C. G. Sargent,

Burring Cylinder,

No. 6,778, Patented Oct. 9, 1849.

Fig. 1.

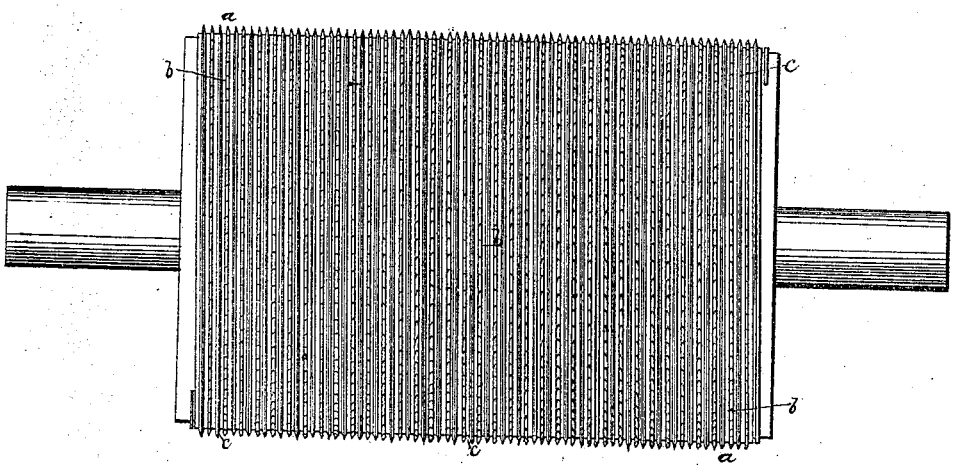


Fig. 2.

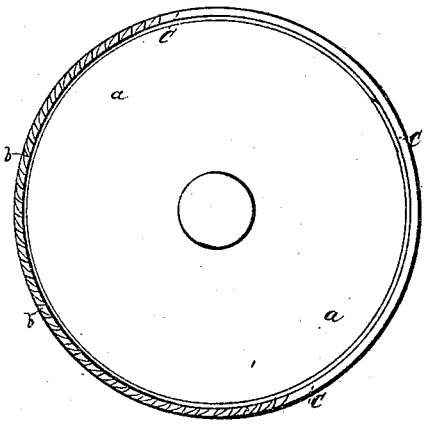
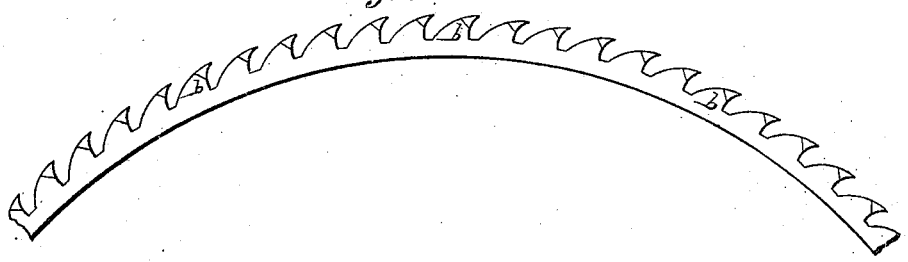


Fig. 3.



UNITED STATES PATENT OFFICE.

CHARLES G. SARGENT, OF LOWELL, MASSACHUSETTS.

BURRING-CYLINDER.

Specification of Letters Patent No. 6,778, dated October 9, 1849.

To all whom it may concern:

Be it known that I, CHARLES G. SARGENT, of Lowell, in the county of Middlesex and State of Massachusetts, have invented certain new and useful improvements in burring-cylinders used in machines for burring, opening, picking, carding, cleansing, and ginning wool and cotton and other fibrous materials, and that the following description, taken in connection with the accompanying drawings, hereinafter referred to, forms a full and exact specification of the same, wherein I have set forth the nature and principles of my said improvements by which my invention may be distinguished from others of a similar class, together with such parts as I claim and desire to have secured to me by Letters Patent.

The figures of the accompanying plate of drawings represent my improvements.

Figure 1 is a plan of my burring cylinder. Fig. 2 is a side elevation, and Fig. 3 is a detail view showing the shape of the teeth on a large scale.

The cylinders which have heretofore been devised and which are now in general use for the production of the several effects on cotton and wool, above referred to, have been mostly composed of saw or toothed circular plates, set at proper intervals apart on a cylinder or shaft; or of teeth formed in metallic strips and staked in spirally on a metallic cylinder and having intervening spiral grooves between the rows of teeth. But in all these cases the teeth have to be made more or less blunt at the points, otherwise they are very liable to get broken by being struck by some coarse and hard substance in the cotton or wool. I have found in practice that the teeth, if they could be made more pointed or sharper than is now the custom, they would more readily and unerringly catch the fibers of the cotton or wool and hold them while the guard knocks off the burs, &c. But these teeth can only be made more pointed, as suggested, by arranging guards or protecting rings on each side of each row of teeth, which will save the teeth from being broken; and this is what I have effected and claim as my improvement.

The construction of my cylinder is as follows:

a a, Figs. 1 and 2, is the metallic drum or shaft in which two sets of straight or spiral grooves are cut from end to end; in the drawing the grooves are represented as spiral. In one of these grooves the teeth, *b b*, &c., formed in iron wire and shaped as shown in Fig. 3, so as to be brought to perfect sharp points, are staked in a manner well understood; or in lieu of being staked in said grooves the toothed wire may be soldered on the surface of the drum in any desired position, either straight or spiral. The other groove is formed at a proper distance from that in which the toothed wire is staked and has a thin metallic plate *c c c*, &c., set and secured therein, the edge of which is at the same distance from the axis of the cylinder as are the points of the teeth; but there is space enough between the sides of the toothed wire to admit the fibers of the cotton or wool and allow the points of the teeth to take hold of the same while at the same time the spiral edges of this metallic plate *c c c* serve as guards to the teeth and prevent any coarse substance from breaking their points, as above suggested. It will be obvious that in lieu of toothed wire as above explained pointed teeth of other descriptions may be used and that in lieu of placing the alternate rows of teeth and metallic edges spirally on the drum *a a* they may be arranged in rings on the same and either staked or soldered thereon. But the surface of the burring cylinder will be substantially the same and to this I shall lay claim.

Having thus described my improvements I shall state my claim as follows:

What I claim as my invention and desire to have secured to me by Letters Patent is—

A cylinder for burring, opening, picking, carding, &c., cotton and wool, in which the burring or working surface is formed by alternate rows of sharp pointed teeth and thin metallic edges either set spirally or straight across the cylinder, whether said teeth and edges are constructed and shaped as above set forth or in any other way substantially similar thereto; it being distinctly understood that my claim is to the burring or working surface produced as above suggested.

CHAS. G. SARGENT.

Witnesses:

EZRA LINCOLN,

LUTHER BRIGGS.