

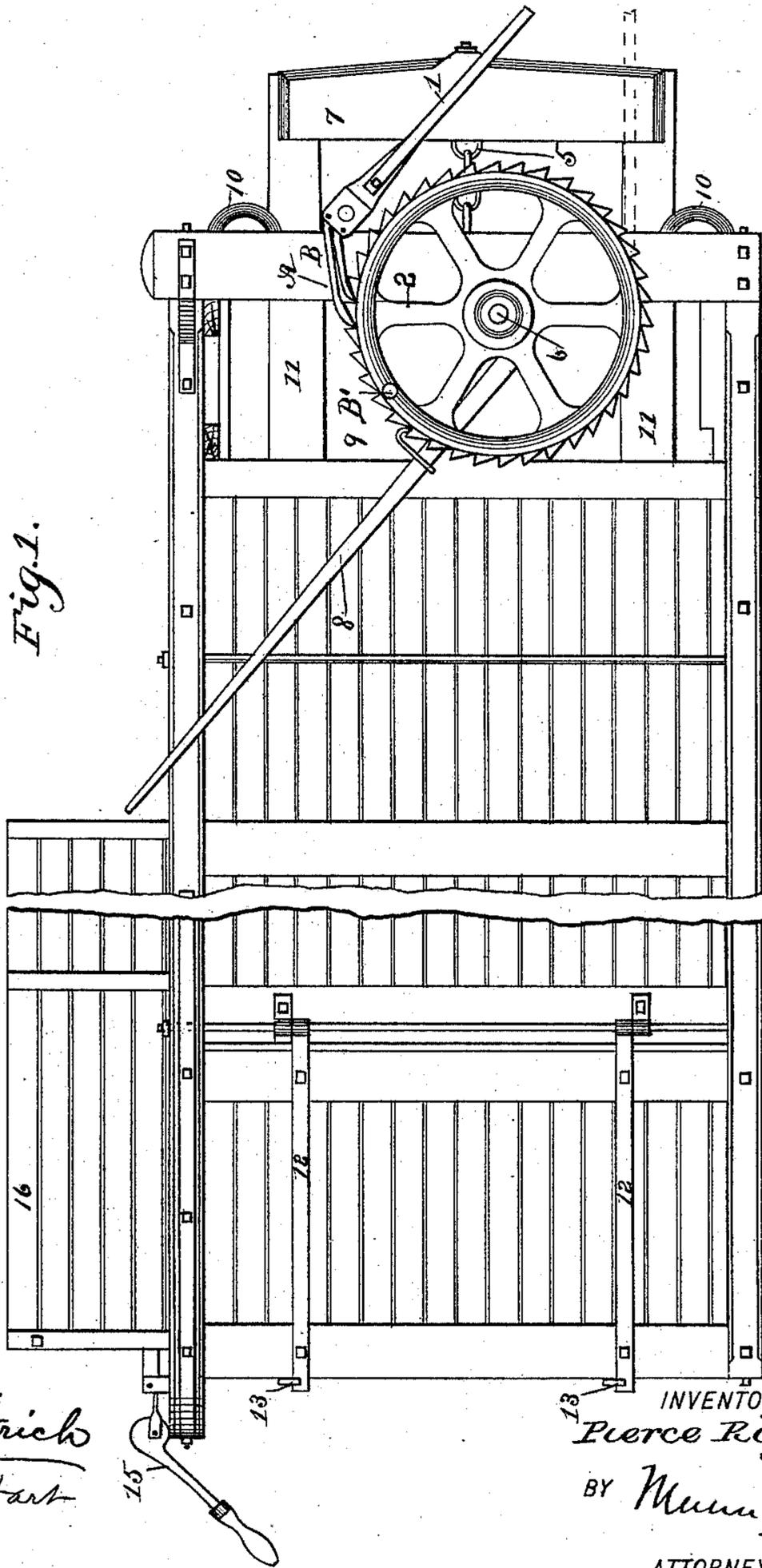
(No Model.)

3 Sheets—Sheet 1.

P. RIGGS.  
HOP PRESS.

No. 470,600.

Patented Mar. 8, 1892.



*Fig. 1.*

WITNESSES:  
*Fred G. Dieterich*  
*Amos W. Hart*

INVENTOR:  
*Pierce Riggs*  
BY *Munn & Co*  
ATTORNEYS



(No Model.)

3 Sheets—Sheet 3.

P. RIGGS.  
HOP PRESS.

No. 470,600.

Patented Mar. 8, 1892.

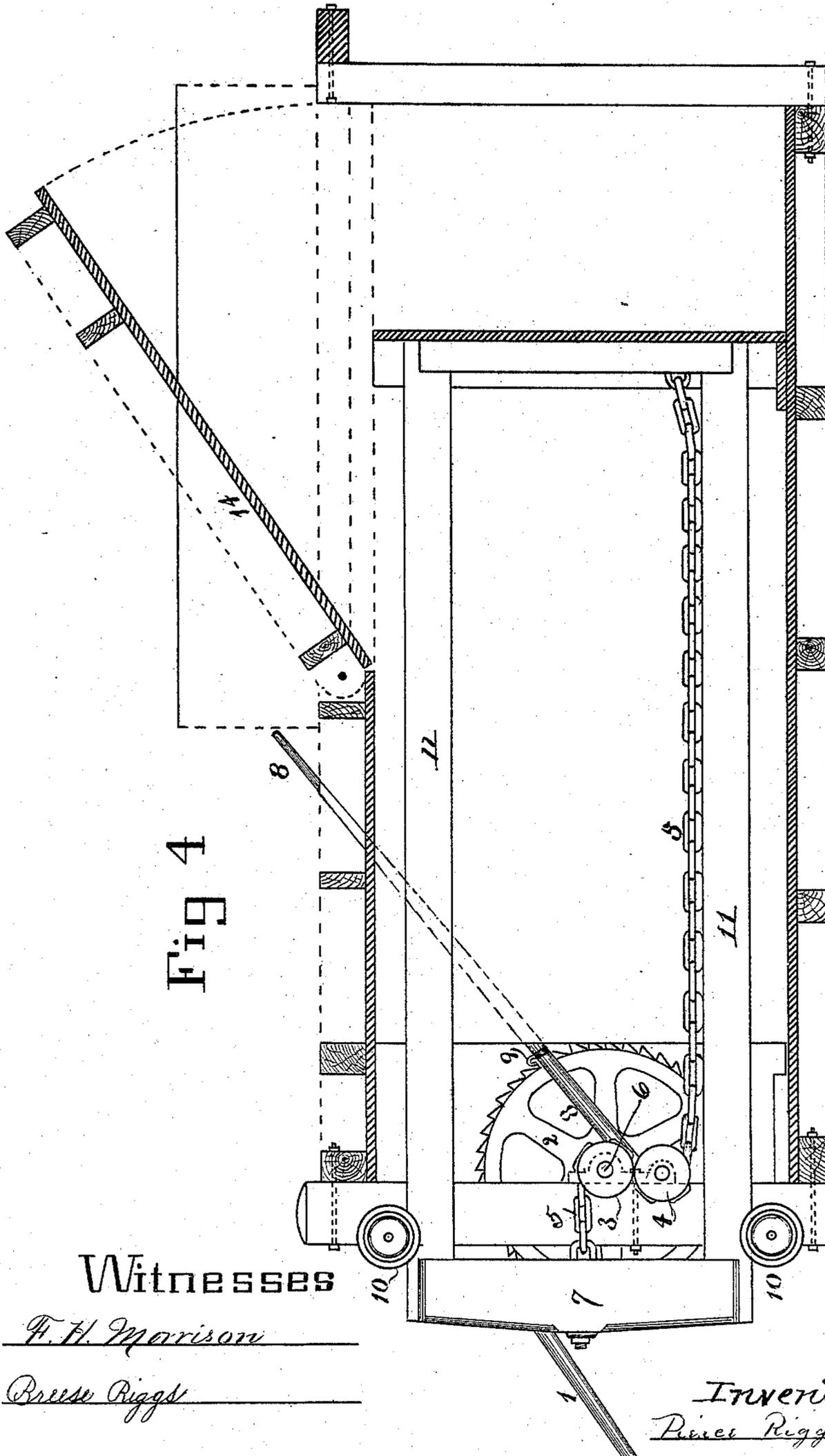


Fig 4

Witnesses

F. H. Morrison

Bress Riggs

Inventor  
Pines Riggs

# UNITED STATES PATENT OFFICE.

PIERCE RIGGS, OF CROWLEY, OREGON.

## HOP-PRESS.

SPECIFICATION forming part of Letters Patent No. 470,600, dated March 8, 1892.

Application filed June 9, 1891. Serial No. 395,731. (No model.)

*To all whom it may concern:*

Be it known that I, PIERCE RIGGS, of Crowley, in the county of Polk and State of Oregon, have invented an Improved Hop-Press, of which the following is a specification.

My invention is an improvement in that class of presses adapted for use in baling hay, cotton, hops, &c., and in which the follower operates horizontally within a press-box similarly arranged.

The novelty consists in the construction and combination of the means for operating the follower, as hereinafter described.

In the accompanying drawings, (three sheets,) Figure 1 is a side elevation of the press. Fig. 2 is an elevation of the rear end, and Fig. 3 an elevation of the front end, of the same. Fig. 4 is a vertical longitudinal section of the press, showing the plunger or follower pushed to its farthest limit into the box or compression-chamber and the cover of said chamber elevated.

The horizontal press-box is closed at one end and open at the other. The sides of the press-box contiguous to such closed end are formed of doors having hinges 12 12, whose projecting free ends may be locked together by a pivoted catch 13, as shown in Fig. 3. The top of this portion of the press-box is a hinged lid 14, working between vertical side boards 16, forming a hopper for receiving the material to be pressed. This lid is locked in place by means of a bolt operated by a lever 15. The parallel bars 11 11, forming part of the follower or plunger, slide in and out through the open end between flanged rollers 10 10, that are arranged opposite each other at top and bottom of the compression-chamber. These rollers hold and guide the follower-bars in their reciprocating movement as well as reduce friction to the minimum.

The chief element of the means for operating the follower is a chain 5, which is attached at its respective ends to the head and rear cross-bar 7 of the follower. Intermediately it passes between and partly around the two sprocket-wheels or chain-pulleys 3 4. The wheel 4 is an idler and the wheel 3 is arranged above it, being keyed on a transverse shaft 6, that projects from one side of the press-box and carries the large ratchet-wheel 2. The

inner rim of this wheel is notched to form the ratchet, and a long hand-lever 1 is pivoted contiguous to the same and provided with pivoted push-pawls A B for operating thereon for the purpose of rotating the wheel 2, and thereby taking up the chain 5 and moving the follower in one direction or the other. The wheel 2 is provided with an outer rim A' for the purpose of forming a peripheral groove or recess adapted to accommodate a rope (shown by dotted lines, Fig. 1) which I employ in operating the press.

In practice the rope is suitably attached to the grooved periphery of wheel 2 and its free end is connected with a horse or some suitable mechanical motor. A lever 8 is pivoted near the wheel 2 on the side opposite the lever 1 and provided with a pivoted hook-pawl 9, which engages the ratchet of wheel 2.

The press is operated as follows: The follower being drawn back, the lid 14 is raised and a quantity of hops suitable to form a bale is placed in the hopper. The lid 14 being then closed and secured, the lever 1 is operated to turn the ratchet-wheel 2, and thereby cause the sprocket-wheel 3 to take up the chain 5 and force the follower inward. The lever 8 may also be worked, when required, to aid in this operation. When the hops have been compressed to a certain degree—say as much as hand-power suffices—the compression is continued and completed by tension on the rope attached to the ratchet-wheel. The side doors and lid 14 being then unlocked or released, the bale may be removed. The wheel 2 has a handle B' for use in rotating it to withdraw the follower. It will be seen that in operating the follower the idler-wheel 4 serves to carry the chain 5 into and hold it in engagement with the sprocket-wheel 3.

What I claim is—

1. In a baling-press of the character hereinbefore indicated, the combination, with the press-box and a follower sliding therein, of the sprocket-wheels 3 and 4, one being arranged above the other, the operating-shaft on which said wheel 3 is keyed, the chain attached to the ends of the follower and passing between said sprocket-wheels, and means for rotating said shaft, as shown and described.

2. In a baling-press of the character here-

inbefore indicated, the combination, with the  
follower and means for operating it, which are  
arranged within the press-box, of the wheel 2,  
having a ratchet-rim on its inner side and a  
5 parallel rim A' on its outer side to form the  
peripheral groove for receiving a rope, as  
specified, and a lever and pawl for acting on  
the ratchet-wheel, as shown and described,  
whereby the initial and completory move-

ments of the plunger may be respectively 10  
produced manually and by other power and  
made practically continuous, as shown and  
described.

PIERCE RIGGS.

Witnesses:

C. G. COUD,  
A. N. HOLMAN.