J. BROWN.

Cotton-Press.

No. 220,216. Patented Oct. 7, 1879.

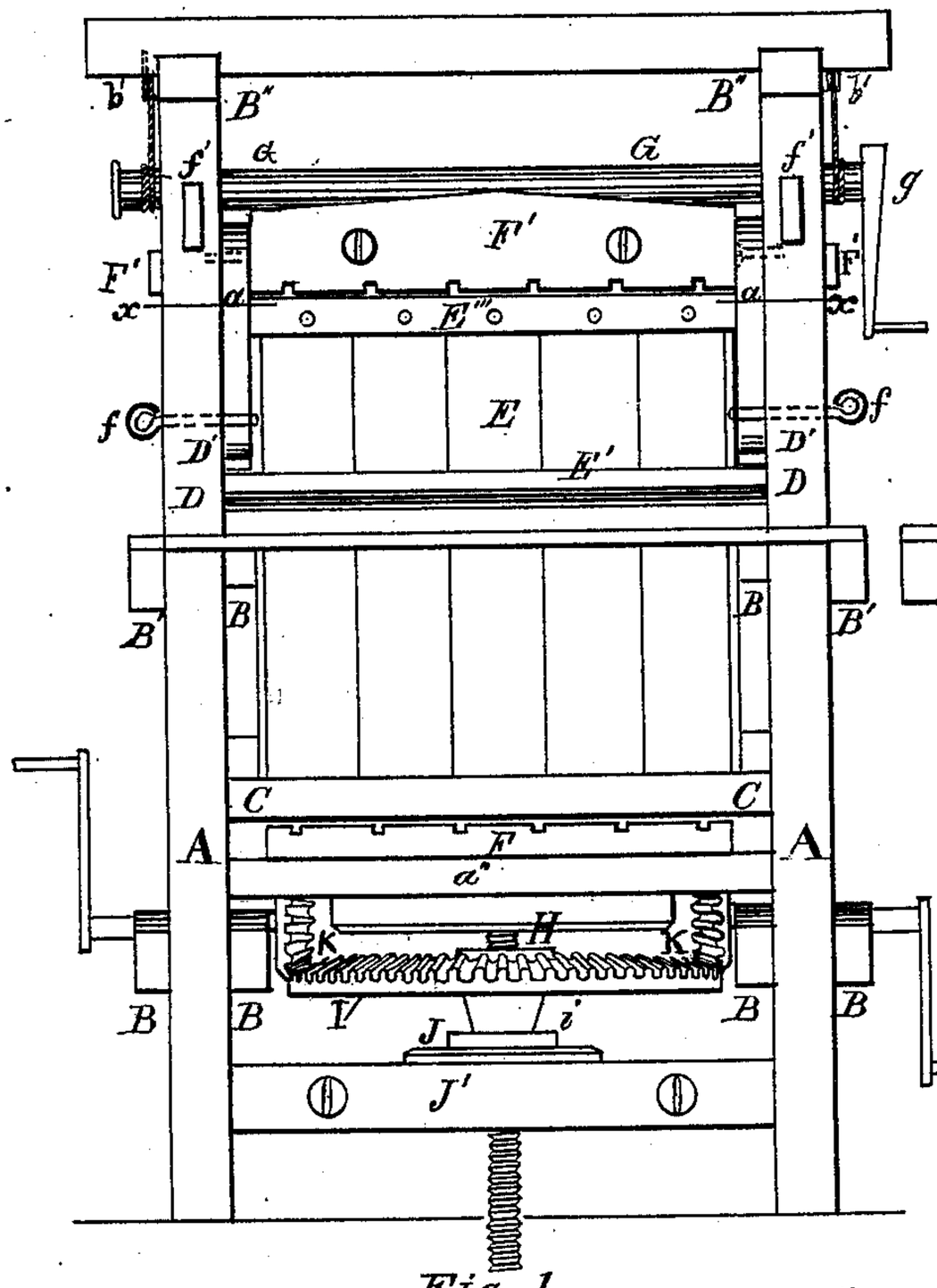


Fig. 1.

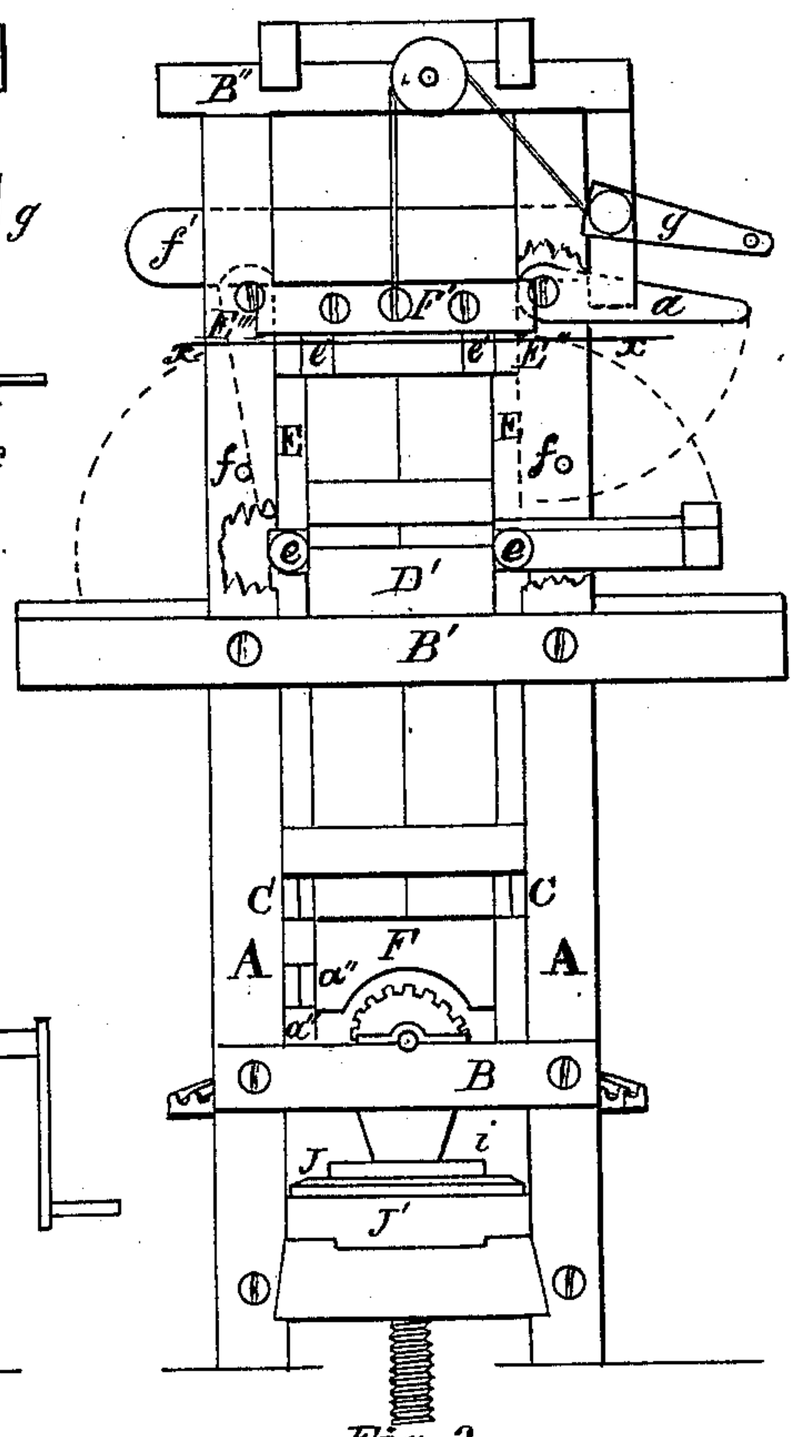


Fig. 2.

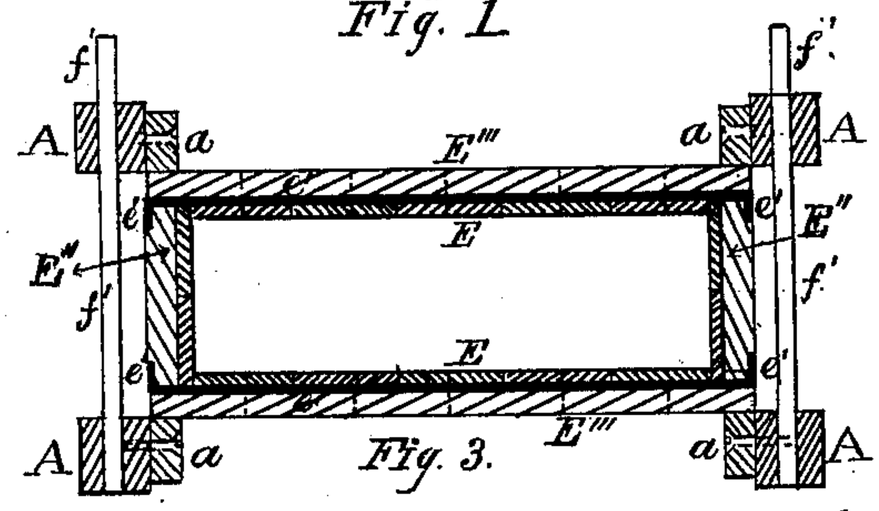


Fig. 3.

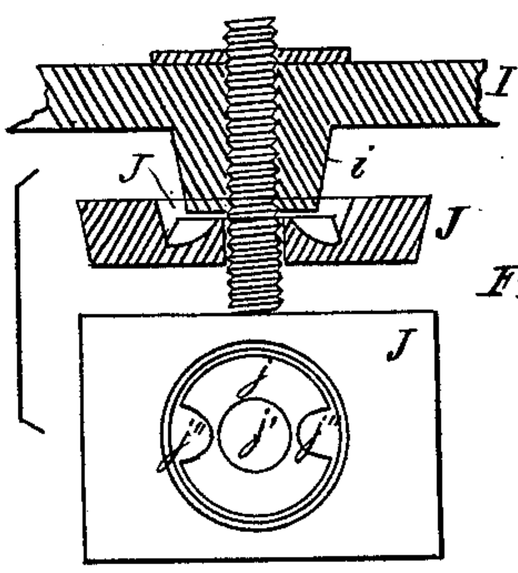


Fig. 4.

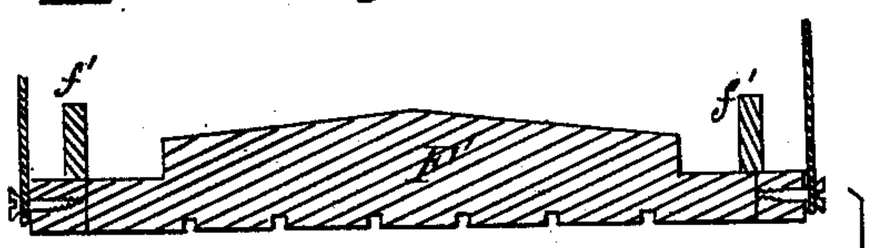
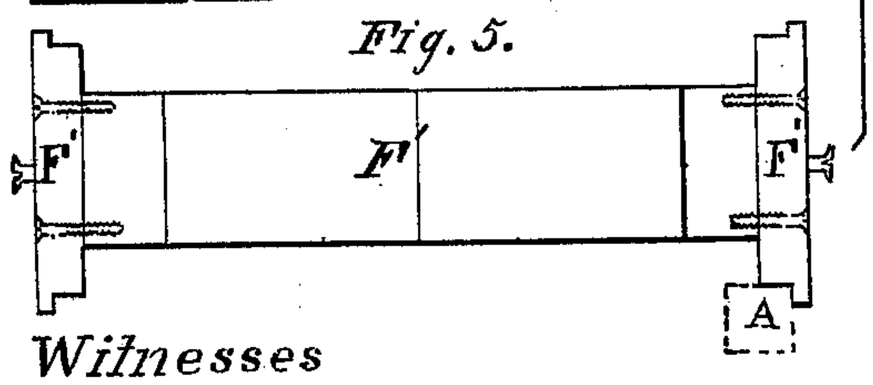


Fig. 5.



Witnesses

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UNITED STATES PATENT OFFICE.

JOHN BROWN, OF MEMPHIS, TENNESSEE.

IMPROVEMENT IN COTTON-PRESSES.

Specification forming part of Letters Patent No. **220,216,** dated October 7, 1879; application filed June 26, 1879.

To all whom it may concern:

Be it known that I, JOHN BROWN, of Memphis, in the county of Shelby and State of Tennessee, have invented certain Improvements in Cotton-Presses, of which the following is a specification.

This invention relates to pressing cotton upward instead of the hitherto common method of pressing it downward; and consists in the arrangement of the several parts of the press, which will be hereinafter more fully described.

In the accompanying drawings, forming a part of this specification, Figure 1 is an elevation of one side of the press. Fig. 2 is an elevation of one end. Fig. 3 is a horizontal section on *x x* of Figs. 1 and 2. Fig. 4 represents a vertical section of the hub of gear-wheel and screw and top view of the bearing-plate. Fig. 5 is a vertical section and top view of the upper follower.

A A A A represent four square posts, which extend from the foundation to the extreme height of the frame, and which are suitably sustained by cross-beams and ties bolted through them, as at B, B′, and B″. Within this frame is supported the boxing for the press, the boards of which extend from a short distance above the gearing at C C to the top of the second floor at D D, which floor is supported on the tie-beams B′ B′. The side doors, E E, are made to turn by a hinge formed on the lower tie-piece, E′, which has at each end a rounded portion, *e*, which works behind the post A, as shown at broken lines in Fig. 2. The end pieces or doors are made to lift out whenever required. The side doors are to be let down, as shown in dotted lines in Fig. 2, for the purpose of filling the press.

At the top of the side doors and at the corners there are flat iron clasps *e′*, securely fastened in the top rails, E‴. These clasps *e′* fasten the end doors, E″, at the top when they are raised up to their proper places. These clasps are seen in Fig. 3, *e′ e′*. The bottom of the end doors, E″, are set in rabbets formed for that purpose in the cross-beams D′ D′. The side doors are fastened by buttons *a a* on each side, pivoted to the inside of posts A at the top, and held in position for use by bolts *f* passing through holes in posts A.

F′ is the upper follower-block, which can be raised up out of the way by means of two cords passing over two pulleys, *b′*, fastened to the upper ties, B″ B″, and down to a windlass, G, which is turned by a crank, *g*. This follower F′, when in position for use, is held down by slides *f′ f′*, which run into suitable mortises in the posts A A. The lower follower-block, F, has the screw H fastened permanently within it, so that it cannot turn. Said screw H passes through the hub *i* of the beveled gear-wheel I, in which is cut the female screw, forming a heavy traveling nut. This hub or nut bears upon a socket-plate, J, which rests upon a cross-beam, J′, of the frame. In the socket-plate J is a saucer, *j*, for holding the lubricant, and within it, on each side of the orifice *j′* for the screw H, is a concavity, *j″*, through which the lubricant can run in under the part of the hub or nut of the large wheel. When the saucer is full the lubricant will rise up to the under side of the hub and oil the same, where there is the greatest friction.

There are two beveled pinion-wheels, K K, supported in journal-boxes on the tie-beams B B, and operated by crank-handles. These pinions mesh with the large beveled gear-wheel I, in the hub *i* of which is the female screw for operating the screw H.

The follower-blocks are formed of two or three pieces of timber bolted together, thus dispensing with heavy iron followers. The upper block, when the cotton is being compressed, is forced hard against the keys *f′ f′*, which are sustained by the posts A A, which posts receive all the strain upwardly, and, from inspection, it will be observed that the downward strain is upon the plate J below the wheel, and which strain, being upon the platform J′, is again thrown upon the posts A A. Thus the posts A A A A sustain longitudinally all the strain in the pressing of the material.

To guide the follower-block F, there is a tie-piece, *a″*, and to guide the upper block, F′, the tie-pieces E‴, which are the top rails of the side doors, E E.

Operation: The upper block, F′, is to be lifted up to the top of the frame. For this purpose the posts A A, &c., are made longer than usual to permit the block F′ to be out of the way. The side doors, E E, being lowered and

the end doors, E″ E″, lifted out, the cotton is thrown into the press and forced down by tramping or otherwise until the press is full up to floor D, when the end doors are set up. The side doors, E E, are then raised. The clasps *e′ e′* on the upper rail, E‴, taking hold of the end doors at the top, sustain them in their places. More cotton is then put in until the amount required is supplied. The upper follower is then lowered until it takes its proper place, and the keys or bars *f′ f′* are forced in above the ends. The press is now ready, and by turning the crank-handles of the two pinion-wheels the lower follower, F, is forced upward until the bale is duly compressed.

This construction of a press gives the following advantages: The proper amount of cotton is readily put in the press with every convenience; and, secondly, the entire strain for compression is transferred to the posts longitudinally, and the whole structure is simple and can be economically made anywhere in the country.

I claim—

1. The combination of the chamber of a vertical cotton-press, the upper follower-block, F, provided with cords, pulleys, and a windlass, and keys or fastening-bars *f′ f′*, to sustain the pressure within the corner-posts A A A A, substantially as and for the purpose described.

2. The combination of the side doors, E E, having the clasps *e′ e′*, the end doors, E″ E″, held by them, the buttons *a a*, and bolts *f f*, all substantially as and for the purpose described.

3. The plate J, having a saucer, *j*, for oil, and recesses *j″ j″*, substantially as and for the purpose described.

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Witnesses:
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