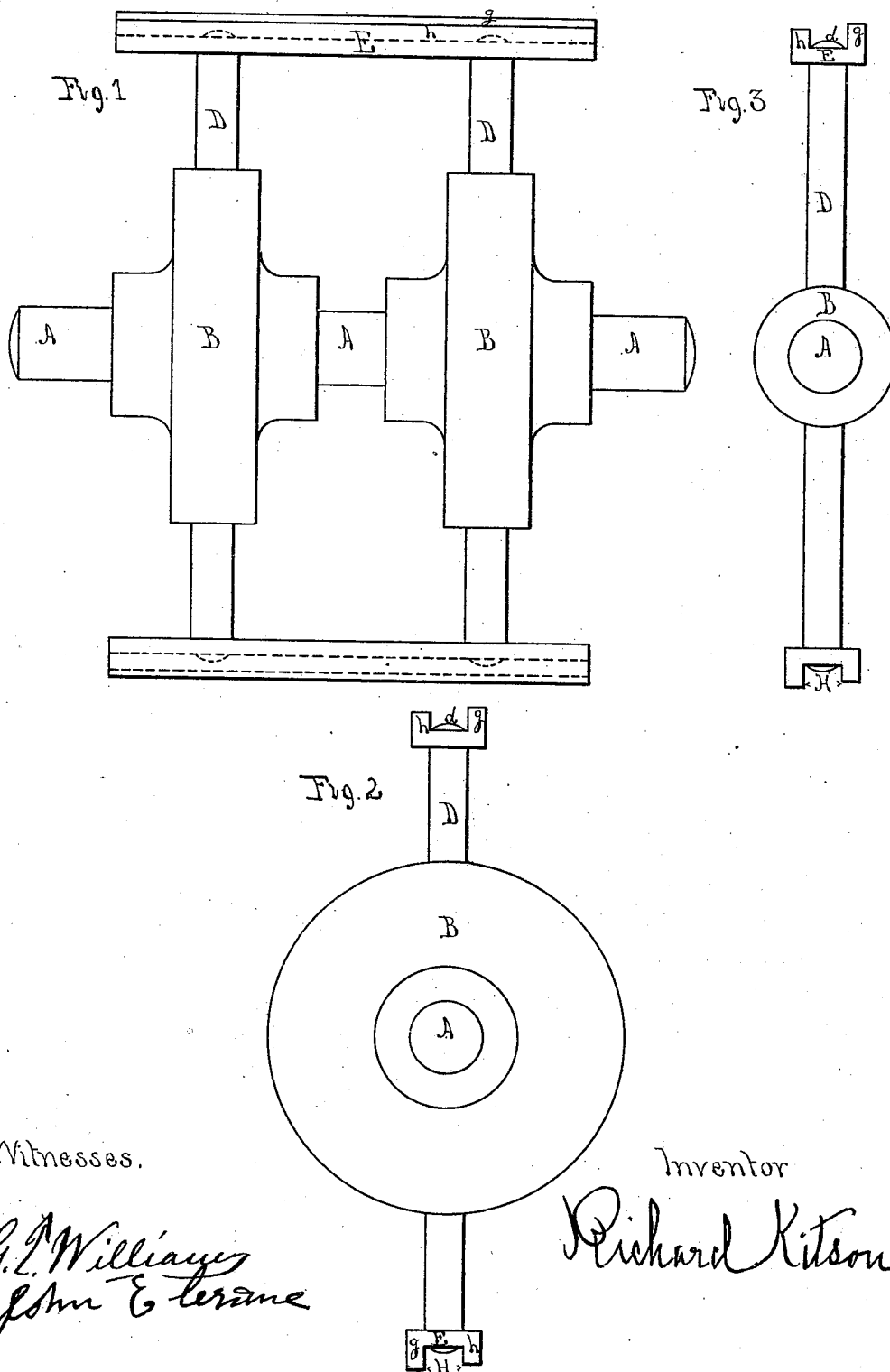


R. KITSON.

BEATERS FOR COTTON OPENERS AND PICKERS.

No. 179,118.

Patented June 27, 1876.



Witnesses.

G. J. Williams
John E. Crane

Inventor

Richard Kitson

UNITED STATES PATENT OFFICE.

RICHARD KITSON, OF LOWELL, MASSACHUSETTS.

IMPROVEMENT IN BEATERS FOR COTTON OPENERS AND PICKERS.

Specification forming part of Letters Patent No. **179,118**, dated June 27, 1876; application filed January 5, 1876.

To all whom it may concern:

Be it known that I, RICHARD KITSON, of Lowell, in the county of Middlesex and State of Massachusetts, have invented a new and useful Improvement in Cotton - Openers, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 represents a side elevation, and Figs. 2 and 3 each an end view.

This invention relates to beaters for cotton-openers; and it has for its object the better and more perfect preparation or opening of the cotton passing from the common feed-rolls to the improved blades of the revolving beater. It also has for its object to produce a beater-blade of greater strength, more durable, and less liable to become broken than the common beater-blade, and, besides this, to simplify and cheapen the riveted connection of the arms to the blade, and the method or process of making such connection.

In the said drawings, A represents the central shaft, and B the hub, to which the arms D connect in any suitable manner. To the outer ends of the arms the blades E are secured, each arm being shouldered against the inner surface of the blade, and by a tenon formed upon the end of the arm, and riveted down upon the outer surface of the blade.

In the common beater-blade, when the tenon is riveted down, its end *d* or a surplus of its substance must be removed, so as to bring the outer surface of the riveting flush with the face of the blade, and allow the blade to strike, and not the riveting.

My improved beater-blade is constructed a double blade, or an arm connecting central portion E, and at or near a right angle to the face of the latter, and from its two opposite edges, other and operating blades *g* and *h*, the rear one *g* a little higher or projecting beyond the forward one *h*, and leaving a clear space or trough, H, sufficient to contain the rounded

head *d* of the riveted tenon, and prevent the latter from interfering with, or obstructing the action of, the two blades rising above it, thus reducing the labor of removing the head *d*, and of additionally finishing the face or outer surface of the blade, and making a stronger and more durable connection of the blades to the ends of the arms.

The two blades *g* and *h* greatly strengthen the whole blade structure, and render it less liable to be broken.

When in operation the narrowest and forward blade *h* imparts a blow to the fed cotton, which blow is instantly followed by a blow from the rear blade *g*, and a little nearer to the feed-rolls.

This operation I find to be advantageous on the various kinds of cotton, the forward blade doing part of the work, which is quite evenly divided between the two blades, and which makes it easier for the beater, and requires less power to drive it than where a single blow from a single blade does all the work, which, by means of the construction of my improved beater-blade, is performed by two blades, each striking at a different distance from the feed-rolls.

It is evident that both of the blades *g* and *h* may be of the same height from the face of the plate E without departing from the principles of my said invention; but in such a construction the forward blade would do most of the work. I prefer the construction first described, and for reasons set forth.

I claim as my invention—

A double or two-bladed beater, constructed as described, with an arm connecting central plate E, and operating blades *g* and *h*, rising from its opposite edges, substantially as described.

RICHARD KITSON.

Witnesses:

JOHN E. CRANE,
G. L. WILLIAMS.