

A. SCHKADE.

TRAMPER ATTACHMENT FOR COTTON PRESSES.

No. 399,441.

Patented Mar. 12, 1889.

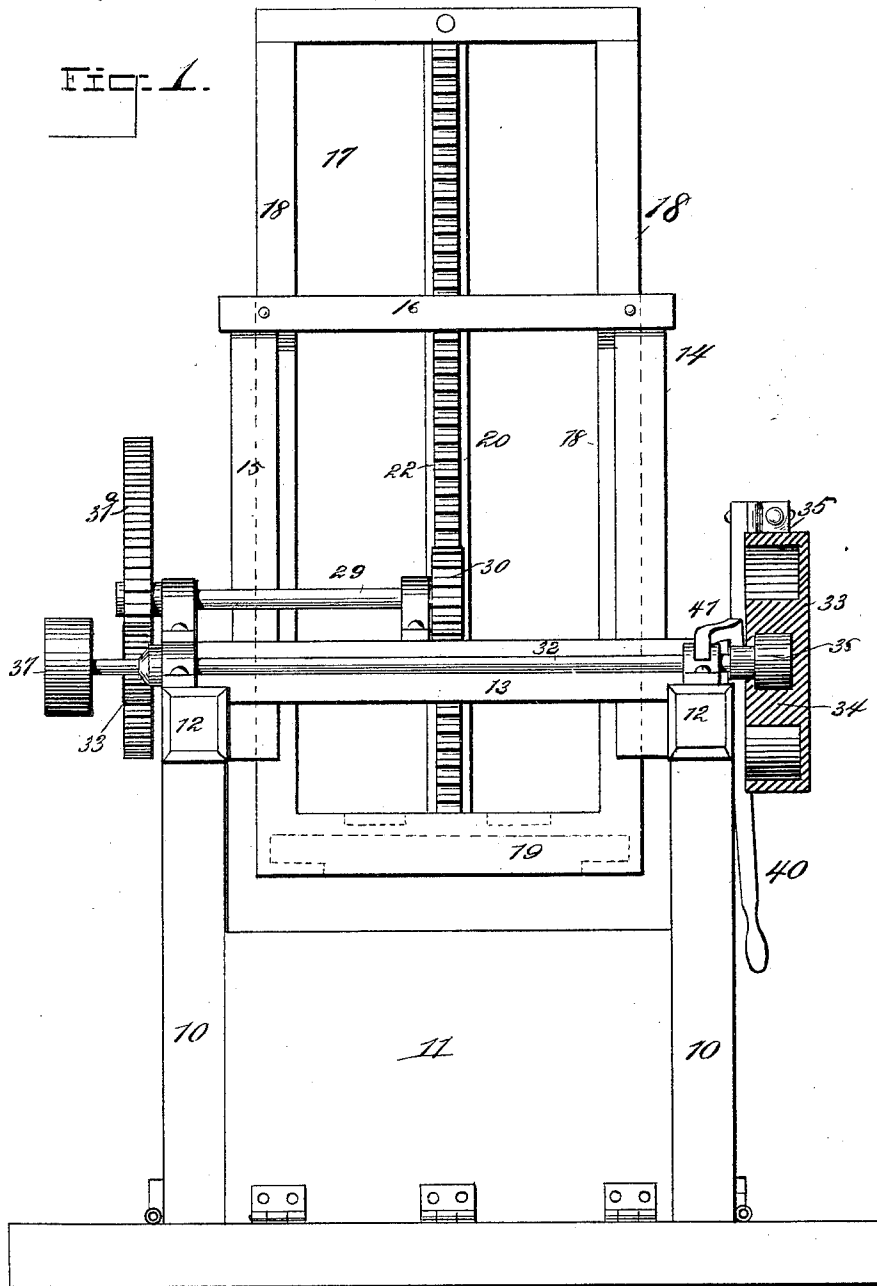


Fig. 1.

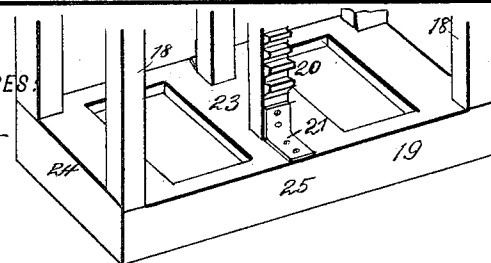


Fig. 2.

WITNESSES:
O. D. Mohr
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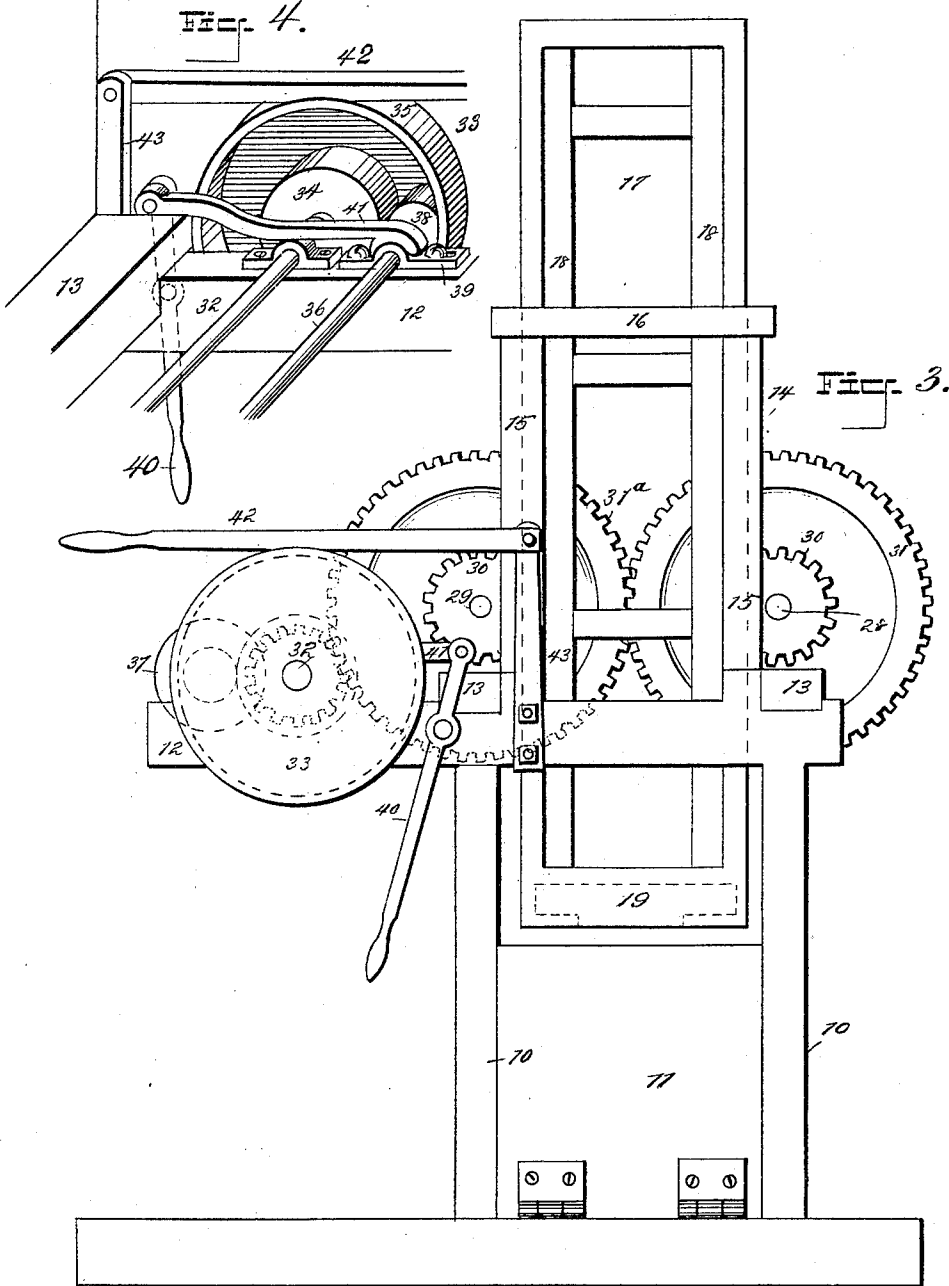
INVENTOR:
A. Schkade
 BY *Munn & Co.*
 ATTORNEYS.

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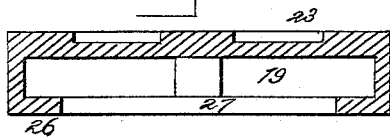
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WITNESSES:

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Fig. 5.



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UNITED STATES PATENT OFFICE.

AUGUST SCHKADE, OF GIDDINGS, TEXAS.

TRAMPER ATTACHMENT FOR COTTON-PRESSES.

SPECIFICATION forming part of Letters Patent No. 399,441, dated March 12, 1889.

Application filed July 12, 1888. Serial No. 279,767. (No model.)

To all whom it may concern:

Be it known that I, AUGUSTUS SCHKADE, of Giddings, in the county of Lee and State of Texas, have invented a new and Improved Tramper Attachment for Cotton-Presses, of which the following is a full, clear, and exact description.

My invention relates to an improvement in tramper attachments for cotton-presses, and has for its object to provide a tramper of simple, durable, and economical construction, which may be readily applied to any press, and which is designed to be operated by steam.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar figures of reference indicate corresponding parts in all the views.

Figure 1 is a front elevation of a press having my improvement applied. Fig. 2 is a perspective detail view of the plunger block or head. Fig. 3 is a side elevation of the press. Fig. 4 is a perspective view of the driving mechanism, and Fig. 5 is a longitudinal vertical section through the plunger block or head.

In carrying out the invention four standards, 10, are projected upward from the base of the press, between which standards suitable doors, 11, are hinged, as best shown in Figs. 1 and 3, and the said standards are provided at the upper extremity of each with side bars, 12, which bars are usually projected horizontally beyond the front of the said standards, as best illustrated in Fig. 3. The respective side bars are connected at the front and rear above the standards by horizontal beams 13. The plunger box or slide 14 is attached to the inner face of the side bars, 12, and consists, preferably, of four perpendicular angled bars, 15, attached one at each corner of the frame formed by the union of the side bars, 12, to the front and rear cross-bars, 13. The said perpendicular angled bars are preferably united at the top by horizontal side and end strips, 16. The plunger 17, adapted to slide in the plunger-box 14, consists, usually, of four uprights, 18, united at their upper ends in any approved manner and having attached

to their lower extremities a plunger block or head, 19, as best illustrated in Fig. 2. The several uprights 18 constitute the frame of the plunger, and are connected to the block or head 19 at one end, the said block or head being preferably rectangular, and one of said uprights is adapted to slide in each of the angled bars, as illustrated in Figs. 1 and 3. The plunger further consists of two spaced central uprights, 20, also attached to the plunger block or head, being preferably secured thereto by angled plates 21, as best shown in Fig. 2, the rack hereinafter described being omitted for that purpose. I do not, however, confine myself to the above mode of connection, as other approved or suitable means may be employed.

The upper ends of the central plunger-uprights, 20, extend upward, preferably to an equal height with the said uprights 18, and are provided upon their outer face with a rack, 22, as shown in Fig. 1. The plunger block or head 19 is preferably constructed with an upper horizontal body-board, 23, attached to side and end boards, 24 and 25, and to inwardly-extending marginal bottom boards, 26, as best shown in Figs. 2 and 5, in which it will be observed that a central rectangular opening, 27, is provided in the head.

The purpose of this form of plunger block or head is to prevent the cotton fibers, when compressed, from riding up at the sides of the press, the tendency being, when the block is carried downward, to draw the fibers inward.

While I have described the plunger block or head as constructed of wood, I desire it to be distinctly understood that I do not confine myself to any particular material, as the block or head may be, for instance, constructed of metal.

Upon the upper surface of the rear and front cross-bars, 13, bearings are secured, in which short shafts 28 and 29 are respectively journaled, which shafts extend from one outer side bar to a point opposite the central uprights, 20, of the plunger. Upon the inner end of each of the said shafts a pinion, 30, is mounted, which pinion engages, respectively, the rack-surfaces 22 of the plunger-uprights 20, as best illustrated in Fig. 1.

Upon the outer end of each of the shafts 28 and 29 a gear-wheel, 31 and 31^a, is secured, which gears are adapted to mesh one with the

other. Upon the front projecting ends of the several side bars, 12, a shaft, 32, is journaled in suitable bearings, provided at one end with a pinion, 33, meshing with the forward gear, 31^a. At the other end of the said shaft 32 a friction balance-wheel, 33^a, is keyed or otherwise secured, provided with a smooth flat outer face, an inwardly-extending hub, 34, and an inwardly-projecting peripheral flange, 35, preferably of a width equal to the width of the hub, as best shown in Figs. 1 and 4, whereby a groove is formed upon the inner face of the friction balance-wheel for the reception of the friction-pulley, as will be hereinafter set forth. A second or outer shaft, 36, is also journaled upon the projecting ends of the side bars, 12, which shaft is provided at one end with a drive-pulley, 37, and at the opposite end with a friction-pulley, 38, the latter pulley being adapted to enter the groove on the balance friction-wheel 33^a and alternately engage the inner surface of the wheel and the circumference of the hub. To this end the extremity of the shaft 36, carrying the friction-pulley 38, is mounted in a sliding bearing, 39, which bearing is reciprocated through the medium of a lever, 40, pivoted upon the outer face of one of the side bars, 12, the upper end of which lever is united by a connecting-rod, 41, with the sliding bearing 39, as best shown in Figs. 1 and 4. Thus by manipulating the lever 40 the pulley 38 upon the drive-shaft 36 may be made to engage the flange of the hub of the balance friction-wheel 33^a, thereby causing the drive-shaft to be driven in opposite directions, which shaft in turn communicates movement to the gears 31 and 31^a, and the said gears rotating the shafts 28 and 29 cause the pinions 30 attached thereto to elevate or depress the plunger.

A brake-lever, 42, is pivoted to a standard, 43, which standard is secured to the side bar, 12, carrying the lever 40, and extends vertically upward a sufficient height to permit the said lever 42, when brought down to a horizontal position, as illustrated in Fig. 3, to bear upon the periphery of the friction balance-wheel 33^a.

I desire it to be understood that although specific construction has been shown and described other equivalent construction may be used without departing from the spirit of the invention. The object of providing the two shafts 28 and 29 and their pinions 30 is to cause the plunger to move evenly and regularly within the box or slide, and the prime object of the brake-lever 42 is to balance the plunger and regulate the descent of the same.

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

1. The combination, with a press, a plunger box or slide secured to said press, and a plunger reciprocating in said box or slide and provided with an attached block or head and central uprights having a racked outer surface, of a horizontal shaft at each side of the

plunger box or slide provided with a pinion adapted to engage the said racked surface of the uprights, and means, substantially as shown and described, for rotating the said shafts, as and for the purpose specified.

2. The combination, with a press, a plunger box or slide secured to said press, a plunger reciprocating in said box or slide, provided with a horizontal hollow block or head, having inwardly-extending lower marginal flanges, uprights secured to said plunger-block at the center, and a rack secured to the outer face of the said uprights, of a horizontal shaft journaled at each side of the plunger box or slide, and pinions keyed to said shafts adapted to engage the said racks, substantially as and for the purpose specified.

3. The combination, with a press, a plunger box or slide secured to said press, a plunger reciprocating in said box or slide, a horizontal hollow block or head secured to said plunger, provided upon its under face with an inwardly-extending marginal flange, an upright centrally secured at each side of the plunger-block, and a rack secured to the outer faces of the said uprights, of a horizontal shaft journaled at the front and rear of the plunger slide or box, a pinion secured to said shafts engaging said racks, gear-wheels secured to the outer ends of the said shafts, an adjustable drive-shaft provided with a friction-pulley at one end, a second parallel shaft provided with a pinion engaging the said gear-wheels, and a grooved balance-wheel secured to the latter shaft, adapted to receive the friction-pulley upon the drive-shaft, substantially as and for the purpose specified.

4. The combination, with a press, a plunger box or slide secured to said press, a plunger reciprocating in said box or slide, a horizontal hollow block or head secured to said plunger, provided upon its under face with an inwardly-extending marginal flange, an upright centrally secured at each side of the plunger-block, and a rack secured to the outer faces of the said uprights, of a horizontal shaft journaled at the front and rear of the plunger slide or box, a pinion secured to said shafts engaging said racks, gear-wheels secured to the outer end of the said shafts, an adjustable drive-shaft provided with a friction-pulley at one end, a second parallel shaft provided with a pinion engaging the said gear-wheels, a balance-wheel provided with an inwardly-projecting peripheral flange and an inwardly-projecting hub adapted for engagement with the friction-pulley of the drive-shaft, a brake-lever adapted for engagement with the periphery of the balance-wheel, and means, substantially as shown and described, for adjusting the drive-shaft, as and for the purpose specified.

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Witnesses:

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