

C. L. MILLER & L. J. TOFFELMIER.

HAY PRESS.

APPLICATION FILED MAR. 9, 1910.

965,646.

Patented July 26, 1910.

2 SHEETS—SHEET 1.

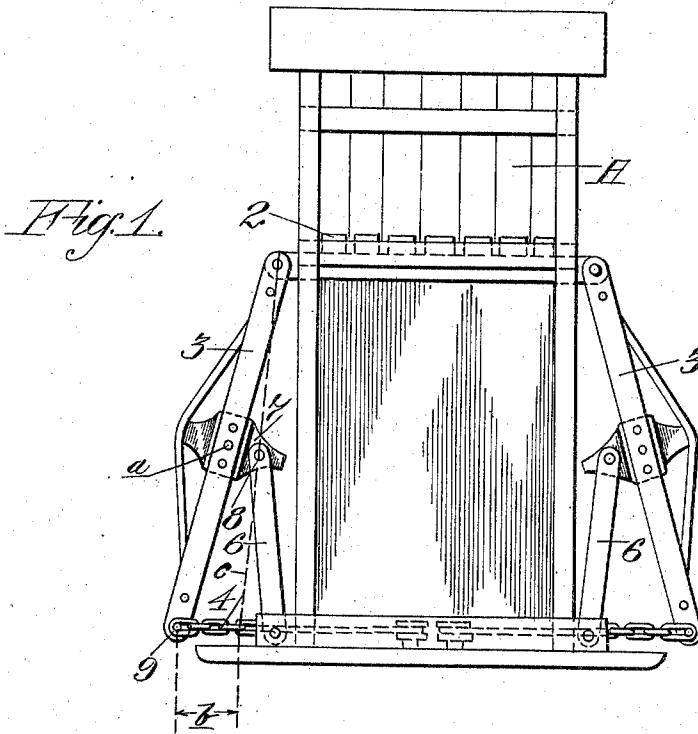


Fig. 3.

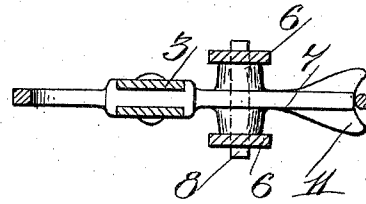
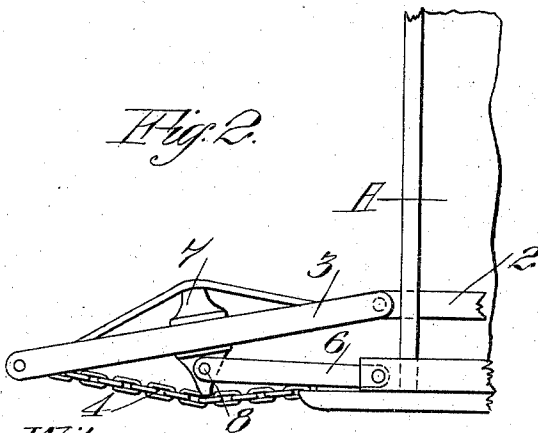


Fig. 2.



Witnesses.
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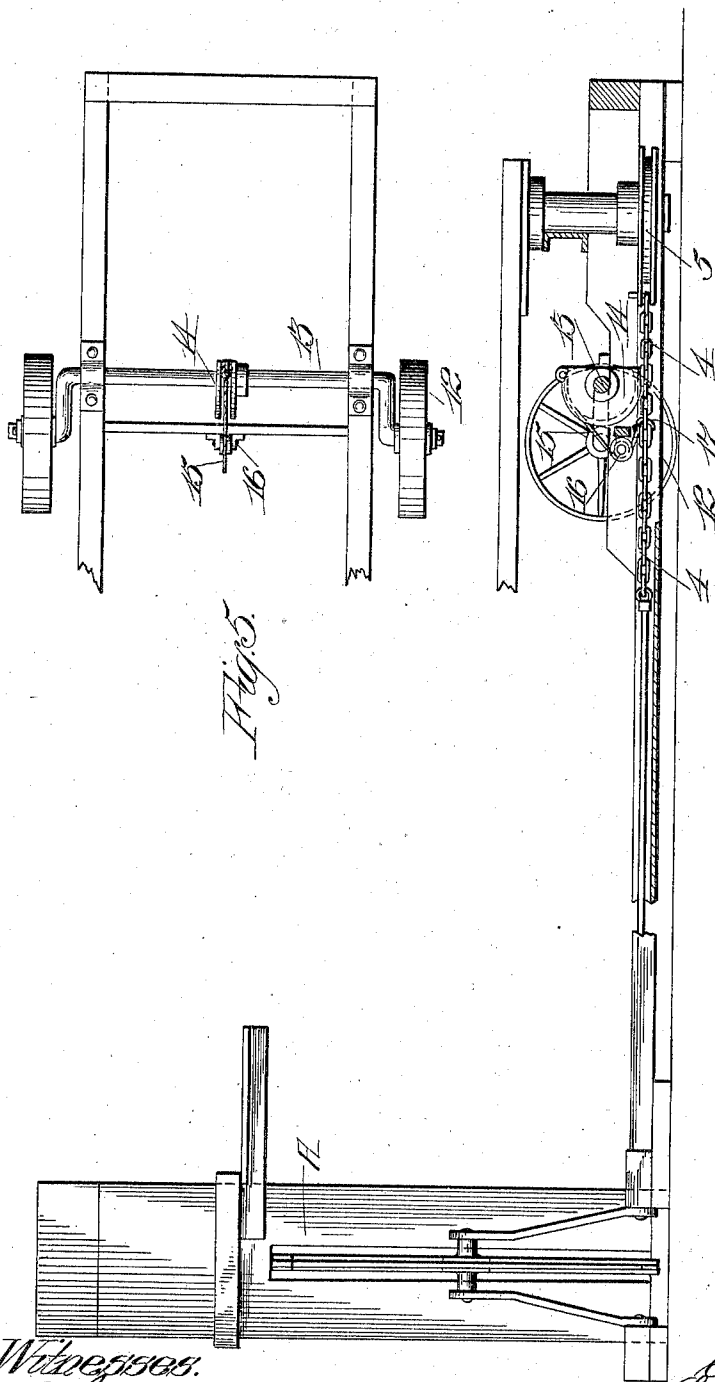
HAY PRESS.

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2 SHEETS—SHEET 2.



Witnesses.
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UNITED STATES PATENT OFFICE.

CHARLES L. MILLER AND LANCE J. TOFFELMIER, OF SAN LEANDRO, CALIFORNIA, ASSIGNORS TO JUNIOR MONARCH HAY PRESS CO., OF SAN LEANDRO, CALIFORNIA, A CORPORATION OF CALIFORNIA.

HAY-PRESS.

965,646.

Specification of Letters Patent. Patented July 26, 1910.

Application filed March 9, 1910. Serial No. 548,169.

To all whom it may concern:

Be it known that we, CHARLES L. MILLER and LANCE J. TOFFELMIER, citizens of the United States, residing at San Leandro, in the county of Alameda and State of California, have invented new and useful Improvements in Hay-Presses, of which the following is a specification.

This invention relates to hay presses, and particularly to labor saving improvements therein.

An object of our invention is to provide a construction involving special details and arrangements of parts to the end that the power necessary in operating presses may be much reduced; and further to render easier the manipulation of the horse-power frame.

The invention consists of the parts, and the construction and combination of parts as hereinafter more fully described and claimed, having reference to the accompanying drawings, in which—

Figure 1 is an end view of the press, in closed position. Fig. 2 is a detail showing the parts in open position. Fig. 3 is a section transversely of a lever. Fig. 4 is a side elevation of the press, with the frame partly in section. Fig. 5 is a plan of the truck.

In the illustrated embodiment, A is an upright press in which is operable a follower 2 actuated by the usual levers 3, from the lower end of which run chains 4 connecting to an appropriate horse-power drum 5.

Heretofore it has been the practice to mount the levers 3 directly upon radius or toggle links 6 pivoted upon the foot or sill of the press. The usual point of connection of the lever 3 and its link 6 was approximately at the center *a* of the lever.

We have found by actual experience that it is possible by securing to lever 3, a plate 7 having a pivot pin 8 set considerably off from the center *a* of the lever 3, to obtain substantially the same lift of follower 2, with the toggle 6 pivoted thereon, as is derived with the pivot at *a*.

The advantage gained by utilizing the offset pivot 8 is that the lower end 9 of the lever 3 does not draw in toward the press A so far as when the center *a* is the toggle pivot. This is clearly illustrated at *b*, Fig. 1, the dotted line *c* representing the position the lever 3 would assume if the pivot 8 were

at *a* as in ordinary cases. Thus if pivot 8 is offset four and one-half inches from *a* the difference of movement *b* will be nine inches, consequently the winding drum 5 may be reduced in circumference an equal amount, and yet the levers 3 will be swung to substantially the positions as if point *a* were used as a pivot, and power increased. The result of reducing the circumference of drum 5 nine inches is an immediate large effective increase of the power, as a proportionately reduced diameter is possible.

Referring to Fig. 2, it will be observed, when the follower 2 is down and the levers 3 extended, that the extreme end or yoke 11, of plate 7, bears upon the power chain 4 deflecting it, and as soon as tension is put on chain 5 it tends to straighten, thereby thrusting upward the imposed yoke 11, and effectively prevents the locking or dead-centering of the toggle.

In order to provide a means whereby the horse-power frame may be easily and quickly lifted from the ground so that it is brought to bear upon wheels 12, we secure upon a cranked axle 13, a sheave 14 to which is connected a chain, cable, or the like 15, guidable over a pulley 16, and having a hook 17 adapted to engage the chain 4.

During the running of the press A, the power frame usually rests directly on the ground, and the wheels 12 are lifted out of the way by the cranked axle 13.

When it is desired to change the position or transport the press, then the hook 17 is coupled to chain 4, when the power drum 5 is given its last turn and the cable 15 rotates the sheave and axle, lifting the frame and bringing the wheels 12 down to running position, after which the hook is disengaged from the chain.

In the old form of pivoting the toggle link at the center *a* of the follower lever, it required a movement greater than our construction requires, but we are able to increase the pressure at the follower, because of the reduction of the diameter of the drum 5.

To illustrate, our construction enables us to use a drum twenty-two inches in diameter as against a drum twenty-five in the old form, the difference resulting in an increase of power of about fifteen per cent.

Manifestly we can set the pivot 8 at different distances from the center a as may be desired.

Having thus described our invention, what we claim and desire to secure by Letters Patent is—

1. In a hay press, the combination of a follower, follower levers, pivoted toggle links connected to the lever, a power chain and means whereby said levers and links are connected, said means including plates fixed to the levers and having pivots set off the transverse center of the levers, the outer ends of said plates adapted to engage and bear upon the power chain to thereby deflect it, whereby when tension is put on the chain it tends to straighten and thereby thrust upward the ends of the plates and prevent the locking or dead centering of the levers.

2. In a hay press, having a follower, follower levers, and a power chain, the pivoted toggle links having plates with pins set off the transverse center of the links, said plates having their outer ends provided with yokes adapted to bear upon the power chain and thereby deflect it, whereby when tension is put on the chain it tends to straighten and thrust upward the yoke and prevent the locking or dead centering of the links.

3. The combination in a hay press, of a follower, a horse-power, a chain and lever mechanism for connecting the follower and the horse-power whereby the former may be actuated, wheels upon which the horse-power may travel, and means adapted to be

detachably connected to the chain whereby said wheels may be shifted into running position by the operation of the horse-power.

4. The combination in a hay press, of a follower, a horse-power, a chain and lever mechanism for connecting the follower and the horse-power whereby the former may be actuated, wheels upon which the horse-power may travel, a crank axle for said wheels, a sheave on said axle and a detachable connection between said sheave and the follower operating chain whereby said wheels may be shifted into running position by pull upon the chain.

5. The combination in a hay press, of a follower, a horse-power, a chain and lever mechanism for connecting the follower and the horse-power whereby the former may be actuated, wheels upon which the horse-power may travel, a crank shaft upon which the wheels are mounted, a sheave on the crank shaft, and a flexible connection having one end fastened to the sheave and having a hook at the other end adapted to engage the follower operating chain whereby said wheels may be shifted in the running position by the movement of said chain.

In testimony whereof we have hereunto set our hands in the presence of two subscribing witnesses.

CHARLES L. MILLER.
LANCE J. TOFFELMIER.

Witnesses:

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