(No Model.) 3 Sheets—Sheet 1.

M. H. KEYS.

CULTIVATOR AND COTTON CHOPPER.

No. 265,968. Patented Oct. 17, 1882.

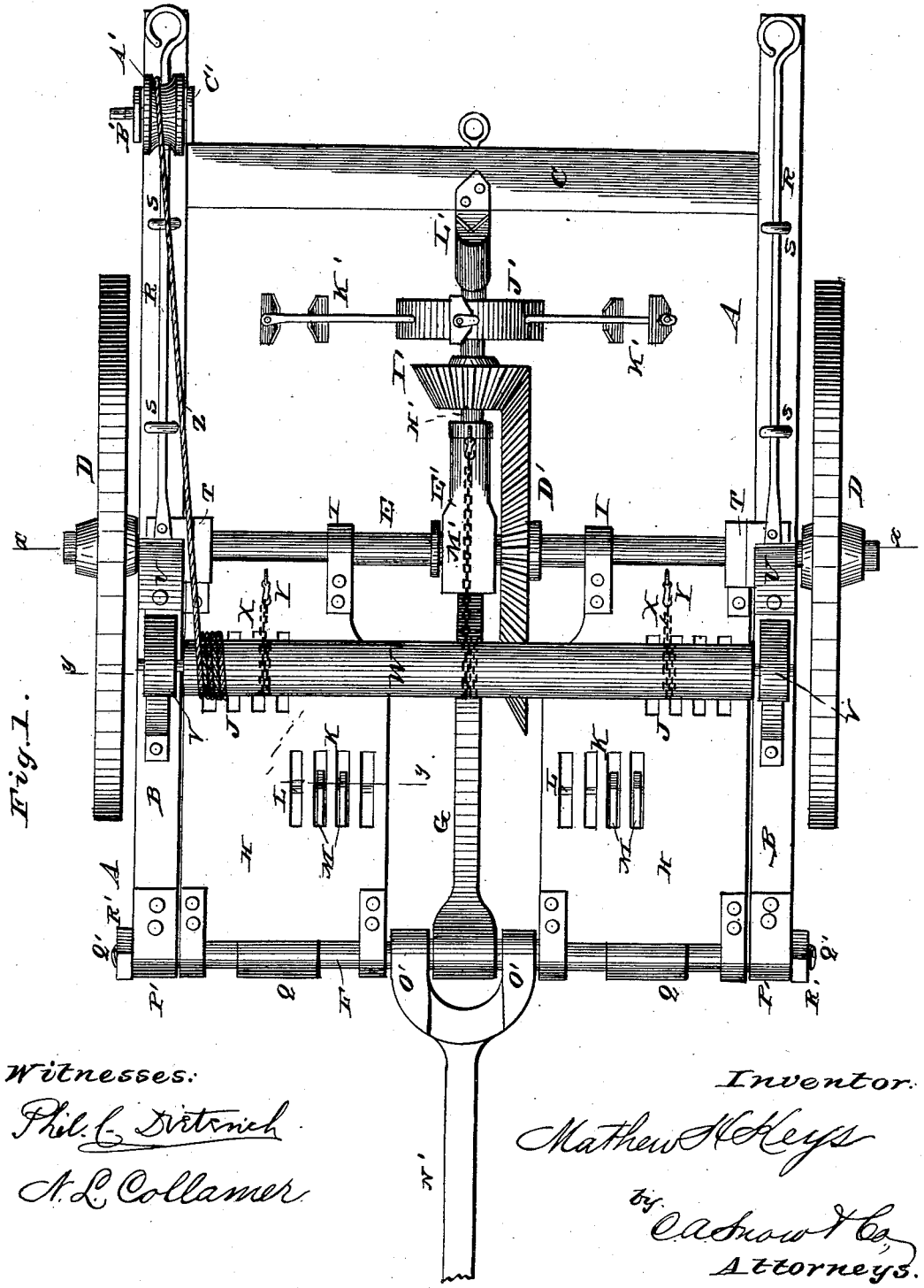

Fig. 1.

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(No Model.) 3 Sheets—Sheet 2.

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Fig. 2.

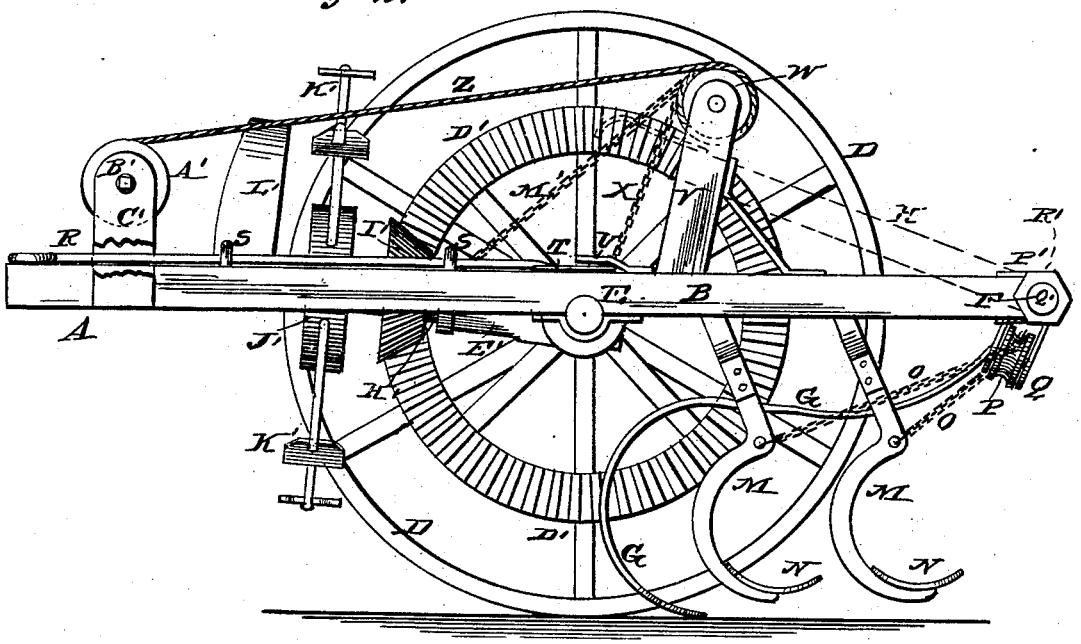
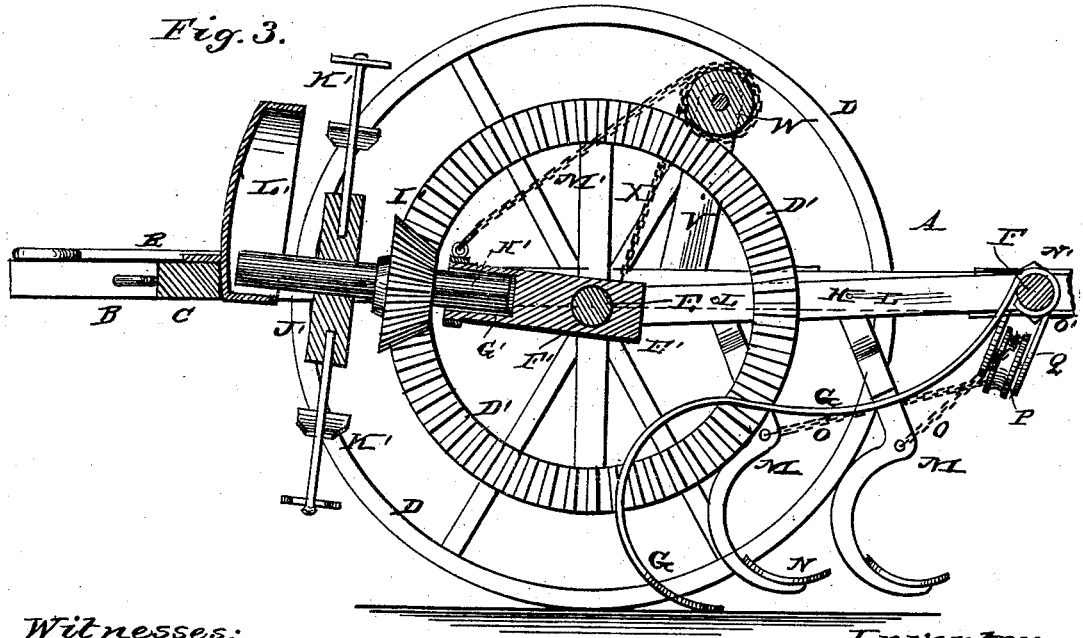


Fig. 3.



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(No Model.) 3 Sheets—Sheet 3.

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CULTIVATOR AND COTTON CHOPPER.

No. 265,968. Patented Oct. 17, 1882.

Fig. 4.

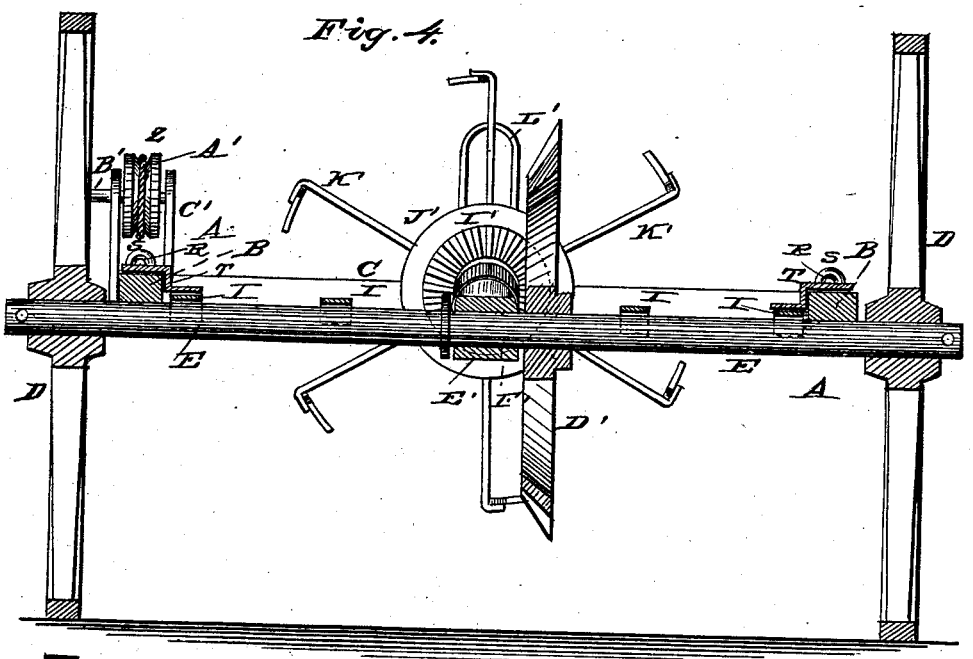


Fig. 5

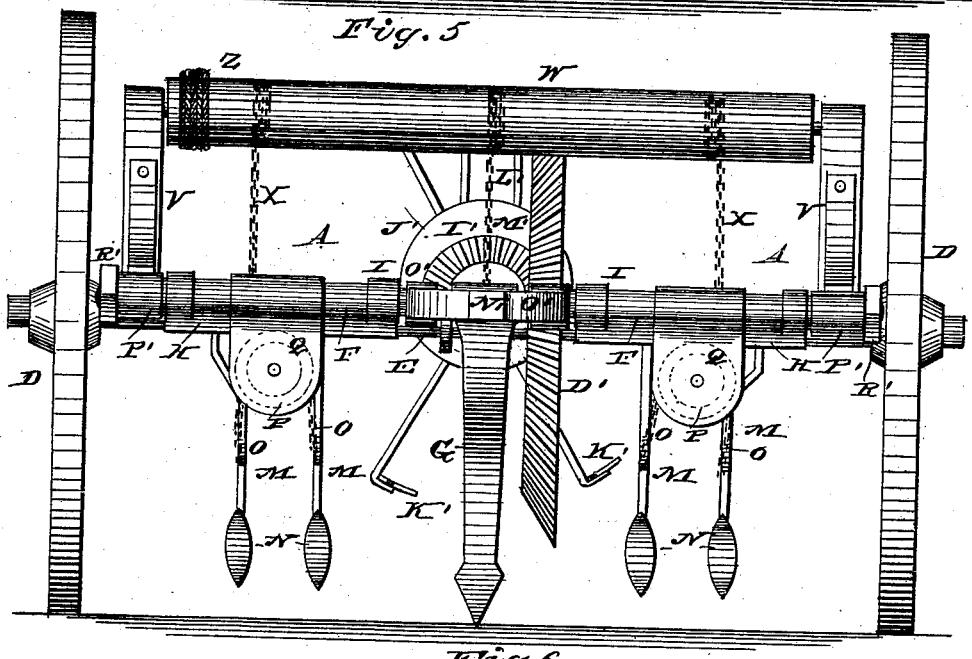
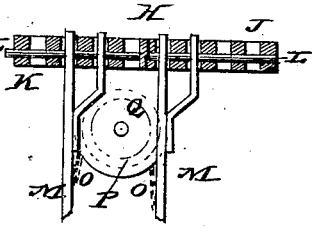


Fig. 6.



Witnesses.
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UNITED STATES PATENT OFFICE.

MATHEW H. KEYS, OF OXFORD, MISSISSIPPI.

CULTIVATOR AND COTTON-CHOPPER.

SPECIFICATION forming part of Letters Patent No. 265,968, dated October 17, 1882.

Application filed July 29, 1882. (No model.)

To all whom it may concern:

Be it known that I, MATHEW H. KEYS, of Oxford, in the county of Lafayette and State of Mississippi, have invented certain new and useful Improvements in a Combined Cultivator and Cotton-Chopper; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

This invention relates to a combined cultivator and cotton-chopper, and has for its object to provide a simple, inexpensive, and efficient device.

To this end it consists in certain improvements in the construction and operation of the same.

In the drawings, Figure 1 is a top view of the machine; Fig. 2, a side view; Fig. 3, a longitudinal vertical sectional view; Fig. 4, a transverse vertical sectional view on the line *x x*, Fig. 1; Fig. 5, a front end view; Fig. 6, a transverse sectional view on the line *y y*, Fig. 1.

Referring to the drawings, A designates a substantially ⊂-shape frame, comprising side beams, B B, and rear cross-piece, C, the whole being mounted on drive-wheels D D, fixed on the rotary axle E, journaled in bearings about midway on beams B B. At the front ends of the latter is arranged a cross bar or rod, F, on which is hinged a central cultivator-shank, G, on each side of which are also hinged platforms H H, extending rearwardly to axle E, each provided with projecting brackets I I, adapted to rest on the axle and support the rear end of the platform, each of the latter being provided with a double series of slots, J K. In these slots are adapted to be secured by a transverse pivot pin or bolt, L, the U-shaped shanks M of cultivators N, which are arranged one pair under each platform. To the shanks of each pair of cultivators are secured the ends of a chain or rope, O, its central portion passing over a pulley, P, in a block, Q, hinged on bar F and adapted to slide thereon. Thus any of the cultivators N will readily "give" to an obstruction, and while one is forced back the other will be drawn forward by the chain, so that there will be no strain on the shanks.

R R are rods sliding in staples or guides S on beams B B, and provided at their front ends with an angular plate, T, which is adapted to pass over the platform and retain the same down. The forward movement of the plates T is limited by a spring-plate, U, arranged one on each beam B, and the downward tension of these plates U on plates T serves to retain the latter in position against any jolting, and the plates T have to be drawn from under the spring-plates.

V V are two standards, arranged on beams B B forward of the axle E, and having bearings for a transverse rotary rock-shaft, W, from which extend chains or ropes X X, detachably secured at their lower ends to the platforms H H. Thus when the shaft W is turned the chains X X will wind upon and elevate the rear ends of the hinged platforms carrying the cultivators. When it is not desired to raise the platforms the chains X X may be detached therefrom by the hooks or catches Y at their lower ends.

To operate or turn rock-shaft W it is provided with a chain or rope, Z, at one end, which extends rearwardly and is wound round a pulley, A′, fixed to a shaft, B′, journaled in a bracket, C′, arranged on one of beams B. Shaft B′ may be turned by a wrench or key to wind cord Z and turn shaft W.

Fixed on rotary axle E is a gear-wheel, D′, at the side of which is mounted a standard, E′, having a perforation or bearing, F′, for the axle, and adapted to turn thereon. In its rear end the standard E′ is formed with a bearing, G′, for a rotary shaft, H′, carrying a small fixed gear-wheel, I′, meshing with gear-wheel D′, and a disk, J′, carrying the radial choppers K′. The rear end of shaft H′ is housed in boxing L′, arranged on cross-piece C of the frame. M′ is a chain or rope extending from the front end of standard E′ to the rock-shaft W, so that when the latter is turned the standard carrying the chopper-shaft may be elevated, the rear end of shaft H′ being guided in boxing L′.

N′ is the draft bar or tongue, which is bifurcated at its rear end, the arms O′ O′ thus formed being hinged on front bar or rod, F, at each side of the central cultivator-shank, G, nicely inclosing the same and preventing it

from wabbling or lateral displacement. The front rod, F, is secured in brackets P′ P′ on the end of side beams, B B, its ends Q′ Q′ being screw-threaded and adapted to receive nuts R′ R′, which bind against beams B B and retain rod F in position.

The operation and advantages of my invention will be readily understood.

The device is very convenient and easily operated, and its parts are readily adjustable.

I claim and desire to secure by Letters Patent—

1. The combination, with the frame having the axle and cross front rod or bar, of one or more platforms, hinged on said rod at their front ends and supported on the axle at their rear ends, said platforms carrying the cultivators and adapted to be elevated, as set forth.

2. The combination, with the frame having the front cross rod or bar, on which is hinged and adapted to slide one or more pulley-blocks, of one or more platforms hinged on said front rod and provided with series of slots, in which the cultivator-shanks are hinged or pivoted, and the connecting chain or rope secured to the cultivators and passing over the pulley, as set forth.

3. The combination, with the frame having the front cross bar or rod, of the two platforms hinged on the latter, one at each side, and carrying the hinged or pivoted cultivators, and the central cultivator hinged on said front rod between the platforms, as set forth.

4. The combination, with the frame having the front cross rod or bar and carrying the rock-shaft in rear thereof, of one or more platforms hinged on said front rod, and connected at their rear ends to the rock-shaft by a chain or cord extending up and adapted to wind round the latter to elevate the platforms on their hinges, as set forth.

5. The combination, with the frame comprising the side beams having the standards carrying a rock-shaft, one beam being provided with a bracket having bearings for a shaft carrying a pulley, the front cross rod or bar, and carrying the axle, of the platforms hinged on the latter and supported at their rear ends by the axle, the platform-elevating chains or ropes, and the rock-shaft-operating chain or rope, as set forth.

6. The combination, with the rod carrying a plate, T, at its end, of a spring-plate, U, to limit the movement of plate T, and by its downward tension thereon retain it in position, as set forth.

7. The combination, with the frame having the side beams carrying the axle and cross front rod or bar, of the platforms (one or more) hinged on the latter and resting on the former, and the rods moving on the beams and having at their ends angular plates to retain the platform down, as set forth.

8. The combination of the frame carrying the rock-shaft, and having the front cross rod or bar and the rotary axle, the hinged platforms carrying the forward cultivators, the hinged standard carrying the rotary chopper-shaft, mechanism for operating the latter, and the elevating chains or ropes, as set forth.

In testimony that I claim the foregoing as my own I have hereunto affixed my signature in presence of two witnesses.

MATHEW H. KEYS.

Witnesses:

JOHN R. BROWN,

W. E. ANDREWS.