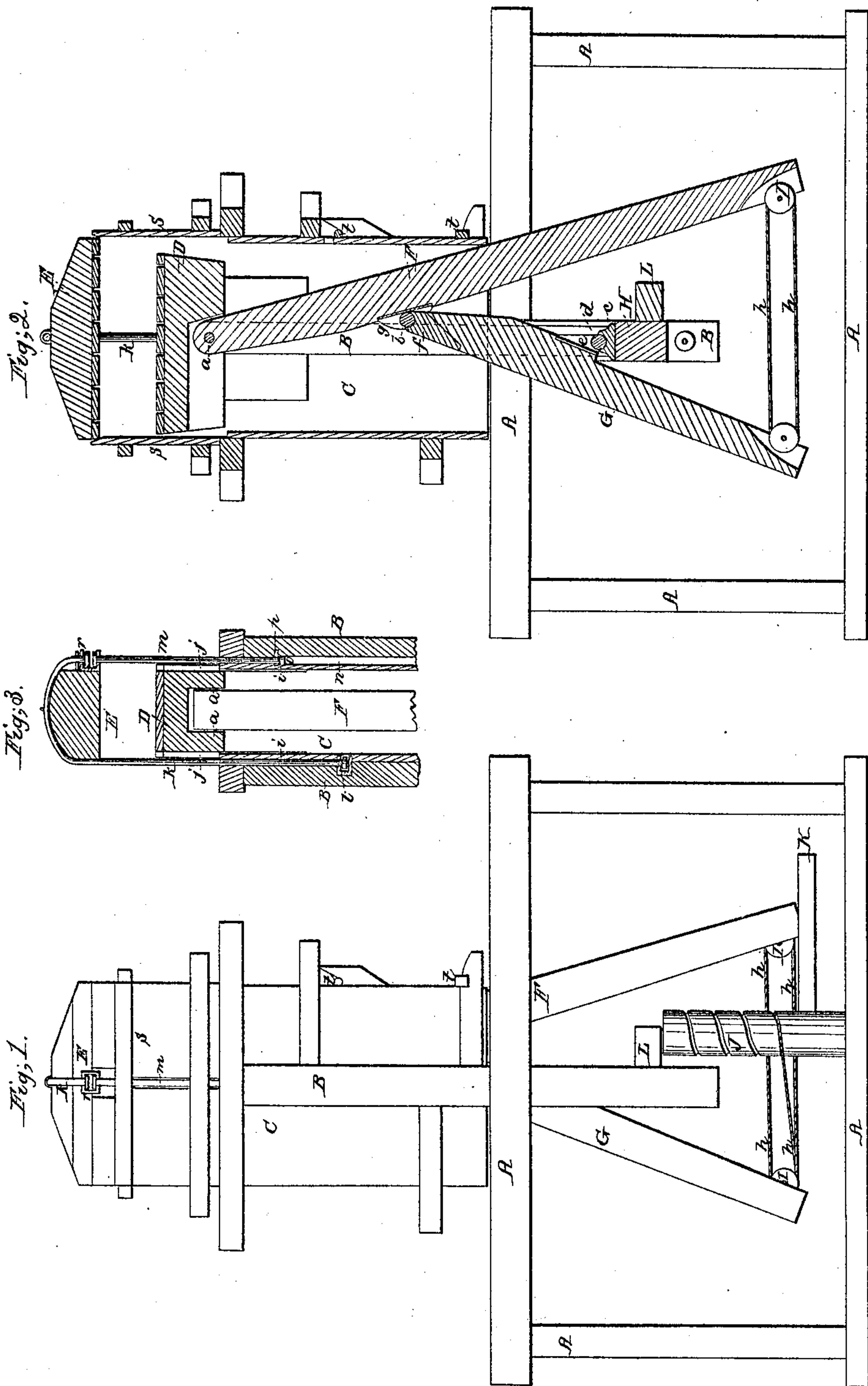


*W. F. & C. J. Provost,
Cotton Press.*

N^o 13826.

Patented Nov. 20, 1855.



UNITED STATES PATENT OFFICE.

W. F. PROVOST AND C. J. PROVOST, OF SELMA, ALABAMA.

IMPROVEMENT IN COTTON-PRESSES.

Specification forming part of Letters Patent No. 13,826, dated November 20, 1855.

To all whom it may concern:

Be it known that we, WILLIAM F. PROVOST and CHARLES J. PROVOST, of Selma, in the county of Dallas and State of Alabama, have invented certain new and useful Improvements in Cotton-Presses; and we do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part thereof, in which—

Figure 1 represents a side elevation of the press. Fig. 2 represents a longitudinal vertical section, and Fig. 3 represents a vertical transverse section through the upper portion of the press.

Similar letters in the several figures denote like parts.

To enable those skilled in the art to make and use our invention, we will proceed to describe the same with reference to the drawings.

A stout, substantial frame, A, is first made, upon which is mounted two upright pieces, B B, which support the whole press, or mainly the whole of it.

C is the box into which the cotton is thrown, and through which the follower D works to press it into a bale.

E is the platen against which the cotton is pressed by the follower. A long lever, F, is pivoted to the follower at *a*, and extends down near to the base of the press. A shorter lever, G, has its fulcrum in the cross-piece H, extending from and attached to the lower ends of the main side pieces, B B. The fulcrum of the lever F is on the point *b* of the lever G, so that one lever has a fixed and the other a movable fulcrum, but both in line, or nearly so, with the direction of the greatest resistance to the follower. The fulcrum of the lever G is formed by an iron chair or pedestal, *c*, resting on the cross-piece H of the frame, into which is placed the rounded part *d* of an iron piece, *e*, firmly secured to the lever G by first recessing it into the lever and then bolting or banding it. The lever G is free to vibrate or move on its fulcrum, which is a fixture.

On top of the lever G is an iron cap, *f*, having a rounded bearing on its upper side, into which the pivot *b*, being a part of the iron piece *g*, firmly secured to the lever F, rests and is supported. This fulcrum of the lever F is a changeable one. At the commencement of

the pressing the fulcrum of F is not in the line of resistance; but it approaches that line up to the completion of the pressing, so that when the resistance is the greatest it is in the proper position to meet it, or, in other words, is in line with the resistance. The lower ends of the levers F G are furnished with sheave-blocks I I, around which a rope or chain, *h*, passes, and is then connected to or placed in the grooves of the capstan J, to which a sweep, K, is attached, to apply power to the press. The grooves in the capstan or windlass is to prevent the rope or chain from riding when it is wound thereon, or when it is flected. The capstan J is supported below in the base A, and above in the arm L. There are guide-pieces *i i* on the inner sides of the uprights B, (see Fig. 3,) which serve as tongues, and in the follower are cut recesses or grooves *j*, into which these guides take, for giving the follower a parallel motion, and prevent it from binding in the box. The tendency of that end of the follower which is farthest from the long lever, or that end on the left of Fig. 2, is to rise faster than the other end. This is caused by the friction of the end of the long lever where it works in or is pivoted to the follower. To counteract this tendency the follower and lever may be pivoted a little to that side of the center, which is thus retarded, and thus gives it a degree of leverage over the other half equal to the friction. This will cause the follower to rise evenly and level, while the guides *i* prevent it from canting. The guides *i* project into the box, so that when the cotton or other material to be pressed is tramped into the box they form grooves in said material, which serve to direct it, as well as the follower, when it is being pressed. The platen E is hung to an iron rod, *k*, bent over the platen at its top. Said rod passes down through a slot or groove in one of the uprights B, and terminates in a square or round head, which fits into a metallic shoe, *l*, in which it may freely turn. This head and shoe prevents the rod from yielding to the pressure against the platen when connected to the rod on the opposite side of the press, as will be described, but is free to turn or be swung around with the platen out of the way of the charging of the press, or for removing the bale, the rod *k* acting as a crane for that purpose.

m is another rod on the opposite side of the

press from *l*. This rod *m* is arranged in a long slot or groove, *n*, in the other upright *B*, and has a head, *o*, on its lower end, which catches against a plate, *p*, to prevent it from rising any higher than said plate *l*, but can be pushed down into the slot *n* until the top of the rod is out of the way, so as to leave the top of the box incommoded and free for charging the press or removing the bale.

r is a coupling-link fastened to the bent end of the rod *k*, and the head of rod *m* at its upper end catches into a slot in said coupling, as seen in Fig. 3, and thus makes, as it were, one continuous rod of the two, which holds the platen firmly against the force of the follower, but which are readily removed, as before stated.

s s are the doors that form that part of the box between the permanent box *C* and the platen. They are so arranged as to be removed when the bale is pressed, and are cut away to admit the rods when the box is up to receive the material to be pressed, and leave the rods flush with the inside of the doors when up in place. The follower and platen are furnished with slats in the usual way for passing the bale-rope around the pressed bale.

t is a lock-piece, which, when let down against

the lever *F*, prevents said lever, the follower, and bale upon it from dropping back into the box when the rope *h* is fleeted or let go, and holds the bale up while rods are uncoupled and the platen swung around out of the way.

There are other details of the press, which will not be specially referred to, as they are clearly shown in the drawings.

Having thus fully described the nature of our invention, what we claim therein as new, and desire to secure by Letters Patent, is—

1. The manner of hanging and holding the platen *D*, by means of the rods *k m* and the coupling-link *r*, so that the platen may be swung around out of the way, and the rod *m* let down, as described.

2. In combination with the levers *G F* and their fulera, the pivoting of the long one of said levers to one side of the center of the follower, to counteract the tendency of the follower to cant, and to apply the power of the press in as near a direct line to the resistance as possible, and as described.

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CHARLES J. PROVOST.

Witnesses:

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