

R. A. WAKEFIELD.
PRESS SWEEP.
APPLICATION FILED OCT. 9, 1909.

956,746.

Patented May 3, 1910.

2 SHEETS—SHEET 1.

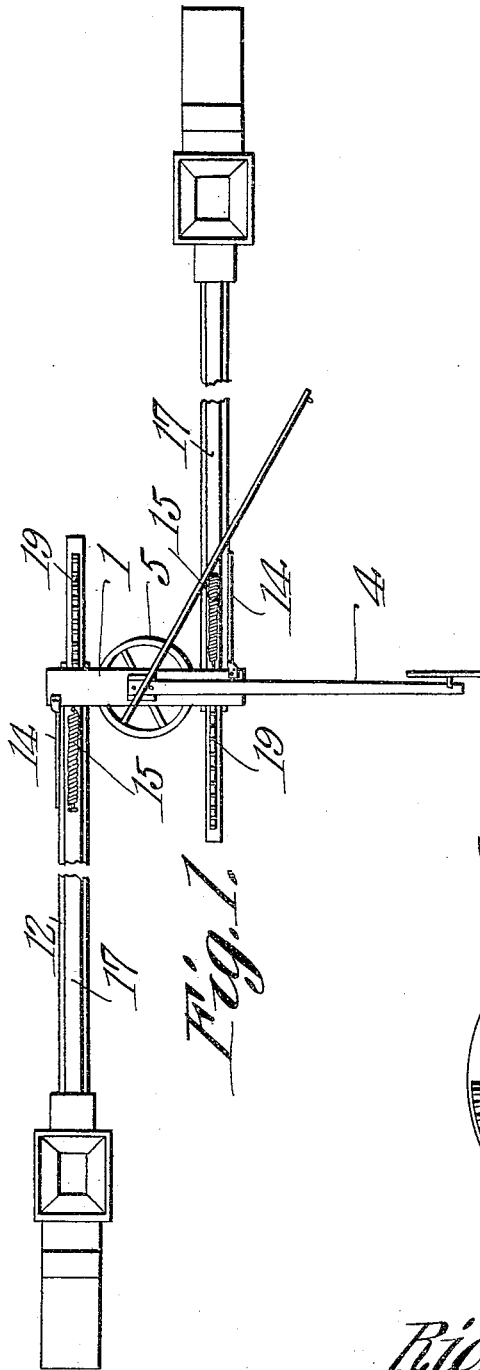


Fig. 1.

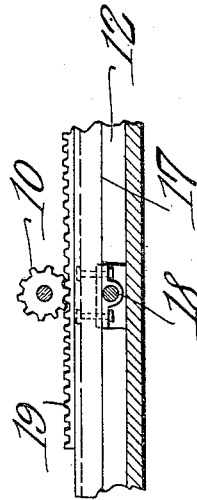


Fig. 4.

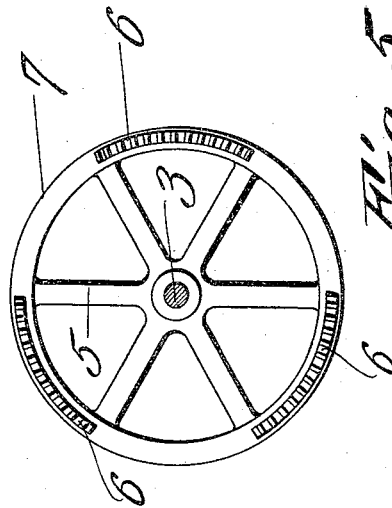


Fig. 5.

Witnesses

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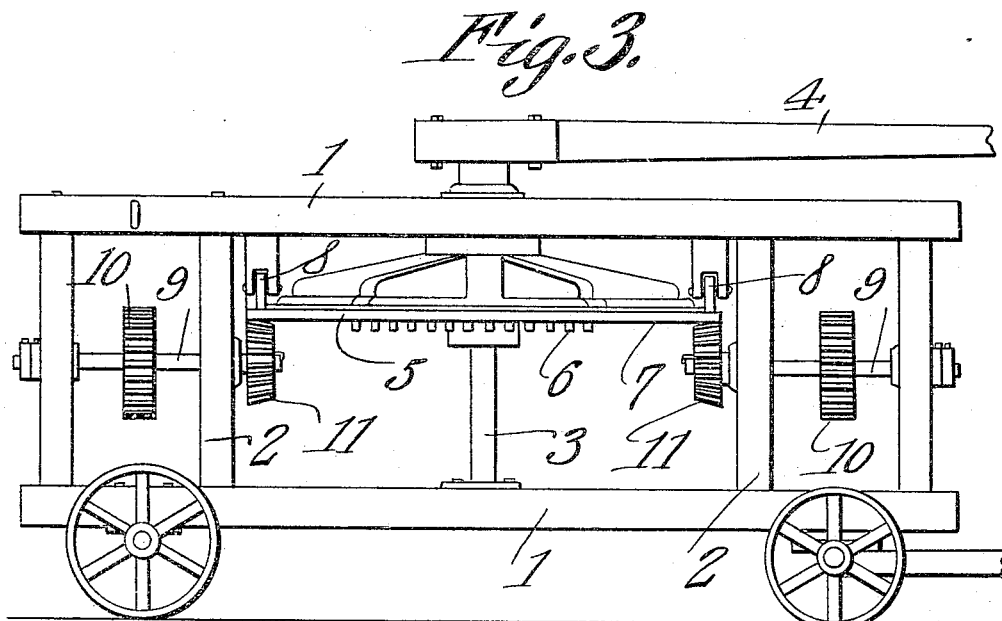
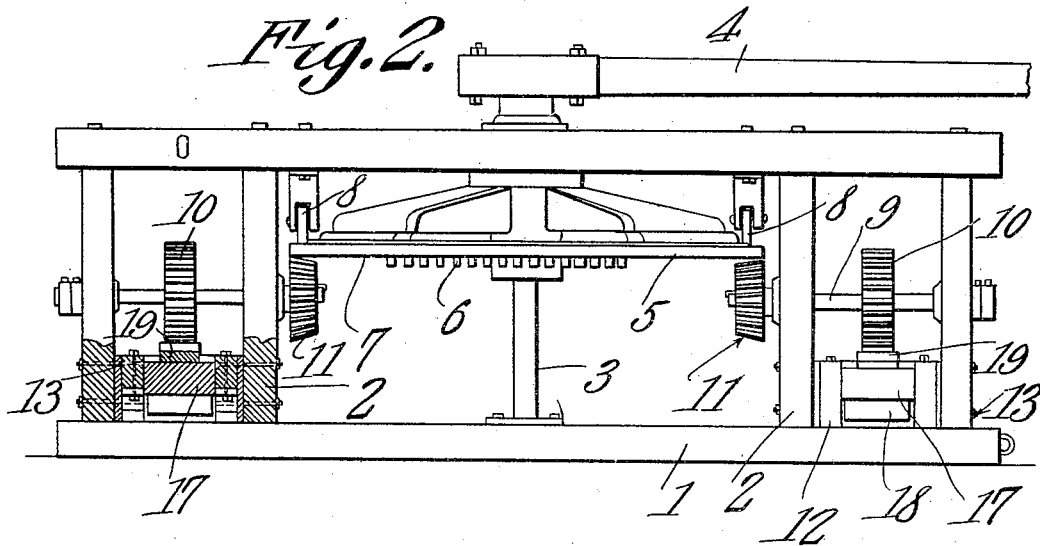
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Witnesses

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UNITED STATES PATENT OFFICE.

RICHARD A. WAKEFIELD, OF MIDWAY, TEXAS.

PRESS-SWEEP.

956,746.

Specification of Letters Patent.

Patented May 3, 1910.

Application filed October 9, 1909. Serial No. 521,959.

To all whom it may concern:

Be it known that I, RICHARD A. WAKEFIELD, a citizen of the United States, residing at Midway, in the county of Madison and State of Texas, have invented a new and useful Press-Sweep, of which the following is a specification.

This invention has relation to press sweeps and it consists in the novel construction and arrangement of its parts as hereinafter shown and described.

The object of the invention is to provide a sweep adapted to be used in conjunction with two baling presses and in which the parts are so arranged as to move the plungers of the presses alternately in their active strokes. The parts of the sweep structure are so assembled that the presses are located at its opposite sides.

With the above object in view the sweep structure includes a frame having at its end portions uprights adapted to receive between them the end portions of the press plunger rod guides and stub shafts are journaled for rotation in the said uprights and are provided with gear wheels for meshing with racks carried by the press plunger rod. An arbor is journaled for rotation at the intermediate portion of the frame and a sweep is attached to the upper end of the arbor in the usual manner. A master wheel is fixed to the arbor and is provided upon its under side with several series of gear teeth which series are separated one from the other but which are located in the same circular arc struck from the center of the master wheel. A series of gear teeth at one side of the wheel is diametrically opposite a space at the other side of the wheel and this arrangement is preserved throughout the entire series of spaces and gear teeth upon the master wheel. Bevel pinions are fixed to the inner ends of the stub shafts and lie in the path of movement of the gear teeth carried by the master wheel and rollers are journaled upon the frame and bear upon the edges of the master wheel directly above said beveled pinions. Rollers are carried by the press guide troughs and are located directly below the gear wheels upon the stub shafts.

In the accompanying drawings, Figure 1 is a plan view of the press sweep connected with two baling presses. Fig. 2 is a side elevation of the press sweep. Fig. 3 is a side elevation of the press sweep mounted

upon wheels for transportation purposes. Fig. 4 is a longitudinal sectional view of a portion of one of the first plunger rod guide troughs. Fig. 5 is an under plan view of the master wheel.

The press sweep includes an approximately rectangular frame 1 having at its end portions vertically disposed uprights 2 which are parallel with the ends of the said frame and spaced from the same. An arbor 3 is journaled in vertical position at the middle of the frame 1 and a sweep 4 is fixed to the upper end of the arbor 3 and lies above the frame 1. A master wheel 5 is fixed to the arbor 3 and lies between the upper and lower sides of the frame 1. The master wheel 5 is provided upon its under side with several series of gear teeth 6 which are separated from each other by spaces 7. The teeth 6 at one side of the wheel 5 are diametrically opposite a space 7 at the other side of the wheel and this arrangement is preserved throughout the several series of teeth. Rollers 8 are journaled for rotation upon the frame 1 and bear against the upper side of the master wheel 5 in the vicinity of the periphery thereof and at the opposite sides thereof. Stub shafts 9 are journaled for rotation in the ends of the frame 1 and the uprights 2 and are provided with gear wheels 10 which are located between the ends of the frame 1 and the uprights 2. Beveled pinions 11 are fixed to the inner ends of the stub shafts 9 and lie in the path of movement of the teeth 6 carried by the master wheel 5 and are adapted to be enmeshed by the said teeth 6. Press plunger rod guides 12 fit snugly in the spaces between the ends of the frame 1 and the uprights 2 and are secured in position therein by means of bolts 13 which pass transversely through the ends of the frame 1 and the sides of the said guides and also by similar bolts which pass through the uprights 2 and the sides of the guides. Braces 14 are attached at their upper ends to the top of the frame 1 and at their lower ends to the guides 12. Coil springs 15 are connected at their upper ends to the frame 1 and at their lower ends to plunger rods slidably mounted in the troughs 12. Rollers 18 are journaled in the troughs 12 and are adapted to hold the plunger rods 17 in elevated positions whereby the teeth racks 19 carried by the said rods 17 will be held in mesh with the wheels 10.

The operation of the sweep is as follows:

When the parts are assembled as described and as shown in Fig. 1 of the drawing a draft animal is hitched to the sweep 4 in the usual manner and the arbor 3 is rotated. As the master wheel 5 rotates upon the axis of the arbor the teeth 6 are carried around and when the said teeth engage a beveled pinion 11 at one side of the frame 1 a space 7 is moved over the bevel pinion at the other side of the said frame. Thus as the pinion 11 is engaged by the teeth to rotate one of the stub shafts 9 and gear wheel 10 to cause one of the plunger rods to make an active stroke the stub shaft 9 at the other side of the frame is free and may be rotated in a direction opposite to that in which it rotates when causing its attached plunger rod to make an active stroke and presuming that the last said plunger rod has just completed an active stroke the tension of the spring 15 attached thereto will cause the plunger rod to retract. Thus it will be seen that by reason of the fact that the stub shafts 9 are in alinement with each other and the teeth 6 and spaces 7 are alternately arranged upon the master wheel 5 and the teeth are diametrically opposite the spaces and vice versa throughout the entire series that but one plunger rod at a time is making an active stroke, and during such active stroke the other plunger rod is retracting. During the longitudinal movement of the plunger rods 17 the racks 19 carried thereby are held in engagement with the gear wheels 10 by the rollers 18 and during the operation of the press sweep the edges of the master wheel 5 are braced in a downward direction toward the beveled pinions 11 by the rollers 8 which are journaled in the frame 1.

40 Having described my invention what I claim as new and desire to secure by Letters Patent is:

1. A power mechanism for presses com-

prising an approximately rectangular frame, uprights mounted upon the frame and spaced from the ends thereof, stub shafts journaled for rotation in the frame and said uprights, gear wheels fixed to the stub shafts and located between the ends of the frame and the uprights, beveled pinions fixed to the inner ends of the stub shafts, an arbor journaled for rotation in the frame, a sweep attached thereto, and a master wheel carried by the arbor and having means adapted to engage the beveled pinion. 55

2. A power mechanism for presses comprising an approximately rectangular frame, uprights mounted upon the frame and spaced from the ends thereof, means for attaching press plunger rods guide troughs to the ends of the frame and said uprights, stub shafts journaled for rotation in the ends of the frame and in said uprights, gear wheels carried by the stub shafts and located between the ends of the frame and the uprights, beveled pinions fixed to the inner ends of the stub shafts, an arbor journaled for rotation at the middle of the frame, a sweep attached to the arbor, a master wheel fixed to the arbor and located between the upper and lower sides of the frame, said master wheel having upon its under side several sets of gear teeth separated by spaces and adapted to engage the beveled pinions upon the stub shafts, and rollers journaled in the frame and bearing upon the upper side of the master wheel in the vicinity of its periphery and above the beveled pinion. 75

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses. 80

RICHARD A. WAKEFIELD.

Witnesses:

J. M. ROBERTS,
J. T. PAYNE.