(No Model.)

W. S. REEDER.

COTTON GIN.

No. 261,042. Patented July 11, 1882.

Fig. 5.

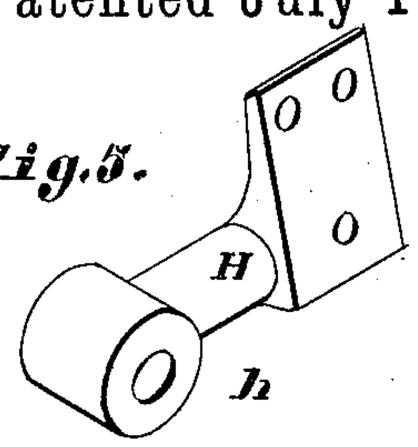


Fig. 1.

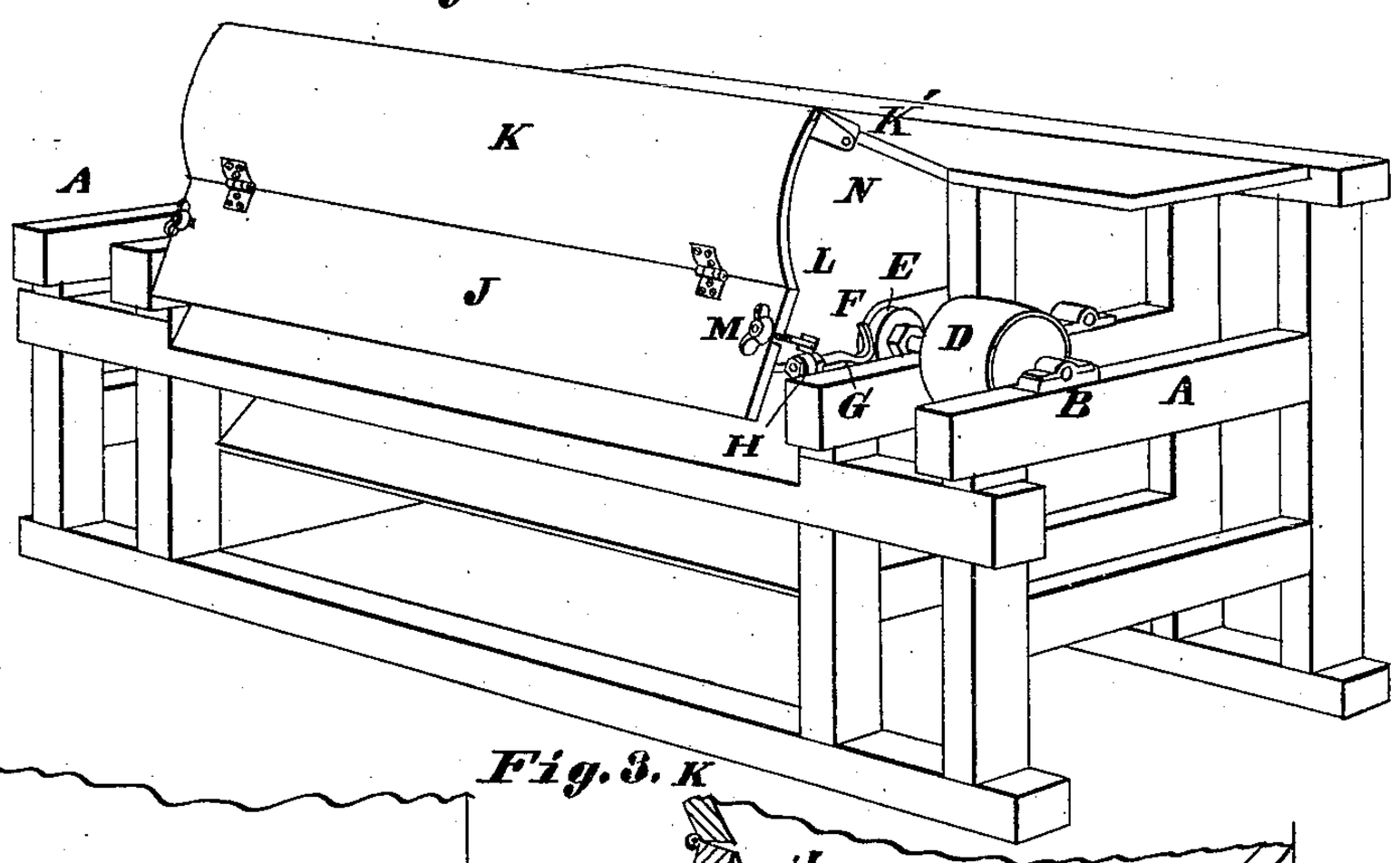


Fig. 2.

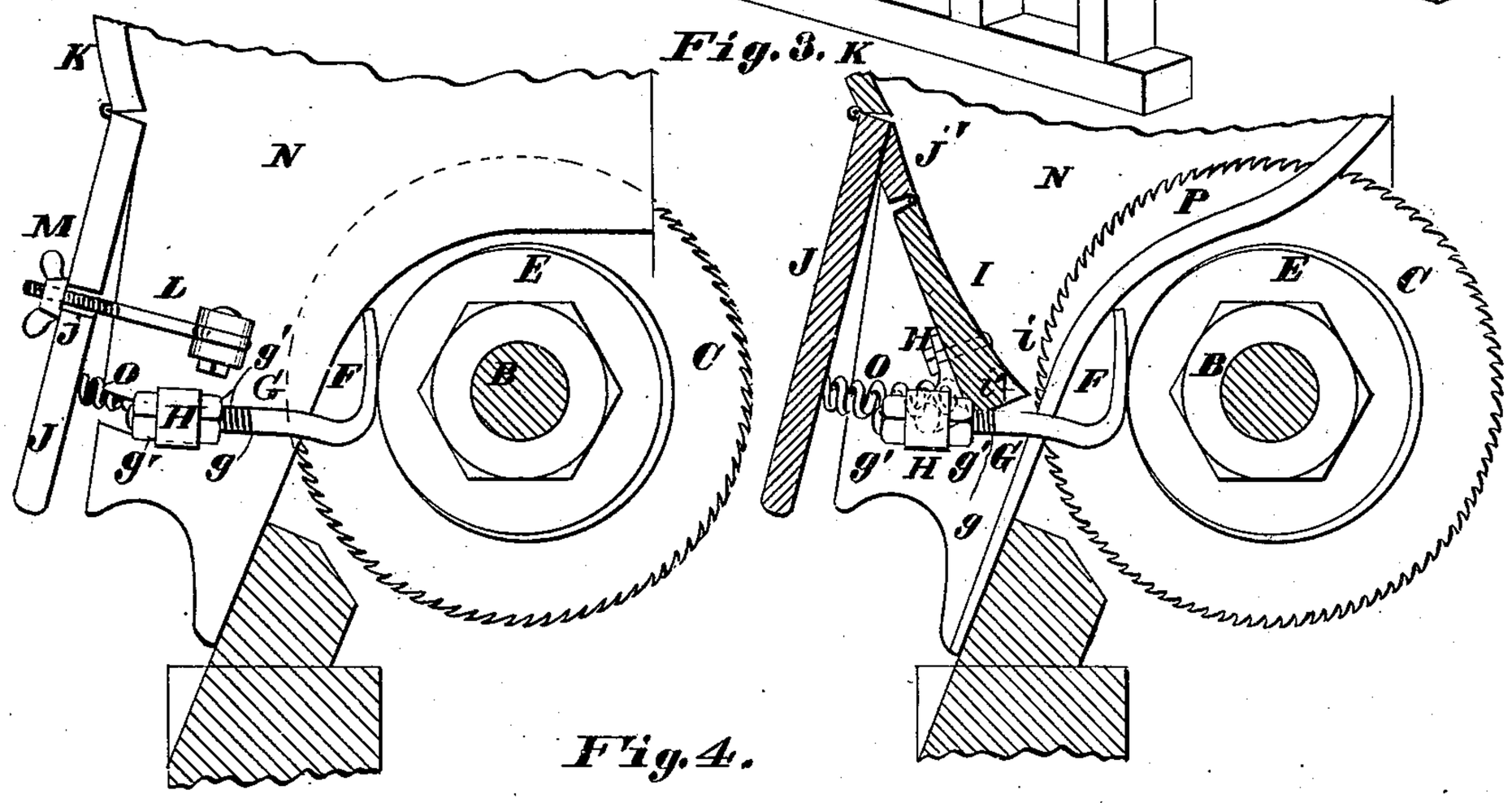
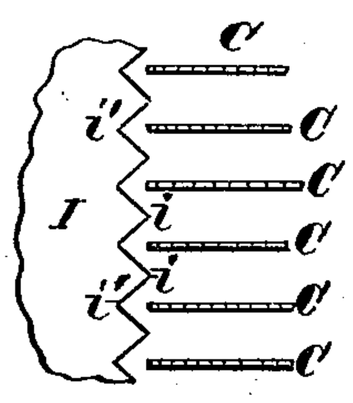


Fig. 3.

Fig. 4.



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COTTON-GIN.

SPECIFICATION forming part of Letters Patent No. 261,042, dated July 11, 1882.

Application filed April 12, 1882. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM S. REEDER, of the city of St. Louis, in the State of Missouri, have invented a certain new and useful Improvement in Cotton-Gins, of which the following is a specification, reference being had to the accompanying drawings, forming part of the same.

This improvement relates to a device for assisting the discharge of cotton-seed from the roll box or hopper, and thus preventing the breaking of the cotton-roll, and is constructed with a hinged seed-board secured to the upper part of the hopper-front, and with means for imparting to the seed-board a positive vibrating motion. The edge of the seed-board has serrations whose salient points alternate with the saws, but do not enter the spaces between them.

In the drawings, Figure 1 is a perspective view of a cotton-gin with my improvement applied thereto. Fig. 2 is an enlarged part end view of the cotton box or hopper, showing the actuating device of the vibratory seed-board. Fig. 3 is a vertical section through the hopper from front to back near one end, and in a plane parallel thereto, showing the actuating device of the seed-board in elevation. Fig. 4 is a detail top view, showing the relative positions of the saws and the serrated edge of the seed-board. Fig. 5 is a perspective view of the bracket by which the rod is connected to the seed-board.

A is the body of the gin, which may be of any usual or suitable construction.

B is the saw-shaft, carrying saws C, as usual.

D is a drive-pulley upon the saw-shaft.

E is an eccentric upon the saw-shaft B. The periphery of the eccentric acts against the foot F of the rod G. The rod G has a screw-threaded part, *g*, passing through the eye *h* of a bracket, H. The bracket H is fixed to the seed-board I.

g' g' are nuts working on the rod G and bearing against opposite sides of the bracket.

The seed-board I is connected by hinges at its upper edge to the ledge J' of the board J, extending downward from the hopper. The board J is hinged at its upper edge to the front board K of the hopper, so that it has capacity for adjustment inward and outward. It is limited in its outward movement by screw-rods L, carrying nuts M, which bear against the outer side of the board. The rods L pass through slots *j* in the ends of the board J, and are hinged to the ends N of the hopper, so that when it is desired to throw up the front of the hopper the bolts can be turned outward on their hinges, and thus disconnected from the board J.

O is a spring extending from the seed-board I to the board J, tending to thrust the seed-board inward and the board J outward. The inward movement of the seed-board is governed by the length of the rod G between the bracket H and the eccentric E, and to adjust the position of the free edge of the seed-board the nuts *g' g'* are turned upon the rod G to increase or diminish the length of the part between bracket and eccentric, as aforesaid. The lower inner edge of the seed-board in proximity to the saws is serrated, the teeth *i* being midway between the saws and the notches *i'* in line with the saws. The edge should be smooth to allow the seeds to slip past. The open notches will not cause detention of the seeds, as the notches wear very smooth.

The force of the spring O is regulated by means of the nuts M, the board J forming the outer bearing of the spring.

K' is the ordinary hinge by which the top of the hopper-front is connected to the body of the gin, so that the front may be thrown up when required.

P is the ribbed breast forming the inner or rear side of the cotton box or hopper.

I have described my preferred construction, but do not confine myself to the exact construction shown and described. For instance, the boards J and K may be made in one piece instead of having hinge-connection. Even the hinge connecting the seed-board I to the rest of the hopper-front may be dispensed with, and the seed-board be solidly attached to the front boards, J and K, the same being all in one piece. In this case the spring or springs O would be interposed between the nuts M and the front board J, and the whole hopper-front would vibrate on the hinges K' as an axis.

I claim herein as new and of my invention—

1. In a cotton-gin, the combination of a cot-

ton box or hopper, a hinged seed-board, and means for imparting positive vibratory motion to the seed-board, as set forth.

2. In a cotton-gin, the combination of a vibratory seed-board, I, having serrated edge *i i'*, forming teeth, the saws C, and a hopper, the teeth alternating with the saws, but not entering the spaces between the saws, as set forth.

3. The combination of vibrating seed-board I, rod G, eccentric E, spring O, and board J, substantially as set forth.

4. The combination, in a cotton-gin hopper, of the adjustable board J, screw-bolts L, nuts M, spring O, vibratory seed-board I, adjustable rod G, and eccentric E, substantially as set forth.

WILLIAM S. REEDER.

In presence of—
SAML. KNIGHT,
GEO. H. KNIGHT.