

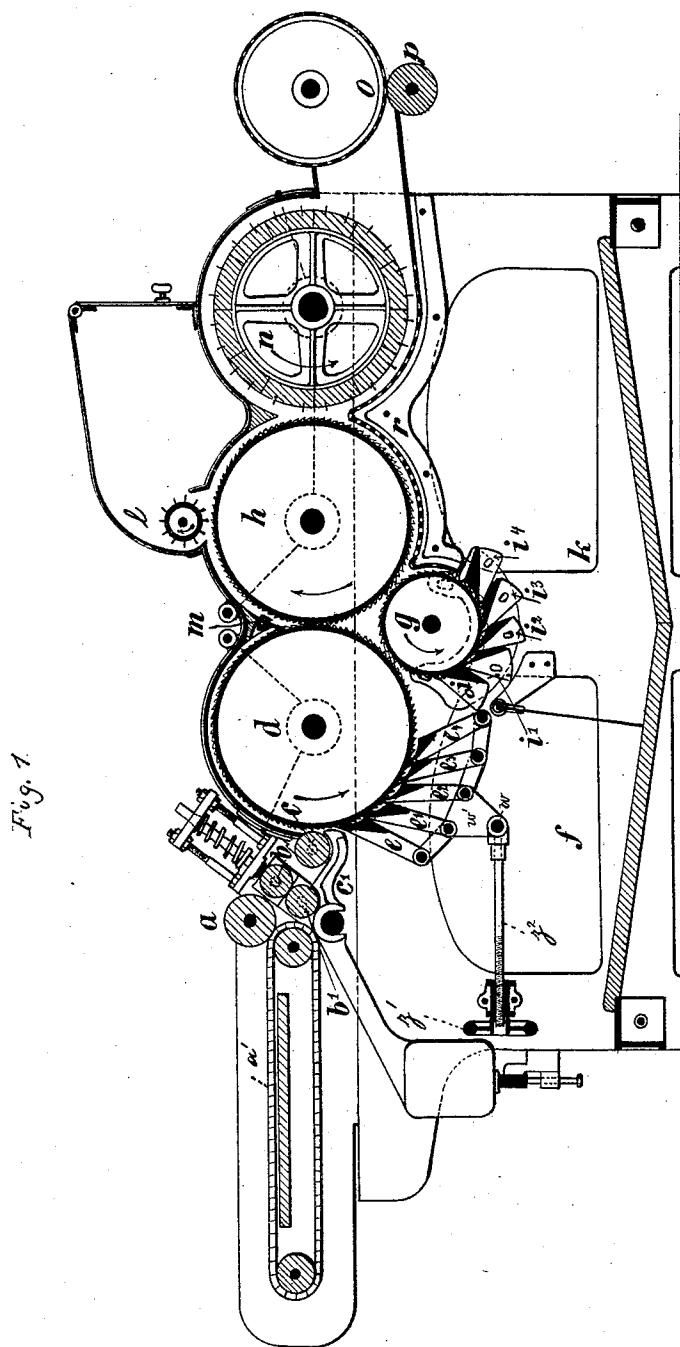
(No Model.)

3 Sheets—Sheet 1.

G. JOSEPHY.
MACHINE FOR CLEANING COTTON.

No. 437,303.

Patented Sept. 30, 1890.



Witnesses
Wm. Wagner.
A. Forghmann.

Inventor:
G. Josephy
by his attorneys
Reeder & Brissan

(No Model.)

3 Sheets—Sheet 2.

G. JOSEPHY.
MACHINE FOR CLEANING COTTON.

No. 437,303.

Patented Sept. 30, 1890.

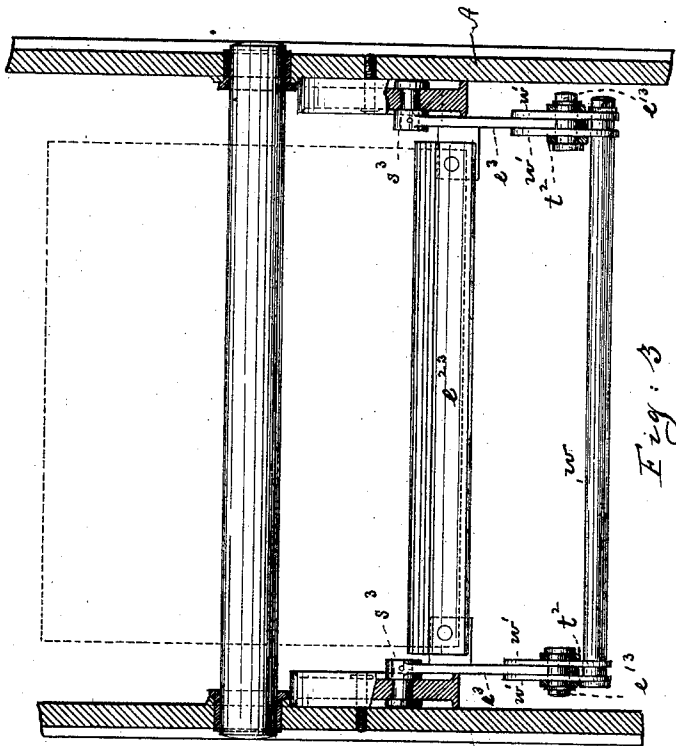


Fig. 3

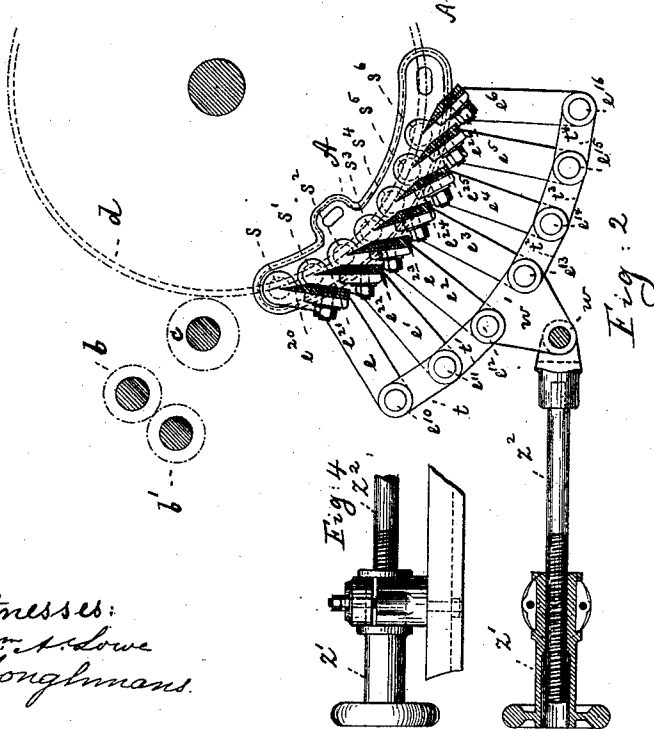
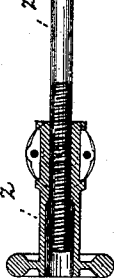
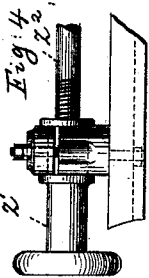


Fig. 2



Witnesses:
W. S. Lowe
H. Longman.

Inventor:
G. Josephy
by his attorneys
Roeber & Brissau

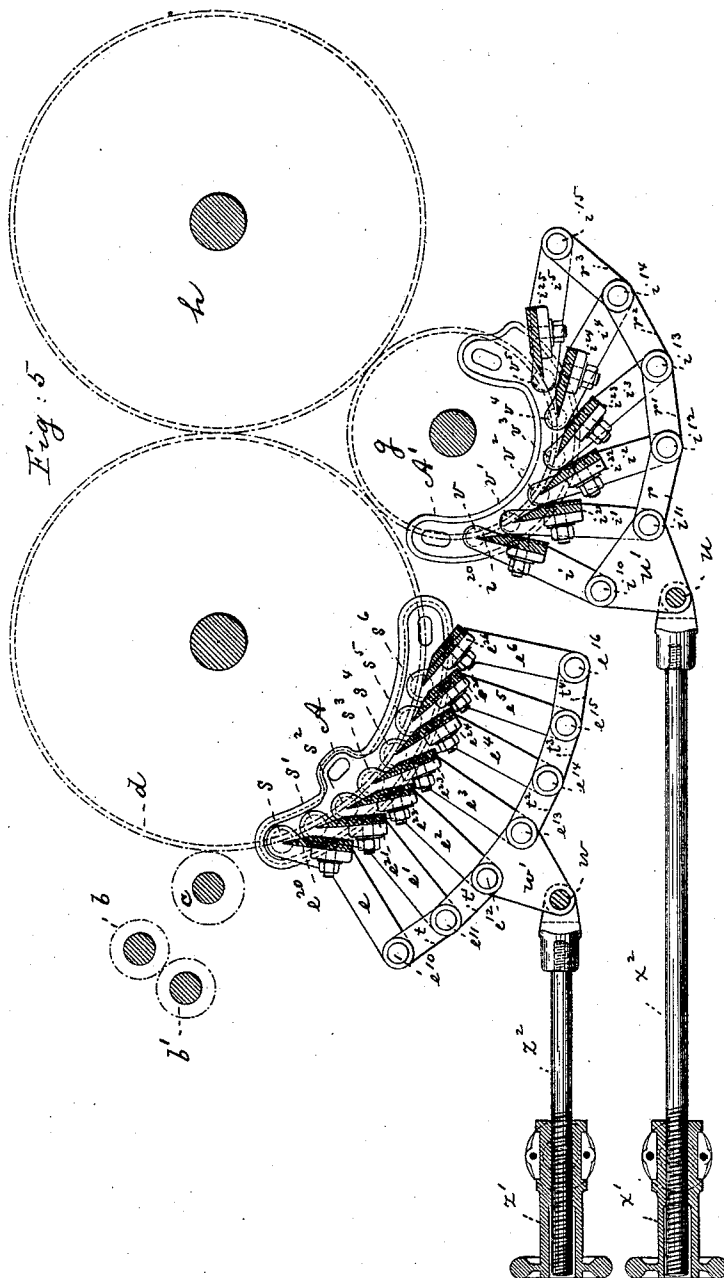
(No Model.)

3 Sheets—Sheet 3.

G. JOSEPHY.
MACHINE FOR CLEANING COTTON.

No. 437,303.

Patented Sept. 30, 1890.



Witnesses:

Wm. A. Lowe
A. Jonghman.

Inventor:

G. Josephy
by his attorneys,
Rieder & Biesen.

UNITED STATES PATENT OFFICE.

GUSTAV JOSEPHY, OF BIELITZ, AUSTRIA-HUNGARY.

MACHINE FOR CLEANING COTTON.

SPECIFICATION forming part of Letters Patent No. 437,303, dated September 30, 1890.

Application filed March 8, 1890. Serial No. 343,126. (No model.)

To all whom it may concern:

Be it known that I, GUSTAV JOSEPHY, a subject of the Emperor of Austria-Hungary, residing at Bielitz, Austria-Hungary, have invented an Improved Machine for Cleaning Cotton, of which the following is a specification.

This invention relates to a machine for removing the impurities from cotton preparatory to carding and from cotton waste.

It has for its object to so construct the machine that the cotton is cleaned without the use of any air-blowing device whatever, which is objectionable.

The invention consists in the various features of improvement more fully pointed out in the claims.

In the accompanying drawings, Figure 1 is a vertical longitudinal section of my improved machine for cleaning cotton, showing it provided with five adjustable scutcher-knives and five fixed doffer-knives. Fig. 2 is a sectional side view of part of the machine, showing seven scutcher-knives and their adjusting mechanism. Fig. 3 is an end view of Fig. 2 with screw-rod z^2 removed. Fig. 4 is a detail side view of the hand-wheel z' and screw-threaded rod, hereinafter described; and Fig. 5 is a sectional side view of part of the machine, showing both the scutcher-knives and doffer-knives adjustable. In this figure seven scutcher-knives and six doffer-knives are shown.

The charge passes from the feed-cloth a' under a safety-roller a and thence between a pair of feed-rollers $b b'$. From rollers $b b'$ the charge passes between roller c and feed-bars c' to the first scutcher d , having a toothed-wire working-face. The scutcher spreads the cotton into a thin bat and forces it against the knives placed opposite the scutcher. Each of these knives $e^{20} e^{26}$, Figs. 2 and 5, is bolted to a pair of arms $e e' e^2 e^3$, &c., Fig. 3, pivoted at their inner ends by gudgeons $s s'$, &c., to a fixed plate A , while at their free ends they carry the studs $e^{10} e^{11} e^{12}$, &c.

Two pairs of arms—viz., e^2 and e^3 , Figs. 2 and 5, and e' and e^2 , Fig. 1—are at their free ends connected to a pair of triangular plates w' by means of their studs. The other arms are in turn connected at their free ends to the plate-carrying arms by means of links $t t^4$ en-

circling their studs, as shown. It will be seen that by imparting motion to the plate w' the arms $e e^6$ will be vibrated, and thus the distance between the cutting-edges of the knives and the scutcher will be altered.

The plates w' are connected to a shaft w , Fig. 3, embraced by a screw-shaft z^2 , entering a tapped hub on a hand-wheel z' . By revolving the hand-wheel the shaft z^2 will be moved backward or forward, taking the shaft w with it, and thus moving the plates w' to oscillate arms $e e^6$, as described.

By means of the knives $e^{20} e^{26}$ the solid impurities—such as scales and grains—are beaten out of the cotton held to the scutcher, the latter revolving at a speed of about eight hundred revolutions per minute. The impurities removed by the knives $e^{20} e^{26}$ fall into a receptacle f . From the first scutcher d the purified charge passes by the doffer g to a second scutcher h . The doffer g has a working-face much finer than the scutcher d .

Opposite to the doffer knives are placed, as shown. These knives may be either fixed, Fig. 1, or adjustable, Fig. 5. If adjustable, the doffer-knives $i^{20} i^{25}$ are bolted to arms $i i^5$, pivoted to fixed plate A' , and having studs $i^{10} i^{15}$ on their free ends, encircled by links $r r^3$. The arms $i i^5$ are oscillated on their pivots v^5 by means of the plate u' , shaft u , screw-shaft x^2 , and tapped hand-wheel x' , the same as already described in relation to the knives $e^{20} e^{26}$. By the knives $i^{20} i^{25}$ the impurities which may still remain in the material are beaten out of it and fall into the compartment k .

The bat passes from the doffer to the second scutcher h , having a very fine and compact coating of toothed wire and rotating at about twelve hundred revolutions per minute. Here the cotton, which has but slightly penetrated the coating of the drum d and g , is somewhat carded and is at the same time reversed. A backing-off roller l , rotating with a very high speed, beats the cotton again, so that the impurities, if any, are removed and thrown out of the machine. A stripping-knife m , placed between the scutchers d and h , prevents the cotton from being taken up by scutcher d from scutcher h .

A cylinder n is placed behind scutcher h and is furnished with strong radial leather

strips. By this cylinder the bat is loosened from scutcher *h* and is thrown forcibly against the delivery-rollers *o p*. All impurities which may still be retained will be blown out in dust form and will fall through a screen *r*, surrounding rollers *n* and *h*, into the compartment *k*.

The advantages of this machine are, among others, that the cotton is subjected to a continual process of carding and beating, while the passage of the material through the machine and its delivery are performed entirely without a blast other than that generated by the parts described.

15 What I claim is—

1. The combination, in a cotton-cleaning machine, of the scutchers *d h* and doffer *g* with a series of knives operating against scutcher *d*, substantially as specified.

2. The combination of feeding devices with 20 scutchers *d h*, doffer *g*, knives operating against the rollers *d g*, and with the take-off roller *l*, operating against roller *h*, and with the discharge-roller *n* and screen *r*, substantially as specified.

3. The combination of scutcher *d* with pivoted arms, knives secured thereto and operating against the scutcher, links *t t'*, connecting the arms, and with plates *w'*, shaft *w*, screw-shaft *z'*, and tapped hand-wheel *z'*, for 30 vibrating the arms, substantially as specified.

In testimony whereof I hereunto sign my name, in the presence of two subscribing witnesses, this 8th day of February, 1890.

GUSTAV JOSEPHY.

Witnesses:

RUDOLF VON PLANK,
NETTIE S. HARRIS.