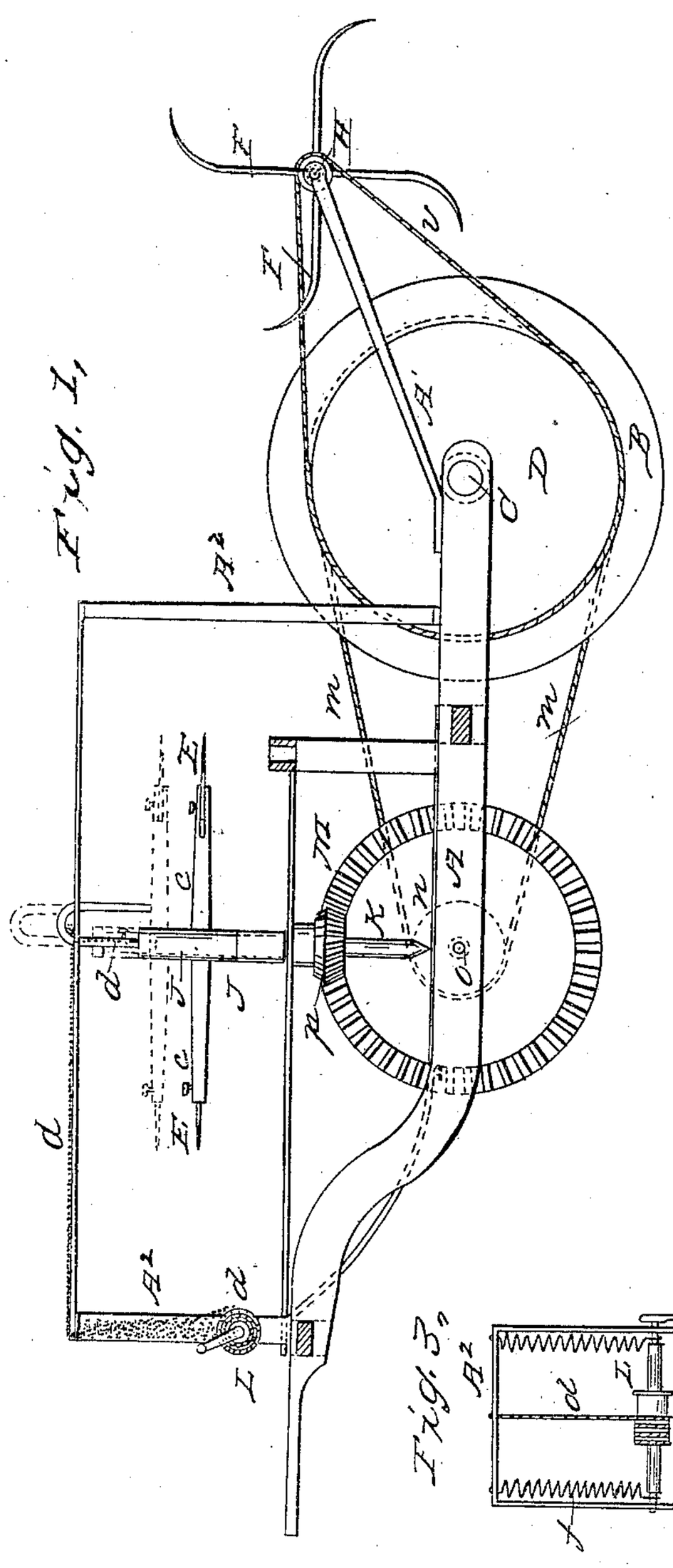
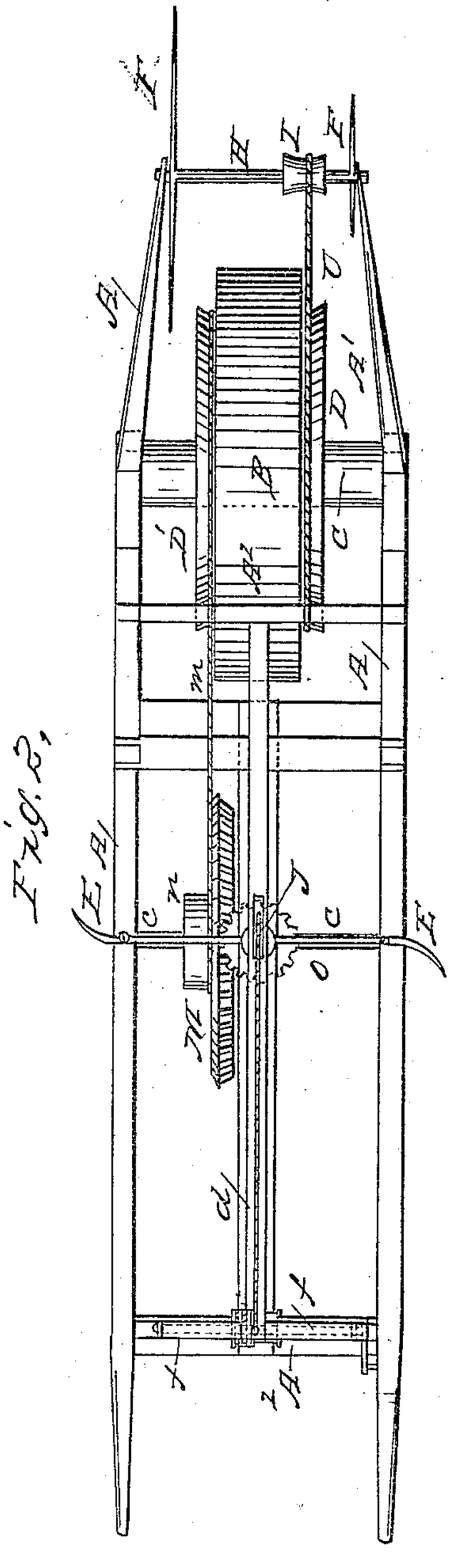
A. A. DICKSON.

Cotton Harvester

No. 10,065. Patented Oct. 4, 1853.





UNITED STATES PATENT OFFICE.

A. A. DICKSON, OF GRIFFIN, GEORGIA.

IMPROVEMENT IN MACHINES FOR TOPPING COTTON IN THE FIELD.

Specification forming part of Letters Patent No. **10,065**, dated October 4, 1853.

To all whom it may concern:

Be it known that I, A. A. DICKSON, of Griffin, in the county of Spaulding and State of Georgia, have invented a new and useful Machine for Topping Cotton; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a side elevation of the machine as it appears when the operation of "topping" is being performed. Fig. 2 is a plan or bird's-eye view of the same. Fig. 3 is a front view of the windlass and its attachments for raising and lowering the horizontal cutters.

Similar letters of reference in each of the several figures indicate corresponding parts.

My invention relates to a new method or manner of topping cotton by machinery, whereby the operation of topping cotton, which is necessary to cause the stalk to yield more abundantly, can be performed in a more speedy and better manner than by the old plan, the operator being enabled to top two rows at one time as fast as he may see proper to walk or run, and to perform six or eight times the amount of work in the same time as is now accomplished with the knife in the hand; and it consists in the employment of two sets of cutters, one set being secured horizontally on a vertical revolving shaft over the center of the machine, so as to cut off the top of the cotton, and the other set being arranged vertically on a horizontal revolving shaft at the back end of the machine or just behind the propelling-wheel, so as to lop off the ends of the branches which lap across the middle of the row. These two sets of cutters are made to revolve by the motion of the propelling-wheel. This wheel is connected to the set which revolves horizontally by means of a band which passes from a small rim-pulley formed on one side of the propelling-wheel, and passes over a small pulley which is attached to a large bevel-wheel secured fast on a revolving horizontal shaft placed across the center of the frame of the machine. This bevel-wheel works into a small pinion secured fast on the vertical revolving shaft of the horizontal cutters, and thereby communicates a horizontal motion to the said cutters. The driving-wheel is also connected to the set which revolves in a vertical direction by means of another band passing from a rim-pulley on the other side of the propelling-wheel and round a pulley secured fast on the horizontal revolving shaft of the vertical cutters. The horizontal blades or cutters are made adjustable both in height and length, so that they can be made to suit the different heights of the cotton-plant, and also the different widths of the rows.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

A A′ A² represent the frame of the machine, the principal portion of which is constructed after the form of a wheelbarrow, as shown in Figs. 1 and 2, it having a propelling-wheel, B, secured fast on the revolving shaft C, which is arranged on the rear part of the machine, and is trundled along between the cotton-rows like a wheelbarrow. The wheel B for propelling the machine forward, and also operating both sets of cutters, has a small rim-pulley, D, formed on each of its sides.

E E F F are the two sets of blades or cutters, E E indicating the horizontal set and F F the vertical set. The vertical set is secured fast in the revolving shaft H, which is secured in that portion of the frame lettered A′, as shown in Figs. 1 and 2. This part of the frame is on the rear of the part A, and the cutters are consequently behind the wheel B. On the shaft H there is a pulley, I, from which a band, U, passes, and connects with the rim-pulley D, as shown in Figs. 1 and 2. This band, by being connected with the driving-wheel, causes the knives F F to revolve in a vertical direction as the machine is propelled forward, and consequently to lop off the ends of the branches which may lap across the middle of the row. The arms *c c* of the horizontal set are secured fast in a movable sliding cap, J, which fits over the square part of the revolving shaft K, and is moved up and down over the same, when it is desired to change the height of the cutters, by means of the windlass L, which is secured in the part A² of the frame, as shown in Fig. 3. The cord *d* of this windlass is attached to the cap J in the manner shown in Fig. 1, or in any suitable manner. The windlass-shaft is kept permanently fixed after the cutters have been raised to the position shown in red lines in Fig. 1, and the cord wound on the said shaft by means of two vertical spiral springs, *f f*, which are

secured fast to the shaft L and attached to the top of the frame A^2, as shown in Fig. 3. These springs effectually prevent the shaft moving after being set.

The horizontal cutters E E may be made adjustable in width either by set-screws or otherwise. In Fig. 1 of the drawings the cutters are shown secured in arms *c c* by set-screws, so that they can be moved in and out to suit the different widths of the rows of cotton. These cutters are also set in motion at the same time that the vertical cutters are by the action of the propelling-wheel, and through the band *m*, which passes over the pulley-rim D′ and over the small pulley *n*, which is secured fast on the revolving horizontal shaft O, near the center of the machine, and to a large bevel-wheel, M, which gears in a small pinion, *p*, secured on the cutter-shaft K in the manner shown in Fig. 1.

Both sets of cutters might be driven, if desired, by cogged instead of band gearing.

This machine will perform the work of topping the cotton and lopping off the ends which bend over the rows in the most perfect manner, it is thought, and as it can be made cheap and light and can be managed by one man its value and utility, it is presumed, will be readily seen and appreciated.

Having thus described the nature and operation of my invention, what I claim as new, and desire to secure by Letters Patent, is—

The employment of two sets of cutters, E E and F F, one set being adjustable and revolving in a horizontal direction, and the other being fixed and revolving in a vertical direction, and both sets being set in operation through the action of the driving or propelling wheel B in any manner equivalent to that herein shown and described, and for the purpose herein specified.

A. A. DICKSON.

Witnesses:
I. S. SIMMONS,
E. W. RHOADS.