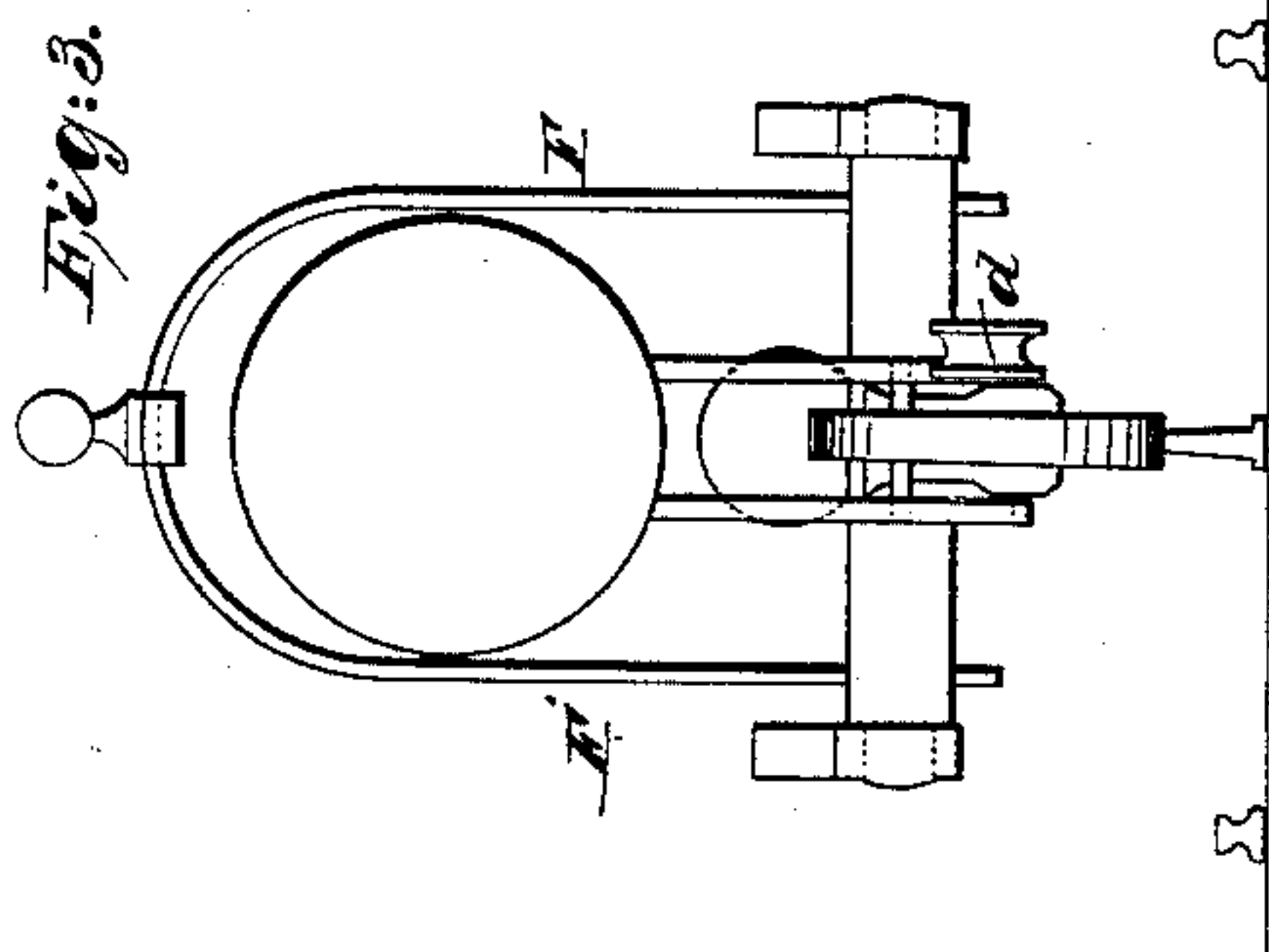
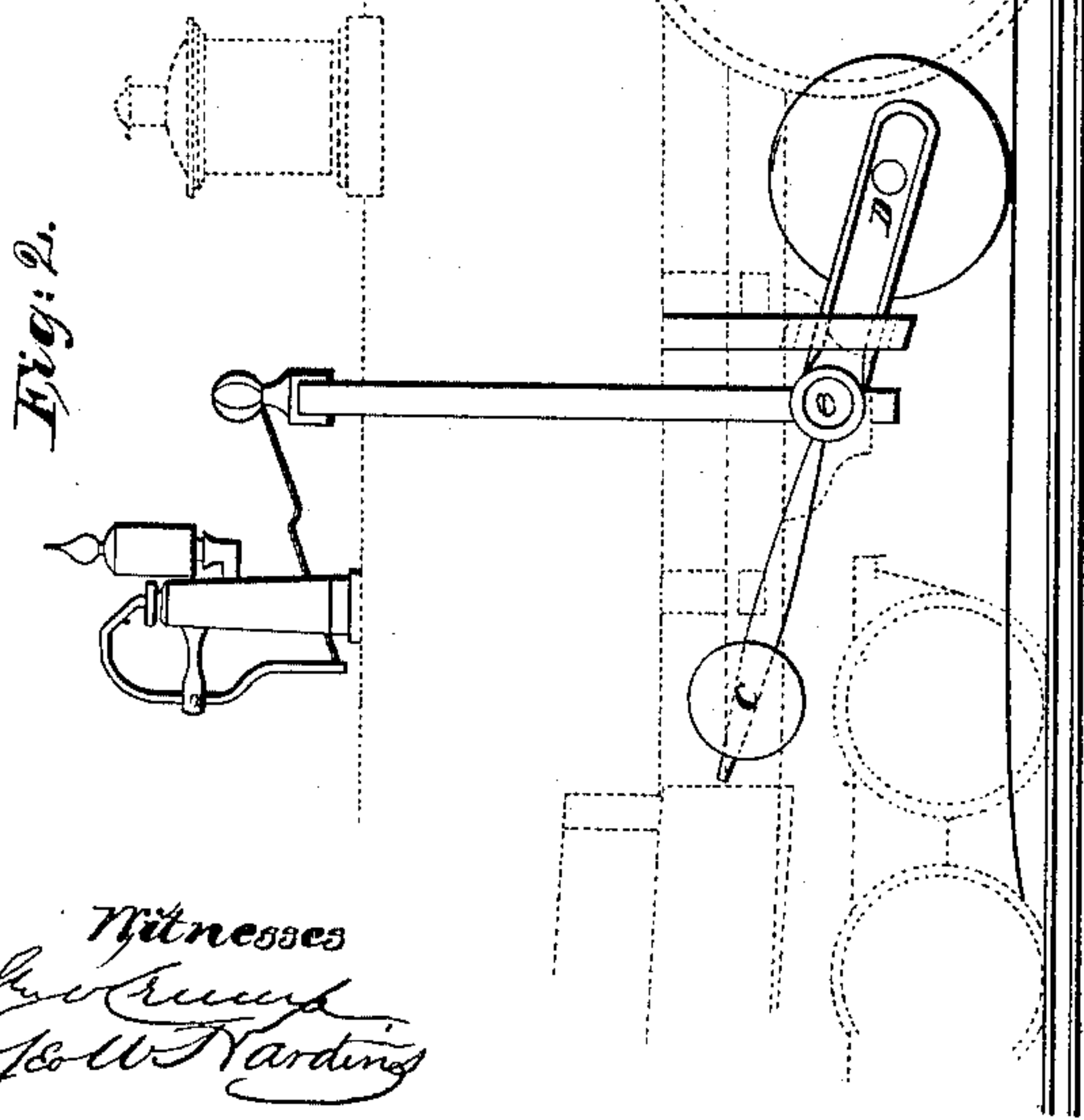
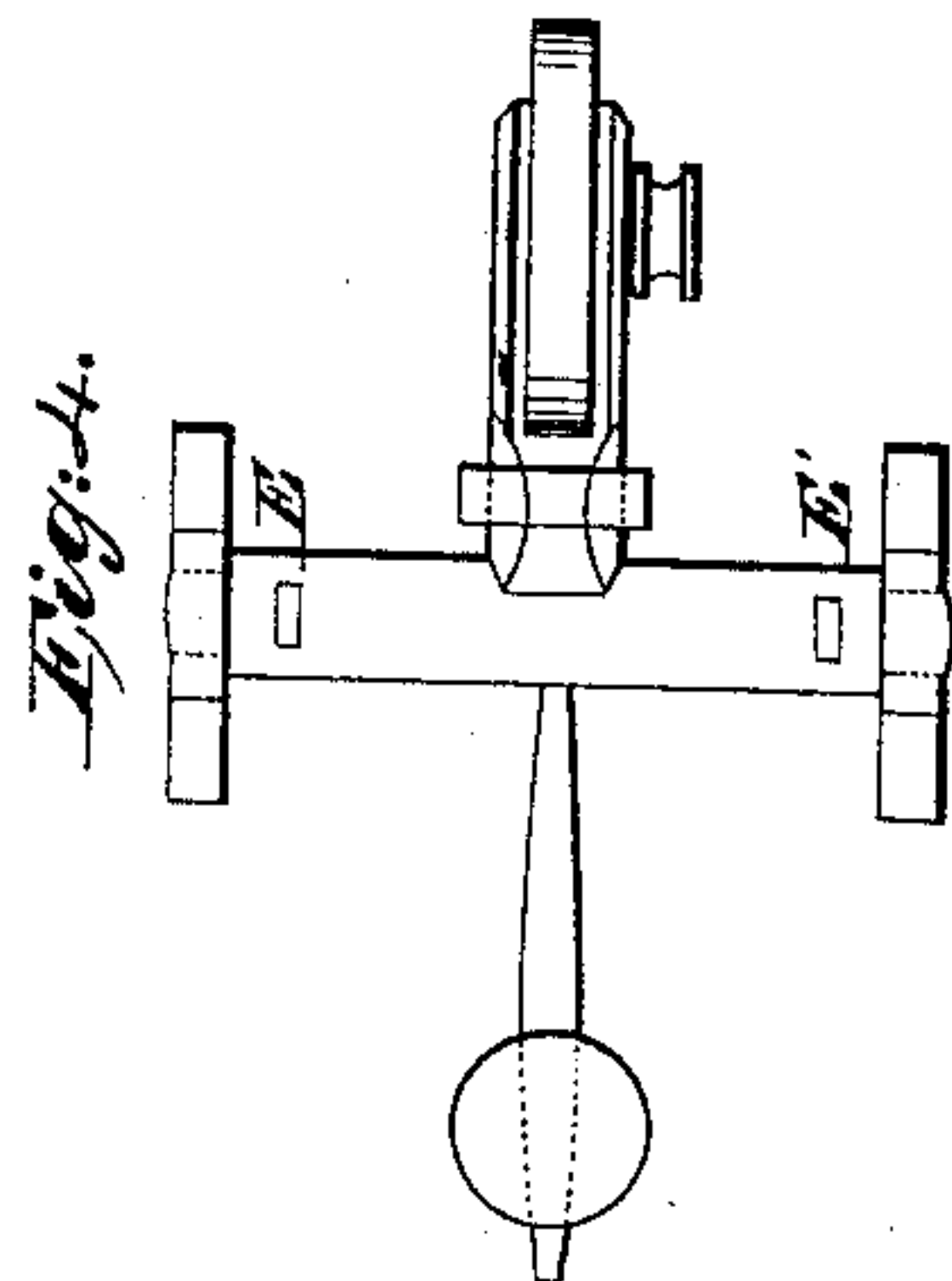
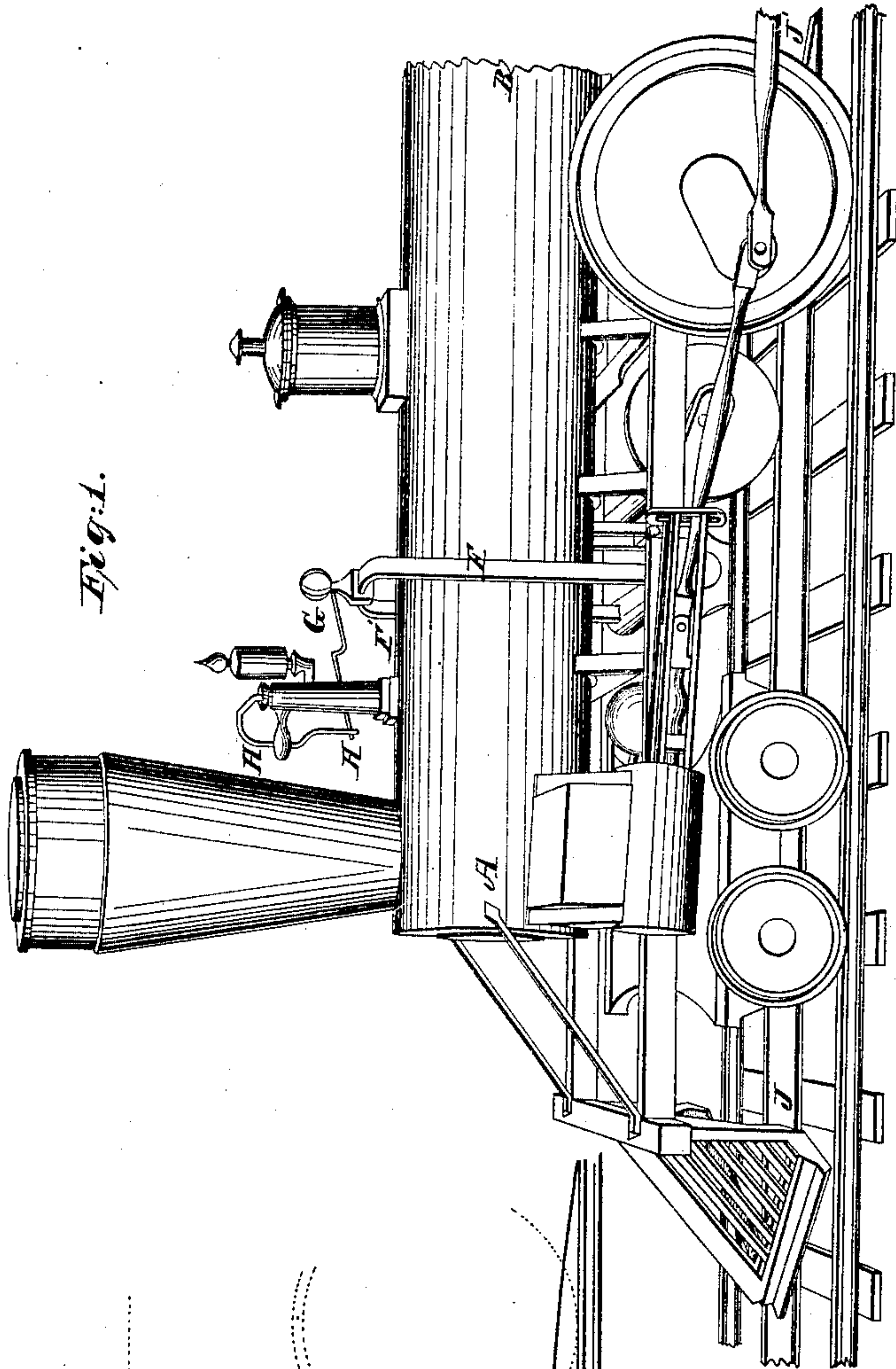


H. MAULE.
Railway Alarm.

No. 22,507.

Patented Jan'y. 4, 1859.



Witnesses
for Henry Maule
John W. Harding

Inventor:
Henry Maule

UNITED STATES PATENT OFFICE.

HENRY MAULE, OF PHILADELPHIA, PENNSYLVANIA.

RAILWAY-ALARM.

Specification of Letters Patent No. 22,507, dated December 28, 1858.

To all whom it may concern:

Be it known that I, HENRY MAULE, of the city of Philadelphia and State of Pennsylvania, have invented a new and useful Improvement in the Construction of Railway-Alarms; and I do hereby declare the following to be a full and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a perspective view of a locomotive and the rail showing my improvement. Fig. 2 is a side view of my improvement detached. Fig. 3 is an end view and Fig. 4 a top view of same.

My improvement has for its object the sounding of the steam whistle at all places where the railroad is crossed by common roads or on curves or other dangerous places, and it consists in an arrangement of a middle rail along the line of the track which coöperates with a device attached to the locomotive whereby the valve of the steam whistle is always opened at that part of the road where the extra rail is placed.

A, B, represents a locomotive of any ordinary construction.

C, D, is a lever attached by a cross shaft or journal at E, E', so that it can work on it as a fulcrum. At D, there is a small iron wheel so arranged that it will always touch and run upon the middle or extra rail hereinafter described. At the other extremity C of the lever C, D, there is a small weight for partly counterbalancing the weight of the wheel at D; to the cross shaft E E' is attached a vertical yoke piece F, F'; to the upper extremity of the yoke piece F F', is attached a small connecting rod G, connecting the upper end of the yoke F F' with the bent lever H H'. The bent lever H H' has at its upper extremity a small conical puppet valve attached with the smaller end of the cone upward. As the upper extremity of the lever H H' is pushed down it opens an aperture for the escape of steam between it and the valve seat. The force of steam tends always to keep the steam valve closed except when forced open by the bent lever H, H'.

J, J', is an extra rail placed midway between the ordinary rails at such points in the road where it is desired to sound the steam whistle and is made of a length just proportionate to the length of time it is de-

sired to keep the steam whistle open. It is made about four inches higher than the level of the outside rails. The wheel at D runs upon the middle rail. Each extremity of the rail gradually rises as shown at I' and then continues level for about five hundred feet in length, and then descends gradually at the other extremity. The effect of this middle rail in connection with the device on the locomotive is as follows: The extra middle rail is placed at such points along the line of the road as it is desired to sound the whistle at. Whenever the locomotive reaches one of these places the wheel at D gradually runs up the inclined end as at I' and thus presses up the end D, of the lever C, D, and forces forward the upper end of the yoke F and presses down the extremity H' of the bent lever and thereby opens the valve of the steam whistle. This valve is kept open as long as the wheel at D continues to run upon this middle rail and as soon as the wheel at D reaches the extremity of that middle rail it descends gradually and closes the valve. By this arrangement an automatic apparatus is provided for sounding alarms on railways at any desired place.

The middle rail may be made of any old rails as it has no pressure or strain upon it. The use of the weight at C is to counterbalance the weight of D so as to prevent the weight of the wheel at D from bringing too great a shock as it first touches the extra rail I, I'. In order to prevent too great a shock on the wheel D I place a small pulley *d* on its side (see Fig. 3). This is to be connected by a belt to the main shaft so as always to keep this wheel revolving at about the proper speed, so that when the wheel at D first touches the ascent of the rail I' it will have the requisite revolving momentum.

Having thus described my improvement what I claim as my invention and desire to secure by Letters Patent is—

The employment of the lever C, D, or its equivalent in combination with an extra rail I, I', and with the steam whistle the whole arranged and operating substantially as above described for sounding the steam whistle at any desired parts of the road.

HENRY MAULE.

Witnesses:

GEORGE CRUMP,
GEO. U. HARKINS.