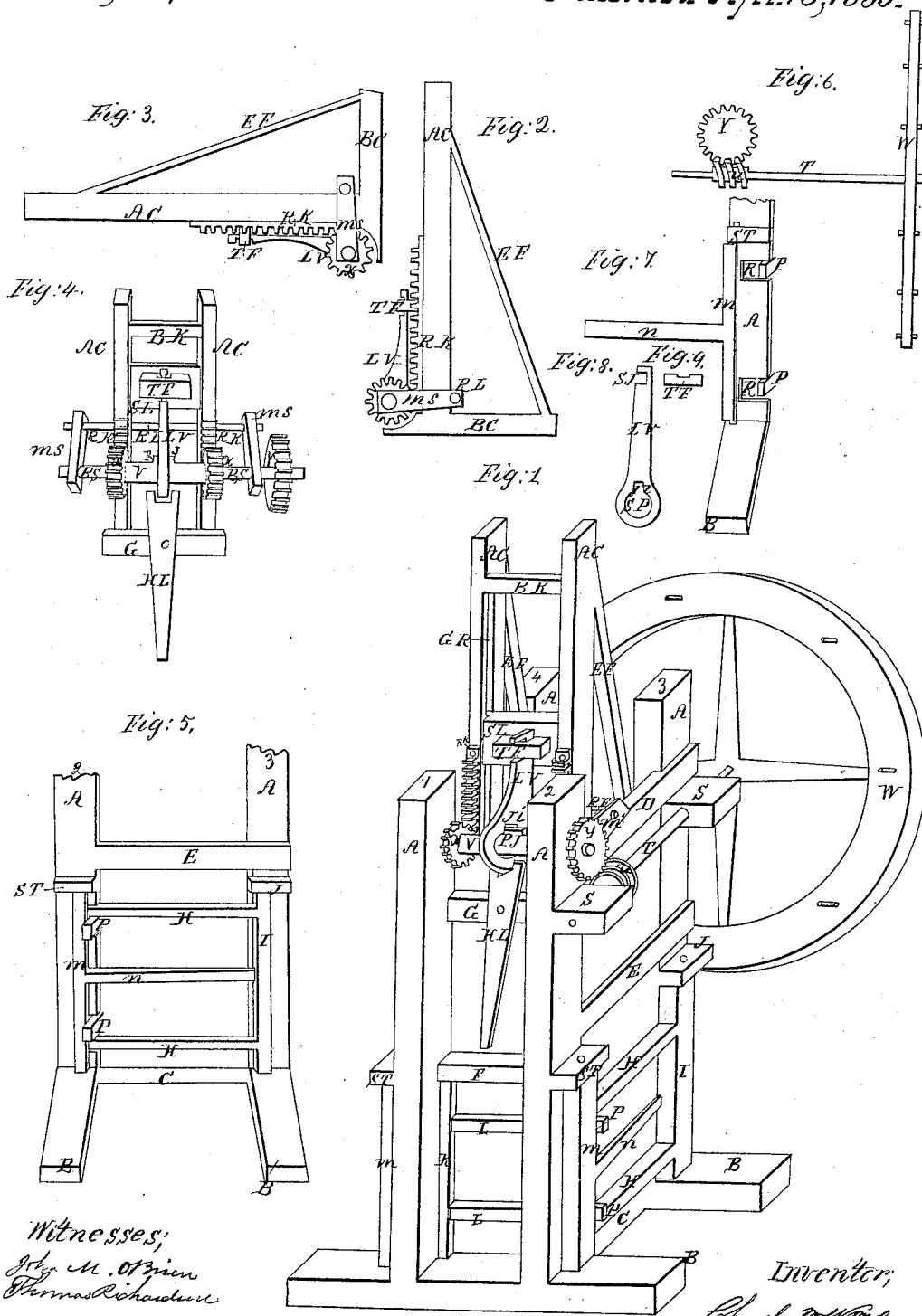


C. W. Hawkes, Cotton Press.

N^o 1,124.

Patented Apr. 18, 1839.



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UNITED STATES PATENT OFFICE.

CHARLES W. HAWKES, OF BRUNSWICK, MAINE.

IMPROVEMENT IN PRESSES FOR COMPRESSING HAY AND OTHER SUBSTANCES.

Specification forming part of Letters Patent No. 1,124, dated April 18, 1839.

To all whom it may concern:

Be it known that I, CHARLES W. HAWKES, of Brunswick, in the county of Cumberland and State of Maine, have invented a new and Improved Press for the Compressing of Hay, Cotton, Hops, or any other articles usually subjected to compression, of which the following is a full and exact description.

In Figure 1 of the drawings which accompany and make a part of this specification are four strong posts (represented by A A A A and numbered 1, 2, 3, and 4) resting on the sills B B, properly secured by cross-sills c. The posts are connected with the sills B B by dovetail and keys or by any of the usual methods, and secured in their positions by girts D E F G, framed into said posts composing the frame. The frame is ceiled on the inside with boards or plank composing the box. There are two doors—one on each side of the box—extending from one post to the other. Said doors are composed of two cross-bars, H H, (represented in Figs. 1 and 5,) and one revolving door-post, I, and ceiled on the inside with boards. Said door-post turns on gudgeons at the top and bottom. The bottom gudgeon turns in a socket in the sill, and the top one in the box J, which is bolted to the post. There is a movable end between the posts 1 and 2, extending from the sill up to the top of the doors. Said end is composed of two upright pieces, K, and two cross-bars, L L, and ceiled on the inside with boards. The ends of the said cross-bars project out by the posts 1 and 2, and are represented by P P. They are fitted to move a small space in grooves cut in said posts. Outside of the posts 1 and 2 and back of the projecting ends P P stands a post (represented by m) and a bar in it (represented by n) called the "bar-post," which turns on gudgeons in the same manner of the door-posts. Said bar-post m acts as a cam against the projecting ends P P, and as it turns it swings back from said ends.

Fig. 7 represents the bar-post m swung around R R, the grooves cut in the posts 1 and 2 to let the projecting ends P P fall back, together with the movable end. The bar-post, when returned, swings round against the cross-bars (of the door) H H, and confines them in their position, and at the same motion presses forward the movable end, as represented in Fig. 5.

In Fig. 1, S S represent the projecting ends

of the girts G, and in said ends are inserted the bearings of the worm-shaft T. On the end of the worm-shaft T, extending through the projecting ends S, (at the post g,) is a large wheel, (represented by W,) to be turned by the moving-power. On the other end of said shaft, opposite the large wheel W, and inside of the projecting end S, is a worm. (Represented by u, Figs. 1 and 6.) The bearings of the main shaft V are inserted in the top girts, D, close to the posts 1 and 2, and properly secured in their position. There are two pinions, X X, on the shaft V, close to the bearings inside of the posts 1 and 2. On the end of said shaft V projecting out by the post No. 2 is a cog-wheel, Y, which meshes into the worm u. There is a follower occupying the area of the box. (Represented by B C in Fig. 2.) Near one end of said follower are two posts or uprights, (represented by A C,) and from the tops of the uprights two oblique braces, E F, extend down to the opposite side of said follower. Near the top of the uprights A C is a cross-bar, B K, framed into the uprights A C. Two upright racks, R K, are placed upon the outside of the uprights A C (opposite the braces E F) and permanently fastened to said uprights, as seen in Figs. 1, 2, and 3. When the follower is in the box, the racks mesh into the pinions X X, and are held in gear by a roller, R L, pressing against the opposite sides of the uprights. The roller R L extends across the top of the frame, and is confined against the uprights A C by two arms, m s, extending from said roller to the main shaft V. The arms m s are outside of the frame, encompassing the shaft V at one end and the roller R L at the other, for the purpose of keeping the racks R K and the pinions X X in mesh, as represented in Figs. 2 and 4.

In Fig. 4, B S represent the bearings of the shaft V, which are inserted in the top girts, D. There is a groove cut on the inside of each of the uprights A C. (Represented by G R in Fig. 1.)

In Figs. 1 and 4, S L represent a slide fitted to run loosely in the grooves G R. There is a lever represented by L V in Figs. 1, 2, 3, 4, and 8. Fig. 8 represents the lever L V with an eye, S P, at the lower end and a slot, J I, in the upper side of said eye; S J, a notch or groove cut at the top of said lever. In Fig. 1 the eye of the lever L V encompasses the shaft

V between the two pinions X X, and on the middle of the shaft V is a stationary nog, P J, which fits into the slot J I. The upper end of the lever L V is fastened to the slide S L by a block, T F. Said block is fitted into the notch S J and permanently fastened to the slide S L. Said block is represented in Fig. 9. The slide S L, being thus fastened to the top of the lever L V, hangs by said lever while the uprights A C are in motion, and at the same time the ends of the slides S L play loosely in the grooves G R. The eye of the lever L V plays loosely back and forth on the shaft V by the application of the hanging lever H L. Said hanging lever is represented in Figs. 1 and 4 hanging by a pin (on which it turns) on the girt G. The upper end of the hanging lever H L has a notch cut in it to admit the lower end of the lever L V. By swinging the lower end of the hanging lever H L, the eye of the lever L V is moved off from the nog P J onto a round part of the shaft V, and gives said shaft a chance to turn without turning the lever L V. When the eye of the lever L V is again placed over the nog P J, said nog fits into the slot J I, and if the shaft V is set in motion the lever L V will turn with said shaft. The large wheel W turns the shaft T and the worm thereon. The worm *u* meshes into the cog-wheel Y and turns the shaft V, together with the pinions X X thereon. Said pinions mesh into the racks R K and elevate or depress the racks, together with the follower. At the extreme elevation of the follower the eye of the lever L V is moved over the nog P J, and if the motion is continued (the nog P J fitting into the slot J I and turning the lever L V, and the top of said lever being fastened to the slide S L, and the end of said slide being thus confined in the grooves

G R) the follower will turn out, so as to give access to the top of the box.

Fig. 3 represents the follower turned out and resting on the top end of the lever L V. When the box is filled, the motion is reversed, and the follower again returned, and when returned the eye of the lever L V is moved off from the nog P J onto the round part of the shaft V, and as the motion is continued the follower is depressed.

In Figs. 1, 2, 3, 4, and 9, T F represent the block which confines the top of the lever L V to the slide S L.

In Fig. 6, Y represents the cog-wheel, and *u* the worm, meshed together; T, the worm-shaft; W, the large wheel.

In Figs. 1, 5, and 7, S T represent the box which the gudgeons of the bar-post *m* run in. The use of the other parts is apparent on inspection.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The method of clearing the follower from the interior of the box by means of the lever L V encompassing the shaft V, in the manner and for the purpose herein described.

2. The method of fastening the doors and of compressing the movable end by means of the revolving bar-post *m* and arm *n*, as herein described.

3. The roller pressing on the uprights of the follower when combined with the shaft V by means of the arms, in the manner and for the purpose herein described.

Dated at Brunswick March 25, 1839.

CHARLES W. HAWKES.

In presence of—

MOSES E. WOODMAN,
R. T. DUNLAP.