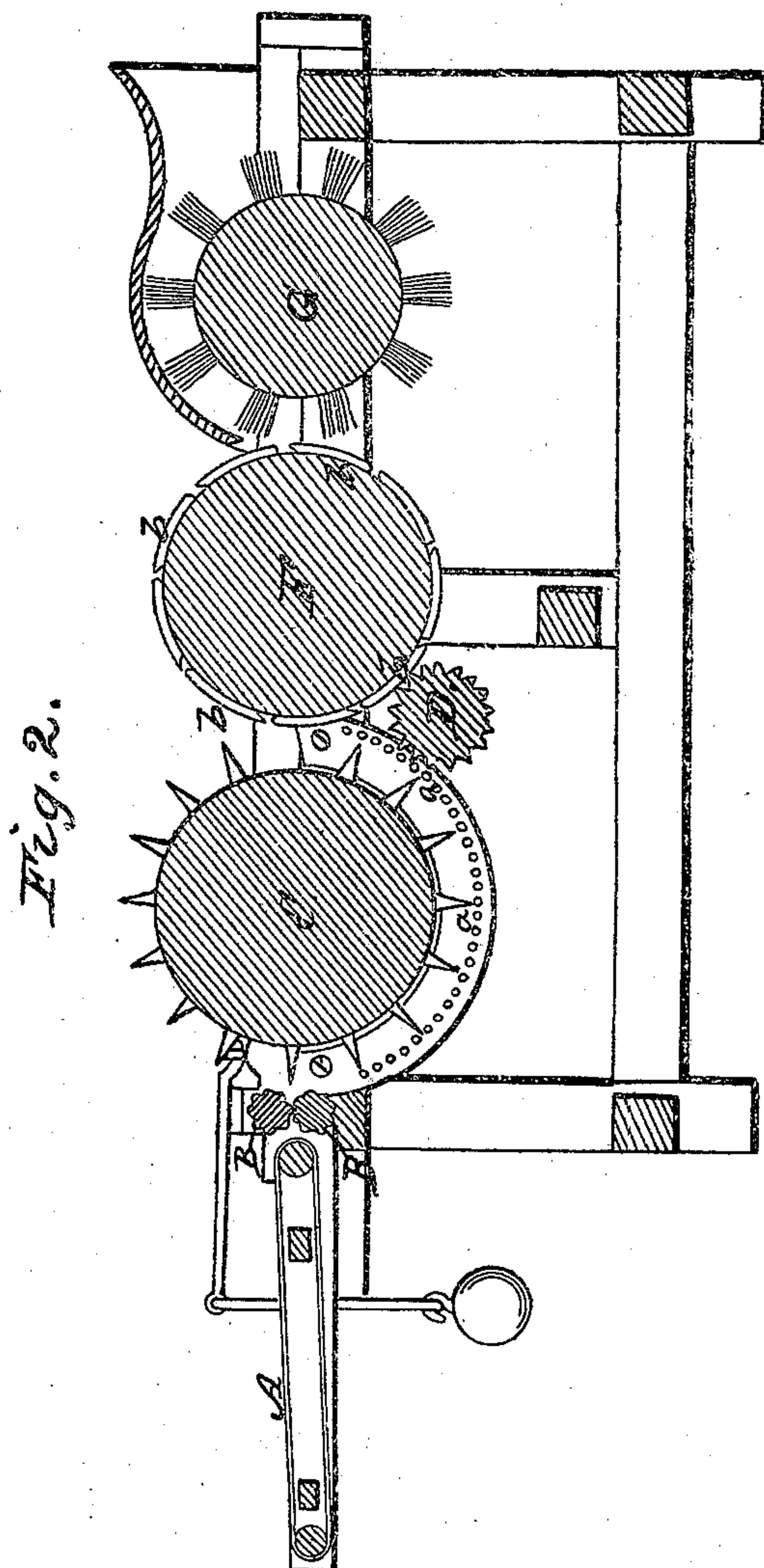
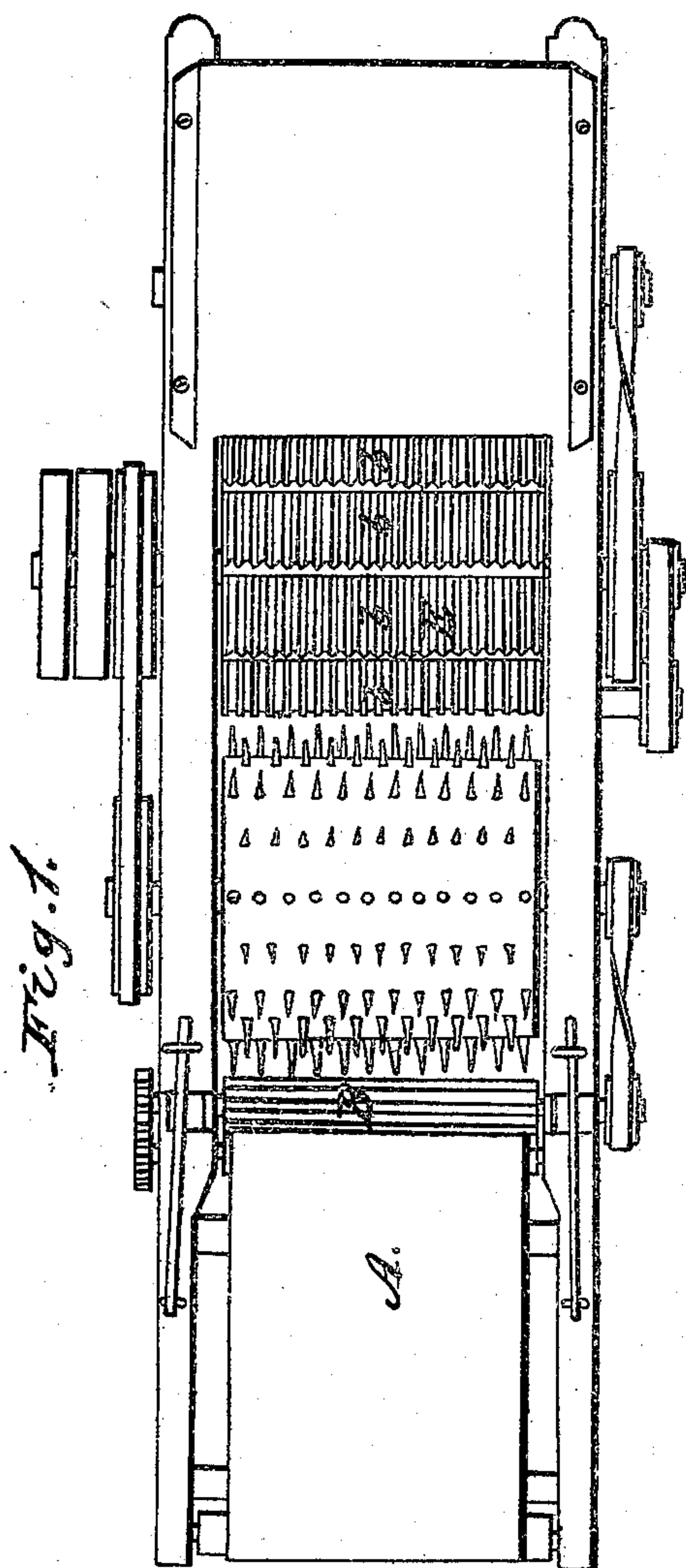
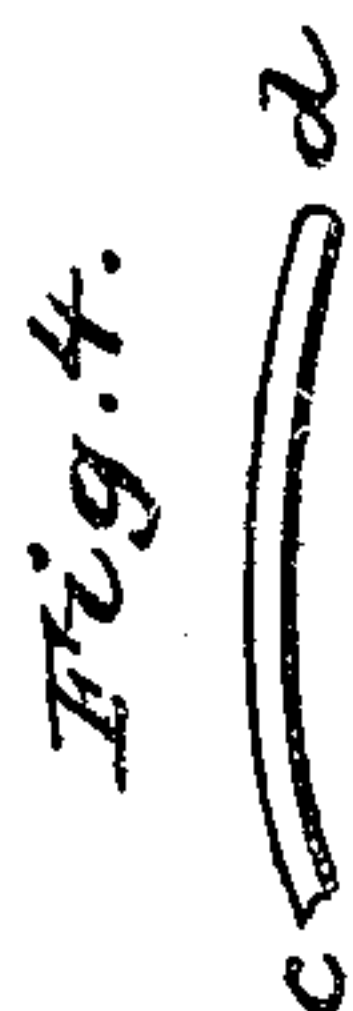
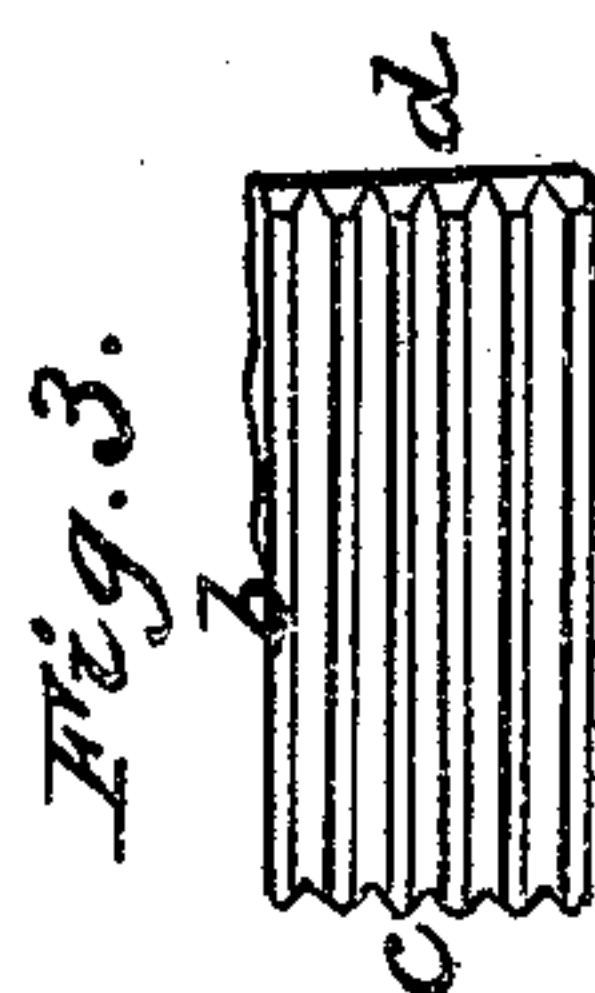


A. Crane. Burring Mach.

N^o 4,231.

Patented Oct. 11, 1845.



UNITED STATES PATENT OFFICE.

ALANSON CRANE, OF LOWELL, MASSACHUSETTS.

IMPROVEMENT IN BURRING-MACHINES.

Specification forming part of Letters Patent No. 4,231, dated October 11, 1845.

To all whom it may concern:

Be it known that I, ALANSON CRANE, of Lowell, in the county of Middlesex and State of Massachusetts, have invented a new and useful improvement in the manner of constructing a machine for the burring and cleaning of wool and cotton; and I do hereby declare that the following is a full and exact description thereof.

In its general construction my improved burring and cleaning machine resembles such as have been before known and used, and more particularly that for which Letters Patent of the United States were granted to me and to William W. Calvert on the 16th day of July, in the year 1841.

My principal improvement in this machine consists in the manner in which I construct the fine-comb cylinder, which, as heretofore made, has not possessed the desired permanence, and has been defective in other respects.

In the accompanying drawings, Figure 1 is a top view, and Fig. 2 a vertical longitudinal section through the center of my machine. Fig. 3 represents a top and Fig. 4 an edge view of one of the steel or iron segment-plates which form the periphery of the fine-comb cylinder, the two last figures being drawn to a larger scale than the two former.

A is the endless apron by which the feeding is effected.

B B are the feeding-rollers.

C is the picker-cylinder, which receives the wool or cotton from the feeding-rollers and carries it down over the grating *a a*.

D is the guard or beating roller, the nature and operation of which are the same with that described in the Letters Patent above referred to.

E is the fine-comb cylinder, and F the body thereof.

G is the doffer or brush cylinder, which removes the cleaned wool or cotton from the fine-comb cylinder.

The fine-comb cylinder I form in the following manner: I take such number of plates of steel or of iron of proper length and width as there are to be combs on the cylinder, and these I bend widthwise, so as to adapt them

to the curvature of the wooden or other cylindrical body of which they are to form the periphery. I then attach them thereto by screws or otherwise and turn their faces perfectly true. I also cut channels or grooves around them at such distance apart as shall equal that of the intended fine-comb teeth, which may be an eighth of an inch, more or less. These channels are shown on the plates *b b b*. In Fig. 3 they are represented of the full size of those in use, or somewhat larger. The edges *c* of these plates on which the teeth are to be formed are chamfered as shown at *c*, Fig. 4, and the opposite edges as shown at *d*. The teeth are then finished by filing between them when they are affixed to the cylinder. The small space left between their edges enables the teeth to lay hold on the fibers of wool or cotton as they are brought up to them by the picker-cylinder. The channels formed around the fine-comb cylinder not only enable me to form the comb-teeth in the most advantageous manner from the solid plates of metal, but they receive within them a large portion of the fibers of the material that is being cleaned, and consequently allow the burrs and motes to be beaten off by the beating-roller more effectually than when the whole of the fibers are exposed. The wool or cotton is likewise more effectually protected from having its fibers broken than upon any other plan of forming the fine-comb cylinder.

Having thus fully described the nature of my improvement in the manner of constructing the fine-comb cylinder of a machine for the burring and cleaning of wool or cotton, what I claim therein as new, and desire to secure by Letters Patent, is—

The constructing of said cylinder by covering its periphery with metallic plates of such width as may be desired, and extending from end to end thereof, on which plates, grooves, or channels are to be cut, and the teeth to be formed on one of their edges, in the manner and for the purpose herein fully made known.

ALANSON CRANE.

Witnesses:

THOS. P. JONES,

EDWIN L. BRUNDAGE.