(No Model.)

W. W. ADAMS.

TRAMPING ATTACHMENT FOR COTTON OR HAY PRESSES.

No. 421,644. Patented Feb. 18, 1890.

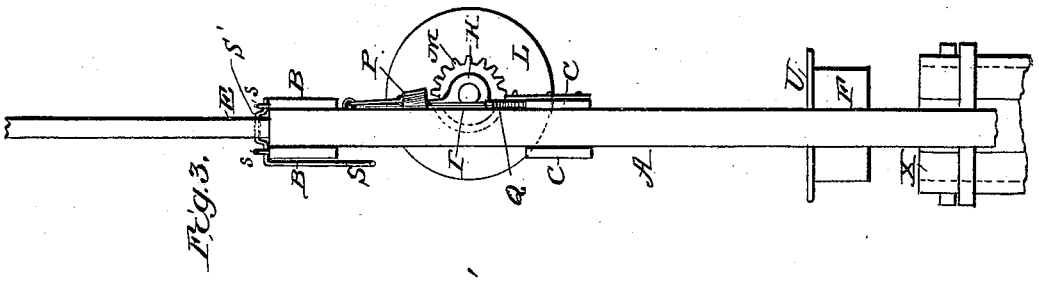

Fig. 3.

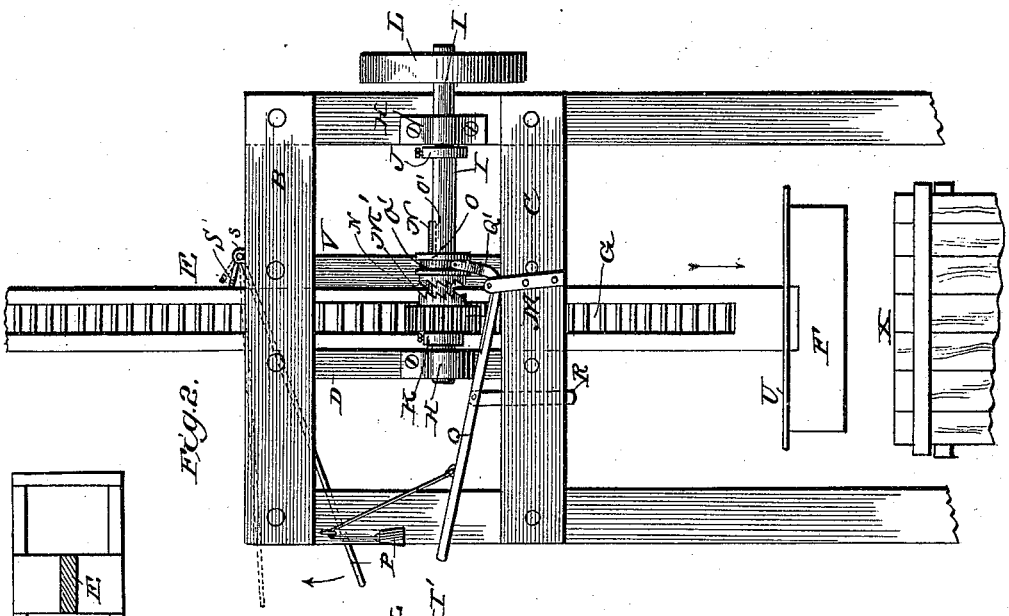

Fig. 2.

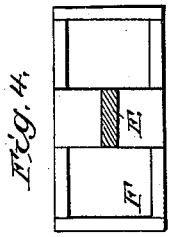

Fig. 4.

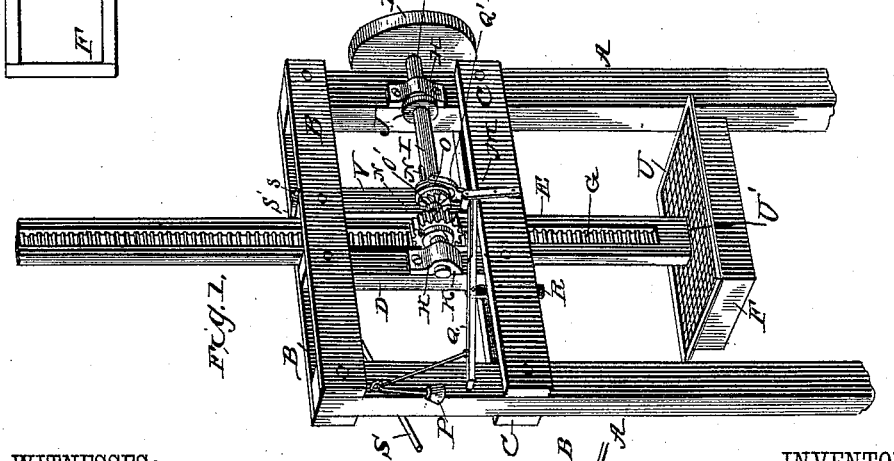

Fig. 1.

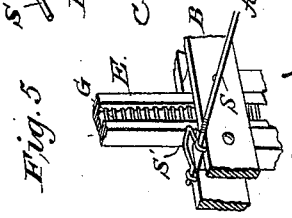

Fig. 5.

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WILLIAM W. ADAMS, OF OZARK, ARKANSAS.

TRAMPING ATTACHMENT FOR COTTON OR HAY PRESSES.

SPECIFICATION forming part of Letters Patent No. 421,644, dated February 18, 1890.

Application filed March 25, 1889. Serial No. 304,582. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM W. ADAMS, a citizen of the United States, residing at Ozark, in the county of Franklin and State of Arkansas, have invented a new and useful Improvement in Tramping Attachments for Cotton or Hay Presses, of which the following is a specification.

My invention has relation to baling-presses, and has for its object to provide a tramping apparatus attached to or over the press for packing or tramping the material into the press preparatory to pressing it into the bale. It can be used on all presses having an open top, (*i. e.*, when the head-block of the press moves entirely to either side and leaves the press-box completely open,) and obviates the necessity of tramping the cotton, hay, or other material into the press-box by muscular power, and by its use bales can be made of more equal weight.

I attain these objects by my invention, which consists in certain novel features of construction, which will hereinafter be fully described in the annexed specification, and particularly pointed out in the claims, reference being had to the accompanying drawings, in which—

Figure 1 is a perspective view of my improvement. Fig. 2 is a front view showing the tramping attachment ready for action over the bale-box. Fig. 3 is a side view of the same. Fig. 4 is a detail view of the tramping-block; and Fig. 5 is a detail view of the gravity-lever.

In the drawings, A A denote upright beams, which may be secured to the press-frame and extended a few feet above the press-box, and which form the supports for the tramping-frame, hereinafter referred to. At the top of these uprights and on either side of them are secured cross-timbers B B, and a short distance below them (about three feet) are secured two other timbers C C, of the same size and in the same manner. Between each pair of the cross-timbers B and C, and over the middle of the bale-box X, are secured two other uprights D and V, reaching from the bottom of the cross-timbers C C, which uprights, together with the cross-timbers B B and C C, form a slide for the guide-bar E, which slides easily up and down between them.

At the bottom of the guide-bar E is the tramper-block F, which fits into the press-box X, and which is formed of an open rectangular frame-work, as shown, so that most of the tramping is done around the sides and ends of the bale-box. The guide-bar E is constructed so as to leave a groove on its front side from two to three inches wide and about one or two inches deep, and extending the entire length thereof, and in this groove is secured a cog-bar G.

In journal-boxes H H, secured upon the upright D and one of the uprights A, is mounted a horizontal shaft I, which is held from longitudinal movement by the collars J K. The outer end of the shaft is extended, as at I′, on which is rigidly secured a pulley L, which drives the shaft I, and which may be in constant motion, whether the tramper is being used or not.

On the shaft I is a cog-pinion M, which is held in place by the set-collar K on one side and a feather or key N, formed on the shaft on its opposite side. This cog-pinion M, which is loosely mounted on the shaft I and engages the cog-rack G, is also provided with a clutch-collar M′.

O denotes a sliding clutch member, which is secured on the shaft, to revolve therewith, by means of a groove O′, engaging the feather or key N, by means of which the clutch may freely slide to the right or left when desired.

Q denotes a lever pivoted near its inner end to the cross-timbers C C, and which is provided at said end with an upwardly-extending forked arm Q′, which engages the grooves O′ in the clutch member O.

P denotes a weight, which is attached to the free end of the lever Q, and which counteracts the weight of the lever and holds the same in position to withdraw the clutch member O from contact with the pinion M, and thereby prevents the engagement of said clutch-member with the pinion before it is so desired.

R indicates an arm pivoted to the lever, which projects therefrom downwardly through and below the cross-timbers C C.

S denotes a brake-lever pivoted at its inner

end in bearings *s s* upon the top of the cross-beams B, and having its outer end extended to within convenient reach of the operator. The inner end of the said lever is formed with a lateral bail-shaped extension S′, which operates against the guide-bar E and prevents its falling at all times, though it never interferes with its rising. It is normally held in place against the guide-bar by gravity, and when it is desired to let the tramper-block fall or drop into the bale-box this brake is released from the guide-bar by moving the same upward.

In operation, when the tramping-block is in its uppermost position, the clutch will be disengaged, and by pressing upward on the lever S the tramping-bar will fall of its own weight. Now, when it is desired to hoist the tramper-block, the operator presses down on the lever Q and throws the clutch in gear with the pinion M, which operates on the bar and raises the reciprocating guide-bar E until the tramping-block F strikes the downwardly-projecting arm R, and thus throws the clutch out of gear with the pinion M, which then ceases to turn. The guide ceases to rise up and is held from falling by the brake-lever S. The pulley and the shaft, however, may in the meantime be continually rotating, and by again pressing the brake-lever upward the operation just described may be repeated, and thus the tramping and packing done by alternately hoisting and dropping the tramper-block F.

U is a light frame, the under side of which is covered with a wire screen or netting, which is provided with a central aperture U′, through which the guide-bar E passes. This frame is a few inches longer and wider than the tramping-block, so that when the block is dropped this frame catches on top of the bale-box and stays there, thus preventing the current of air made by the fall of the tramper-block from blowing the cotton out of the bale box or press. When the block is hoisted again, it carries the frame up out of the way. The main frame may be either connected with the press-frame, as before stated, or it may rest on the floor of the press-room and project over the bale-box.

I am aware that prior to my invention tramping attachments for cotton or hay presses have been made with cog-bar and pinion operating therein. I therefore do not broadly claim such as my invention; but

What I do claim, and desire to secure by Letters Patent, is—

1. In a tramping attachment for cotton or hay presses, the combination, with the main frame, the vertically-reciprocating guide-bar E, provided with a rack G, a tramping-block secured at the lower end of said bar E, the drive-shaft I, the loose cog-pinion M, and the sliding clutch member for engaging the clutch-collar of the pinion and means for operating the clutch, as described, of the gravity pawl or lever S, pivoted to the frame and engaging the guide-bar, said lever holding the said bar from downward movement, but permitting the same to move upward, substantially as and for the purpose described.

2. The combination, with the main frame, the vertically-reciprocating guide-bar having a tramping-block at its lower end, and the cog and rack mechanism for raising said guide-bar, of the screen-frame U, loosely mounted on the guide-bar above the tramping-block, substantially as and for the purpose described.

3. In a tramping attachment for cotton or hay presses, the combination, with the guide-bar provided with a tramping-block formed of open frame-work at its lower end, of the screen-frame U, mounted on the said guide-bar above the tramping-block, said frame being of slightly-greater length and width than said block, and the rack-and-cog mechanism for raising the guide-bar, substantially as and for the purpose described.

4. In a tramping attachment for hay or cotton presses, the combination, with the guide or tramping bar E, provided with a cog-rack, a drive-shaft mounted on the frame, a loose pinion mounted thereon engaging said rack and provided with a clutch-collar, and a sliding clutch member mounted on said shaft, of a lever pivoted on the frame, provided with a short arm engaging said clutch member, and a long arm provided with a depending portion arranged in the path of the tramping-block, whereby said arm is automatically elevated to release said clutch by the upward movement of said block, substantially as and for the purpose described.

5. In a tramping attachment for cotton or hay presses, the combination, with the guide or tramping bar E, provided with a cog-rack, a drive-shaft mounted on the main frame, a loose pinion mounted thereon having a clutch-collar, said pinion engaging the cog-rack, and a sliding clutch member mounted on the said drive-shaft, of a lever pivoted on the frame, its inner end engaging the sliding clutch, a counterbalance-weight secured to its end to prevent the weight of said lever from throwing the clutch into gear before it is desired, said lever being adapted to force said clutch into operative engagement when forced down by hand, and to be automatically operated to disengage the clutch by the upward movement of the tramping-bar, substantially as and for the purpose described.

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Witnesses:
T. C. MOORE,
M. F. GREER.