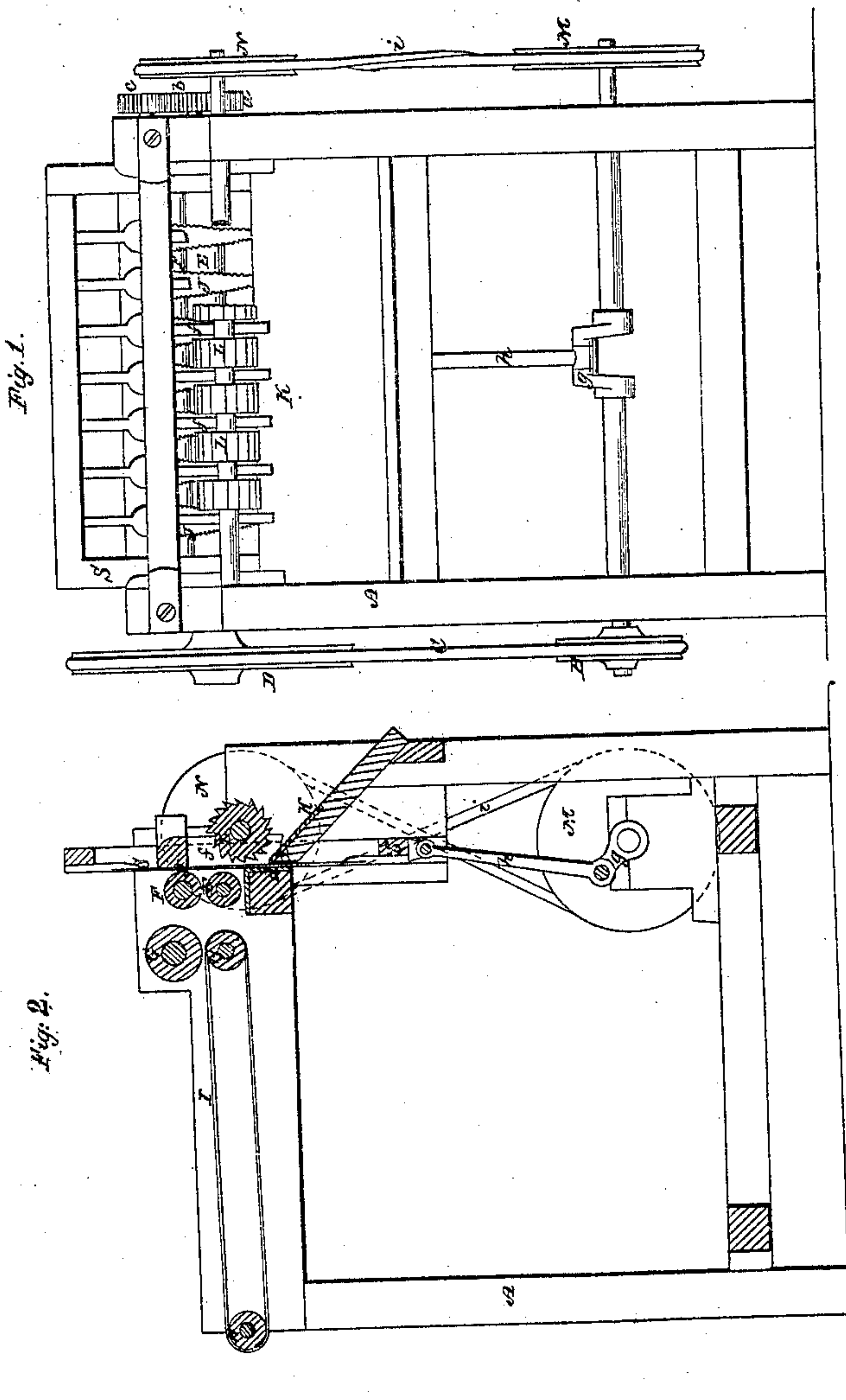
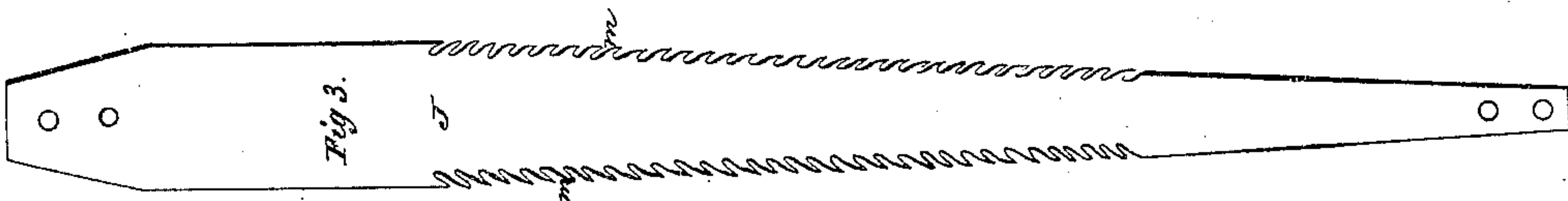


*R. J. Clay,
Wool Burring Machine.*

N^o 63,471.

Patented Apr. 2, 1867.



Witnesses:

*J. Bloomby
G. W. Reed*

Inventor:

R. J. Clay

United States Patent Office.

ROBERT J. CLAY, OF GREENPOINT, NEW YORK, ASSIGNOR TO HIMSELF,
JAMES T. HUSTED, ETENGER J. BURLING, AND CORNELIUS CORSON.

Letters Patent No. 63,471, dated April 2, 1867.

IMPROVEMENT IN MACHINE FOR BURRING WOOL, GINNING COTTON, &c.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, ROBERT J. CLAY, of Greenpoint, in the county of Kings, and State of New York, have invented a certain new and useful Improvement on Machines for Burring Wool, Ginning Cotton, or other analogous purposes, of which the following is a full, clear, and exact description, reference being had to the accompanying drawing, forming part of this specification, and in which—

Figure 1 represents a front elevation of a machine constructed according to my improvement.

Figure 2, a longitudinal section of the same taken transversely through the feeding rollers; and

Figure 3, a face view on an enlarged scale of one of the burring blades detached.

Like letters indicate like parts in the several figures.

My invention, though more particularly designed to removing the burs from wool, especially mestizo burs, which, from their convolute and jagged character, require to be removed unbroken, as otherwise there is great difficulty in detaching broken particles, is also applicable to ginning cotton or other analogous purposes. It will suffice here, however, to describe it in its application to burring wool; and the nature of my invention consists in detaching the burs or other obstructions or foreign matter contained in the fibre by means of a gang of reciprocating tooth-shaped blades, to catch as it is fed thereto the fibre from the bur, while the latter by suitable devices is afterward separately ejected and prevented from commingling with the wool so cleared. Said invention also consists in a machine of the character described, of a combination with reciprocating saw-shaped blades for detaching the fibre, working through ways or passages which exclude the burs, of intermediate rotary bur extraction; also in a taper form to said reciprocating toothed blades, and in a peculiar formation of the teeth thereof, whereby, while the fibre is withdrawn from the bur, the latter is prevented from being broken.

Referring to the accompanying drawing, A represents the frame of the machine, which may be of any suitable description. B is or may be a driving-pulley giving motion, by belt C, to a wheel, D, that carries or drives a roller, E, running across the front of the machine, and that by pinion gear *a b c* on the one side of the frame fitting into corresponding gear serves to rotate an upper front roller F, soft roller G, and by rollers H H to give motion to an endless apron I for the purpose of feeding up the wool and delivering it in a proper form to a gang of reciprocating blades, J, arranged at a suitable distance apart, and that are formed with teeth on both edges, which project transversely to the feed for the purpose of (in the one stroke of the blades) detaching the wool as it is fed from the burs, and in their opposite stroke clearing themselves of the fibre, by, say, working the wool in their down stroke, through or between ways or passages formed by plates *d* arranged sufficiently close to exclude the burs, and to scrape off or detach any adhering fibre in the up stroke of the blades; brushes, slides, or other suitable devices being, if necessary, arranged below said passages to sweep off the wool in case of it not dropping from the blades. The blades J may either reciprocate in a straight or curvilinear direction. The burs are delivered in between the gang of toothed blades J above the plates *d*, and may be ejected or drawn out down a delivery-board, K, by ratchet-shaped toothed rollers L, or by any other appropriate devices. The saw-shaped blades J may be guided on their front faces to prevent the blades from springing or buckling by strips *f*, which, if desired, may be attached to the blades that are held in a frame, S, to which a reciprocating motion may be given by a crank, *g*, on the driving-shaft and pitman *h*. The rotary bur extractors or wheels L may be driven by a belt, *i*, and pulleys M N. For the more effectual performance of the work I make the blades J of a tapering character, being wider above and narrower below, whereby crowding of the burs between the blades is avoided, and their clearance down or on to the edge of the delivery-board, for a free and proper action of the bur extractor, is secured. Likewise, and as it is all-important in working wool containing mestizo burs, that the latter should not be broken in the wool, the teeth of the blades J are not simply formed sharp-pointed and to project downwards, but are straightened or shelved off on their outer edges *m* so as to avoid catching or cutting the burs, substantially as represented in fig. 3, and which the taper character of the blades, especially in the up stroke, largely contributes toward. It is also desirable that the teeth of the blades should be sharpened or shelved off from their roots to their points on the faces of the blades which lie in front or are next adjacent to the bur extractors to still further prevent all liability of the burs being caught or broken.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In machinery for burring wool, ginning cotton, or other analogous purposes, a combination, with a suitable feed and bur or seed extractors or delivery device, of a gang of reciprocating blades having saw-shaped teeth at their edges for operation relatively to the feed substantially as specified.
2. The combination, in connection with a suitable feed, of a series of reciprocating blades having teeth on their edges, and working through ways or passages which pass the fibre but exclude the burs, with a series of intermediately arranged rotary bur extractors, for operation together as herein set forth.
3. The tooth-shaped blades J made of taper form in direction of their length, as described, in combination with a suitable feed and series of bur extractors, essentially as and for the purpose, herein specified.
4. In a gang of saw-shaped blades, operating as described, for the purposes set forth, constructing the teeth of said blades straight or shelving on their outer edges, and sharpened from their roots to their points on their outer or front faces, substantially as shown and described.

R. J. CLAY.

Witnesses:

J. W. COOMBS,
G. W. REED.