

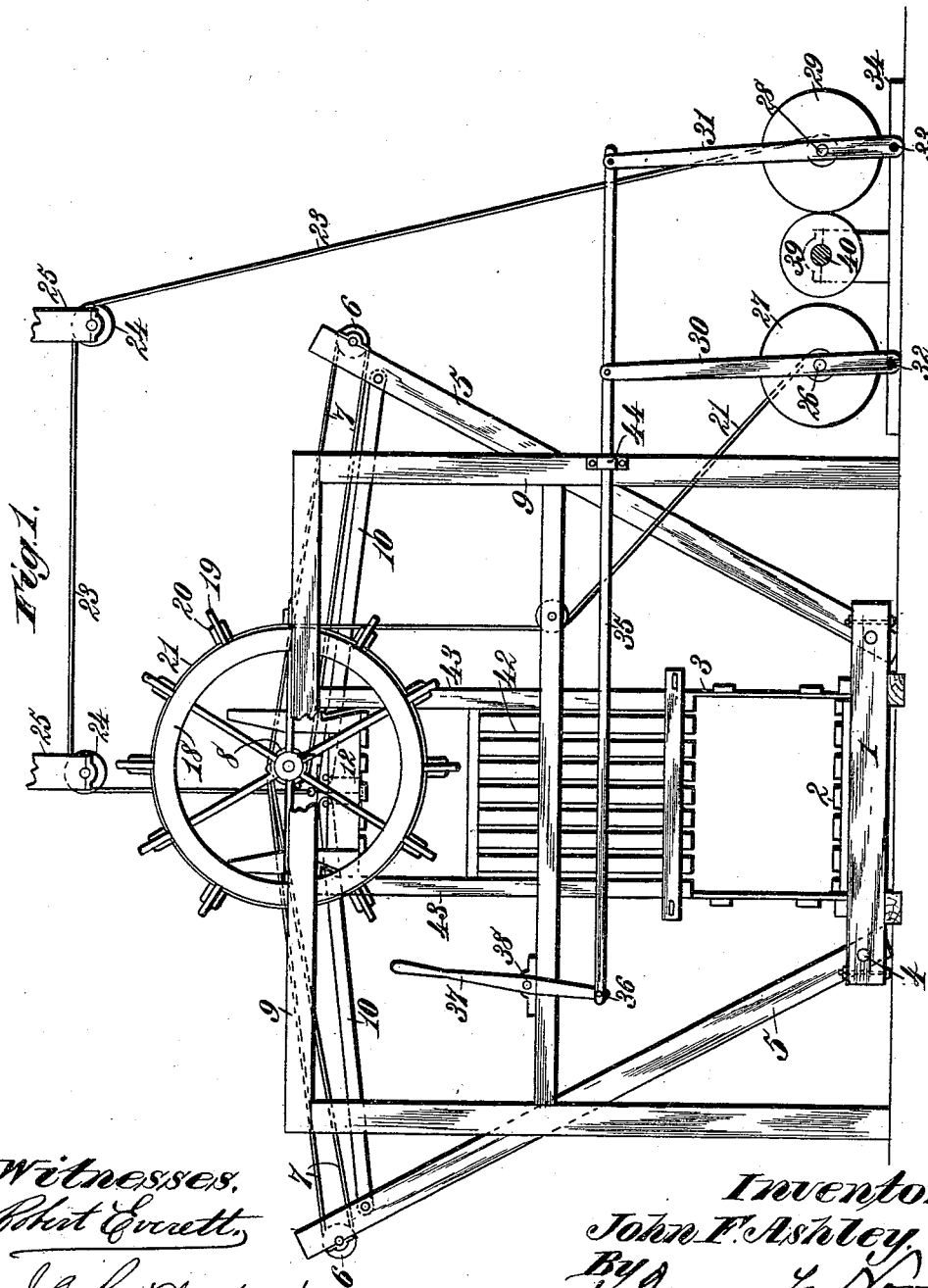
(No Model.)

2 Sheets—Sheet 1.

J. F. ASHLEY.
BALING PRESS.

No. 458,043.

Patented Aug. 18, 1891.



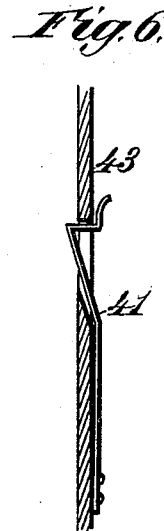
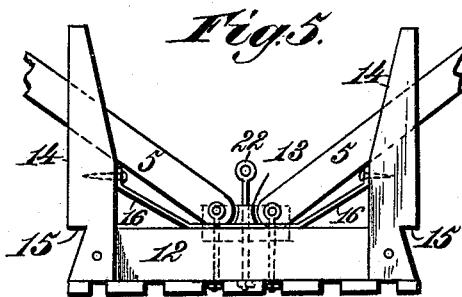
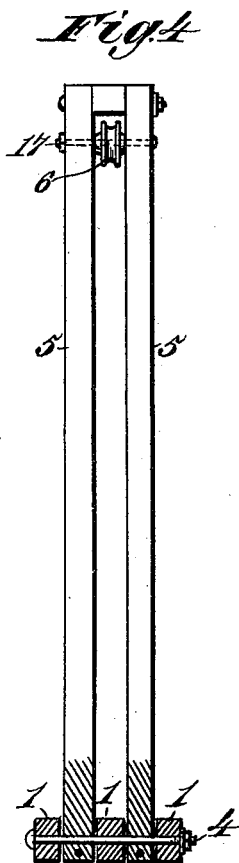
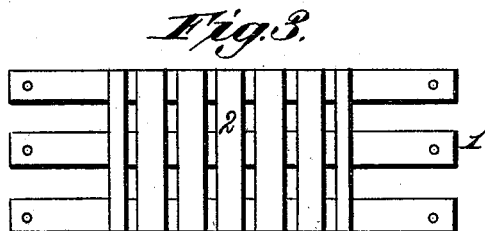
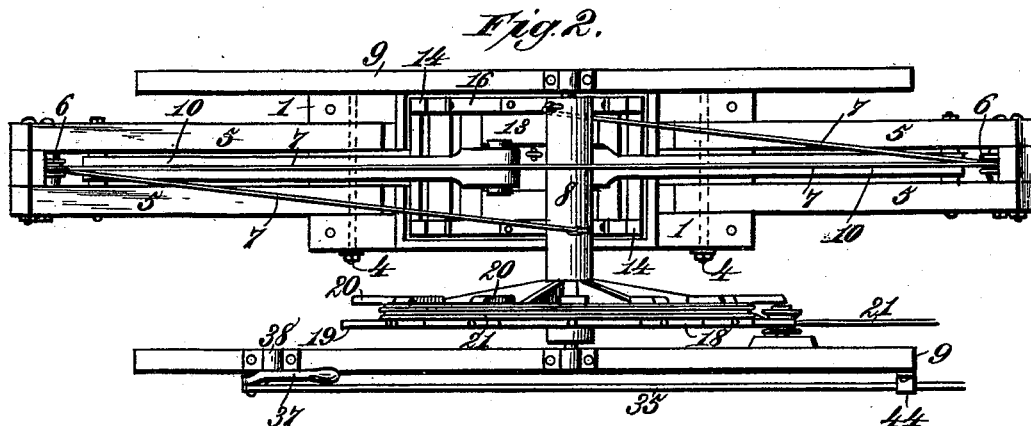
Witnesses.
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J. F. ASHLEY.
BALING PRESS.

No. 458,043.

Patented Aug. 18, 1891.



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UNITED STATES PATENT OFFICE.

JOHN F. ASHLEY, OF PELICAN, LOUISIANA.

BALING-PRESS.

SPECIFICATION forming part of Letters Patent No. 458,043, dated August 18, 1891.

Application filed May 29, 1891. Serial No. 394,564. (No model.)

To all whom it may concern:

Be it known that I, JOHN F. ASHLEY, a citizen of the United States, residing at Pelican, in the parish of De Soto and State of Louisiana, have invented new and useful Improvements in Baling-Presses, of which the following is a specification.

This invention relates to that type of baling-press for which Letters Patent Nos. 201,465 and 341,070 were issued, respectively, March 19, 1878, and May 4, 1886, to G. W. Soule.

The objects of my invention are to simplify and improve the press mechanism and provide novel, simple, efficient, and economical mechanism for automatically hoisting the plunger or follower and lowering the same to effect the pressing of the material into a bale.

To accomplish these objects my invention involves the features of construction and the combination or arrangement of devices hereinafter described and claimed, reference being made to the accompanying drawings, in which—

Figure 1 is a side elevation of a baling-press embodying my invention. Fig. 2 is a top plan view of the same. Fig. 3 is a detail plan view of the triple-bar base-frame. Fig. 4 is a detail sectional elevation of one of the levers for lowering the plunger or follower. Fig. 5 is a detail side view of the plunger or follower, showing portions of the links which connect the same with the actuating-levers; and Fig. 6 is a detail sectional view of a spring-catch employed for retaining the plunger or follower in its elevated position.

In order to enable those skilled in the art to make and use my invention, I will now describe the same in detail, referring to the drawings, wherein—

The numeral 1 indicates the triple-bar base-frame, comprising three separated timbers having transverse slats 2, which constitute the bottom of the baling-chamber 3. The extremities of the triple-bar base-frame are provided with transverse bolts 4, serving as pivots for the lower extremities of the actuating-levers 5, which at their upper extremities are provided with cable guides or pulleys 6, over which passes the windlass-cable 7, the ends of the latter being secured to opposite end

portions of a windlass 8, journaled upon the upper portion of the press-frame 9 in such manner that when the windlass is rotated in one direction the windlass-cable will be wound up, and thereby draw the actuating-levers 5 toward each other. In this rotation of the windlass the opposite end portions of the windlass-cable 7 wind in reverse directions upon the windlass, and inasmuch as the extremities of the said cable are attached to opposite end portions of the windlass it will be obvious that the reverse windings of the cable will not interfere with each other and will wind in uniform coils upon the windlass.

The actuating-levers 6 are connected by links 10 with the plunger or follower 12, such links being pivoted at one extremity to the levers and at the opposite extremities to a center block 13, rigidly secured to the central portion of the plunger or follower, as in Fig. 5.

The plunger or follower is provided at opposite ends with uprights or standards 14, having notches 15, and strengthened and sustained by braces 16, the construction being such as to provide a strong and substantial plunger suitable for the conditions required.

The actuating-levers are each composed of two parallel timbers, Fig. 4, between which the cable guide or pulley 6 is journaled on a transverse bolt or pin 17, while the lower extremities of such parallel timbers enter the spaces between the bars of the base-frame 1 and are mounted upon the pivot bolts or pins 4. The object of this construction is to avoid bending of the pivot bolts or pins 4 and 17 and provide a strong and efficient construction. When the windlass-cable 7 is wound upon the windlass 8, as explained, the actuating-levers 5 are drawn toward each other, and by means of the links 10 the plunger or follower 12 is depressed or lowered for the purpose of effecting the pressing operation and the formation of the bale in the baling-chamber 3.

The windlass 8 is provided at one extremity with a rigidly-attached wheel or pulley 18, having a series of radiating fingers or projections 19 and 20, between which passes the cable 21, that serves to rotate the wheel or pulley for the purpose of winding the wind-

lass-cable and thereby operate the actuating-levers to lower or depress the plunger or follower.

To elevate or hoist the plunger or follower 5 after the pressing operation has been effected, I provide it with a central eyebolt 22, to which is attached one extremity of the plunger-hoisting cable 23. This cable 23 passes over pendent cable guides or pulleys 24, supported 10 by pendent hangers 25, supported in any suitable manner. The cable 21 is attached to the shaft 26 of a friction-driven wheel 27 and the plunger-hoisting cable 23 is attached to the shaft 28 of a similar friction-driven wheel 29, the shafts of these friction-driven wheels being suitably supported, respectively, in two swinging arms or supports 30 and 31, which are pivoted at their lower extremities, as at 32 and 33, to a suitable base-plate 34. The upper extremities of the swinging arms or supports 30 and 31 are pivotally attached to the horizontal actuating-rod 35, pivotally attached at one extremity, as at 36, to a hand-lever 37, which is pivoted, 25 as at 38, to a suitable piece of the press-frame 9.

At a point between the peripheries of the friction-wheels 29 is arranged a friction drive-wheel 39, rigidly secured to a shaft 40, mounted 30 in suitable bearings and designed to be continuously rotated in one direction through the medium of a motor of any character that will fulfill the conditions required. It will be obvious that if the hand-lever 37 be operated to swing the arms 30 and 31 one of the friction-driven wheels will be forced in superficial contact with the friction drive-wheel and the operating friction-driven wheel will be moved out of contact with such friction drive-wheel. 40 By this means the friction-driven wheel 29 can be moved into frictional engagement with the friction drive-wheel 39, and consequently the plunger-hoisting cable 23 will be wound up for the purpose of elevating or hoisting the plunger to the position indicated in Fig. 1, where it will be automatically engaged with and sustained by a spring-catch 41, springing into the recesses 15 of the plunger uprights or standards. If the wheel 27 be moved into superficial contact with the frictional drive-wheel 39, the cable 21 will be wound up and the wheel or pulley 18 thereby rotated in the direction required to wind the opposite end portions of the windlass 7, whereby the actuating-levers 5 will be drawn toward each other for the purpose of depressing or lowering the plunger 12. It will be evident that this reversing mechanism is an exceedingly simple and economical element of the combination, and since it is under perfect control of the attendant through the medium of a single hand-lever the press-plunger can be quickly and conveniently controlled in its movements. 60

65 The press-boxing 42 is of ordinary construction;

but the end standards 43 are extended outward to the horizontal top portion of the press-frame 9, and one of these uprights 43 is provided with the spring-catch 41, hereinbefore alluded to; but obviously I may provide 70 one or more of the uprights with a spring-catch for the purpose of engaging different portions of the plunger to more securely retain it in its elevated position. The windlass-operating cable 21 is preferably of smaller 75 caliber than the plunger-hoisting cable 23; but this is not material. The rod 35, which serves to swing the arms or supports 30 and 31, is arranged to move horizontally in a guide or guides 44 on the press-frame 9, and this 80 actuating-rod is placed at one side of the press-frame, as will be understood by reference to Fig. 2, thereby placing the hand-lever in position for its convenient manipulation by the attendant. 85

Having thus described my invention, what I claim is—

1. The combination, with a baling-chamber, a plunger, actuating-levers having link connections with the plunger, a windlass having 90 a rigidly-attached wheel or pulley, and a windlass-cable connected with the actuating-levers, of a windlass-operating cable connected with the wheel or pulley of the windlass, a plunger-hoisting cable connected with 95 the plunger, a pair of movable arms or supports provided with driven wheels connected, respectively, with the windlass-operating cable and the plunger-hoisting cable, a drive-wheel interposed between the driven wheels, 100 and means for moving the arms or supports to place either driven wheel in engagement with the drive-wheel, substantially as described.

2. The combination, with a baling-chamber, 105 a plunger, a pair of actuating-levers having link connections with the plunger, a windlass having at one end a rigidly-attached wheel or pulley, and a windlass-cable connecting the windlass with the actuating-levers, of a 110 windlass-operating cable secured to the periphery of the wheel or pulley on the windlass, a plunger-hoisting cable connected with the plunger, pendent hangers having cable guides or pulleys supporting the plunger-hoisting cable, a pair of swinging arms or supports provided with driven wheels connected, 115 respectively, with the windlass-operating and the plunger-hoisting cables, a drive-wheel interposed between the driven wheels, a connecting-rod for swinging the arms or supports, and a hand-lever for operating the connecting-rod, substantially as described. 120

In testimony whereof I have hereunto set my hand and affixed my seal in presence of 125 two subscribing witnesses.

JOHN F. ASHLEY. [L. S.]

Witnesses:

GEO. SIMMONS,

NEEDHAM W. PORKER.