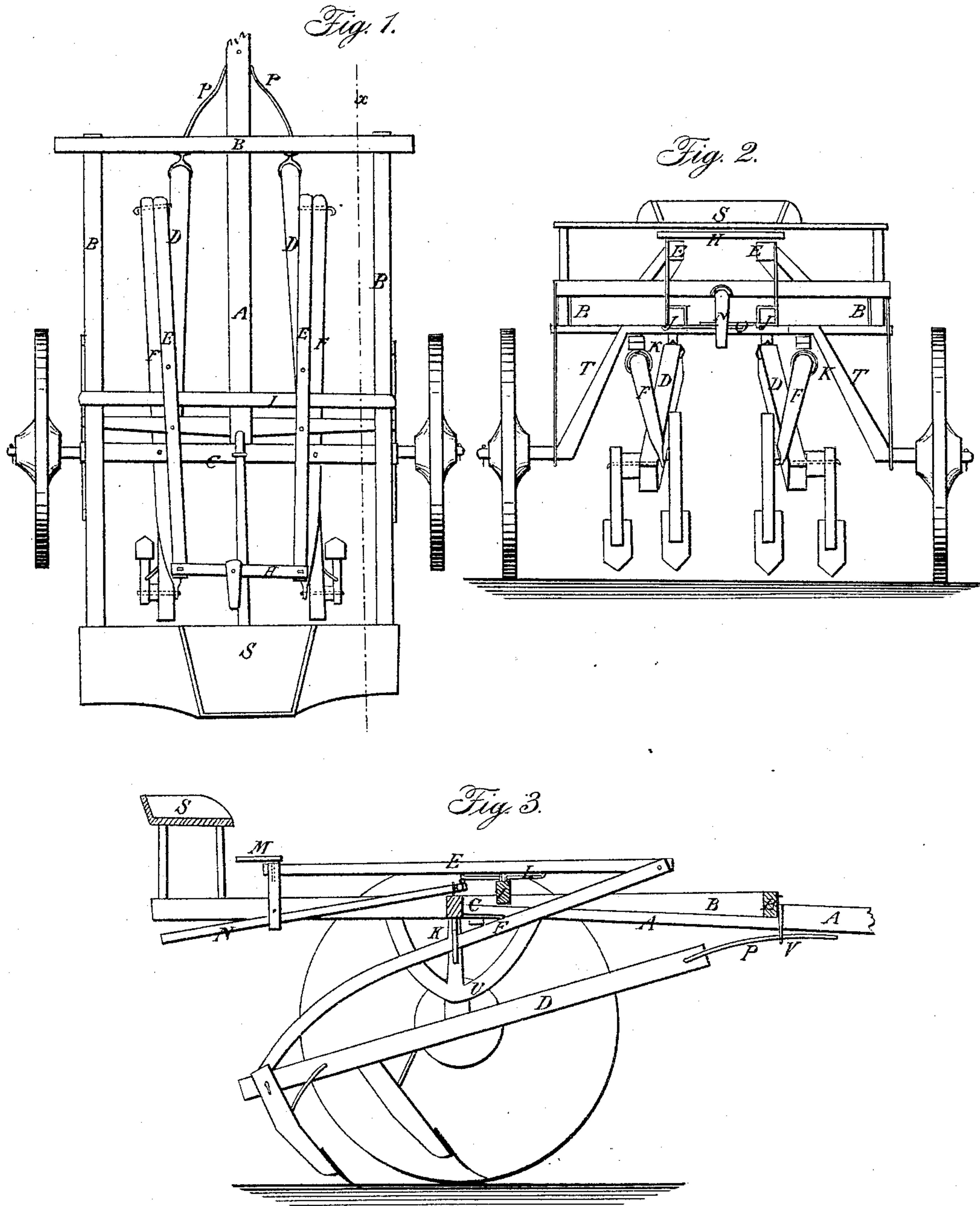


G. CALKINS.  
Wheel Cultivator.

No. 49,715.

Patented Sept. 5, 1865.



**Witnesses:**  
James Pennock  
Geo B Nichols

**Inventor:**  
George Calkins  
by Coburn, Mans  
attorneys

# UNITED STATES PATENT OFFICE.

GEORGE CALKINS, OF EL PASO, ILLINOIS.

## IMPROVEMENT IN CULTIVATORS.

Specification forming part of Letters Patent No. **49,715**, dated September 5, 1865.

*To all whom it may concern:*

Be it known that I, GEORGE CALKINS, of El Paso, in the county of Woodford and State of Illinois, have invented a new and useful Improvement in Cultivators; 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 and letters and figures marked thereon, which form a part of this specification, and in which—

Figure 1 represents a plan or top view; Fig. 2, a rear elevation; and Fig. 3, a vertical sectional view of my improved cultivator at the red line *x* in Fig. 1.

A is the tongue of the cultivator, and B the frame.

C is a cross-piece with its ends mortised into the side pieces of the frame.

D D are the cultivator-beams, to which the plow-standards are attached. These beams are attached to the tongue A by means of the bent rods P, which pass through the supports V, (shown in Fig. 3.) The plow-beams are raised and lowered, and also moved sidewise, by the levers E and F. The levers E E have their fulcrums on the cross-piece I, and are so arranged by means of the rod L, passing through the eye of an eye-bolt driven into the said cross-piece, that the levers can slide longitudinally. The rod L also fits in the eye of the bolt loosely enough to admit of the lever E being swung laterally, the bolt serving as a pivot. The front ends of said levers E are attached to the front ends of the levers F, and the levers F extend back under the cross-pieces and have their fulcrums in the supports K, the supports K being attached to the cross-piece C, and constructed sufficiently large where the levers K pass through to admit of the ends of the levers receiving both the vertical and lateral motion. The rear ends of the said levers F are attached to the plow-beams D, as shown. The rear ends of the levers E are connected by means of the cross-piece H, and there is also connected thereto the frame O, with places J J provided therein for the feet of the operator. There is a short lever, M, attached to the cross-piece H and

extending out near the seat, so that the operator, sitting thereon, can operate the levers E with his hands instead of his feet when he so desires; and there is also a lever, N, which is attached to the frame O, with the front end passing under the staple S, that is driven into the cross-piece C. This lever is so arranged that the operator can operate the levers E when walking behind the machine. The distance between the rear ends of the plow-beams D is regulated by the distance between the ends of the levers E at the frame O, and that is regulated by there being various holes in the cross-piece H for the bolts that fasten it to the levers, and by constructing the bottom piece of the frame O in two parts, so that one will slide over the other, thereby allowing the ends of the levers E to be arranged at different distances apart.

It is readily seen that by operating the levers E the plows are completely controlled—that is, raised or lowered or thrown sidewise to follow the sinuosities of the rows.

The frame of the cultivator is raised to adapt it to be used among high corn by means of the arms T and braces U, which are so constructed as to firmly support the frame on the wheels, and at the same time avoid the necessity of using large wheels.

Having thus fully described the use and construction of my invention, what I claim, and desire to secure by Letters Patent, is—

1. The combination and arrangement of the plow-beams D, levers F, supports K, levers E, provided with the rods L, the cross-piece H, and frame O, when constructed and operating substantially as and for the purposes set forth.

2. The combination and arrangement of the plow-beams, levers E and F, provided with their fulcrums, as described, cross-piece H, frame O, and the levers M and N, when constructed substantially as and for the purposes described.

GEORGE CALKINS.

Witnesses:

E. A. BANGS,  
W. E. ESTY.