

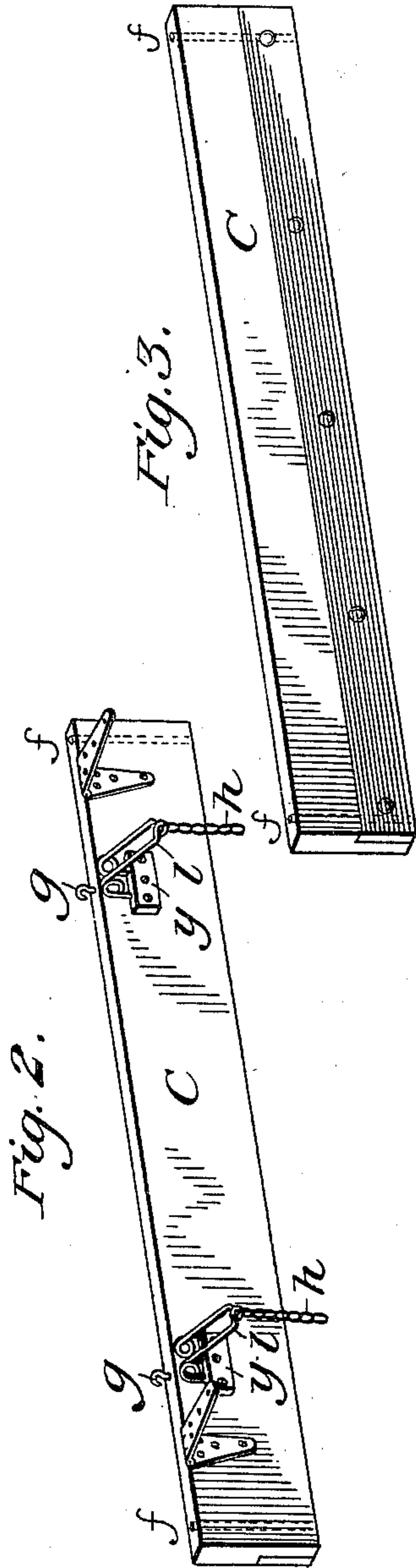
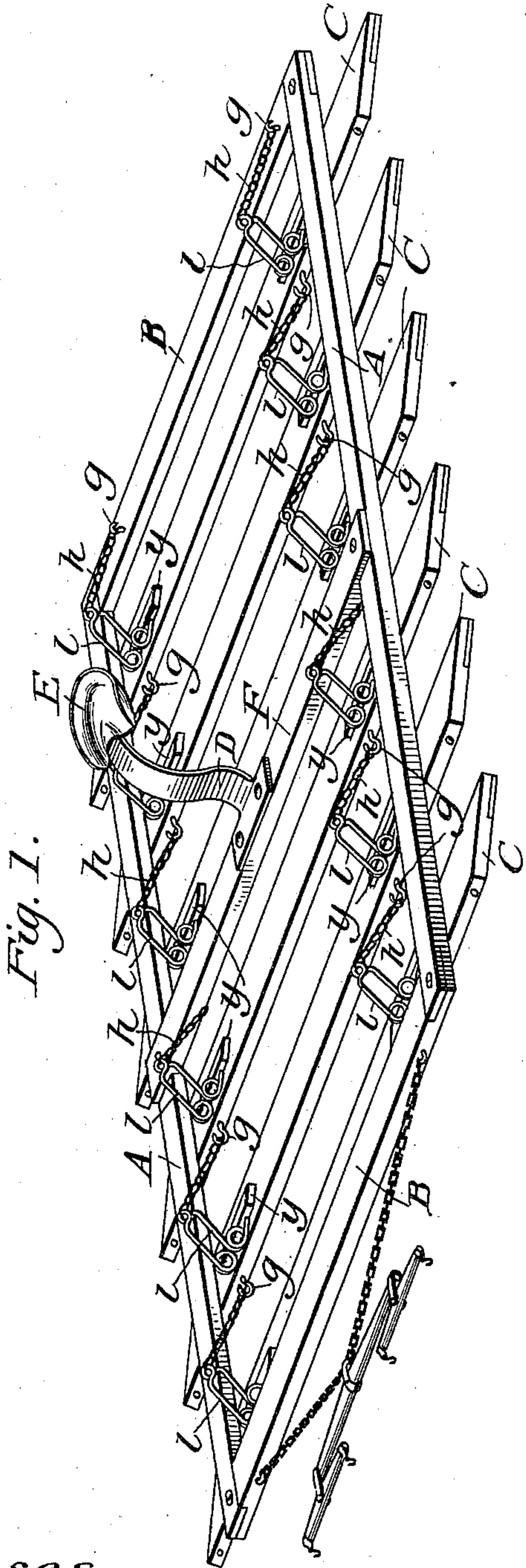
No. 662,370.

Patented Nov. 20, 1900.

G. E. BLAINE & P. T. SOUTH.
CLOD CRUSHER AND LAND LEVELER.

(Application filed May 16, 1900.)

(No Model.)



Witnesses.
Rose South
Ray South

Inventors,
George E. Blaine
Philip T. South.

UNITED STATES PATENT OFFICE.

GEORGE E. BLAINE AND PHILIP T. SOUTH, OF DAYTON, OHIO.

CLOD-CRUSHER AND LAND-LEVELER.

SPECIFICATION forming part of Letters Patent No. 662,370, dated November 20, 1900.

Application filed May 16, 1900. Serial No. 16,950. (No model.)

To all whom it may concern:

Be it known that we, GEORGE E. BLAINE and PHILIP T. SOUTH, citizens of the United States, residing at the city of Dayton, in the county of Montgomery and State of Ohio, have invented a new and useful Agricultural Implement for Crushing Clods and Leveling and Evening the Surface of Plowed Ground for Planting or other Purposes, of which the following is a specification.

Our invention relates to improvements in clod-crushers in which we use a series of hanging leaves or blades hinged to the under side of a top frame. Said leaves or blades, being set to any desired angle by means of springs and a link chain connecting one blade with another, operating in conjunction with the hinges, produce a pounding or crushing effect upon plowed ground as the device is drawn forward; and the objects of our improvements are, first, to provide facilities for the proper adjustment of the blades to any desired angle or pitch from the frame backward; second, to afford facilities for this particular purpose by the hinging process, and, third, to reduce the friction by the elasticity of the springs as the blades pass over the plowed ground; and we attain these several objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a top view in perspective of our device as a complete machine. Figs. 2, 3, 4, 5, 6, and 7 are detail views of some of the parts. Fig. 8 is a view of the cross-brace of the frame to which the seat is attached. Fig. 9 is a view of one of the leaves or blades, showing the hinges, springs and plate, and chain-hook. Fig. 10 is a perspective view of one of the leaves or blades, showing the metal plate C attached thereto on the bottom front side. The opposite ends of the leaves are strengthened to prevent splitting by means of bolts, as shown at *f*. Fig. 11 is an end view of several of the leaves or blades hinged to the frame-plate A.

Similar letters refer to similar parts throughout the several views.

The top frame A B constitutes the bed-plate. To the under side of the plates A the leaves or blades C are hinged, so that they stand or hang perpendicular beneath the frame and can only be set at a backward an-

gle to the frame. The degree of angles at which the blades may be set is regulated by the springs *l* and link chain *h*, connecting the leaves together. The springs *l* are secured to the top back side of the leaves C by means of plates *y*, screwed or bolted over the forward ends of the springs, as shown in Fig. 9. A screw-hook *g* is made fast to each rear leaf or blade, as well as the rear end of frame-plate B, to which the link chain *h* is attached, which connects with the closed end of the spring *l* on the next forward leaf or blade. A brace F, midway across the frame between the plates A, is secured to said plates by bolts. To this plate a spring-seat D E is made fast. The blades C are faced on the lower front part with metal strips to prevent wear as they come in contact with the plowed ground. These leaves or blades are secured to the under sides of the plates A of the top frame with strap or other hinges.

When the machine is drawn forward over the plowed ground, the lower or bottom part of these leaves comes into contact with the clods, and as each blade works independently of the other as the front blade passes over the ground it will strike the clod and break off or pulverize a part of it and will rise up and pass over, when the next following blade will strike, taking off another portion, and so on until the whole lot of blades or leaves have passed over the ground, each giving a pounding or pulverizing blow by means of the hanging blades controlled by the action of the springs, the recoil of which may be controlled by the lengthening or shortening of the link chain, which controls the tension. The effect of this system of pounding reduces the ground to an even smooth surface, ready for planting.

A further description of our device does not seem necessary, in connection with the drawings, to enable others to make and use the device. The mechanical principles upon which it is constructed are very simple and new only as applied to our device, a clod-crusher and land pulverizer and leveler.

Therefore what we claim, and desire to secure by Letters Patent, is—

In a clod-crusher a top frame A and B mortised and bolted at the four corners and braced through the middle by means of plate F bolted to the sides of the frame A, with seat D E se-

cured thereto, in combination with a series of blades C hinged to the under side of the frame-plates A, said blades held at any desired backward angle by means of springs l
5 secured to the sides of the blades C by means of plates y, said springs connected to rear blades by means of screw-hook and tension

of springs regulated by means of link chains substantially as set forth and described.

GEORGE E. BLAINE.
PHILIP T. SOUTH.

Attest:

MINNIE BLAINE,
HATTIE SOUTH.