

P. J. MARTIN.
Cotton Seed Hullers.

No. 153,263.

Patented July 21, 1874.

Fig. 1.

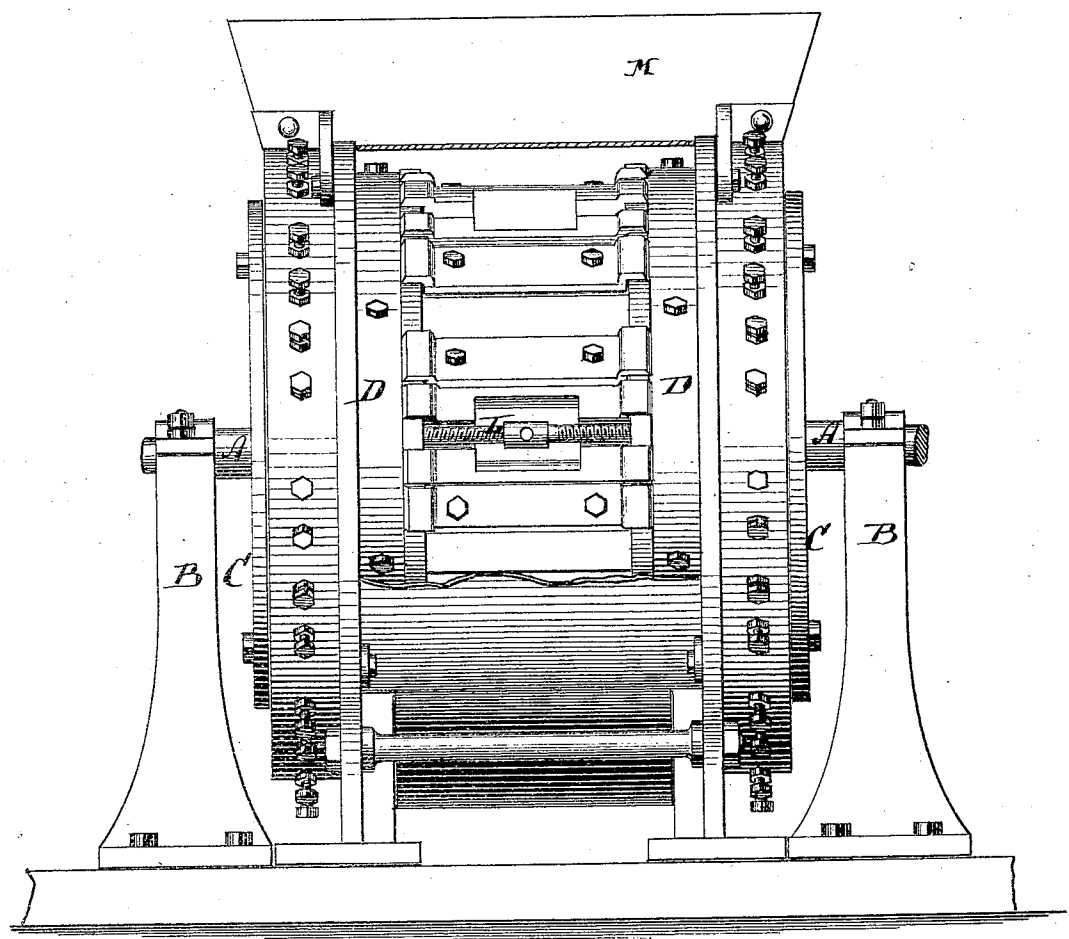


Fig. 2.

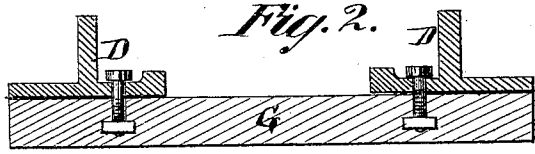
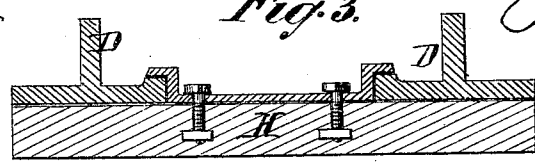


Fig. 3.



Witnesses:
John Becker.
Fred Haynes

P. J. Martin
by his Attorneys
Brown & Allen

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Fig. 4.

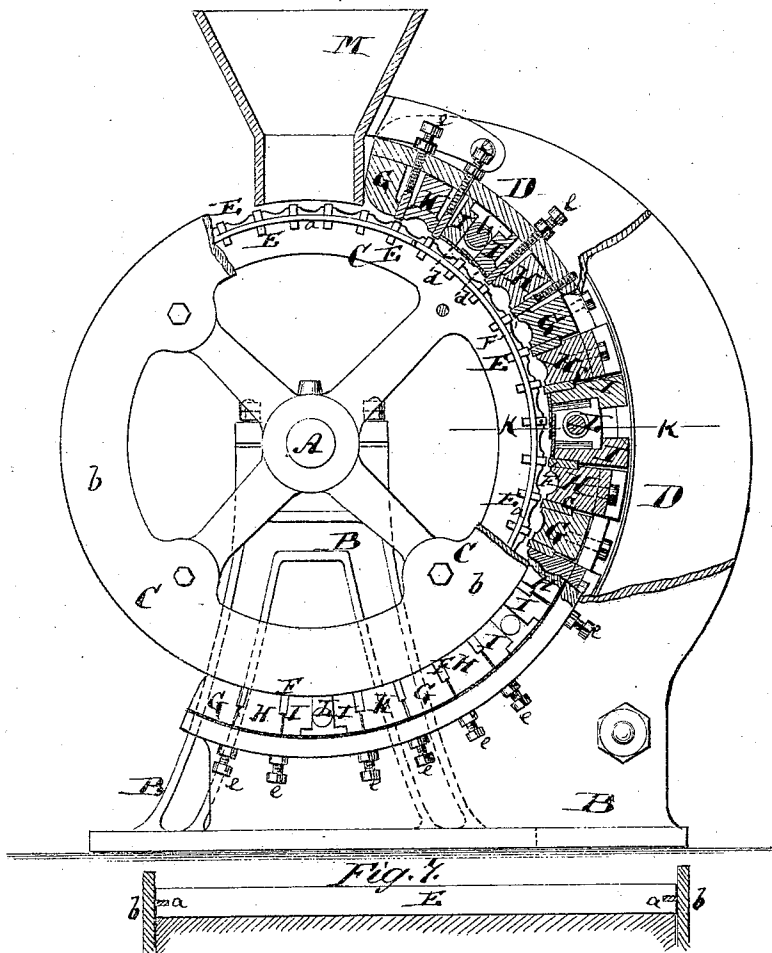


Fig. 1.

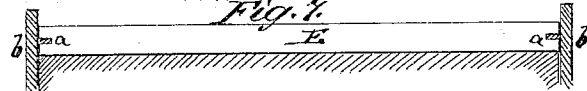


Fig. 5.

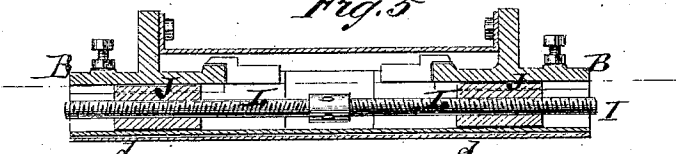
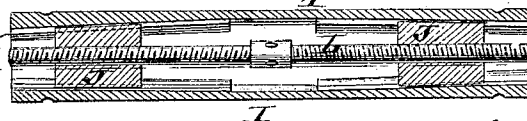


Fig. 6.



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UNITED STATES PATENT OFFICE.

PAUL J. MARTIN, OF PARIS, FRANCE.

IMPROVEMENT IN COTTON-SEED HULLERS.

Specification forming part of Letters Patent No. **153,263**, dated July 21, 1874; application filed March 24, 1873.

To all whom it may concern:

Be it known that I, PAUL J. MARTIN, of Paris, France, have invented an Improved Cotton-Seed Hulling or Decorticating Machine, of which the following is a specification:

Figure 1 represents a side elevation, partly in section, of my improved decorticating-machine. Figs. 2 and 3 are detail horizontal sections of its outer concave frame. Fig. 4 is an end elevation, partly in section, of the machine; Fig. 5, a detail horizontal section on the line *k k*, Fig. 4. Fig. 6 is a detail horizontal section on the line *c c*, Fig. 4, and Fig. 7 a detail face view of one of the knives or blades on the rotary cylinder.

Similar letters of reference indicate corresponding parts in all the figures.

The invention relates chiefly to a certain construction and arrangement of screws and wedges for securing the knives of the concave in place, and for adapting them to be adjusted toward the cylinder.

The effect of the operation of the machine on the cotton-seed, which passes from a hopper down between the stationary concave and revolving cylinder, is to remove its fibrous outer covering or envelope by the grinding or rubbing action of the knives or sharp-angled bars fixed on said concave and cylinder.

In the accompanying drawing, the letter A represents the shaft of my improved decorticating-machine. The same is hung in a stationary frame, B, and supports a rotary cylinder, C, while a semicircular concave, D, is secured to the frame B, and forms part of the same. The cylinder C contains and carries a series of blades, or knives, or scrapers, E E, which project from its circumference, and which are all notched at their ends, as shown in Fig. 7. With these notched ends the knives are secured to rings *a* that are crowded by them against the face-plates *b* of the cylinder C, said face-plates being fastened to the ends of the cylinder by means of screws or otherwise, to be removable, so that when they are removed the knives can easily be detached, reversed, or repaired. In cross-section each knife E is rectangular, as shown in Fig. 4,

and furnishes thus four working edges, of which one only is used at a time. When one edge is worn the other outer edge is brought into use by properly turning the knife, and when that also has been worn the knife is reversed to bring the inner edges outward, and one of these is used, and finally the other, so that thus each knife will serve four different times. The concave D contains similar knives F F, which can also be reversed in like manner. These knives F are held between a series of peculiar wedges, which are more fully shown in Fig. 4. The uppermost wedge G is fixed to the frame or rim of the concave; the next wedge, H, is movable; the next wedge, I, dilatable; then follows another movable wedge, H; another stationary wedge, G, &c., in similar succession. Between each pair of wedges G, H, and I is held a knife, F, as shown. The dilatable wedge I is made in two parts, between which laterally-movable blocks or wedges J J are placed, as more clearly shown in Figs. 5 and 6. A screw, L, passes through these blocks or wedges J, and serves when turned to expand the two parts of the dilatable wedge I. When, by such turning of the screw L, the wedge I is expanded and crowded toward the two knives F F, which are contiguous to the two movable wedges H H, such knives and movable wedges are moved toward the two stationary wedges G G, and thus the four knives held between such five wedges are firmly clamped in their places. By turning the screw L in the opposite direction, and contracting the dilatable wedge I, all the knives will be released. The dilatable wedge has on its inner face overlapping sheet-metal plates *d*, which prevent the fibrous material acted upon in the machine from coming in contact with and clogging the screw L. Set-screws *c c* pass through the shell of the concave D, against the outer sides of the knives F, for the purpose of setting them a proper distance from the knives E of the cylinder C. On one concave I may have four dilatable wedges, I, as shown in Fig. 4, in which case there will be eight movable wedges, H, and five fixed wedges, G. A feed-hopper, M, is connected with the concave D, to supply

the machine with material, which is acted upon in the usual manner by revolving the cylinder C.

What is here claimed, and desired to be secured by Letters Patent, is—

1. The dilatable wedge I, movable wedges H, and fixed wedges G, combined and arranged on the concave of a decorticating-machine for holding the knives in position, as set forth.

2. The overlapping plates *d d*, formed on the two parts of the dilatable wedge I, respectively, as and for the purpose set forth.

3. The combination, in a decorticator, of the knives E, wedges H and I, fixed wedges G, with the movable wedges J, and double-threaded screw L, all constructed and arranged as shown and described.

In testimony whereof I have hereunto signed my name in the presence of two subscribing witnesses this the 17th day of January, 1873.

P. JOSEPH MARTIN.

Witnesses:

C. JACHARD,
S. FERGUSON.