J. WALKER.

Cotton-Seed Huller.

No. 12,610. Patented March 27, 1855.

Fig. 1.

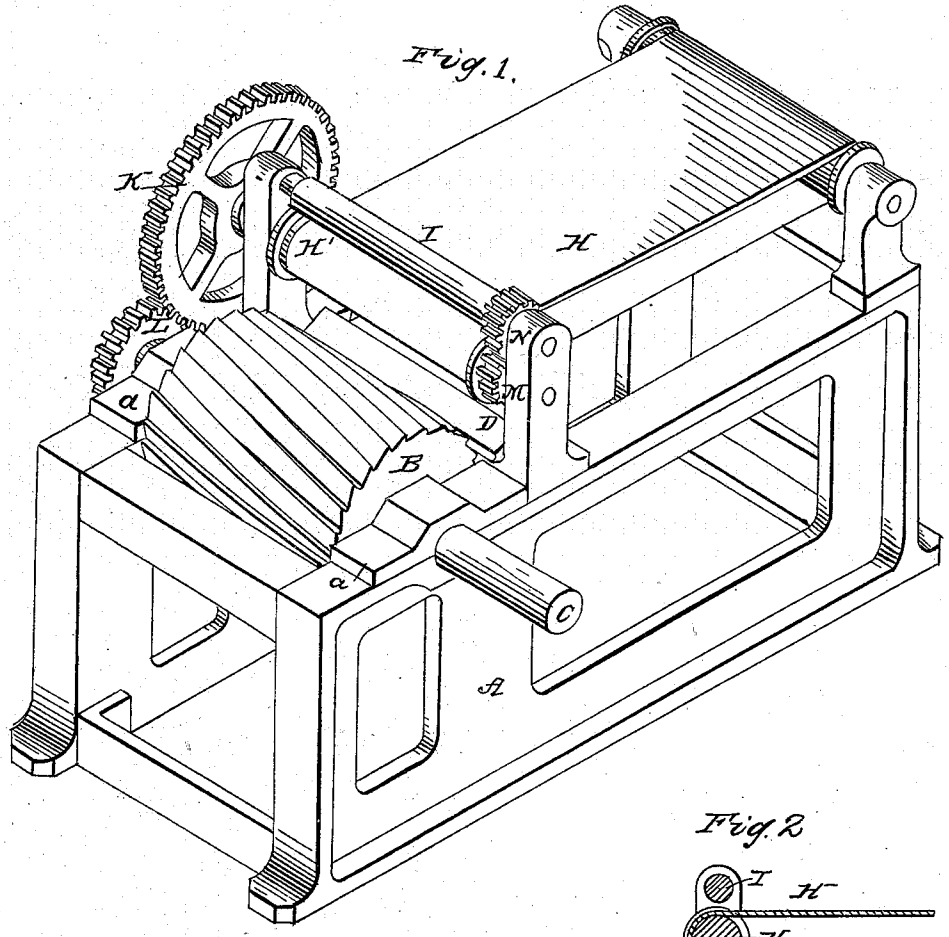
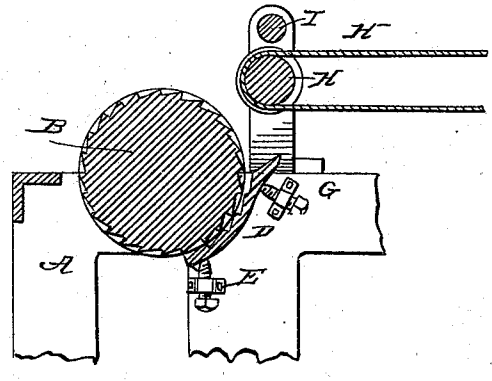


Fig. 2



N. PETERS. Photo-Lithographer. Washington, D. C.

UNITED STATES PATENT OFFICE.

JOSEPH WALKER, OF DOVER, ENGLAND.

IMPROVEMENT IN HULLING COTTON-SEEDS.

Specification forming part of Letters Patent No. **12,610**, dated March 27, 1855.

To all whom it may concern:

Be it known that I, JOSEPH WALKER, of Dover, in the county of Kent, England, merchant, have invented a mill or machine for hulling cotton-seeds and grains with caps or shells; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

This mill consists of an iron or steel roller furnished with teeth made along the cylinder in a direction oblique to its axis. This cylinder works within a hollow or concave segment fitting the cylinder, or nearly so, and having teeth made within it in such a direction that when the cylinder rotates in its bearings the teeth of the cylinder and those of the concave case are at angles with respect to each other, so as to produce an action upon the seeds similar to that of a pair of shears.

Figure I is an isometrical view of my machine. Fig. II is a section in detail, and similar letters indicate similar parts in both.

A is the frame-work.

B is the roller or cylinder provided with rows of teeth arranged at an angle with its axis, and extending the whole length of its surface. The roller is supported and revolves in bearings or brasses *a a* in the two side frames, and receives motion from a strap-pulley or other suitable gearing keyed upon the shaft C.

D is a concave segment or case, made of cast-steel or cast-iron, case-hardened, and furnished with rows of teeth arranged in lines parallel with the axis of the rollers. The teeth in both the roller and segment are made similar to ratchet-teeth, with their faces in opposite directions. The segment D is capable of being adjusted to various distances from the roller B, to suit the size of seeds to be operated upon, for which purpose the front end of the segment is supported at each side upon the point of a set-screw, E, Fig. II. The back part of the segment is supported also by a set-screw at each side G, whereby that end of the segment is also capable of adjustment.

H is an endless web passed over rollers supported in paper bearings upon the frame-work, as shown.

I is a distributing and regulating roller. The roller H′ has keyed on one end the toothed wheel K, driven by a pinion, L, upon the shaft of the cylinder. The other end of the roller H′ carries a toothed pinion, M, which works into the toothed wheel N, upon the end of the regulating-roller I, and thus motion is given to the endless web H and regulating-roller I. The seed to be cracked falls from a reservoir (not shown in the figures) upon the web, and on reaching the roller L becomes evenly distributed across it, and is then fed into the mill.

Although in this description I have only described the machine as operating on cotton-seeds, it is equally applicable to all seeds with caps or shells.

What I claim is—

Supporting and adjusting the concave bed by means of grooves cut within, or other equivalent devices affixed to the side frame in such manner that the said concave shall be eccentric to the axis of the hulling-cylinder, for the purpose specified.

In witness whereof I, the said JOSEPH WALKER, have hereunto set my hand this 20th day of July, A. D. 1854.

JOSEPH WALKER.

Witnesses:

MICHAEL HENRY,

R. A. BROOMAN,

Both of 166 *Fleet Street, London.*