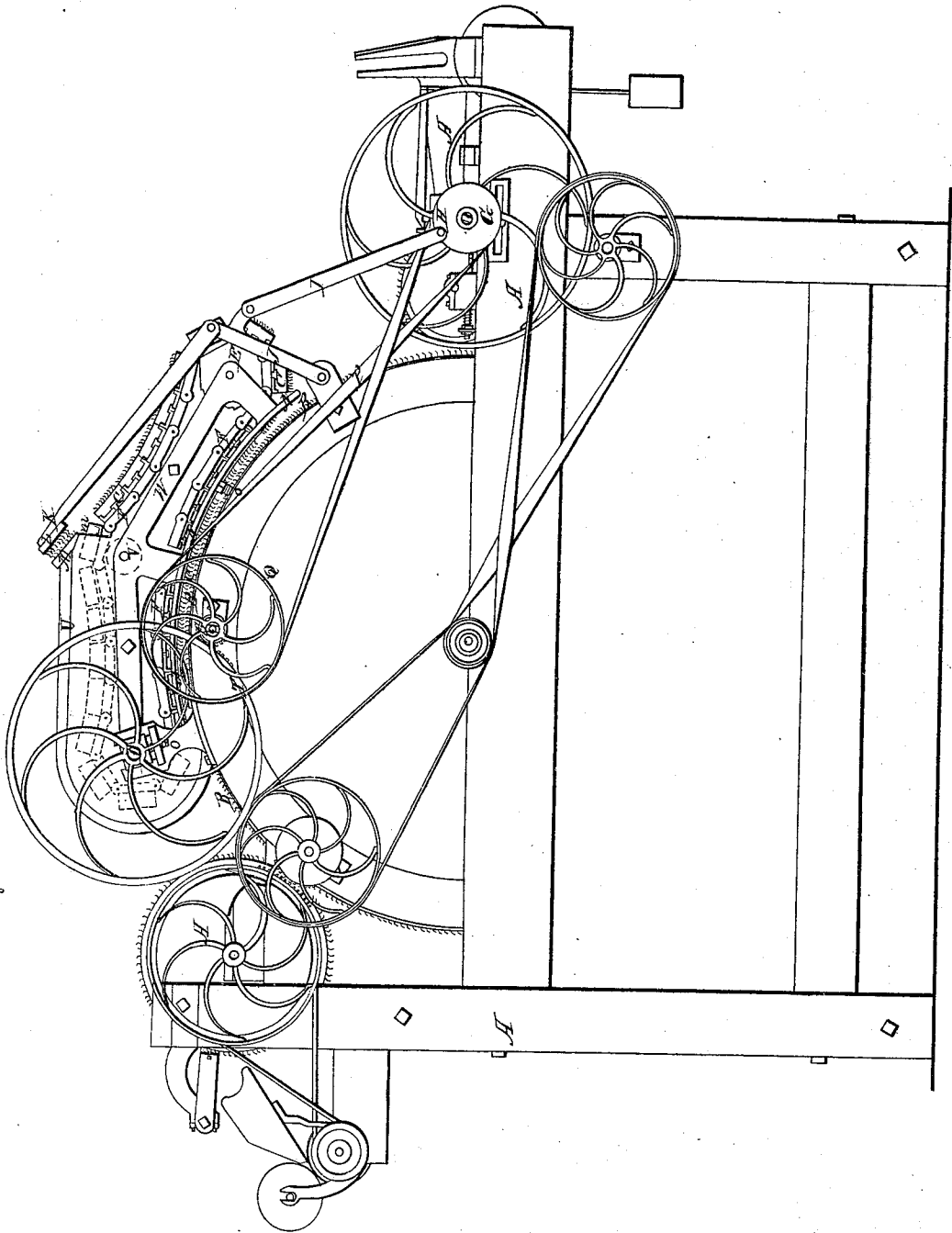


*E. & A. Crane.  
Carding Mach.*

*N<sup>o</sup>. 1962.*

*Patented Jan. 30, 1841.*



# UNITED STATES PATENT OFFICE.

EBENEZER CRANE AND ALANSON CRANE, OF LOWELL, MASSACHUSETTS.

## IMPROVEMENT IN MACHINES FOR CARDING COTTON OR WOOL.

Specification forming part of Letters Patent No. 1,962, dated January 30, 1841.

*To all whom it may concern:*

Be it known that we, EBENEZER CRANE and ALANSON CRANE, both of the city of Lowell, in the county of Middlesex and Commonwealth of Massachusetts, have invented a new and useful Machine or Improvement for Carding Cotton or Wool, called "Crane's Self-Stripping Carding-Machine;" and we do hereby declare that the following is a full and exact description of the same, reference being had to the drawings hereto annexed and made a part of this specification, representing a side view of said improvement.

A A A A represent the frame of a common carding-machine with the feeding apparatus, doffer, and some of the other attachments.

B B B is the main card or cylinder with the teeth above the frame exposed or uncovered.

C C C are the top cards of the machine.

D and E are two rollers running on gudgeons resting in a frame or stand W at the ends.

F F F is an endless chain or belt, the links of which correspond in length to the width of the sides of the said rollers, to which links the top cards of the machine are attached at the ends and revolve with the chain or belt over said rollers.

G is a pulley attached to and moved by the feed-roller of the machine. H is a crank moved by said pulley.

I J K are three sweeps connected together and moved by the crank H.

L is a stripping-card attached at the end to the sweep K and moved by it.

M is a cleaning-card which cleans the stripping-card L.

N N N is the segment of a circle, which supports the chain or belt above mentioned and prevents the top cards attached to said chain or belt from approaching too near or pressing upon the main cylinder-card.

O O are adjusting-screws supporting the segment above named and regulating the distance between the top cards and main cylinder.

P is a belt carried by the pulley G, which drives a pulley Q, moving a pinion S. T is a

gear carried by said pinion, connected with and moving the six-sided roller D.

U is a box covering the roller D and a part of the chain or belt and top cards, and V is a common roller supporting the chain or belt and top cards.

The operation of this improvement is as follows: The cotton or other material is fed through the feed-rollers and passes over the main cylinder and onto the doffer, as in the common carding-machine, but each of the top cards being attached at the ends to endless chains or belts instead of being secured to the frame and made stationary, as has been hitherto practiced, is carried by the revolution of the rollers D and E, round which the endless chains or belts revolve, over the face of the main cylinder-card about the same distance usually covered by the whole of the top cards of the common machine, and is then carried upward and over the roller V, the teeth of the card projecting upward or outward. Immediately before passing the roller V each top card is stripped by the stripping-card L, which being attached at the ends to sweeps, as at K, moved by a crank H, passes over and strips each top card in succession, and, passing over the cleaning-card M in its forward motion, pushes the dirt and waste out of cleaning-card over onto the top of the box U, and in its returning motion is itself stripped and cleaned by the cleaning-card.

The advantages of this improvement over the mode of stripping by hand hitherto practiced consists in the saving of labor and in the perfect regularity with which the cards will be stripped and in the facility with which by exchanging the pinion-gear S for a larger or smaller one the top cards may be made to revolve more or less rapidly over the rollers and stripped more or less frequently, as the quality of the material to be carded may require.

What we claim as our invention, and desire to secure by Letters Patent, is—

The attaching or fastening the top card of the carding-machine to revolving endless chains or belts instead of securing them to the frame of the machine and making them

stationary, as heretofore practiced, as herein described, and the application of such chains or belts, in combination with the rollers and adjusting-screws and segments of a circle, to the purpose of conveying the top cards of the carding-machine to and placing them in a position where they can be stripped by power, and the combination of the sweeps and stripping and cleaning cards and cranks for the

purpose of stripping the top cards by power when placed in such position, as herein described.

EBENR. CRANE.  
ALANSON CRANE.

Witnesses:

B. F. BOYNTON,  
THOMAS MILNES.