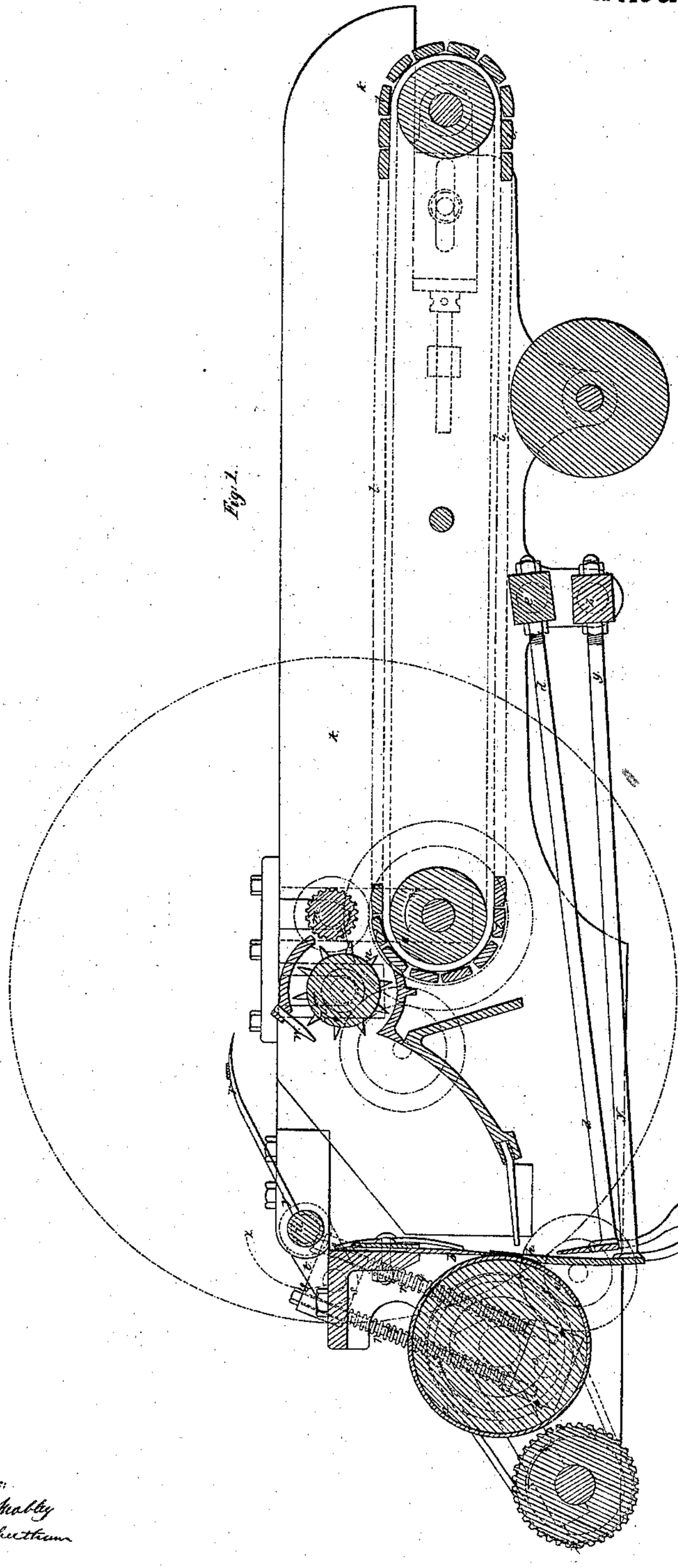
Sheet 1, 2 Sheets.

Platt & Richardson.

Cotton Gin.

No. 36,789. Patented Oct. 28, 1862.

Fig. 1.



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Sheet 2. 2 Sheets.

Platt & Richardson.

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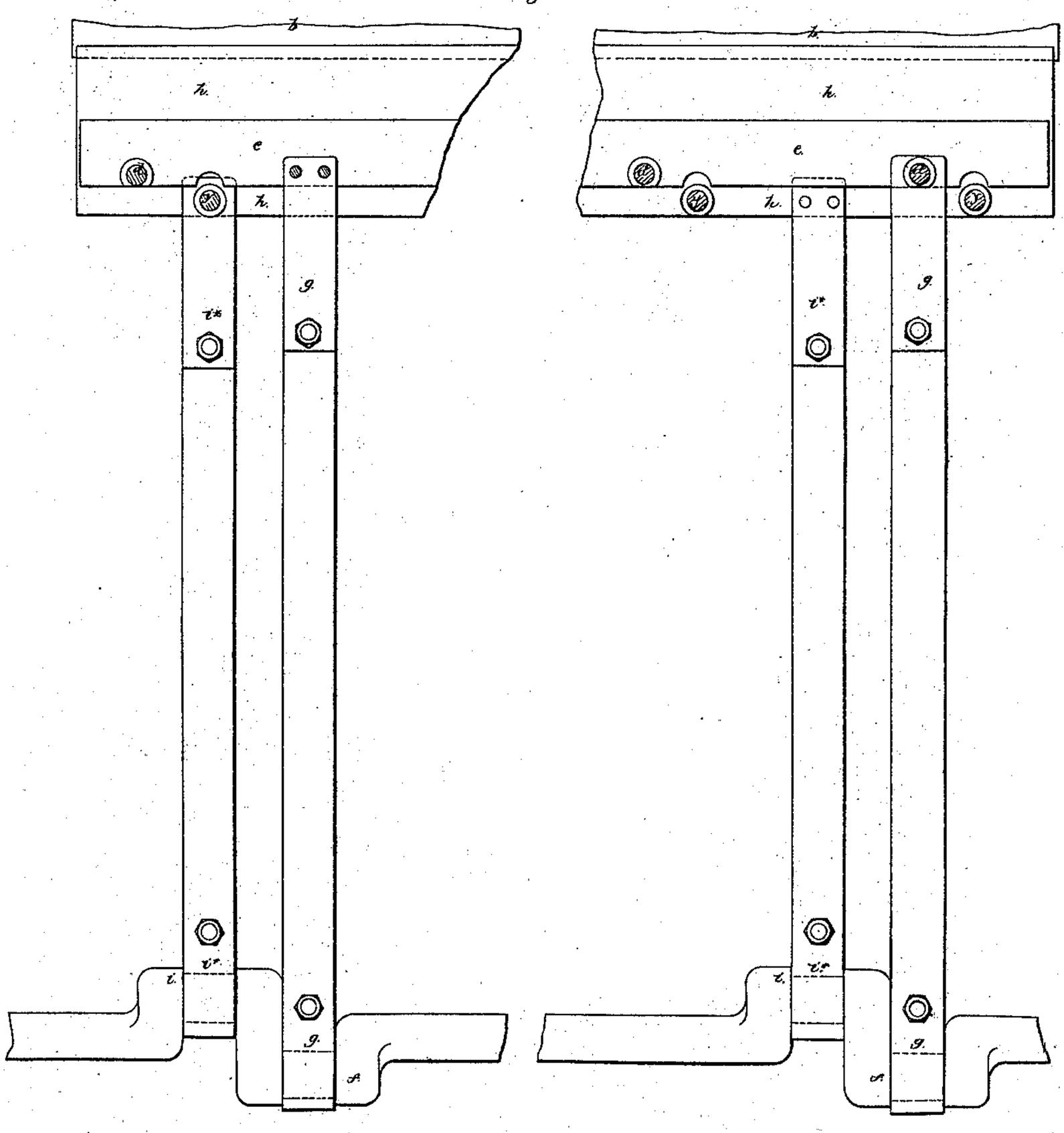
Fig. 2.



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UNITED STATES PATENT OFFICE.

JOHN PLATT AND WM. RICHARDSON, OF OLDHAM, COUNTY OF LANCASTER, ENGLAND.

IMPROVEMENT IN COTTON-GINS.

Specification forming part of Letters Patent No. **36,789**, dated October 28, 1862.

To all whom it may concern:

Be it known that we, JOHN PLATT, of Oldham, in the county of Lancaster, England, mechanical engineer, and WILLIAM RICHARDSON, of the same place, mechanical engineer, have invented certain improvements in machinery or apparatus commonly called "Gins for Cleaning Cotton from Seeds;" and we do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters and numbers of reference marked thereon.

Our invention relates to that description of gin known as "McCarthy's," and in which one roller is employed in conjunction with a fixed and vibrating blade; and it consists, first, in the employment of two of such vibrating blades acting alternately upon the usual roller and fixed blade; and, secondly, in the adaptation of apparatus whereby the material is regularly supplied to the roller and blades, and is presented thereto in a more open and suitable condition for the separation of the seeds.

In the accompanying drawings, Figure 1 represents the operative parts of our improved gin in section, and Fig. 2 is a face view of the vibrating blades and the apparatus by which they are caused to operate.

The usual roller is at *a*, and its fixed blade at *b*. Beneath these is what may be called the "usual vibrating blade," *c*, mounted upon levers *d*, which turn upon a center at *e*, and at *f* are the cranks by which the vibrating motion is communicated. In Fig. 1 the connecting-rod *g* of the cranks is broken off, it being too long to be shown in the drawings; but at Fig. 2 the arrangement is shown entire. At *h* is the second vibrating blade, which constitutes this part of our invention, mounted upon levers *y*, turning upon a center at *z*, and which is connected to another pair of cranks by connecting-rods *i**, and the two are so arranged that when one is ascending the other is descending, so that these two blades *c h* act alternately, thus affording two operators upon the material for one revolution of the crank-shaft.

Thus far we have described the first part of our invention as it may be applied by itself to the aforesaid description of gin, and we now proceed to explain another part of our invention, which may be combined therewith or may be used in conjunction with the ordinary one-blade machine. The frame-work is extended at *k* and carries a feed-apron, *l*, which is caused to travel so as to convey the material toward the operating part of the machine. At *m* is a fluted roller, between which and the feed-apron the material is retarded. At *n* is a roller furnished with spikes, which, by being caused to revolve in the direction of the arrow, opens or combs out the fibers. Upon the roller *a* is a crank-pin, *o*, connected to a block, *p*, to which are adapted two rods, *q*, encircled by springs *r*. These springs abut against a second block, *s*, through which the rods *q* pass, and in which they are capable of sliding. The block *s* is connected by a center-pin to a lever, *t*, fixed upon a shaft, *u*, by which arrangement therefore the said shaft *u* is caused to vibrate in its bearings, and this is done through the medium of the springs *r*, and if, therefore, any undue resistance should be offered these springs will give way and allow the rods *g* to slide in the block *s*. To the shaft *u* is attached a series of combs, *v*, extending across the machine, which combs, in vibrating with the shaft *u*, pass through a series of stationary combs, *w*, from thence through the teeth of the spiked roller *n*, from which they draw off tufts of the cotton, and a further downward motion of the combs *v* will present the said tufts to the action of the vibrating blades *h c*, after which the combs *v* will return to the position shown in the drawings, ready to operate as before. At *x* is a fluted roller, which is caused to revolve nearly in contact with the roller *a*, so as to keep its surface clear of the material. The several parts may be caused to revolve in the direction of the arrows by any ordinary arrangement of gearing, but the red circles indicate the pitch-lines of wheels which may be employed for that purpose.

We have in the foregoing description alluded to a particular arrangement and combination of machinery; but we do not confine ourselves thereto, as many modifications may be adopted without departing from the spirit of our invention. For instance, in that part thereof relating to the opening out or combing of the material the spiked roller and transferring-comb need not of necessity be used together, for the latter might draw the material from fixed points or bars in detached tufts, so as to effect a preparatory opening. We would also

remark that instead of the spiked roller apparatus similar to "gills" or other opening arrangements may be employed.

The following is what we claim as new in the above-described invention, and desire to secure by Letters Patent:

1. The two alternately-reciprocating blades *c h*, constructed and arranged to operate in combination with each other and with the roller *a* and breast *b* of the McCarthy cotton-gin in the manner and for the purposes herein shown and explained.

2. The employment or use of combing or carding instruments, substantially as herein described, for opening the material preparatory to its presentation to the ginning mechanism *a b c*.

3. The transferring-comb *u v*, constructed as described, and employed to present the material in tufts to the ginning mechanism *a b c*, substantially as and for the purposes set forth.

4. The elastic or yielding connecting-rod *o p q*, employed to operate the comb *u v*, substantially in the manner described.

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