

No. 716,696.

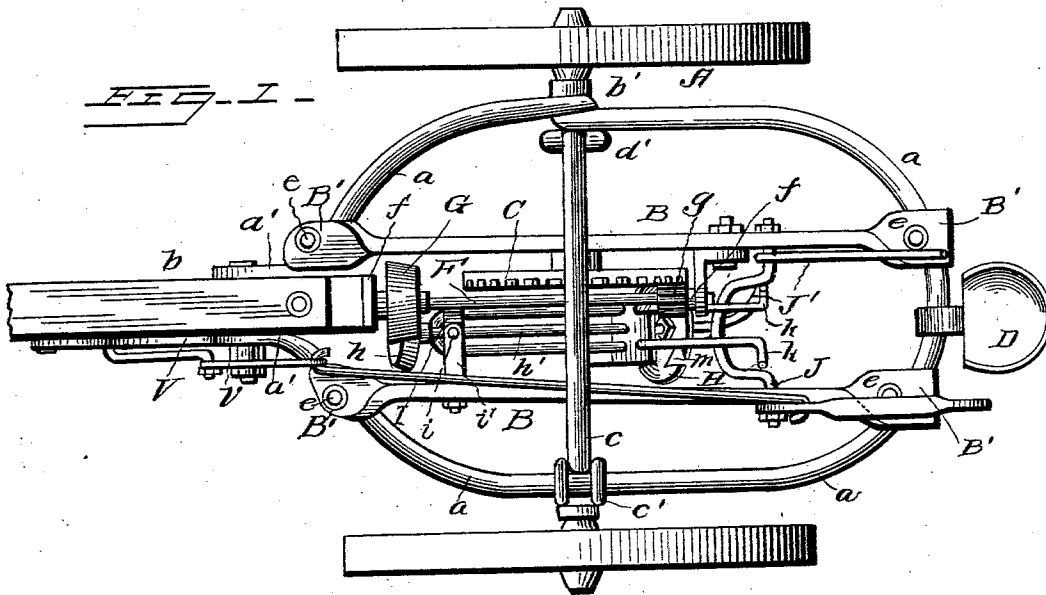
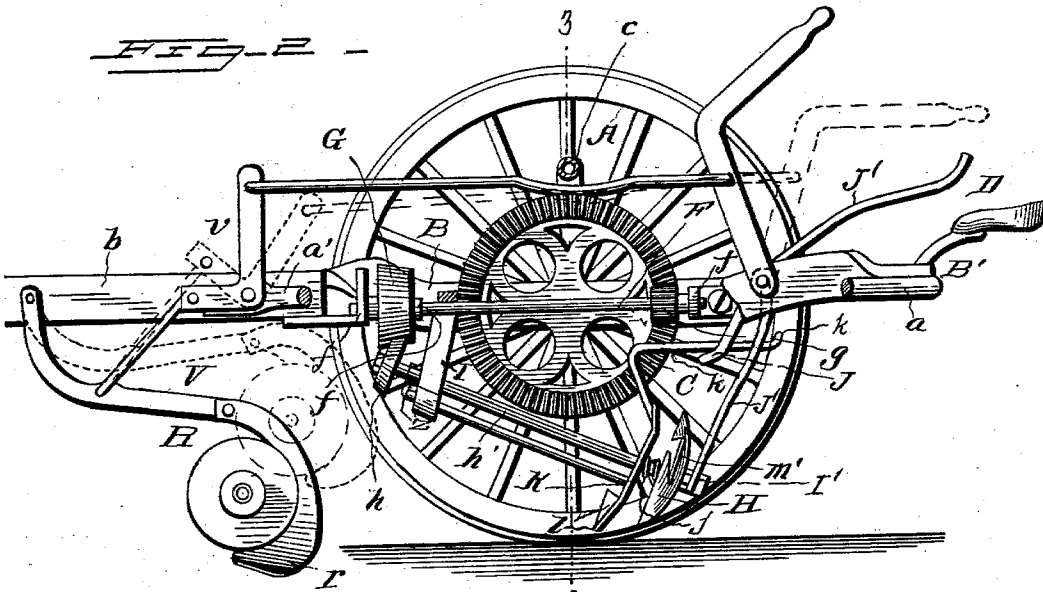
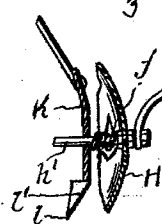
Patented Dec. 23, 1902.

H. C. FOSTER.
COTTON CHOPPER AND CULTIVATOR.

(Application filed July 5, 1902.)

3 Sheets—Sheet 1.

(No Model.)



Witnesses

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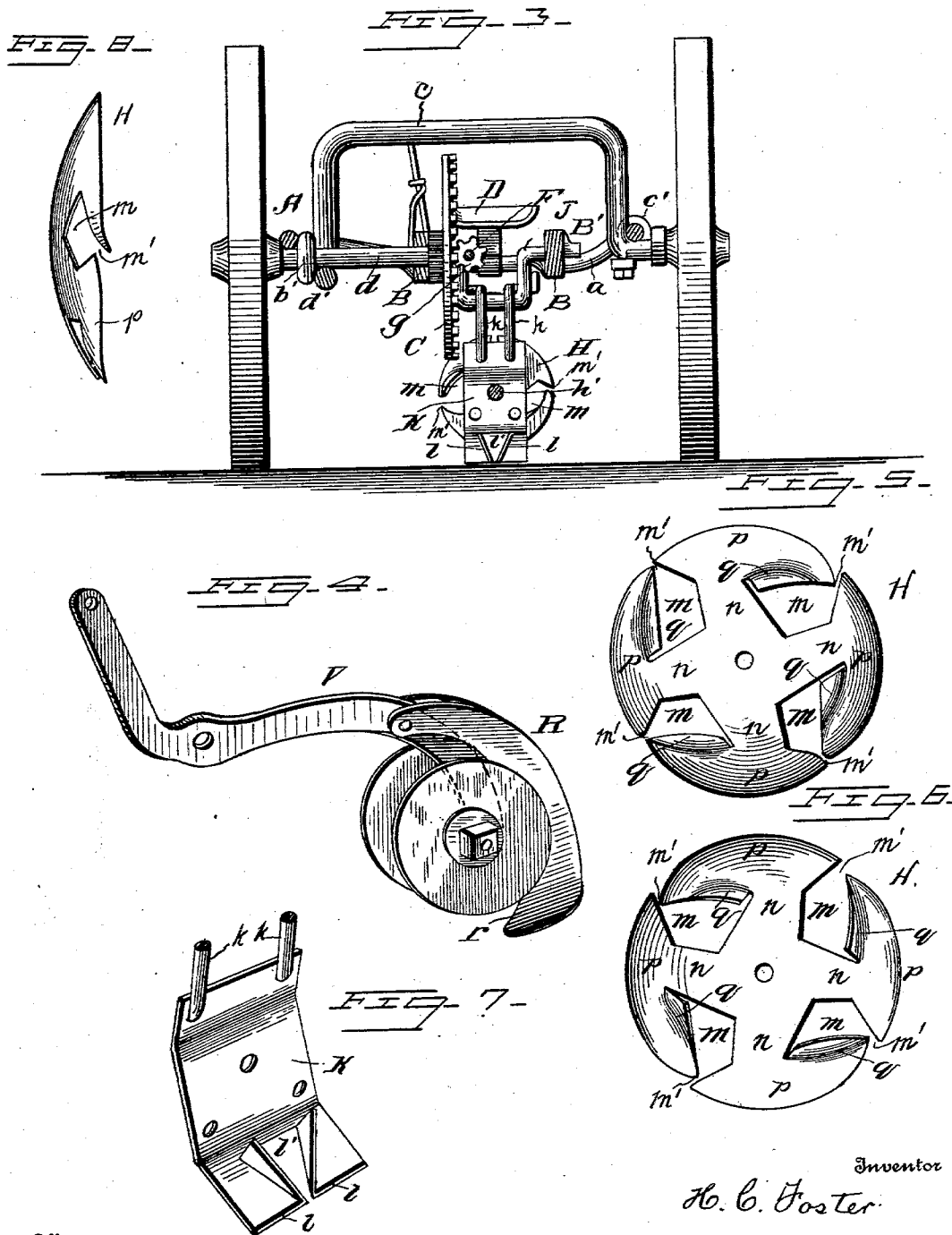
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3 Sheets—Sheet 2.



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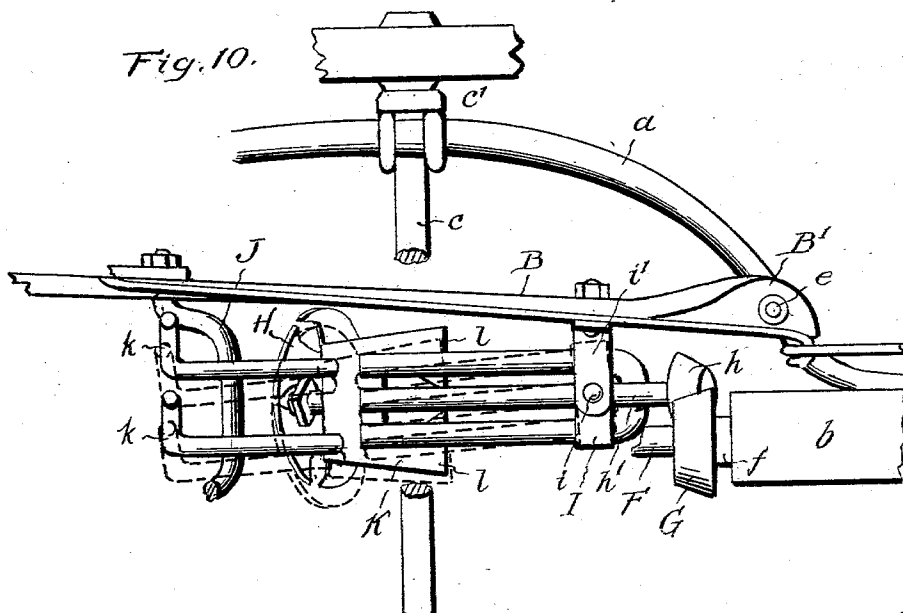
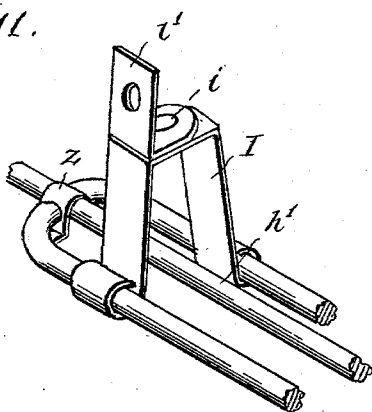


Fig. 11.



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UNITED STATES PATENT OFFICE.

HENRY C. FOSTER, OF TUTWILER, MISSISSIPPI.

COTTON CHOPPER AND CULTIVATOR.

SPECIFICATION forming part of Letters Patent No. 716,696, dated December 23, 1902.

Application filed July 5, 1902. Serial No. 114,409. (No model.)

To all whom it may concern:

Be it known that I, HENRY CLAY FOSTER, a citizen of the United States, and a resident of Tutwiler, in the county of Tallahatchie and State of Mississippi, have made a certain new and useful invention in Cotton Choppers and Cultivators; and I declare the following to be a full, clear, and exact description of the same, such as will enable others skilled in the art to which it appertains to make and use the invention, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

Figure 1 is a plain view of the invention. Fig. 2 is a side elevation of the same with parts broken away. Fig. 3 is a section on the line 3 3, Fig. 2. Fig. 4 is a detail perspective view of the plow and colters. Figs. 5 and 6 are rear and front views, respectively, of the chopper-disk. Fig. 7 is a detail perspective view of the scraper K. Fig. 8 is a detail side elevation of the chopper-disk, and Fig. 9 shows the scraper and chopper-disk and adjacent parts in section. Fig. 10 is a fragmentary plan view illustrating the swinging movement of the gear-carrying hanger. Fig. 11 is a detail perspective view of the gear-carrying hanger and adjacent parts.

This invention relates to cotton choppers and cultivators; and it consists in the novel construction and combinations of parts, as hereinafter set forth.

In the accompanying drawings, illustrating the invention, the letter *a* designates the main loop-frame made of steel tubing. The arms of the loop-frame have at their forward ends parallel extensions *a' a'*, which are secured to the tongue *b*. This loop-frame is arranged in the horizontal plane and with it is combined the transverse axle-bar *c*, also of steel tubing, said axle-bar being connected to the horizontal loop-frame at one side by means of a clamp at *c'*. The other end of this axle-frame is centered upon the driving-shaft *d* at *d'*, said driving-shaft being rigidly secured to the side wheel *A* of the machine and having a bearing in the loop-frame, usually by means of a bend *b'* of the latter, and an inner bearing in one of the longitudinal bars *B B* of the frame. These bars *B B* are longitudinal braces and are of flat iron or steel, their

ends being twisted half-round, as at *B'*, and perforated for the clamps *e*, whereby they are secured to the loop-frame in parallel position, the interval between them being sufficient for the introduction of the moving parts of the mechanism, whereof the main driving-gear *C* at the inner end of the driving-wheel shaft is guarded not only by these parallel brace-bars, but by the upright bow portion of the axle-bar *c*. The seat *D* is arranged on the loop-frame between the bars *B B* at the rear end of the machine. A rotary shaft *F* extends longitudinally between the bars *B B* and is provided with front and rear bearings *f f*. At its rear end this shaft carries a pinion *g*, engaging the drive-gear *C*, and at its front end a friction-wheel *G*, adapted to engage the friction-wheel *h* at the front end of the rotary shaft *h'* of the chopper-disk *H*. The shaft *h'* works in a bearing *z* in a pivoted hanger *I*, pivoted at its upper end at *i* to a bracket *i'* of the frame, and the rear end of the shaft has a swinging bearing *I'*, which is provided with an operating-lever *J'* for the purpose of moving this shaft forwardly against the tension of the spring *j* to bring the wheels *G* and *h* in engagement, such spring normally holding these wheels apart. The bearing *z*, being a little in rear of the friction-wheel *h*, provides for engagement and disengagement of the friction-wheels.

In front of the seat, the frame is provided between the bars *B B* with a bail device *J*, on which rest the treadle-arms *k k*, which extend over and rest upon the bail device *J*. These treadle-arms are usually secured to the top of the scraper *K*, which is a broad transverse plate extending downward and forward and terminating in two scraper edges *l l*, having between them a triangular interval *l'* increasing upward in the manner shown. By means of the treadle-arms the chopper-disk and scraper may be swung to one side or the other upon the pivot *I'* of hanger *I* to guide the chopper-disk and scraper in their work.

The chopper-disk or rotary hoe *H* is located in rear of the scraper, its perimeter extending about on a level with the scraper edges. This chopping-disk is of concave form, its concavity being forward, and it is provided with one, two, or four openings *m'* in its peripheral portion between the spoke portions

n and with corresponding hoe-blades *p* of arc form extending forward of the spokes and a little in rear thereof also, the forward portion or point of each blade closing nearly up to the heel portion in front of it and being so flanged on its upper portion, as at *q*, that such flange is directed somewhat within the path of the heel to allow an interval between for the passage of the stalks which are to be left standing. The flange serves as a protection for these stalks. Above this passage is the large opening *m* for the plants, providing an interval which allows them to stand upright during the chopping operation.

At the forward end of the machine is shown a double plow *R* having rolling colters, between which the downward and outward curved blades *r r* extend, passing behind the colters and outward in rear of their lower portions, these entering points terminating a little in rear of the centers of these colters in the manner indicated. The blades are carried by a serpentine curved bar *V*, which is pivoted to the pole or frame in front and is connected to an angle-lever-operating device *v*.

When it is desired to use the machine as a cultivator simply, the chopper and scraper may be removed and, if desired, a second double plow may be attached in lieu thereof to a pivot-bearing in front of the loop-frame.

This machine is of simple character, there being only a driving gear-wheel and pinion used in connection with two friction-wheels. The engaging or disengaging movement of the swinging frame is very slight, so that the disk is put instantly in or out of gear with the driving mechanism. The hoe and scraper works resting on the ground and is guided in its work by means of the treadles connected to the swinging frame. This frame is very easily governed on account of its fulcrum-bearing near the friction-wheel of its shaft, and the operator has thorough control of its movements, enabling him to cause the hoe and scraper to conform in its action to the curves and irregularities of the ground and to follow curvatures of the drill-line. The hoe is

designed to cut with a sliding motion and its work is smooth. The point of the blade enters between the plants, and the stalk which is to be left remains standing in upright position.

Having described this invention, what I claim, and desire to secure by Letters Patent, is—

1. In a cotton chopper and cultivator, the combination with a frame and its drive-wheel, wheel-shaft and drive gear-wheel, of a swinging gear-carrying hanger, a rotary hoe, and its shaft in connection with such gear, and treadle devices for controlling the motion of said swinging gear-carrying hanger, substantially as specified.

2. In a cotton chopper and cultivator, the combination with a vertically-pivoted swinging hanger, a shaft pivoted thereon, the hoe attached to said shaft in rear, the friction-wheel attached thereto in front, and a fulcrum-bearing for said shaft behind the friction-wheel, and means for operating said shaft, substantially as specified.

3. In a cotton chopper and cultivator, the gear-operated swinging shaft, and its rotary concave chopping-hoe having the peripheral arc-form blade provided with a protecting-flange on its forward point portion, a heel portion, a passage between the point portion and the preceding heel portion, and an opening above said passage, substantially as specified.

4. In a cotton chopper and cultivator, the swinging hanger, and a rotary shaft fulcrumed therein in gear with a drive-shaft of the carrying-wheel, a rotary chopping-disk on said shaft, a two-blade scraper in front of the hoe, and means in connection therewith for operating said swinging hanger, substantially as specified.

In testimony whereof I affix my signature in presence of two witnesses.

HENRY C. FOSTER.

Witnesses:

H. H. HARRISON,
G. S. LAMKIN.