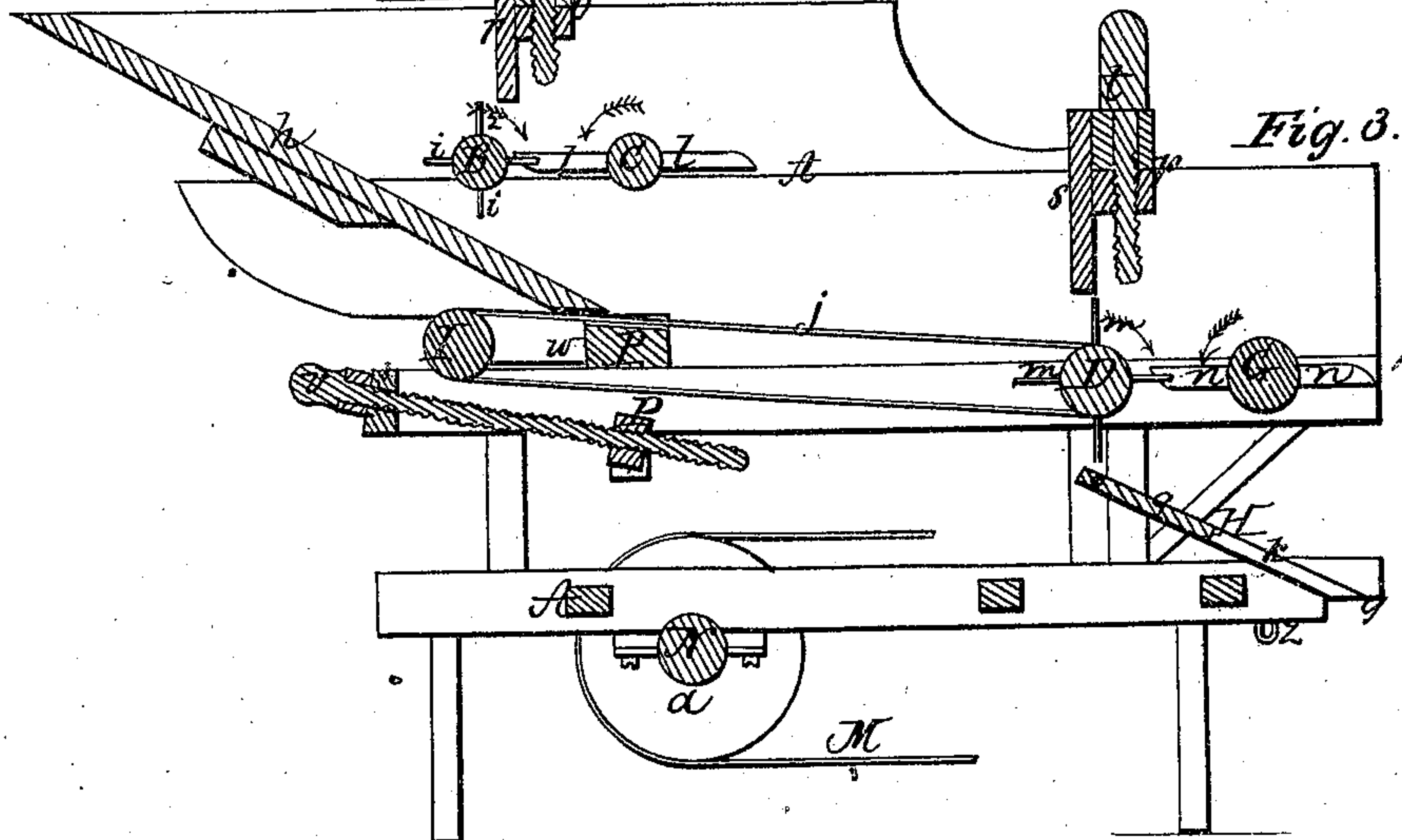
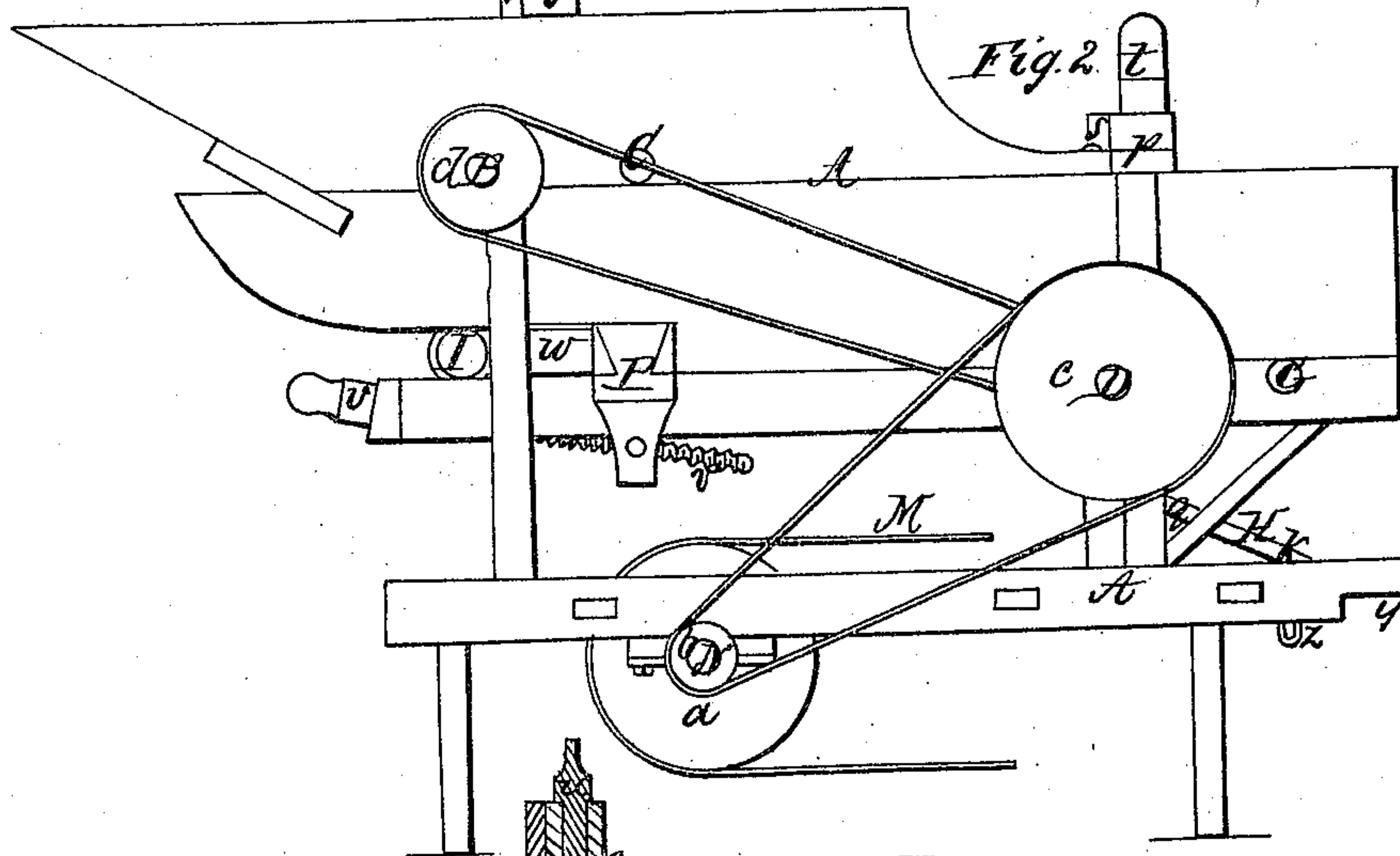
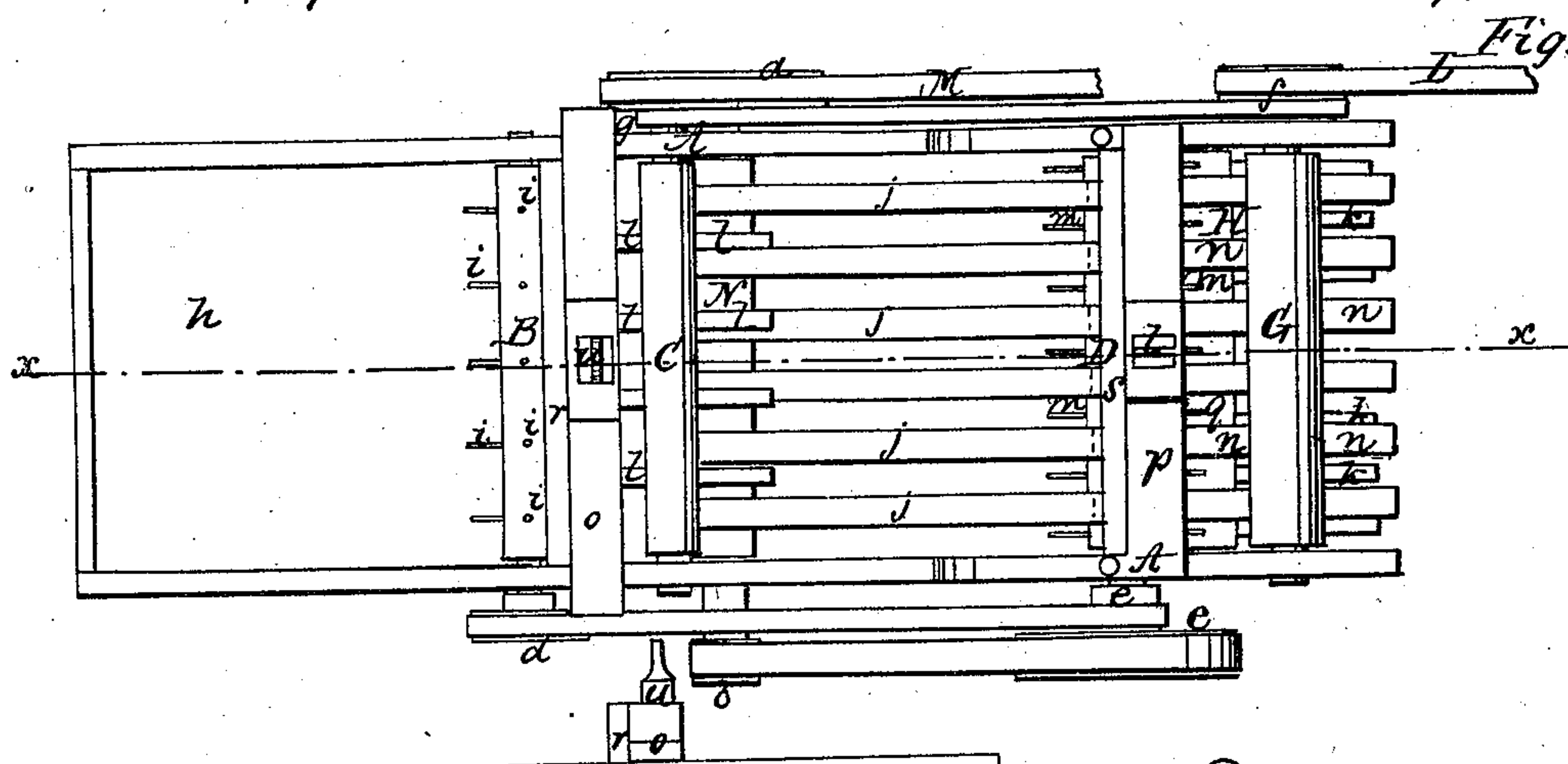


M. B. CLARKE

Cleaning Seed Cotton and Feeding it to the Gin.

N<sup>o</sup> 12,091.

Patented Dec. 19, 1854.





# UNITED STATES PATENT OFFICE.

MAJOR B. CLARKE, OF NEWNAN, GEORGIA.

CLEANING SEED-COTTON AND FEEDING IT TO THE GIN.

Specification of Letters Patent No. 12,091, dated December 19, 1854.

*To all whom it may concern:*

Be it known that I, MAJOR B. CLARKE, of Newnan, in the county of Coweta and State of Georgia, have invented a new and Improved Machine for Whipping and Cleaning Seed-Cotton and Feeding it to the Gin; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, making part of this specification.

Figure 1, being a plan of the machine; Fig. 2, a side elevation thereof; and Fig. 3, a longitudinal vertical section of the same, in the line *x x*, of Fig. 1.

Like letters designate corresponding parts in all the figures.

The first feature of my invention consists in the combination of a series of parallel conveying bands *j*, having suitable spaces between each other, a series of feeding teeth *m*, projecting from the rear band-roller D, in said intermediate spaces, and a whipper composed of a series of strong beaters *n*, projecting radially from a roller G, which revolve between said feeding teeth, close behind said conveying bands; arranged and operating substantially as hereinafter set forth, for the purpose of cleaning the crude seed-cotton, and properly opening and separating its fibers, preparatory to entering the gin.

The second feature of my invention consists in constructing the inclined screen H, partly solid and partly open, viz., the upper portion solid, against which the cotton is thrown by the beaters *n*, and the remaining portion of parallel inclined bars *k*, with intermediate spaces, through which the impurities fall; for the purpose of preventing the collection and clogging of the cotton between the bars of the screen, substantially as hereinafter specified.

The machine has a suitably constructed frame A, the dimensions of which will depend upon the size of the gin, with which it is to be worked. It may be attached to the gin by any convenient means—generally by placing the notches *y*, in the rear ends of the sills of the frame, upon the end of the gin, and securing them there by hasps on the gin, which fit in staples *z*, on the whipper-frame.

The cotton is first placed in the hopper *n*, from which it is conveyed by a series of narrow endless bands *j*, which pass over rollers I, and D. They are situated parallel with

each other, and at some distance apart, so as to leave spaces between them, as represented in Fig. 1. In order to tighten these bands, if they should become too slack, a bar P, with arms *w, w*, extending forward to the journals of the roller I together with a tightening screw *v*, may be provided, as shown in Figs. 2 and 3. This series of bands compose a conveyer, which at the same time acts as a screen to assist in cleaning the cotton.

The hind roller D, around which the bands are conveyed, is provided with a series of teeth *m*, that project radially from its periphery, in such positions as to revolve in the spaces between said bands. They may be of any convenient length—say of about the proportion represented in the drawings. These teeth serve to take the cotton from the conveying bands, as it is brought to them, loosen and separate its fibers, and hold it to be acted upon by the whipper presently to be described. The amount of cotton which they take from the conveying bands, is regulated by a gate *s* which is simply a thin board situated vertically edgewise above the feeding roller D, and is made adjustable up and down by a screw *t* that passes down through a cross-bar *p* of the frame, and through said gate, substantially as shown in Fig. 3. By enlarging or contracting the space between the gate and the teeth *m*, the quantity of cotton passing through is varied.

The whipper is situated just behind the feeding roller D, and is composed of a series of strong beaters *n*, which project radially from a roller G, in such position as to revolve between the teeth *m*, without touching them. They are generally made of hard wood, and may be of any convenient length—as much as a foot or a foot and a half if desired, their extremities reaching between the teeth *m*, so as to nearly touch the roller D. They are to revolve rapidly in the direction indicated by the arrow in Fig. 3, while the teeth *m*, revolve much more slowly in the opposite direction. Therefore, as the feeding teeth take up and hold the cotton, a little at a time, in a loosened state, these rapidly revolving beaters strike it powerfully, and effectually beat out all dirt and impurities, and still more separate its fibers, leaving it in a clean and disentangled state well suited to be acted upon by the gin, which will produce an article therefrom



much superior to the ordinary ginned cotton, and also gin considerably more in the same time. The revolving teeth *m*, are much superior to stationary teeth or bars, 5 because they feed the cotton more regularly to the beaters and especially because they yield by their revolving, and allow the cotton to be easily stripped therefrom by the beaters *n*.

10 As the cotton falls from the beaters *n*, it is received by an inclined screen *H*, which conducts it immediately to the hopper of the gin, the upper end being hinged to the frame of the machine, and the lower end 15 resting upon the gin. The upper portion *q*, upon which the cotton is driven by the beaters with considerable force, is made solid; and the remaining portion is composed of parallel inclined bars, or fingers, *k*, with 20 spaces between them, so as to form a suitable screen for separating the impurities detached by the whipper, from the cotton. The solid portion *q*, is employed to prevent the cotton being driven, and clogging, be- 25 tween the bars of the screen, which would be the result if said bars extended up where the cotton first strikes with violence. This screen conducts the cotton so gradually and regularly to the gin that no attendant is 30 required at the hopper thereof. As a modification of my machine, I also contemplate adding a feeding roller *B*, provided with teeth *e'*, to be placed in the hopper *h*, in connection with an additional whipper *C*, *l*, 35 and regulating gate *r*, which is to be adjusted by a screw *u*, passing down through a cross-bar *o*, in the same manner as the similar devices above described. This feeding

roller and whipper revolve in the directions indicated by arrows in Fig. 3, and serve to 40 give additional efficiency to the machine.

The several revolving parts of the machine may be driven by power communicated from the gin through the driving belts *L*, and *M*; the former driving the whipper- 45 rollers *G*, and *C*, by passing over a pulley *f*, on the roller *G*, from which pulley, a band also passes to a pulley *g*, on the roller *C*; and the latter passing around a pulley *a*, on a driving shaft *N*, which has a pulley *b*, 50 on the other end, whence a band passes to a pulley *c*, on the feeding roller *D*, also provided with another pulley *c*, from which a band goes to a pulley *d*, on the feeding roller *B*, when used. 55

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

The combination of a series of parallel bands *j*, operating as a feeding apron, with the toothed roller *m*, the teeth being so ar- 60 ranged on the roller as to pass between the feeding bands, while the arms of a beater are so arranged as to pass between the teeth of the said roller and strip them of the cotton as it is carried forward, substan- 65 tially in the manner and for the purpose herein described.

The above specification of my new and improved machine for whipping and cleaning seed cotton, and feeding it to the gin, 70 signed by me this 28th day of June 1854.

MAJOR B. CLARKE.

Witnesses:

THOMAS BROWN,  
J. S. BROWN.