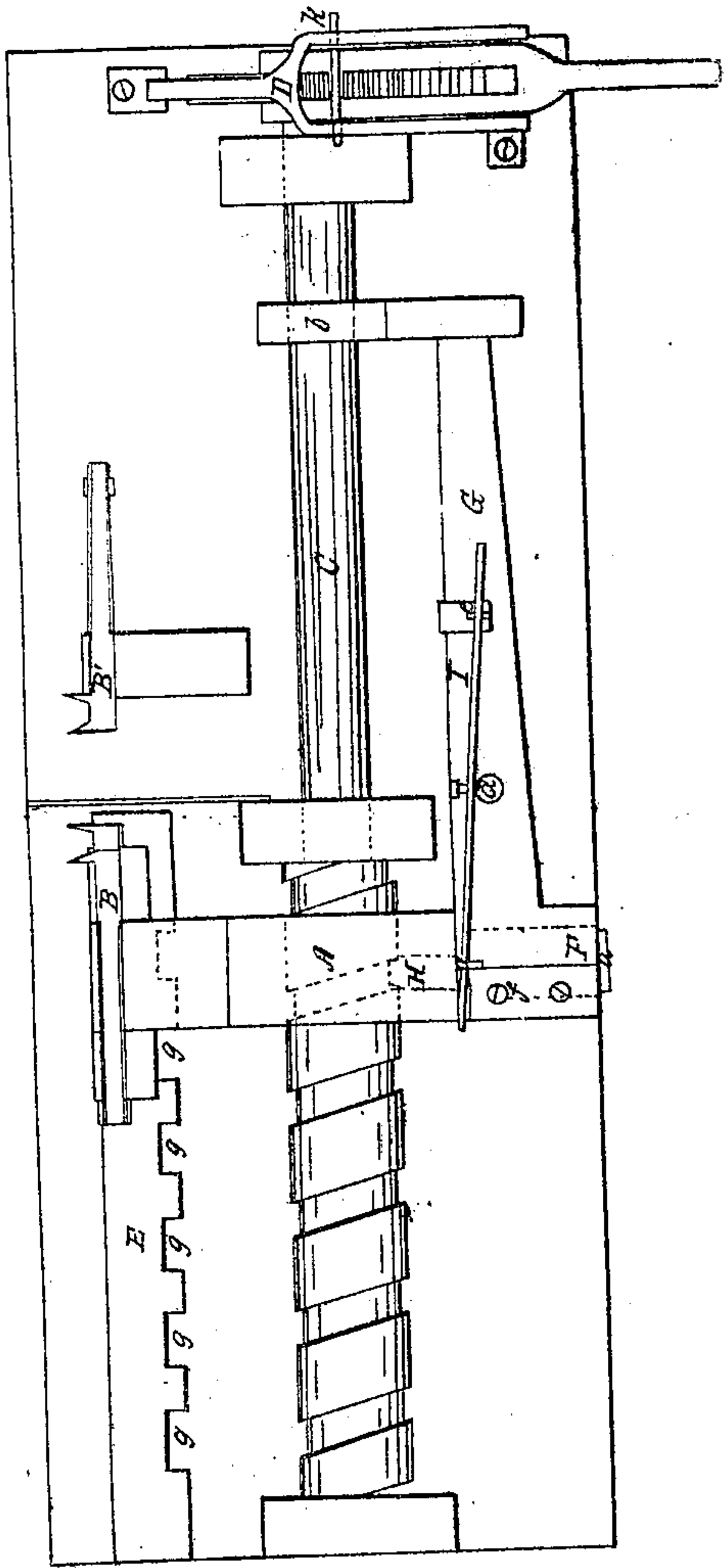


Fig. 4.

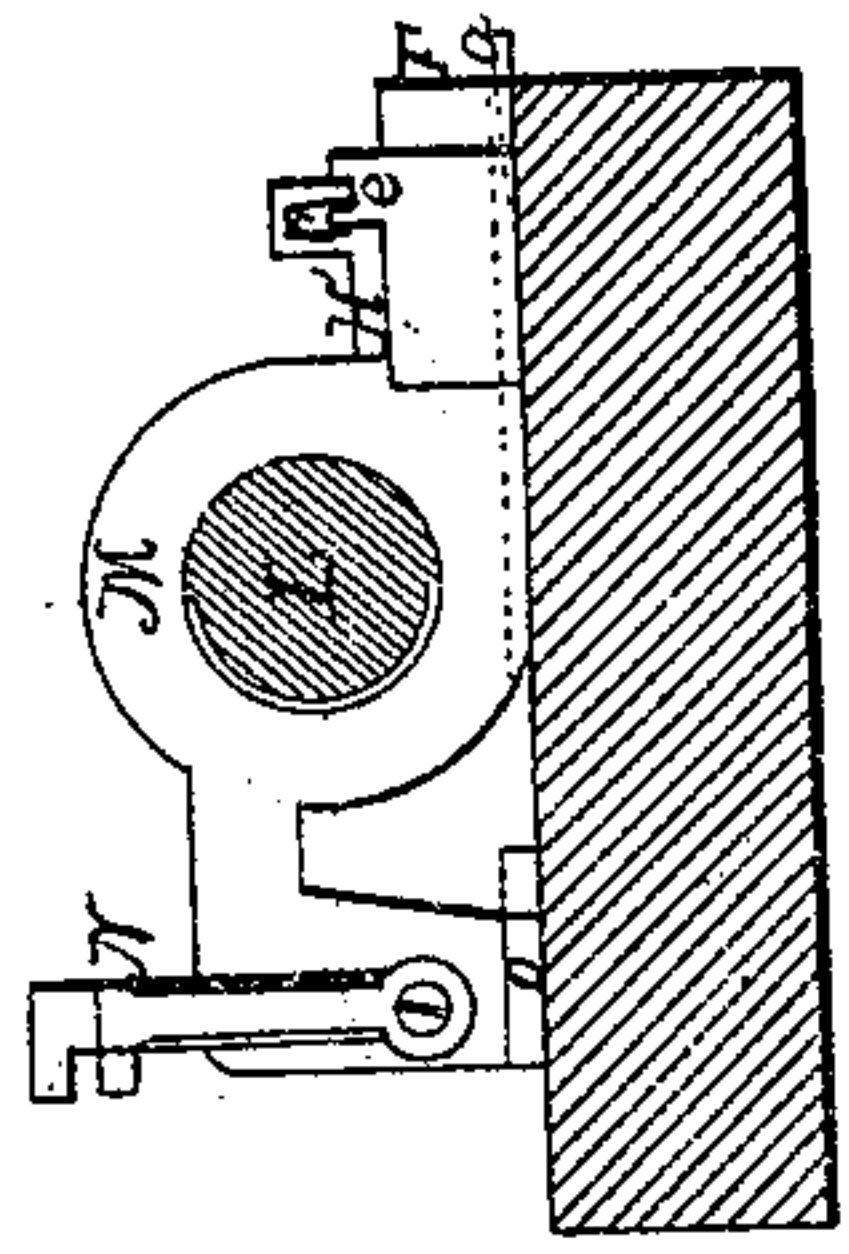


Fig. 5.

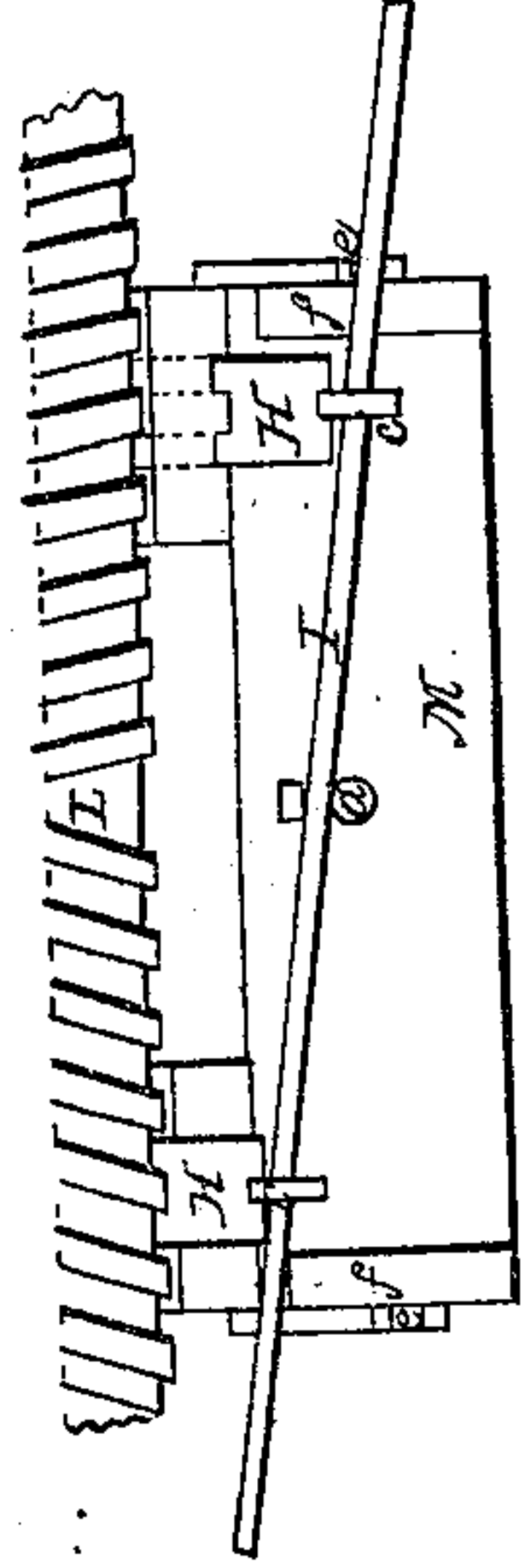
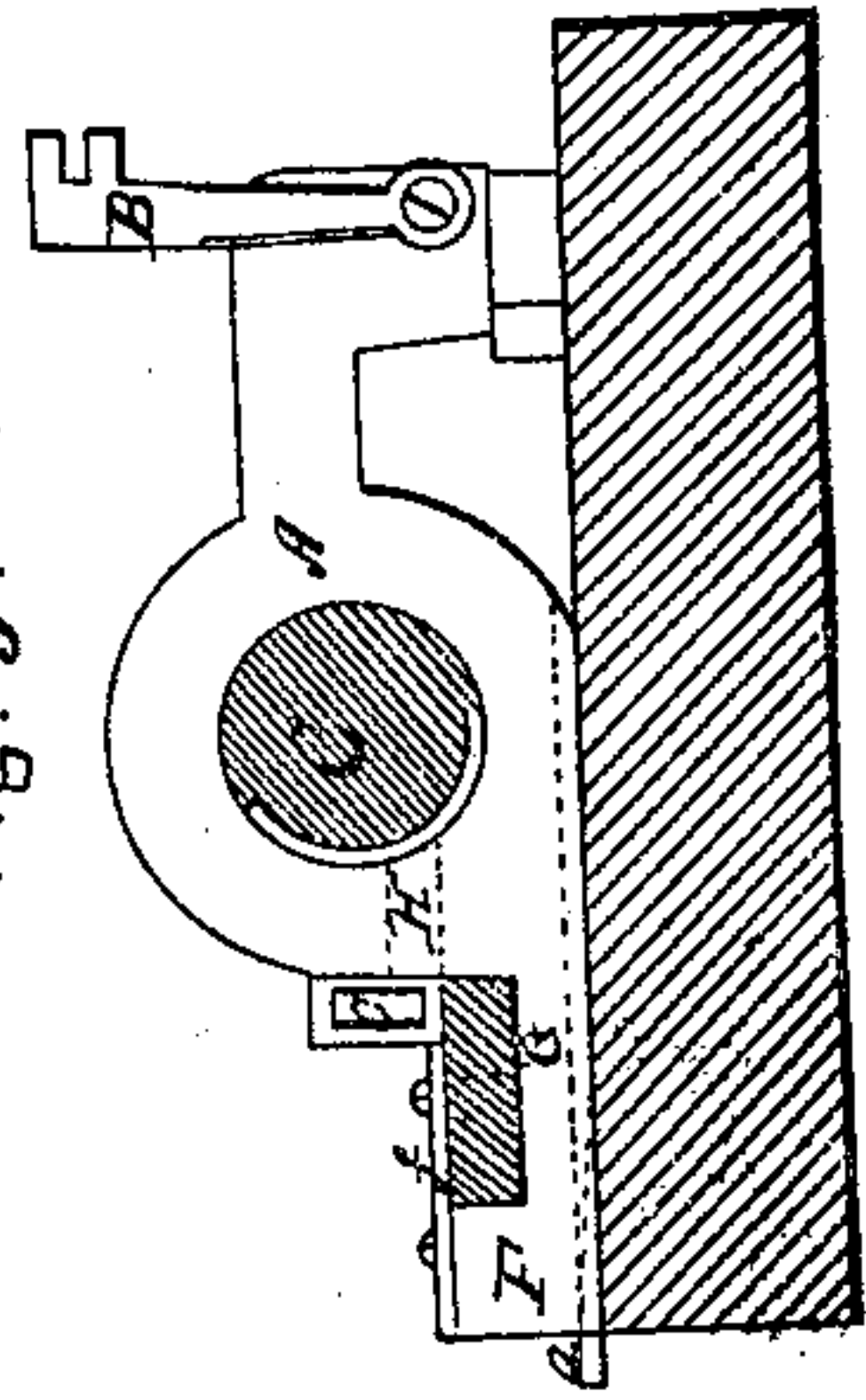


Fig. 3.



UNITED STATES PATENT OFFICE.

GEO. W. HILL, OF WAVERLY, NEW YORK, ASSIGNOR TO FRANCIS LYONS AND GEO. W. HILL.

SAWMILL-DOG.

Specification of Letters Patent No. 14,844, dated May 6, 1856.

To all whom it may concern:

Be it known that I, GEORGE W. HILL, of Waverly, in the county of Tioga and State of New York, have invented a new and
5 useful Improvement in Sawmill-Dogs; 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 accompanying
10 drawing, making part of this specification, and to the letters of reference marked thereon.

Figure 1, is a plan view of the head block, and Fig. 2, of the tail block. Figs. 3 and
15 4, are elevations in part section of the same, the same letters referring to like parts.

A is the bail block; B B' the bails, one attached to the bail block, and the other stationary upon the head block. C is the
20 screw shaft with ratchet wheel and lever at D. The screw of the shaft C, passes through the bail block which has no corresponding thread. The bail block has a bearing on the way or track E, and also on
25 the head block at its opposite extremity F. This latter bearing is regulated by a wedge driven in a recess in the bail block shown at *a* Fig. 3, and also in the plan. The wedge elevates the rear part so as to insure a firm
30 and steady bearing of the bail B. Attached to the bail block is an arm extending longitudinally with the shaft C, a distance equal to the sliding movement required, where the shaft passes through a socket in the right
35 angle of said arm at *b*. This arm acts as a guide in moving the bail block, effectually preventing any swaying or twisting and insuring a steady movement while it answers as a brace when at rest. The absence of an
40 internal screw to the bail block is supplied by the spring die H. This is a die with a point fitting the size of the thread of the shaft C, and having at its opposite end a vertical slot-frame, (*c*, Fig. 3,) through
45 which loosely passes a light-spring bar I having a swivel bearing upon the side of the standard *d* and a rest at *e*. The die is movable in a mortise through the bail block, and is thrown in or out of gear at the will of
50 the operator by means of the spring. Thus, if the spring be raised into the bearing *e*, it exerts a lateral pressure forward on the die. If it is not in a position to fall at once in the mesh of the screw a partial revolution of the shaft brings them in
55 juxtaposition and the die is instantly

thrown into the meshes of the screw. The spring has also a downward pressure at the die which causes it to drop below the guard *f*, which effectually secures it in its connection against the liability of an accidental
60 disconnection. By dropping the end of the spring bar from the rest *e*, the die is thrown out of connection with the screw, leaving the bail block free to be moved by the bar of
65 the sawyer. The recesses *g, g*, on the way E, are to form convenient rests for the bar while moving the bail block independent of the screw. The spring die is found to be
70 a vast improvement over the set-screw and wrench sometimes used in the bail block for getting a connection with the screw thread of the shaft. In using the set-screw, it is
75 impossible to judge accurately when the shaft is so turned as to bring the screw directly over the groove between the thread. Therefore it is necessary to screw it down
80 tightly, and if it does not meet the groove to turn the shaft until it does, and thus complete the operation. This, besides being
85 slow and tedious, subjects the screw thread to great wear from the frequent and forcible contact of the two unyielding metallic surfaces, until finally the large screw becomes useless. The spring die is instantly
90 set without the operator leaving his position at the ratchet lever, and when set if not at once in gear is gently pressed by the spring until it falls lightly in, when its position is as perfectly secure as the set-screw could

make it. The tail block Fig. 2 is of a construction analogous to this. L is the screw shaft furnished with a right and left hand screw meeting at the center near the saw-kerf *h*.
95 The bail block M, M, is a repetition of the one described except that it is of quadrangular construction, having two sockets through which the screw shaft passes, and a broader bearing, front and back. N is the bail, O
100 the forward bearing or track, *d* the standard to which the spring bar I, is attached. Two dies H and H' are operated by this spring one meshing with the left, the other with right hand screw. When one is thrown
105 into gear, the other is thrown out by the same motion of the spring, as shown in the separate view, Fig. 5. One of the rests is shown in elevation at *e* Fig. 4. P is a cog-wheel on the shaft L, the teth meshing with
110 a toothed or cog-way by the side of the carriage for setting the tail-log while running

back the carriage in a manner in common
use on self-setting dogs. The pins *i i* are
rests for moving the wheel by a bar in the
hands of the operator. The bails are those
5 of ordinary construction, secured in the log
by a wedge-shaped block of wood driven in
from behind by the bar of the sawyer, the
most simple and safe method, probably,
that has ever been applied to the purpose.
10 For the convenience of setting for the
thickness of board or plank to be sawed, a
scale of inches may be applied to the head
and tail blocks, in the usual manner, and
the distance regulated by the sweep of the
15 ratchet lever, by the use of the pin, *k*,
through the guard D, as will readily be
seen.

What I claim as my invention and for
which I desire to secure Letters Patent is—

1. The peculiar form of the bail-block, 20
having a front and back rest or bearing, in
connection with the arm G, clasping the
shaft of the screw C, in the manner and for
the purpose described.

2. I also claim the die or dies, H and H', 25
in connection with the spring-bar I, the rest
e, and the guard *f*, the whole arranged,
combined and operated in the manner here-
in set forth.

GEO. W. HILL.

Witnesses:

WM. W. I. NEIL,
O. H. FRASER.