

(No Model.)

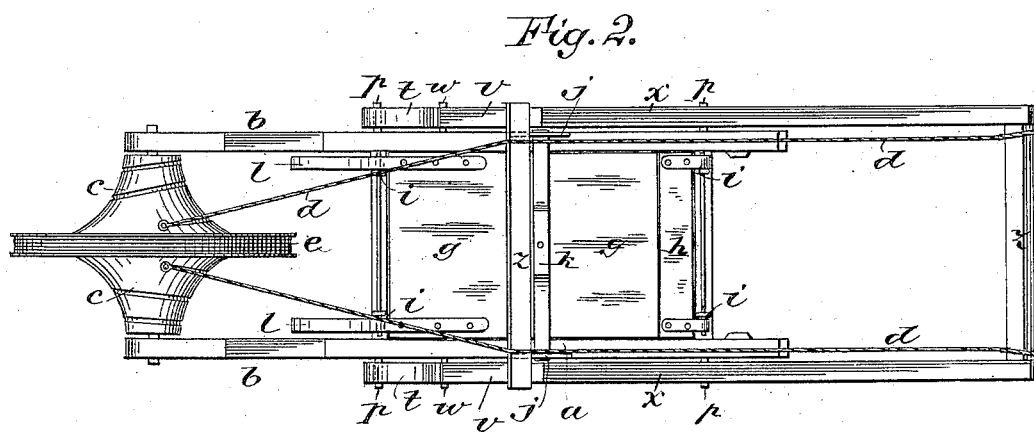
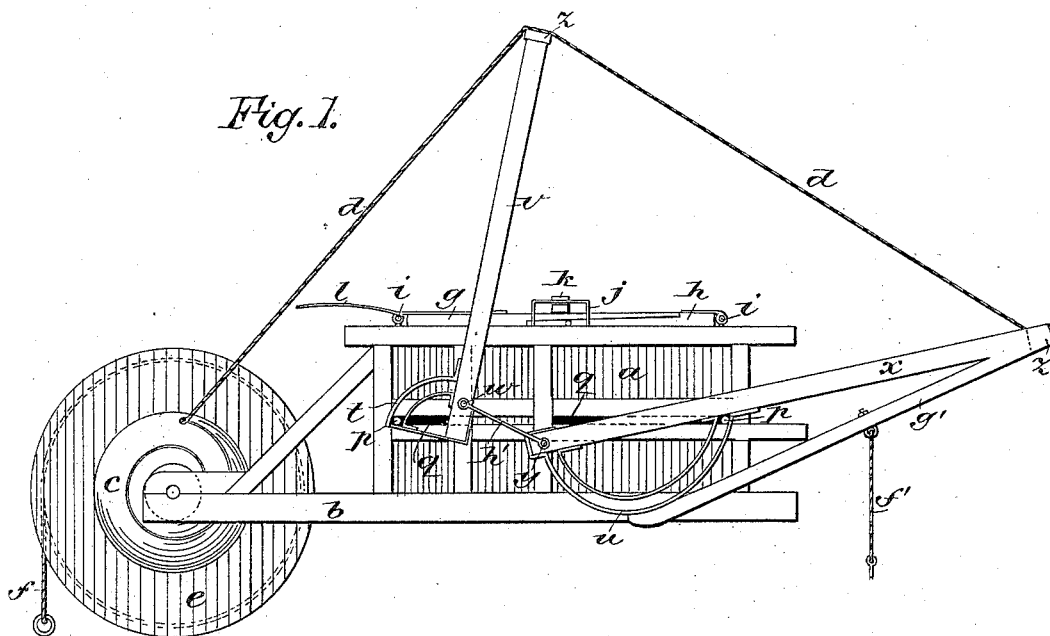
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H. L. WHITEHEAD.

HAY PRESS.

No. 306,300.

Patented Oct. 7, 1884.



WITNESSES:

WITNESSES:  
*Hotzeyer*  
*L. Sedgwick*

INVENTOR:

H. L. Whitehead

BY

Munn &amp; Co

ATTORNEYS.

(No Model.)

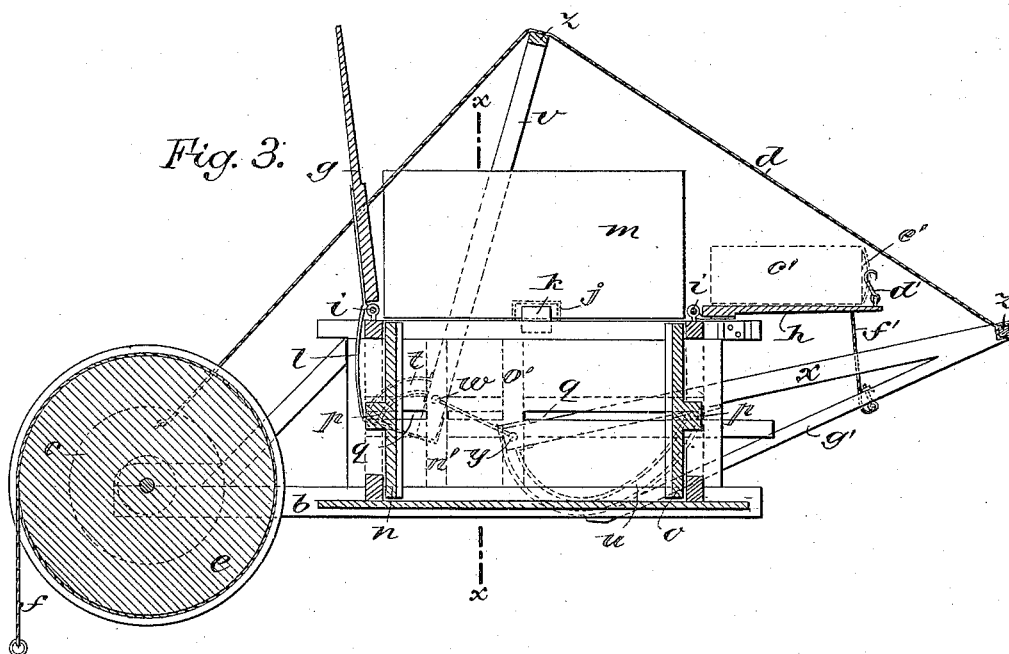
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H. L. WHITEHEAD.

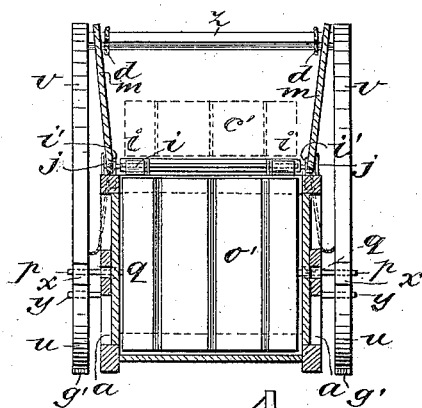
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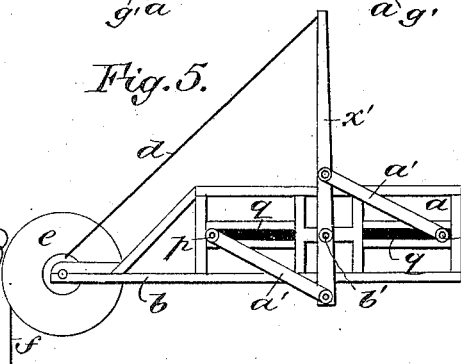
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*Fig. 4.*



*Fig. 5.*



WITNESSES:

*Wm B. W.*  
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# UNITED STATES PATENT OFFICE.

HERMAN L. WHITEHEAD, OF ISLAND CITY, OREGON.

## HAY-PRESS.

SPECIFICATION forming part of Letters Patent No. 306,300, dated October 7, 1884.

Application filed April 19, 1884. (No model.)

*To all whom it may concern:*

Be it known that I, HERMAN L. WHITEHEAD, of Island City, in the county of Union and State of Oregon, have invented a new and Improved Hay-Press, of which the following is a full, clear, and exact description.

My invention consists of improved contrivances for working two followers from opposite directions toward each other in a horizontal case by means of a single or double lever arrangement with power applied by a windlass to be worked by horse-power, making a simple device for applying great power in a low-down case, that is very convenient for filling and emptying.

The invention also comprises an arrangement for utilizing one of the levers for working a follower to lift the pressed bales out of the case, all as hereinafter fully described.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a side elevation of my improved press, in which the case is represented as being filled and closed, ready for pressing. Fig. 2 is a plan view of the press as represented in Fig. 1. Fig. 3 is a longitudinal sectional elevation of the press adjusted for filling, and with a pressed bale in dotted lines, indicating the manner of discharging the pressed bales. Fig. 4 is a transverse section of Fig. 1 on the line *x x*, and Fig. 5 is a side elevation of a modified arrangement of the press for using only one lever for working the two followers.

I make a press-case, *a*, of rectangular form and suitable dimensions, with an extension, *b*, of the bed-frame at one end to support the double conical drum *c* of a windlass adapted for working two ropes or chains, *d*, and hang a large pulley, *e*, by which to operate it with a rope, *f*, to which the team is to be hitched. I make the cover of said case to consist of two doors, *g* and *h*, and hinge them to the ends of said case, respectively, at *i*, preferably making the cover *g* longer than the other, to overlap it and serve for a lever by which the hay may be crowded into the case more easily, and rabbeting or recessing the doors on the overlapping sides, so that they will close down as flat on the top of the case as if only meeting and abutting at the ends.

For holding the doors fast when closed I have a staple, *j*, secured into the top of each side of the case at the middle, or thereabout, and a cross-bar, *k*, extending over the cover and passing through each staple, said bar being readily removable from and insertible in said staples for quickly fastening and unfastening the covers. The cover *g* is provided with elastic stop-levers *l*, that swing down against the end of the box and arrest the cover in the upright position, or thereabout, to serve, together with temporary sides *m* and the cover *h*, which is, in practice, also to be held up by a spring, as a charging-hopper, for confining the loose hay until beaten down in the case. Within this case I arrange two followers, *n* and *o*, to be placed at the ends of the case, respectively, when being charged, and to be forced along therein toward each other, about as indicated by the dotted lines *n'* and *o'*, for compressing the hay and forming the bales.

For operating the followers I fit them with a strong stud-pin, *p*, at each end, which studs extend out through slots *q* in the sides of the case into cam-grooves formed in curved bars *t u*, attached to levers *v x*, pivoted to the sides of the case at *w* and *y*, the like levers of the opposite sides of the case being connected together at the free ends by the cross-bars *z*. The grooved bars *t u* of the respective levers are relatively arranged with said levers and the followers, whereby the followers will be forced toward each other by the pulling of both sets of the levers toward the windlass, and they are connected to the drum *c* by two cords or chains, *d*, for that purpose, said cords extending to the levers *v* first and thence to *x*, so as to pull both together.

The arrangement of the levers is such that the levers *v* stand nearly upright, and the levers *x* range nearly horizontal when the pulling begins, and the levers *v* form struts, over which the angle of the cords *d*, with the levers *x*, is suitably enlarged to enable said levers *x* to be pulled to advantage. For this double arrangement of levers a single pair of levers, *x'*, may be employed for working both the followers with connecting-rods *a'*, the rods *a'* of the respective followers being connected to said levers on opposite sides of the fulcrum-pivots *b'* of said levers to pull the followers in opposite directions, as represented in Fig. 5.

For utilizing the levers *x* to lift the pressed and tied bales *c'* out of the pressing-case, I apply one or more hooks, *d'*, to the inside of the door, suitably to hook onto one or more of the bands or ties *c'* of the bale, and hitch a chain, *f'*, attached to a cross-bar of said levers to the door near the free end, so that the door and bale will be raised when the levers *x* are pulled back for adjusting the press for filling again. After the bale is discharged from the door *h* the chain *f'* is to be unhooked from the door, which will then be swung upright, as before stated, by a spring to be employed in practice for that purpose. The levers *x* are re-enforced by a brace, *g'*, attached to them at the free end and to the slot-bar *u*, and the fulcrums *w y* of these levers are connected by the tension-rods *h'*, to balance the thrust of one by the other. The sides *m* are to be temporarily placed on the top of the case for confining the loose hay while stuffing it into the case, by placing them between the levers *v* and setting the lower edges between the staples *j* and stud-pins *i'*; but they may be confined in any approved way.

By the arrangement of the two followers and two sets of levers, greater range of followers is obtained with a given length of levers and range of the windlass than can be had with a single follower and levers, and the hay presses more compactly by pressing it between movable followers.

The conical form of the windlass-drum is designed for working the followers more rapidly in the fore part of the operation, while the hay is slack, than later, when the resistance increases with the compression of the hay, and the cords *d* are fastened to the drum at the largest portions of the cover, so that from the beginning of the operation the cords run down onto the smaller portions of the covers, and thus greatly increase the effect of the power.

Having thus fully described my invention, I claim as new and desire to secure by Letters Patent—

1. The combination, with the press-case *a*, of two followers adapted to work therein, levers adapted to work said followers in opposite directions, and a windlass for operating the levers, substantially as described.

2. The combination of two followers, *n o*, two sets of levers, *v x*, and a windlass, *c e*, and cords or chains *d*, with the horizontal case *a*, substantially as described.

3. The combination, with a case, *a*, having slotted sides, of followers *n o*, having stud-pins *p*, and levers *x*, having cam-grooved bars *t u*, embracing said stud-pins, and being pivoted to the sides of the case for working the followers, substantially as described.

4. The combination, with the horizontal press-case *a*, of the followers *n o* and two pairs of levers, *v x*, for working them by cam-grooved bars *t u*, said levers and cam-grooved bars being arranged to work the followers in opposite directions by themselves moving in one and the same direction, and both sets of levers being connected by the cords or chains *d* to the windlass *c e*, substantially as described.

5. The levers *v x*, pivoted to the sides of the press-case *a* at *w* and *y*, and connected to the followers *n o*, for moving them toward each other for pressing the bales between them, and the fulcrum-pivots of the said levers connected by tension-rods *h'*, to counterbalance the thrusts, substantially as described.

6. The combination of overlapping covers *g h* with the press-case *a*, arranged to utilize one of said covers for a lever to press in the hay by said doors, substantially as described.

7. The combination, with the case of a baling-press, of a door, *h*, and press-follower levers *x*, having attachments, as described, and being arranged to utilize the press-levers for lifting the pressed bales out of the case by hooking them to said door, substantially as described.

8. The door *h*, having one or more hooks, *d'*, and the levers *x*, having a chain, *f'*, adapted to hook onto said door, in combination with the press-case *a*, substantially as described.

9. The door *g*, having stop-levers *l*, in combination with the press-case *a*, substantially as described.

HERMAN L. WHITEHEAD.

Witnesses:

M. A. HARRISON,  
J. J. McDONALD.