

E. KEITH.

Saw Gin.

No. 4,901.

Patented Dec. 22, 1846.

Fig. 1

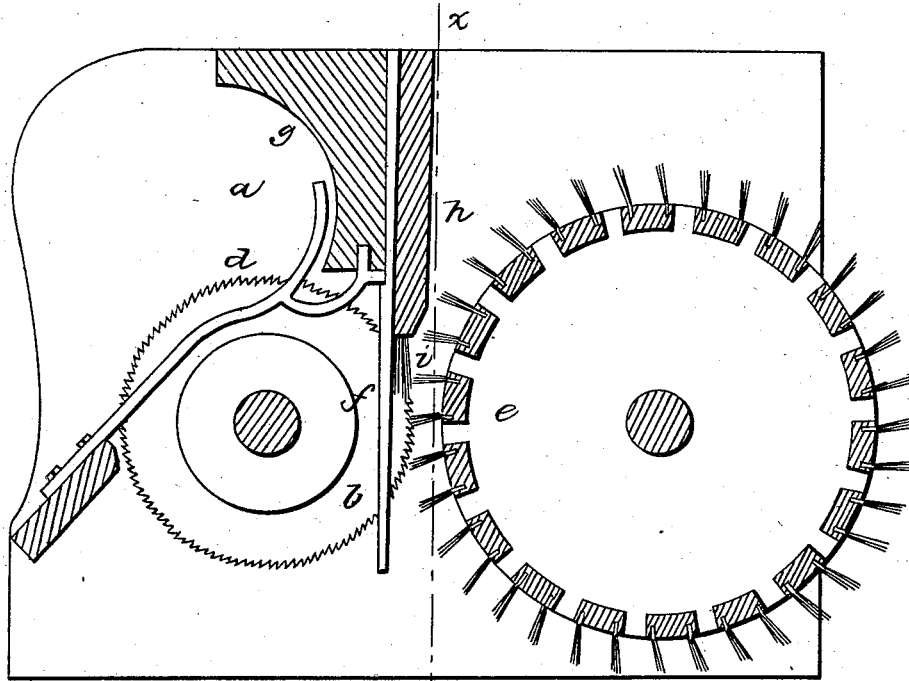
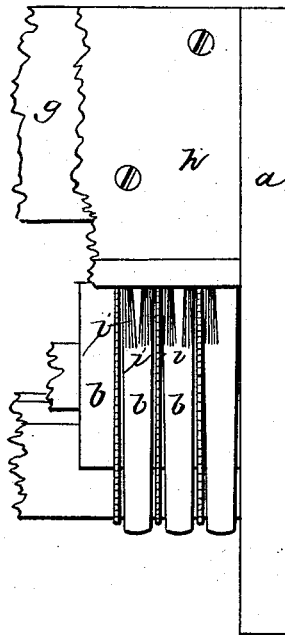


Fig. 2



UNITED STATES PATENT OFFICE.

EDWIN KEITH, OF BRIDGEWATER, MASSACHUSETTS.

IMPROVEMENT IN COTTON-GINS.

Specification forming part of Letters Patent No. 4,901, dated December 22, 1846.

To all whom it may concern:

Be it known that I, EDWIN KEITH, of Bridgewater, in the county of Plymouth and State of Massachusetts, have invented a new and useful Improvement in Gins for Ginning Cotton; and I do hereby declare that the following is a full, clear, and exact description of the principle or character which distinguishes it from all other things before known, and of the manner of making, constructing, and using the same, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a vertical section of the gin in the plane of the saws, and Fig. 2 another vertical section taken at the line *xx* of Fig. 1.

The same letters indicate like parts in both the figures.

Many efforts have been made to so improve the saw-gin as to separate from the fibers of cotton motes and other impurities. By some this has been essayed by means of rotating brushes, which act on the fibers as the saws carry them from the grate to the stripping-brush, the mote-brushes rotating in the reverse direction of the saws; and others have substituted for the rotating mote-brushes stationary brushes, through which the saws carry the fibers to be stripped of the motes and other impurities. The objection to these methods is that the mote-brushes act on the fibers when held by the teeth of the saws only, and therefore, instead of separating the motes and other impurities from the fibers to which they adhere, sometimes with considerable force, the fibers are drawn out with the motes, thus occasioning a considerable loss of cotton. The object of my improvement is to avoid this loss, which I effect by so placing a permanent brush that it shall hold onto the motes or other impurities as the fibers are stripped from the saws by the stripping-brush, the fibers being under the operation of the two brushes at the

same time. The mote-brush has the effect also of more effectually stopping the current of air, generated by the rotation of the stripping-brush, from acting on the fibers before they are cleaned than if located at a greater distance from the point of action of the stripping-brush.

In the accompanying drawings, *a* represents a part of the frame of a saw-gin, *d* the gin-grates, *b* the saws, and *c* the stripping-brush, all made according to any of the known methods. Back of the axis of the saws, and near to the stripping-brush, are placed the back grates, *f*, through the openings in which the saws carry the fibers of cotton to be stripped. These grates are attached to the cross-piece *g* of the frame, and to the back of the grates *f* is attached, by screws or other means, a block, *h*, from the lower edge of which projects the mote-brush *i*, made of bristles, finely-split whalebone, fine elastic wire, or other similar fine and elastic material. This brush is placed back of the back grate, and the teeth of the saws pass through it, where the stripping-brush *c* acts on the fibers to strip them from the saws; hence as the fibers are drawn from the teeth of the saws by the brush the brush *i* holds onto and retains the motes and other impurities, instead of drawing the fibers from the teeth of the saws by the adherence of the motes to them, as by the methods heretofore known.

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

Placing the mote-brush where the rotating stripping-brush acts on the teeth of the saws, substantially as described, so that the mote-brush shall act on the fibers to separate the motes as the rotating brush strips the fibers from the teeth of the saws, as described.

EDWIN KEITH.

Witnesses:

PHILO LEACH,
SUMNER KEITH.