

(No Model.)

3 Sheets—Sheet 1.

A. MATTIJETZ. BALING PRESS.

No. 380,810.

Patented Apr. 10, 1888.

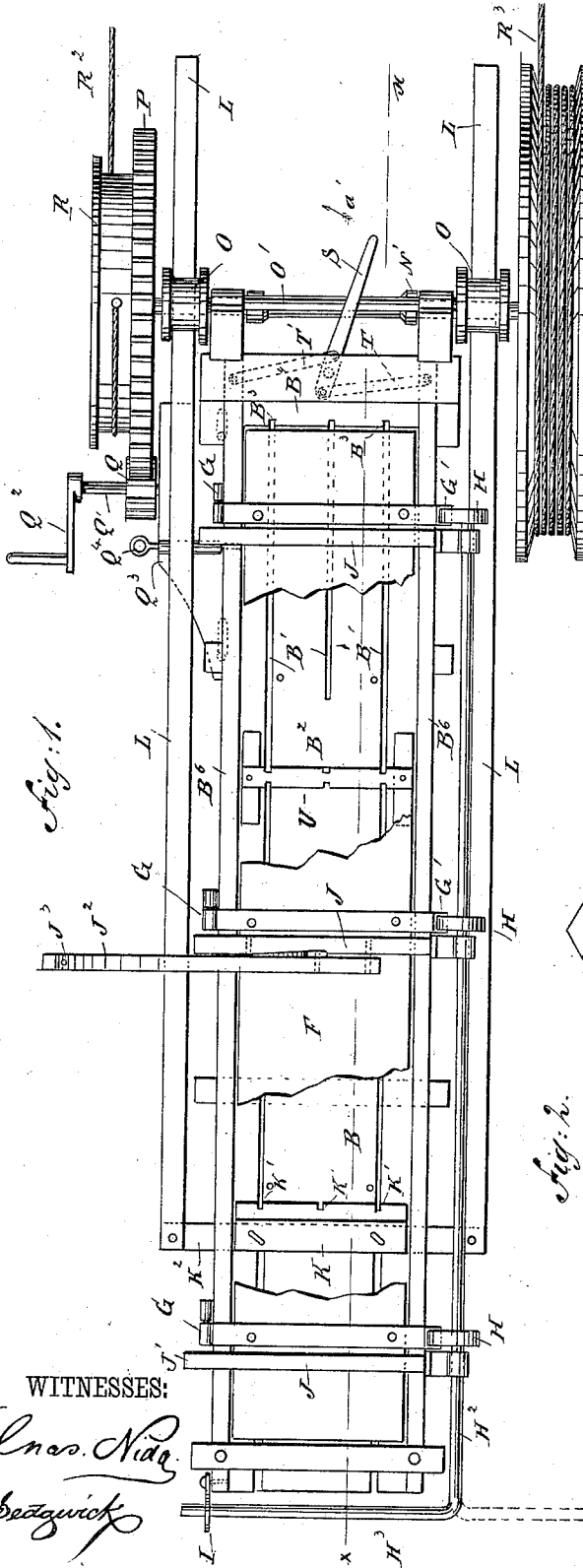


Fig. 1.

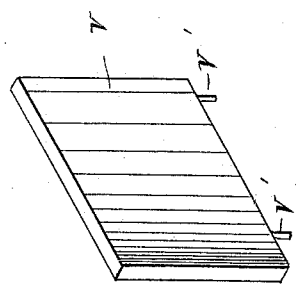


Fig. 3.

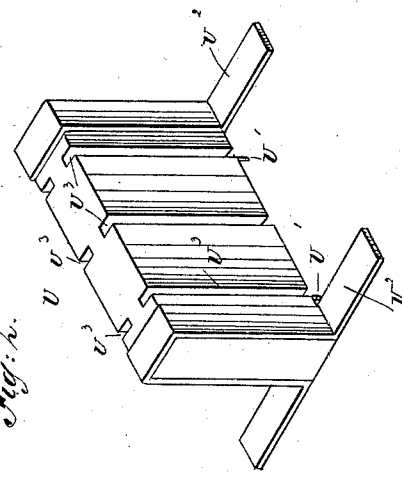


Fig. 2.

WITNESSES:

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C. Bedgwick

INVENTOR:

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(No Model.)

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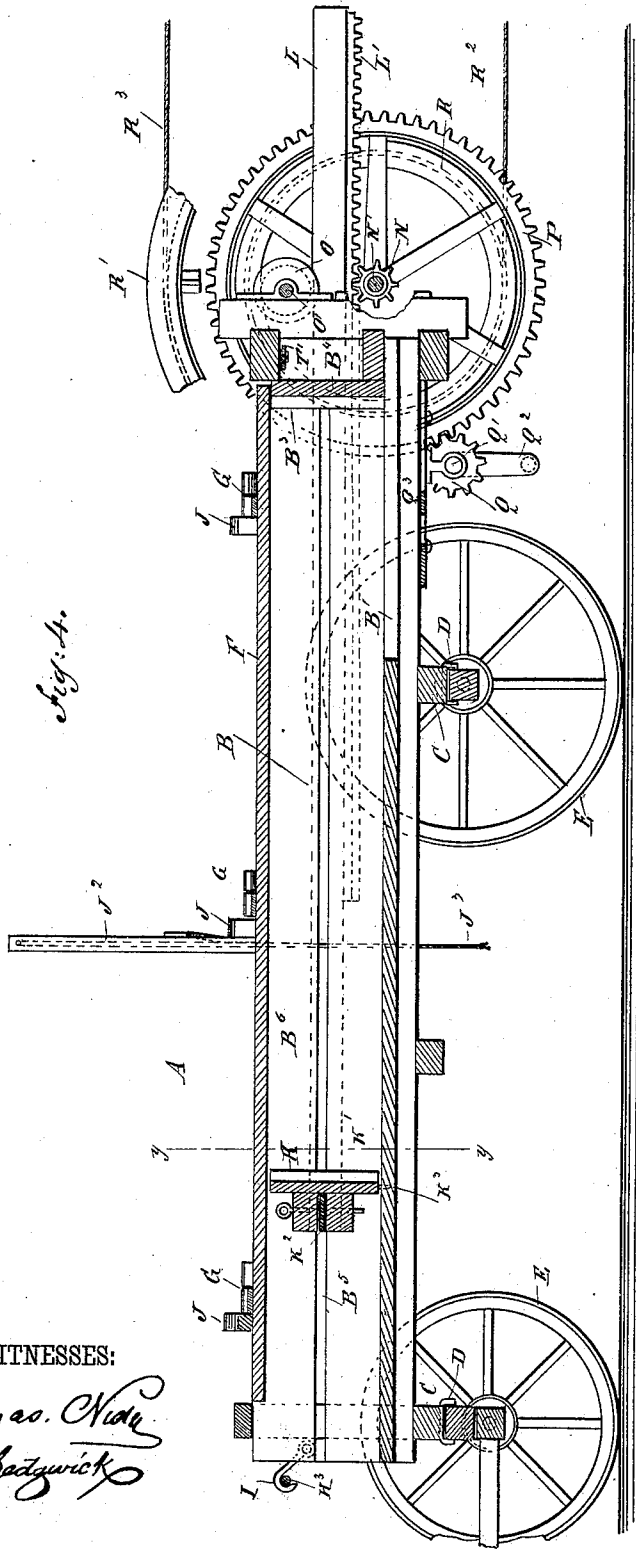


Fig. 4.

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Fig. 5.

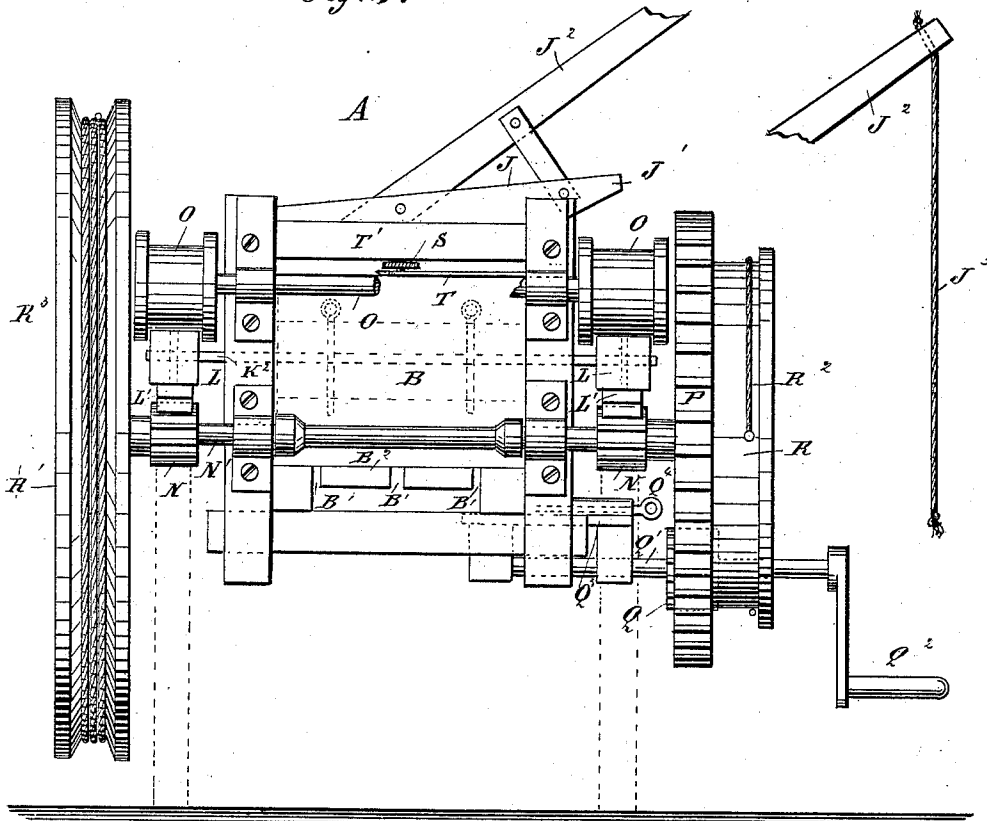
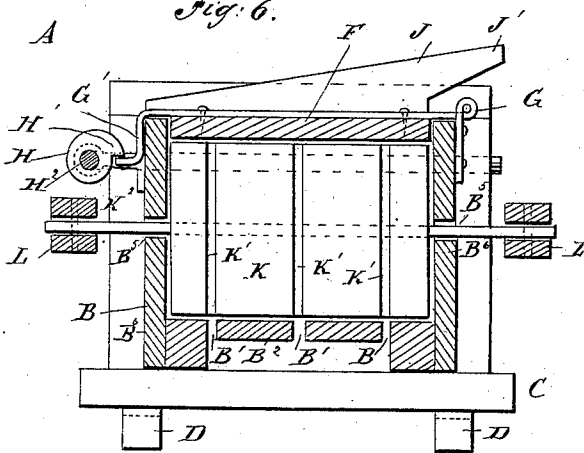


Fig. 6.



WITNESSES:

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UNITED STATES PATENT OFFICE.

ANDREAS MATTIJETZ, OF GIDDINGS, TEXAS.

BALING-PRESS.

SPECIFICATION forming part of Letters Patent No. 380,810, dated April 10, 1888.

Application filed November 29, 1887. Serial No. 256,397. (No model.)

To all whom it may concern:

Be it known that I, ANDREAS MATTIJETZ, of Giddings, in the county of Lee and State of Texas, have invented a new and Improved Baling-Press, of which the following is a full, clear, and exact description.

The object of my invention is to provide a new and improved baling-press which is simple and durable in construction, and is very easily operated by hand or other power.

My invention consists of the particular construction and arrangement of parts, as herein-after fully described, and pointed out in the claims.

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

Figure 1 is a plan view of my improvement, parts of the hinged cover being broken out. Fig. 2 is a perspective view of a division-block for making two bales at a time. Fig. 3 is a perspective view of a block for dividing the bale in layers. Fig. 4 is a longitudinal sectional elevation of my improvement on the line *xx* of Fig. 1. Fig. 5 is an enlarged end elevation of my improvement with parts broken out, and Fig. 6 is an enlarged transverse sectional elevation of my improvement on the line *yy* of Fig. 4.

My improved baling-press A is provided with a baling-box, B, to the bottom of which are secured the cross-beams C, each carrying a U-shaped and downwardly-extending clamping-iron, D, adapted to fit over the axle or bolster of a wagon, E, of any approved construction. The baling-box B, being mounted on a wagon, can be easily transported from one place to another and can easily be removed from the wagon by lifting the box upward, so that the clamping-irons D are disengaged from the axle or the bolster of the wagon E.

The baling-box B is provided with a cover, F, provided on one edge with hinges G, secured to one side of the baling-box B, so that the cover F can be swung upward for charging the baling-box B or for removing the bale. The bands of the hinges G, secured to the cover F, extend to the other edge of the cover F, and are then bent downward and outward to form each a projection, G', adapted to be engaged

on top by a shoulder, H', formed on a cam-wheel, H, secured to a shaft, H², mounted in suitable bearings on one side of the baling-box B. The outer end of the shaft H² is provided with a right-angular arm, H³, by which the said shaft can be turned, and said arm can be locked in position by a hook, I, pivoted to the side of the baling-box B, on which the hinges G are secured.

On the top of the cover F are secured a number of transverse bars, J, each provided near the hinged edge of the cover F with a projection, J', adapted to engage the side of the baling-box F when the cover is thrown backward, so that the said cover is held in convenient angular position for filling the box with the material to be baled. On the middle bar, J, is secured an upwardly-extending arm, J², provided on its outer end with a downwardly-extending piece of rope, J³, serving to pull the cover open whenever the operator desires to do so.

In the baling-box B is fitted to slide longitudinally a plunger, K, provided on its inner face with vertical slots K', corresponding with longitudinal slots B', formed in the bottom B² of the baling-press B. The longitudinal slots B' correspond to vertical slots B³, formed on the inside of the end piece, B⁴, of the baling-box B. The slots K' and B³ serve to pass the wire or cord through the box for baling. On the back of the plunger K is secured in any suitable manner a transverse bar, K², which extends through and is guided in slots B⁵, formed in the sides B⁶ of the baling-box B. The slots B⁵ extend throughout the length of the sides B⁶ of the said box and are sufficiently wide to permit an easy sliding movement of the cross-bar K². The outer ends of the latter are rigidly connected with arms L, extending longitudinally on the outside of the baling-box, and each carrying on its under side a rack, L', meshing into a pinion, N, secured on a transverse shaft, N', mounted in suitable bearings on the front end of the baling-box B. The top of each arm L is engaged by a flanged friction and guide roller, O, secured on a shaft, O', mounted transversely in suitable bearings on the front of the baling-box B directly above the shaft N. The flanges of the guide-rollers O prevent a sidewise motion of the arms L,

and the rollers O also prevent an upward movement of the said arms, so that the racks N' are always in mesh with the pinions N.

On one end of the shaft N' is secured a gear-wheel, P, adapted to mesh in a pinion, Q, secured on a shaft, Q', provided with a handle, Q², for turning the said shaft, which is mounted in suitable bearings on a plate, Q³, held to slide longitudinally on the under side of the baling-box B. A pin, Q⁴, passes through an eye in the said plate Q³, and is adapted to engage a corresponding aperture formed in the side B⁶ of the baling-box B. By sliding the plate Q³ forward and then securing the pin Q⁴ in the respective aperture of the side B⁶ the pinion Q is thrown in mesh with the gear-wheel P, and when the operator now turns the handle Q² a rotary motion is imparted to the shaft N', which by its pinions N imparts a longitudinal sliding motion to the racks L' and the arms L. The pinion Q and its shaft Q' serve to operate the baling-press by hand; but if I desire to employ other power for operating the baling-press I disengage the pin Q⁴ from the aperture in the side of the baling-box B and then move the plate Q³ inward, so that the pinion Q is disengaged from the gear-wheel P.

On the ends of the shaft N are secured the drums R and R', on which are wound the ropes R² and R³, respectively, in opposite directions, so that when one rope is unwound the other is wound up on its respective drum. The drum R' is somewhat larger in diameter than the drum R and serves to press the material in the box, while the other drum serves to give return motion for the plunger K.

On a transverse beam on the front of the baling-box B is fulcrumed a lever, S, connected at one side of its fulcrum with an arm, T, and at the other side of its fulcrum with an arm, T'. The arms T and T' extend in opposite directions, and are pivotally connected with the two sides B⁶ of the baling-box B near the upper edge. When the cover F is open and the operator presses the lever S in the direction of the arrow a', the arms T and T' press the upper edges of the sides B⁶ outward sufficiently to allow removal of the bale very easily from the baling-box B.

In the baling-box B, between the plunger K and the front end B⁴, can be placed the division-block U, provided on its bottom with the pins U', adapted to engage the outer longitudinal slots, B', in the bottom B². The division-block U is also provided on each end with longitudinally-extending feet U², resting on the bottom B² of the baling-box B. On each face of the division-block U are formed vertical slots U³, corresponding to the slots B', formed in the bottom B² of the baling-box B, and serving for the same purpose as the slots K' and B³, above described—that is, for passing the ropes through the box B after baling.

In the bottom B² of the baling-box B are also formed several sets of apertures, into which fit the pins V', secured to the under side of

the plate V, adapted to be held transversely in the said box B, and serving for forming several layers of the material to be baled in each bale.

The operation is as follows: The plunger K is moved to the extreme outer end of the baling-box B by rotating the shaft N', so that the pinions N move the racks L' and the arms L rearwardly. The cover F is then thrown open by pulling on the rope J³, so that the said cover swings upward on its hinges G until the projections J' engage one side, B⁶, of the baling-box B. If two bales are to be made at the same time, I place the division-block U in the baling-box, so that the pins U' engage the outer slots, B', in the bottom B² of the box B, as shown in Fig. 2. If the bales are to be of equal length, I place the said block U in the middle between the plunger K and the end B⁴. The box B is now filled with the material to be baled—such as hay or cotton—and then the cover F is closed and pressed down on the material in the box by hand; but as the material does not permit of an entire closing of the said cover F, I then turn the handle H³, which had been held in the position shown in dotted lines in Fig. 1, in an opposite direction, so that the shoulders H' of the cam-wheels H engage the projecting lugs G', whereby the bands of the hinges H, secured to the cover F, are pressed downward, thus pressing the cover F firmly on the material in the baling-box B. When the arm H³ of the shaft H² has assumed its inward horizontal position, as shown in Fig. 3, the hook I is hooked over the outer end of said arm H³, which with its shaft H² and the cam-wheels H stand locked in position. The shaft N' is now rotated either by hand-power, by turning the handle Q², or by any other suitable power pulling on the rope R³. The rotary motion thus imparted to the shaft N' causes the pinions N to move the racks L' outward, so that the arms L, connected with the transverse bar K², move the plunger K against the material in the baling-box B, so that the said material is compressed in the box B. It will be seen that when the division-block U is inserted in the baling-box B it moves along, when the material is compressed by the plunger K, until the desired degree of pressure has been reached. The operator now disengages the hook I from the arm H³ and throws the same over into the position shown in dotted lines in Fig. 1, whereby the shoulders H' disengage the lugs G', and the operator can now open the cover F by pulling on the rope J³. The wires or bands for baling the pressed material are inserted through the slots B', K', B³, and U³, (if the division-block is used,) and the said wires or bands are fastened in the usual manner.

In order to remove the finished bale from the box B, I throw the lever S forward in the direction of the arrow a', as above described, so as to move the sides B⁶ of the baling-box B outward sufficiently to loosen the bale or bales in the box. The plunger K is then again moved

outward to its former position by pulling on the rope R², which had been previously wound up on the drum R by the forward motion of the rope R³.

5 If it is desired to form several layers of material in one bale, I place the block V transversely in the baling-box B when filling the same with the material, so that the box B is divided into several compartments, and the
10 material thrown into the box forms several layers. Before the cover F is closed, after the box is filled, I remove the blocks V, and then proceed in the manner above described.

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

1. In a baling-press, the combination, with the slotted baling-box and the slotted division-block U, provided with the downwardly-extending pins U' and the longitudinally-extending feet U², adapted to be placed in said baling-box to make two bales at a time, of the sliding plunger K, transverse bar K², secured to said plunger, arms L, rigidly secured to the
20 transverse bar and having the racks L' on their under sides, the shaft N', provided with the pinions N and the gear-wheel P, said pinions meshing with the racks L', and the pinion Q, meshing with gear-wheel P and carried on
25 shaft Q', having the handle Q², all operating substantially as shown and described.

2. In a baling-press, the combination, with a slotted baling-box, of a plunger held to slide in said box, arms rigidly connected with said
30 plunger and provided with racks on their under sides, a shaft provided with pinions meshing with said racks, and having at its ends drums upon which ropes are wound in reverse directions, substantially as shown and de-
35 scribed.

3. In a baling-press, the combination, with a slotted baling-box, of a sliding plunger having secured to its rear face the transverse bar K², to which are rigidly connected the arms
40 L, having the racks L' secured to their under sides, the shaft N', provided with the pinions N, meshing with said racks, and carrying at its ends the drums R and R', and the ropes R² and R³, wound in reverse directions upon said

drums, the drum R' being of greater diameter
50 than the drum R, substantially as shown and described.

4. In a baling-press, the combination, with a baling-box, of the cover F, hinged to one side of said box and provided with the bars J,
55 having beveled projecting ends J', whereby they are adapted to rest against the hinge side of said box when the cover is lifted and hold it in an upright position, substantially as shown and described. 60

5. In a baling-press, the division-block U, provided with the downwardly-projecting guide-pins U' and the longitudinally-extending feet U², and having on each face the vertical slots U³, substantially as shown and described. 65

6. In a baling-press, a slotted box, a cover hinged to one side of said box, and lugs formed on the free edge of the said cover, in combination with the cam-wheels having shoulders adapted to engage said lugs, a longitudinal shaft secured to the outside of said bale-box and carrying said cam-wheels and bent at right angles at the end of said box, forming a handle, and the hook I, pivoted to the end of the bale-box and adapted to lock the cam and shaft
70 in place, substantially as shown and described. 75

7. In a baling-press, the combination, with a baling-box, of a cover hinged on one side of the said box, and bars provided with projecting ends and secured to the said cover, said
80 projecting ends being adapted to rest against the hinge side of the baling-box when the cover is open, an inclined arm secured to one of said bars, and a rope secured to the outer end of the said arm for opening the said cover, 85 substantially as shown and described.

8. In a baling-press, the combination, with a baling-box, of a lever fulcrumed on one end of the said baling-box, and arms pivotally connected with the said lever and with the sides
90 of the said box, so as to enable the operator to move the said sides outward for removing the finished bale, substantially as shown and described.

ANDREAS MATTIJETZ.

Witnesses:

F. RAUBE,
C. E. WARLICH.