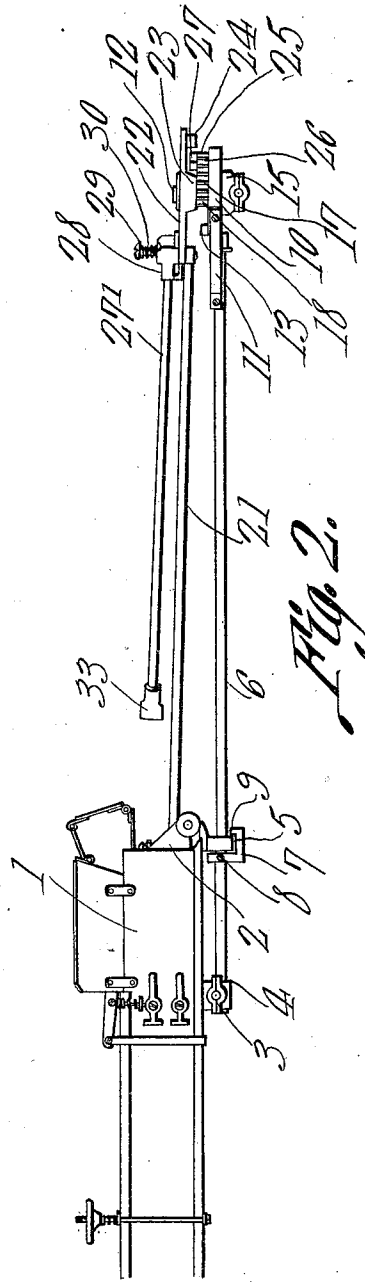
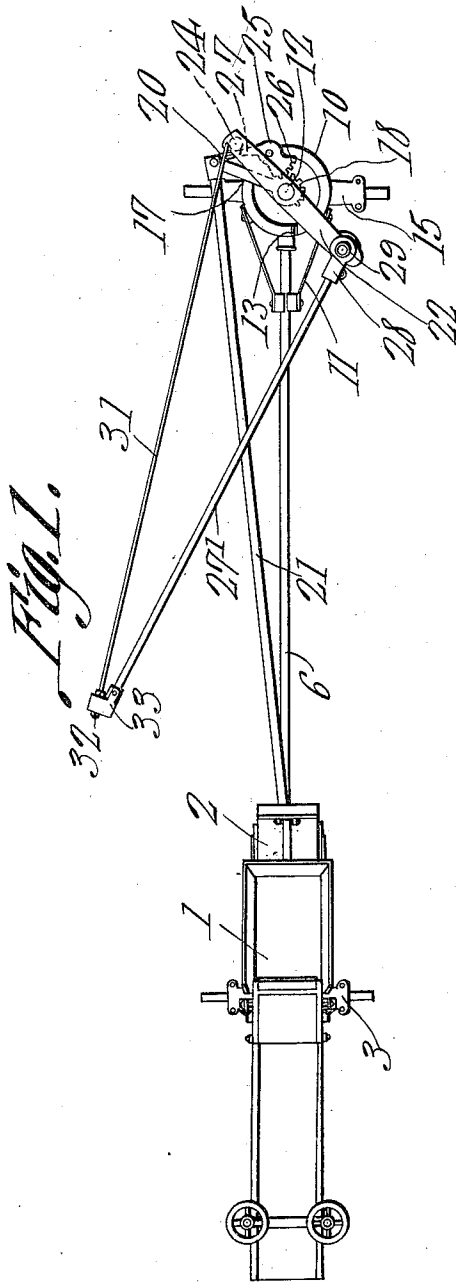


E. H. SHOLAR.
SWEEP MECHANISM FOR BALING PRESSES.
APPLICATION FILED JUNE 8, 1911.

1,046,875.

Patented Dec. 10, 1912.

4 SHEETS—SHEET 1.



Witnesses

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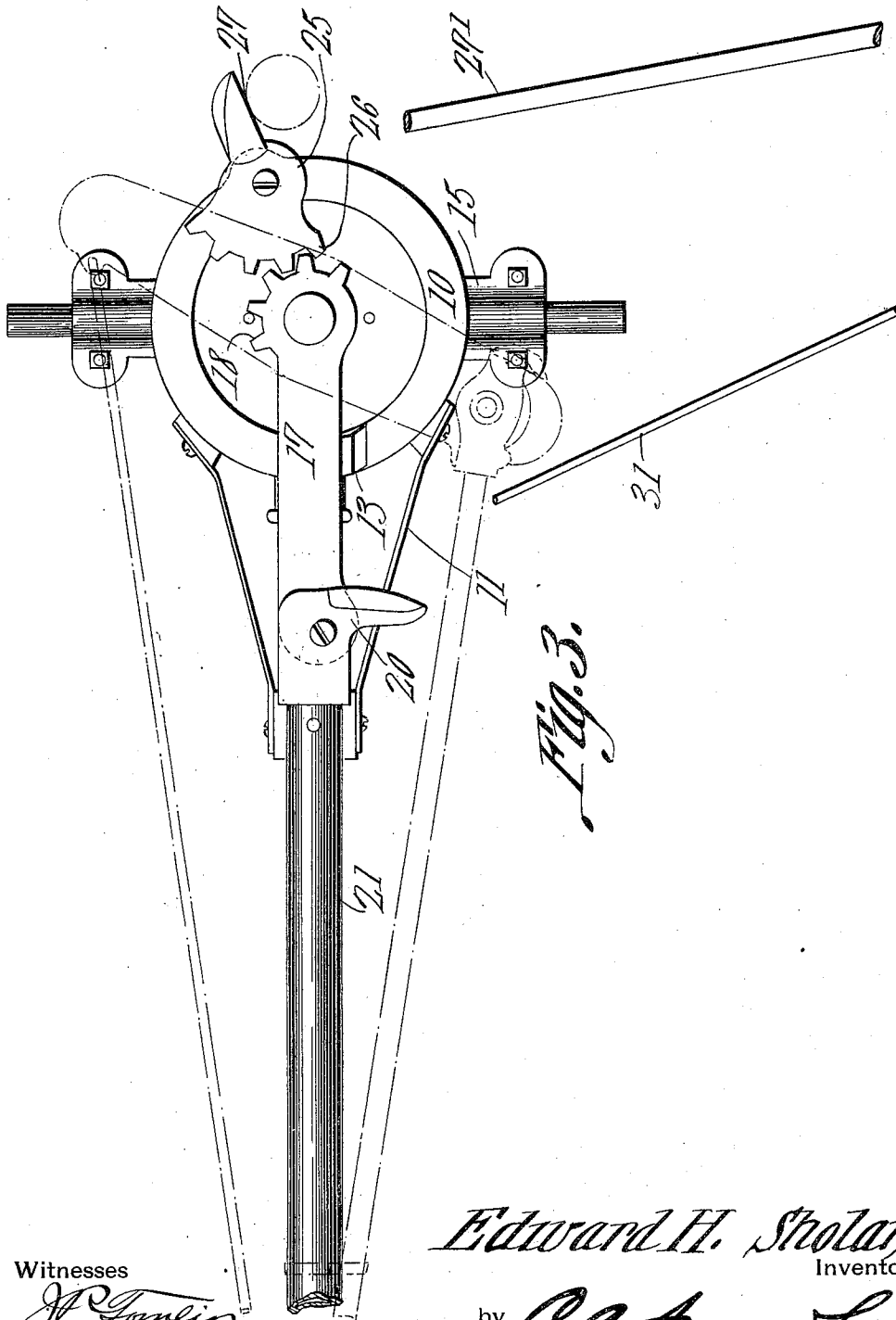
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Witnesses

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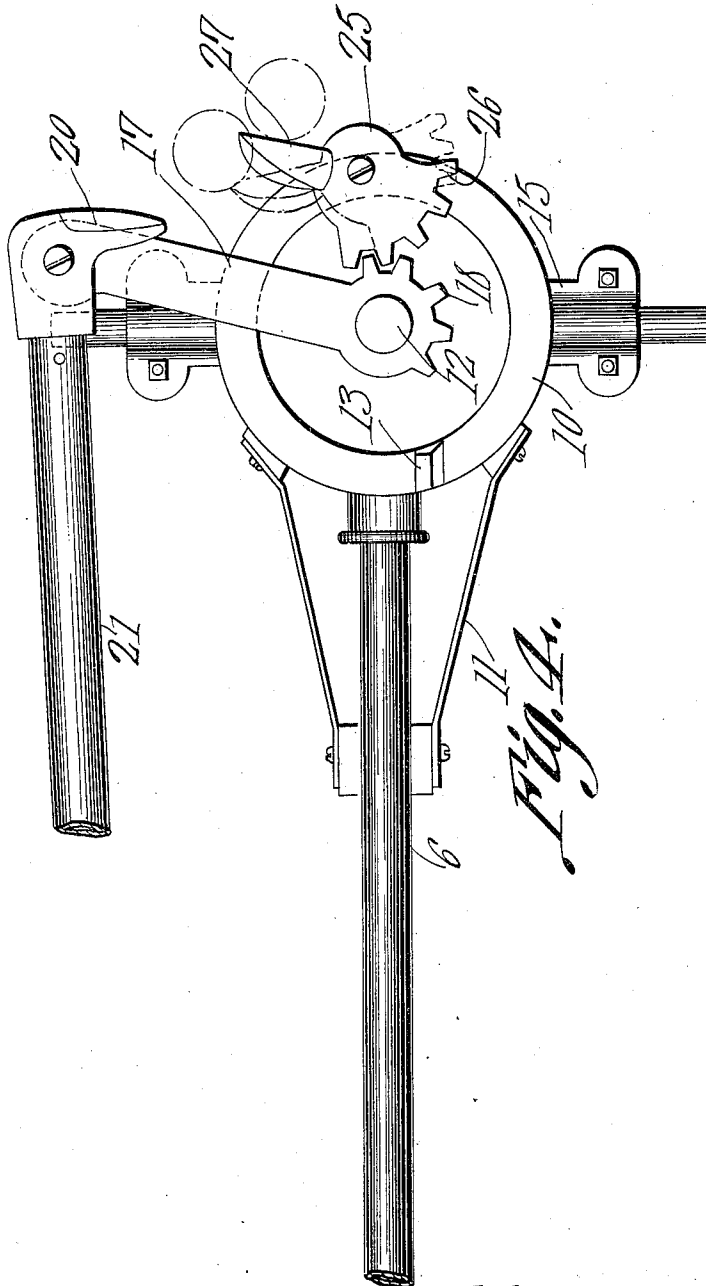
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4 SHEETS—SHEET 3.



Witnesses

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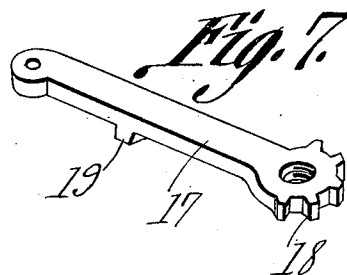
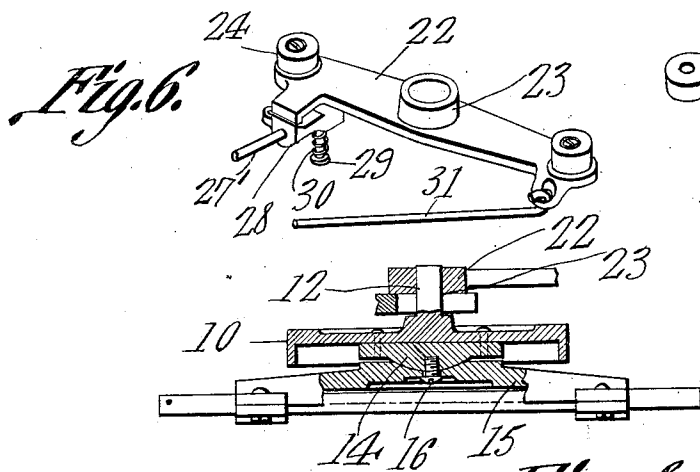
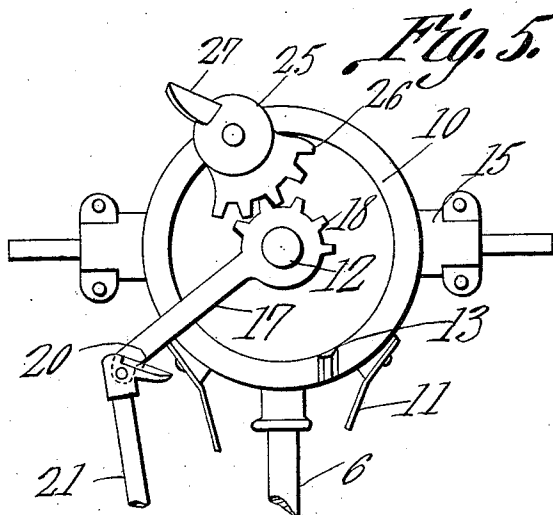
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4 SHEETS—SHEET 4.



Witnesses

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UNITED STATES PATENT OFFICE.

EDWARD HIRAM SHOLAR, OF CHATTANOOGA, TENNESSEE.

SWEEP MECHANISM FOR BALING-PRESSES.

1,046,875.

Specification of Letters Patent.

Patented Dec. 10, 1912.

Application filed June 8, 1911. Serial No. 632,045.

To all whom it may concern:

Be it known that I, EDWARD H. SHOLAR, a citizen of the United States, residing at Chattanooga, in the county of Hamilton and State of Tennessee, have invented a new and useful Sweep Mechanism for Baling-Presses, of which the following is a specification.

This invention has relation to sweep mechanisms for baling presses and 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 mechanism adapted to be used in the capacity stated which is simple in structure, powerful in its action and which may be readily operated at the expenditure of a minimum amount of energy.

In the accompanying drawing: Figure 1 is a top plan view of the baling press with the sweep mechanism applied thereto. Fig. 2 is a side elevation of the same. Fig. 3 is an enlarged plan view of the sweep mechanism with parts removed showing the plunger rod in projected position. Fig. 4 is a similar view of the sweep mechanism showing the plunger rod in retracted position. Fig. 5 is a similar view but on a smaller scale showing the plunger rod in the act of being projected. Fig. 6 is a perspective view of the under side of an arm forming a part of the sweep mechanism. Fig. 7 is a perspective view of a lever which also forms a component part of the sweep mechanism. Fig. 8 is a transverse sectional view of the sweep mechanism.

The baling press consists of a baling box 1 which may be of any usual pattern having a plunger 2 mounted for reciprocation therein. An axle 3 is located under the intermediate portion of the baling box 1 and at a point between its ends carries a sleeve 4. The baling box 1 is provided upon its under side and in the vicinity of its end with a sleeve 5 and the sleeves 4 and 5 loosely receive the rear end portion of a sill 6. A cuff 7 is adjustably fixed to the sill 6 by means of a bolt 8 and is provided with a flange 9 which is located at one side of the sleeve 5 while the body portion of the said cuff is located at the opposite side of the said sleeve. Thus it will be seen that means is provided for shifting the sill 6 with relation to the sleeves 4 and 5 and securing the said sill 6 with relation to the said sleeves against longitudinal movement but permit-

ting the said bar to turn within the sleeves. At its forward end the sill 6 is attached to a plate 10 and is fixedly held in relation thereto by means of braces 11 which are connected at their rear ends with the said reach bar and at their forward ends with said plate.

The plate 10 is provided with an up-standing concentric pintle 12 and is provided upon its upper side with a stop 13. The plate 10 is provided upon its under side with a bearing block 14 which rests upon the intermediate portion of an axle frame 15 which is pivotally secured to the said block by means of a pivot bolt 16. An arm 17 is pivoted at one end upon the pintle 12 and is provided at its inner end with a set of gear teeth 18. At a point between its ends the arm 17 is provided with a lug 19 in the path of movement of which is located the stop 13 upon the plate 10. At its outer end the arm 17 is pivotally connected with a shoe 20 carried at the forward end of a plunger rod 21. The said rod at its other end is pivotally or appropriately connected with the plunger 2 which is located for reciprocation within the baling box 1. An arm 22 is provided upon its under side and at a point midway between its ends with a bearing 23 which is journaled upon the upper end portion of the pintle 12. The said arm 22 is provided upon its under side and in the vicinity of its ends with freely journaled rollers 24. A disk 25 is provided at one side with a series of gear teeth 26 which mesh with the gear teeth 18 carried at the upper end of the lever arm 17 and the said disk is provided at its side opposite that side at which the teeth 26 are carried with a projecting lug 27 which at times is located in the path of movement of the rollers 24 carried by the arm 22.

A sweep pole 27' is provided at its inner end with a head 28 which is pivotally and resiliently connected with one end of the arm 22. The pin 29 is carried by the arm 22 and passes up through the head 28 and a coil spring 30 is interposed between the head of the pin 29 and the upper surface of the head 28 and bears down upon the said head 28 and has a tendency to hold the same in close contact with the upper surface of the arm 22. A brace rod 31 is connected at one end with that end of the arm 22 opposite the end thereof to which the sweep pole 27' is connected and at its outer end the brace

rod 31 is adjustably connected with the outer end portion of the sweep pole 27' by means of nuts 32 which are screw threaded upon the outer end portion of the rod 31 and receive between them a sleeve 33 which is fixed to the outer end portion of the sweep pole 27'.

It will be seen by this construction, that the pole may be moved transversely with respect to the arm, that is the same may be raised at the point where the team is hitched without straining the bearings, this flexibility of the pole making the draft easier for the horses.

The operation of the sweep mechanism is as follows. Presuming that the parts are approximately in the positions as illustrated in Fig. 1 of the drawing the plunger rod 21 is in its retracted position and the draft animals which are hitched to the outer end of the sweep pole 27' are about to pass at their fore legs over the plunger rod 21 and sill 6. As the animals move over the said sill 6 and rod 21 the arm 22 is turned upon the pintle 12 and when the animals have passed entirely over the said sill 6 and rod 21 the rod 21 is then subjected to the compression stress of the plunger 2 to which it is connected. In the meantime the hay has been fed into the baling box 1 and the said plunger 2 engages the same and compresses the same into the baling chamber of the said box. As the said arm 22 is continued in its rotating movement upon the pintle 12 the rod 21 is pushed to the position as illustrated in Fig. 3 of the drawing when the plunger 2 attached to the end thereof is at the extent of its compression stroke within the baling box 1. At this time the roller 24 at the opposite end of the arm 22 engages the lug 27 at the side of the disk and as the said arm continues to rotate the said disk 25 is rotated upon its pivotal connection with the plate 10 and through the intermeshing gear teeth 26 and 18 the arm 17 is rotated and carries back with it the shoe 20 and the plunger rod 21 to the position as illustrated in Fig. 4 of the drawing. When the parts are thus positioned the roller which has previously been in engagement with the lug 27 upon the disk 25 passes to the shoe 20 and again forces the rod 21 in a direction toward the baling box 1. Thus the lever 17 and arm 22 are mounted for pivotal or rotary movement upon a common axis which materially simplifies the structure and renders the action of the apparatus positive.

When it is desired to transport the sweep mechanism and baling press to which it is attached from one point to another, supporting wheels are journaled upon the axles 3 and 15 and the arm 22 is turned so that the plunger rod 21 is projected to the extent of its compression stroke as illustrated in Fig. 3. When this is done the sweep pole 27' and brace 31 are in the positions as indi-

cated in heavy lines in Fig. 3. The said sweep pole 27' together with the brace 31 are then swung back into position as indicated by dotted lines in the said figure; then by removing the bolt 8 the sill may be moved longitudinally in the sleeves 4 and 5 so that the plunger 2 will be located in the baling chamber of the press and the sweep pole 27' will be received in the box 1. The bolt 8 is then replaced in the cuff 7 and passed through the sill and thus the parts are coupled close together for transportation. As the sweep mechanism and the press pass along a roadway they are guided by turning the axle 15 on the plate 10 in the usual manner and by reason of the fact that the baling press 1 may swing or turn upon the rear portion of the sill 6 the sweep mechanism and attached baling press may pass evenly and smoothly over unequal surfaces upon a road bed.

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

1. A sweep mechanism comprising a sill, a plate attached thereto and having a pintle, a lever fulcrumed upon the plate, a plunger rod pivotally connected with the outer end of said lever, an arm journaled upon the pintle, a sweep pole attached to said arm, rollers carried by the arm, a shoe mounted upon the end of the plunger and at times lying in the path of movement of said rollers, a disk pivoted upon the plate and operatively engaging the lever and having a lug which at times lies in the path of movement of the rollers upon the said arm.

2. A sweep mechanism comprising a sill, a plate attached thereto, said plate having a pintle, a lever fulcrumed upon said pintle and having a head provided with gear teeth, a plunger rod, a shoe attached to said plunger rod and pivotally connected with the outer end of said lever, a disk pivoted upon the plate and having a set of gear teeth which meshes with the gear teeth upon the lever and provided with a lug, an arm journaled upon the pintle and having at its opposite ends rollers which are adapted to successively engage the lug upon the disk and the shoe upon the plunger rod.

3. In a sweep mechanism, an arm mounted for rotation, a sweep pole provided at one end with a head, a bolt passing through said head and seated upon the arm, a spring interposed between the head of the bolt and the head attached to the sweep pole and a brace connected at one end with the arm at its other end with the outer portion of the sweep pole.

4. In a sweep mechanism an arm journaled for rotation, a sweep pole provided at one end with a head, a bolt passing through said head and located upon one end of said arm, a spring interposed between the head

and the bolt and the upper side of the head upon the sweep pole, a sleeve carried at the outer end of the sweep pole, a brace connected at its inner end with the arm at the
5 opposite side of its journaled point from that at which the said sweep pole is located, said rod at its outer portion passing through the sleeve at the outer end of the sweep pole, and adjusting nuts screw threaded upon the outer end portion of said rod
10 and bearing against the opposite ends of said sleeve.

5. A sweep mechanism including a plate, an axle pivoted thereto, a connecting sill secured at its forward end to said plate, a
15 sweep proper located upon the plate, in combination with a baling chamber having a sleeve which receives the said sill and a cuff fixed upon the sill and engaging the
20 sleeve to restrain the sill against longitudinal movement within the sleeve but permitting the sleeve to rotate about the sill.

6. In a sweep mechanism for baling presses, an arm mounted for rotation and arranged to actuate a baling plunger, a
25 sweep pole resiliently supported on said arm, said pole being supported for a cushioned movement transversely to said arm.

7. A sweep mechanism for baling presses comprising an arm mounted for rotation,
30 said arm having an operative connection with a baling plunger, a sweep pole supported by said arm and having a cushioned movement in a direction transversely to the arm, and
35 a substantially resilient brace connecting the outer end of said sweep with said arm.

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

EDWARD HIRAM SHOLAR.

Witnesses:

E. DE L. WOOD,
CARL A. GRATZER.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."