G. C. Davies,

Cotton Press.

No. 47,490. Patented Apr. 25, 1865.

Fig. 1.

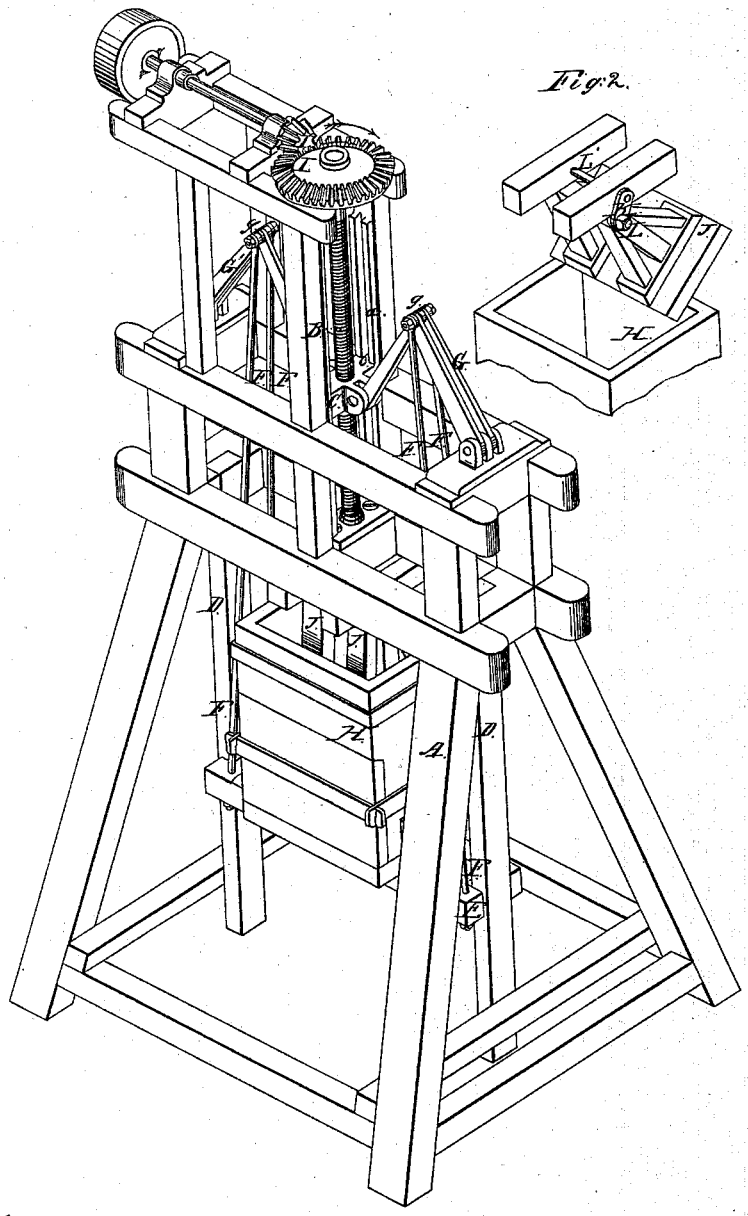

Fig. 2.

Witnesses;
Millward,
James H. Layman

Inventor;
G. C. Davies,
By King & Bro
attys.

UNITED STATES PATENT OFFICE.

GEO. C. DAVIES, OF DAYTON, OHIO, ASSIGNOR TO OHIO EROLIN COMPANY.

IMPROVEMENT IN COTTON-PRESSES.

Specification forming part of Letters Patent No. **47,490**, dated April 25, 1865.

To all whom it may concern:

Be it known that I, GEORGE C. DAVIES, of Dayton, Montgomery county, Ohio, have invented a new and useful Improvement in Baling-Presses; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings, making part of this specification.

My improvement relates to a construction of parts in a baling-press adapted to combine the advantages of speed at the commencement with great power at the termination of the pressing action.

Figure 1 is a perspective view of a press embodying my invention. Fig. 2 represents the arrangement of swinging head or platen.

A is a frame of oak or other suitable material, and having journaled vertically within it a screw, B, provided with a nut, C, which travels up or down the screw B as the latter is rotated forward or backward.

D are stanchions, which guide to a vertical path the platform E, which platform is suspended by rods F from the knuckles *g* of the two sets of toggles G and G′, which are articulated in the manner represented to opposite sides of the nut C and frame A. The platform E supports and carries upward in the act of pressing a baling trunk or box, H, of the represented or any other approved form. In the act of pressing, the screw B is rotated in direction of the arrow. This rotation may be effected by a sweep attached directly to the head of the screw, or through the medium of gearing I, as in the diagram, or in any other suitable manner. The abutment or resisting object against which the cotton or other material is compressed, consists of a head or platen, J, which depends from the frame A, to which it is connected by a kind of double-jointed hinge or articulation formed by links K K′ and pintles or bolts L and L′, so as to be capable of being swung to one side to enable the charging of the trunk. (See Fig. 2.) The nut C is prevented from turning by wings or lugs *c*, which travel in vertical grooves *a* in the frame.

It will be perceived that the initial rapidity of ascent of the platform is nearly that of the nut itself, which with the screw sustains at first nearly the entire resisting stress of the work; but as the work proceeds the accumulating resistance is almost wholly transferred to the outer limbs of the toggles, accompanied by a vastly increased exertion of power, and of course a corresponding diminution of speed as the rods F and the outer limbs of the toggles G G′ approximate to parallelism. Toward the conclusion of the work the duty of the screw B is almost wholly confined to that of a side-thrust upon the toggles. It is therefore apparent that although a vastly more intense pressure accompanies the concluding movements, yet the wear and strain upon the thread of the screw is nearly equal at every part of its length.

I claim herein as new and of my invention—

1. The provision, in a baling-press, of the screw B, winged nut C *c*, vertical guides D and *a*, toggles G G′, rods F, platform E, and baling-trunk H, in the described combination with the swinging platen J, the whole being arranged and operating substantially as set forth.

2. While disclaiming the idea or principle of hinging the follower, I claim the suspended platen or abutment J, articulated to the frame by means of the links K K′ and pintles L L′, so as to be capable of being swung to one side for filling or charging the baling-trunk, in the manner described.

In testimony of which invention I hereunto set my hand.

GEO. C. DAVIES.

Witnesses:

GEO. H. KNIGHT,

JAMES H. LAYMAN.