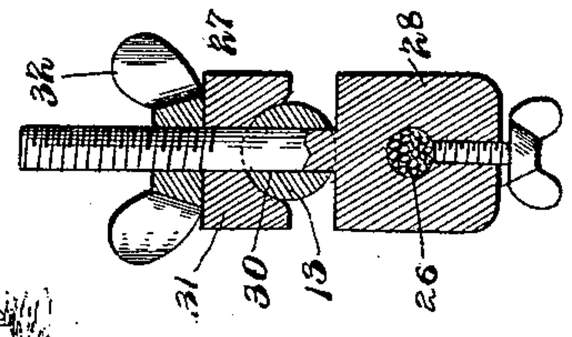
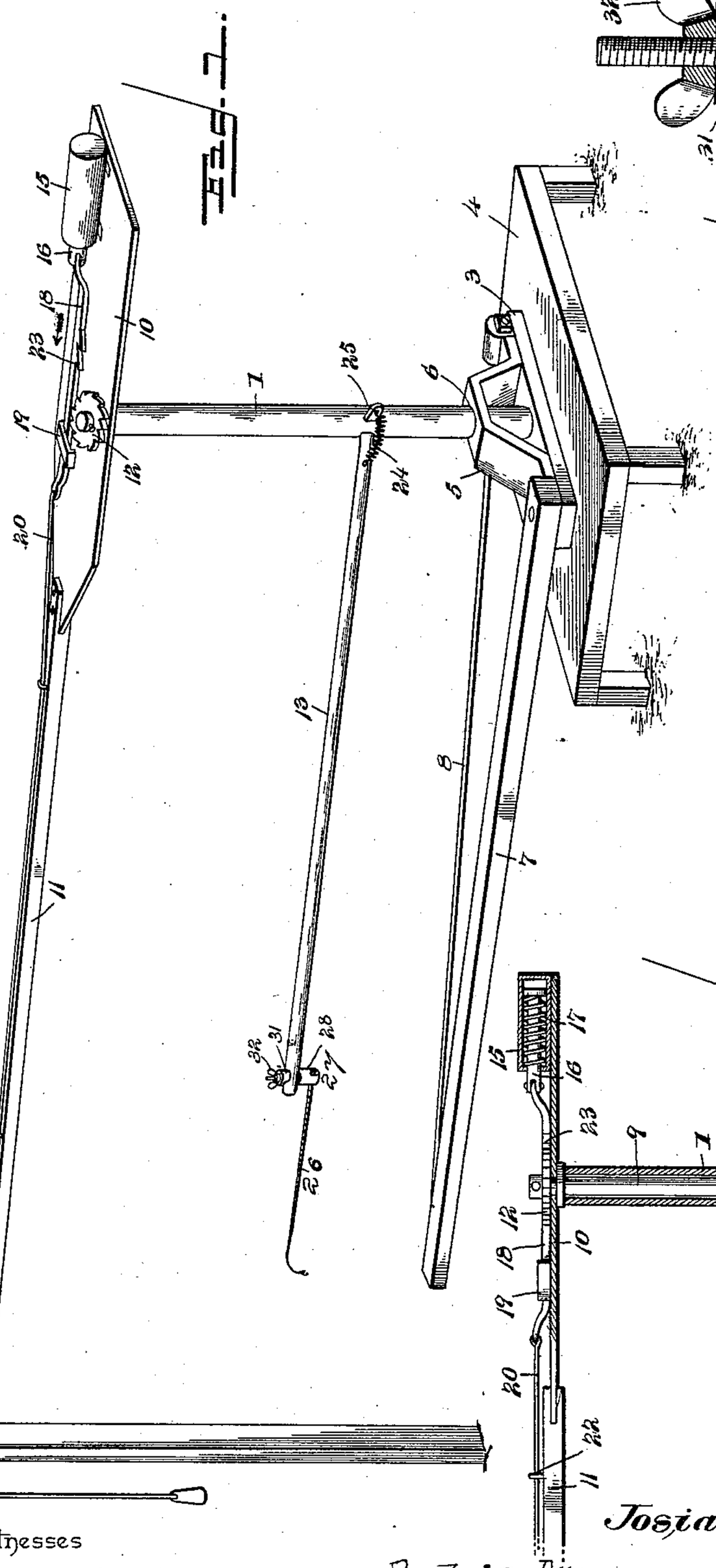
(No Model.)

J. S. TUTTLE.

HORSE POWER.

No. 543,066. Patented July 23, 1895.





Witnesses

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UNITED STATES PATENT OFFICE.

JOSIAH S. TUTTLE, OF BURNS, KANSAS.

HORSE-POWER.

SPECIFICATION forming part of Letters Patent No. 543,066, dated July 23, 1895.

Application filed October 6, 1894. Serial No. 525,131. (No model.)

To all whom it may concern:

Be it known that I, JOSIAH S. TUTTLE, a citizen of the United States, residing at Burns, in the county of Marion and State of Kansas, have invented a new and useful Horse-Power, of which the following is a specification.

My invention relates to a horse-power adapted for use in connection with baling-presses and similar machinery, and the objects in view are to provide simple and efficient means for driving or urging the horses to maintain a uniform speed.

Further objects and advantages of the invention will appear in the following description, and the novel features thereof will be particularly pointed out in the appended claims.

In the drawings, Figure 1 is a perspective view of a power embodying my invention. Fig. 2 is a vertical section to show the core which carries the driving-arm or whip-arm. Fig. 3 is a detail view of the clamp for attaching the whip to the driving or whip arm.

Similar numerals of reference designate corresponding parts in all the figures of the drawings.

1 designates a rotary post or standard, which is mounted at its lower end in a socket 2 and is secured to a cross-head 3, which rests upon a horizontal platform 4. This cross-head is provided with a brace 5 provided with an opening 6, through which the post or standard extends, and attached at one end to one extremity of the cross-head is a sweep 7 braced by means of a tension-rod 8.

The post or standard 1 is tubular in construction, and in the bore thereof is fitted an independently-movable core or stem 9 mounted at its upper end in a bearing in the plate 10, which is supported by the horizontal beam 11. The upper end of said pawl or stem is fitted with a ratchet-wheel 12, and attached to an intermediate point of the core or stem is a driving or whip arm 13, said arm being arranged to operate in a horizontal slot 14 in the side of the post or standard. Mounted in a suitable guide 15 on said plate 10 is a bolt 16, provided with an actuating-spring 17, and pivotally connected to the said bolt is a latch 18, which operates at its free end in a keeper 19. Attached to said free end of the latch is a cord or wire 20, which extends through suitable guides 22 on the horizontal beam 11 and terminates at the outer end of such beam. The said pivotal latch is provided with one or more teeth 23 for engagement with the teeth of the ratchet when the latch is pulled outward, in the direction indicated by the arrow in Fig. 1, by means of the said cord or wire 20. Said teeth of the latch are normally held out of engagement with the teeth of the ratchet by means of the actuating spring 17. A tension-spring 24 is attached to the driving or whip arm adjacent to the post or standard and is attached at the other end to a bracket 25 supported by said post or standard, and when the latch 18 is moved to bring the beveled sides of its teeth into frictional contact with the beveled sides of the teeth of the ratchet-wheel. The rotary movement of the latter is retarded until the tension of the spring 24 is increased by straining sufficiently to overcome the resistance offered by the teeth of the latch to the rotary movement of the ratchet-wheel, when the free end of the latch will be swung outward or from the ratchet-wheel, thus disengaging its teeth from those of the ratchet-wheel and allowing the driving or whip arm to be returned to its normal position by means of the spring 24. As soon as the driving or whip arm has reached its normal position it is again retarded by the continued frictional contact of the teeth of the latch with the teeth of the ratchet-wheel, provided said latch is held in such a position as to maintain its teeth in operative relation with the ratchet, and as long as such a position of the latch is maintained the driving or whip arm will be alternately retarded and forcibly advanced or vibrated to inflict a series of blows upon the team.

Attached to the free end of the driving or whip arm is a whip 26, and said whip is connected to the arm by means of a clamp 27, comprising a perforated head 28, in which the whip is fixed, a stem 29, which extends through a perforation 30 in the end of the arm, a serrated washer 31, which is fitted upon the stem and bears against the adjacent surface of the arm and a thumb-nut 32 threaded upon said stem and bearing against the washer. It will be seen that the clamp may be detached at any time for the application of a new whip.

In operation the latch is operated when

necessary to cause the engagement of its teeth with those of the ratchet-wheel, thus intermittently retarding the rotation of the core or stem and then releasing the same. This retarding of the movement of the core or stem has the effect of drawing the driving-arm backward, and when the ratchet-wheel is released said arm is moved forward at a speed greater than the sweep, thus causing the whip to strike the animals.

It will be understood that various changes in the form, proportion, and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

Having thus described the invention, what is claimed, and desired to be secured by Letters Patent, is—

1. The combination of a rotary post or standard, a sweep connected to said post or standard, a driving or whip arm loosely connected to and carried by the post or standard, a spring for holding said arm in its normal position, and means for retarding the movement of the arm at intervals, and releasing the same to allow said spring to advance the arm, substantially as specified.

2. The combination with a rotary post or standard of tubular construction, a sweep connected to said post or standard, a core or stem fitted in the bore of the post or standard, a whip or driving arm attached to the core or stem and extending through a horizontal slot in the post or standard, a spring for holding said arm in its normal position, a ratchet wheel attached to the upper end of the core or stem, and a toothed arm adapted to be arranged to cause frictional engagement of its teeth with those of the ratchet wheel, substantially as specified.

3. The combination of a rotary post or standard of tubular construction, a core or stem mounted therein, a sweep connected to the post or standard, a driving or whip arm attached to the core or stem and extending through a horizontal slot in the post or standard, a spring for holding the said arm in its normal position, a ratchet wheel attached to the upper end of the core or stem, and a pivotal arm provided with teeth for frictional engagement with the teeth of the ratchet wheel to retard the rotation thereof, substantially as specified.

4. The combination of a rotary post or standard of tubular construction, a core or stem mounted therein, a sweep connected to the post or standard, a driving or whip arm attached to the core or stem and extending through a horizontal slot in the post or standard, a spring for holding said arm in its normal position, a ratchet wheel carried by the core or stem, a spring actuated bolt, and a toothed arm pivotally connected to said bolt, the teeth of said arm being adapted to engage the teeth of the ratchet wheel to retard the rotation of the latter, substantially as specified.

5. The combination with a rotary post or standard and a sweep connected thereto, of a driving or whip arm loosely connected to and carried by the post or standard, means for alternately retarding and forcibly advancing said arm, a whip, and a clamp for securing said whip to the arm, the clamp comprising a head having an opening in which one end of the lash is fixed, a stem fitted in an opening in the arm, and means for removably securing said stem in the opening, substantially as specified.

6. The combination of a rotary post or standard, a sweep connected to said post or standard, a driving or whip arm loosely connected to and carried by the post or standard, a spring for holding said arm in its normal position, a ratchet connected to the whip or driving arm, and a movable pawl arm for engaging and retarding the rotary movement of the whip or driving arm, substantially as specified.

7. The combination of a rotary post or standard, a sweep connected to said post or standard, a driving or whip arm loosely connected to and carried by the post or standard, a spring for holding said arm in its normal position, a ratchet carried by the whip or driving arm, a movable pawl arm for engaging and retarding the rotary movement of the whip or driving arm, and a cord or wire connected to the pawl arm and passing through suitable guides to a point beyond the circle described by the outer end of the sweep, substantially as specified.

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

JOSIAH S. TUTTLE.

Witnesses:
H. F. NOUKEN,
MARY TUTTLE.