T. J. CHRISTY.

Harvester Cutter.

No. 78,515. Patented June 2, 1868.

Fig. 1

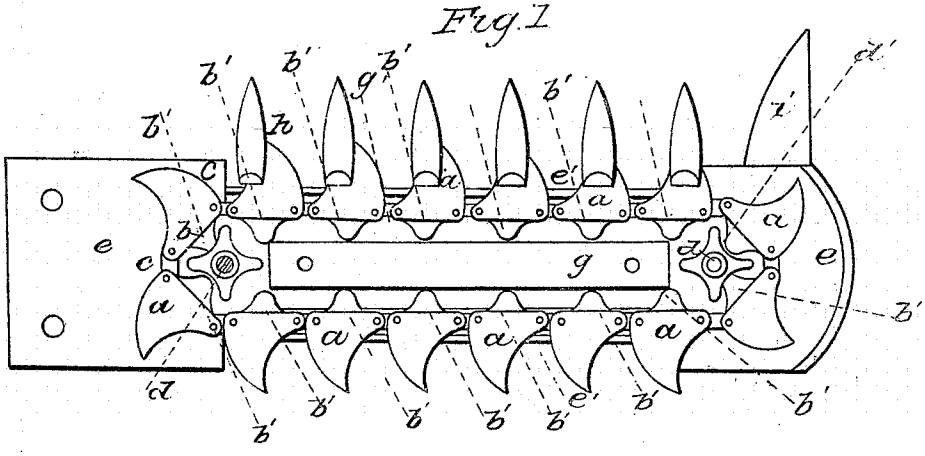


Fig. 2

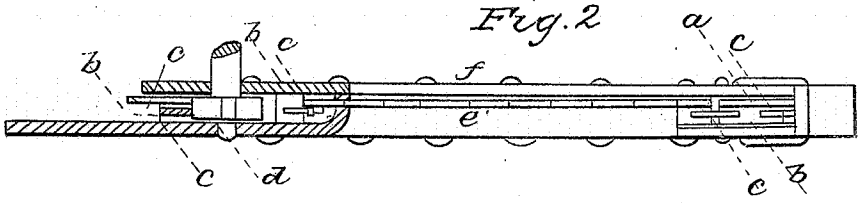


Fig. 3

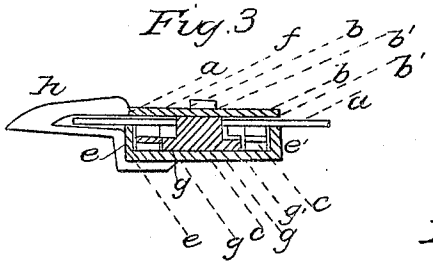


Fig. 4

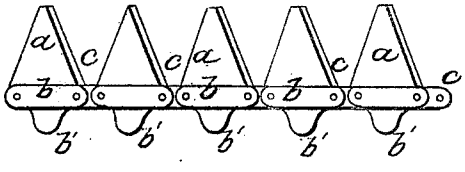
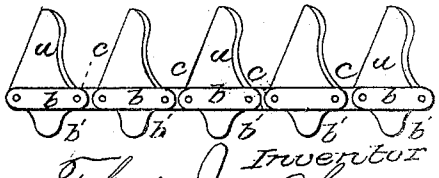


Fig.



Witnesses

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THOMAS J. CHRISTY, OF OLNEY, ILLINOIS.

Letters Patent No. 78,515, *dated June* 2, 1868; *antedated May* 25, 1868.

IMPROVEMENT IN HARVESTER-CUTTERS.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, THOMAS J. CHRISTY, of Olney, Richland county, State of Illinois, have invented a new and useful Improvement in Reaping and Mowing-Machines; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing, forming part of this specification.

This invention relates to the kind of cutting-apparatus, for reaping and mowing-machines, in which the cutting-teeth go to make up an "endless chain," which has a continuous circulating movement upon the finger-beam.

The invention consists in the combination, with the endless-chain cutter, of peculiarly-formed metallic sections, which, in connection with a cap-plate and suitable guides on the finger-beam, serve to give the cutter a free, steady, and uniform motion in operation.

Figure 1 is a plan of my improved cutting-apparatus with the cap-plate removed.

Figure 2 is an elevation thereof, looking from the rear, partly in section.

Figure 3 is a central transverse section.

Figures 4 and 5 illustrate modifications in the form of the cutting-teeth.

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

In the drawings, *a a a* represent a series of steel cutters or teeth, each rigidly fastened to a cast or wrought-iron section, *b*, seen clearly in figs. 4 and 5, which are under side views of a portion of the endless cutter. The bolts which fasten together the teeth *a* and sections *b*, also connect these parts to the links *c c c*, which form flexible joints to enable the endless chain thus formed to turn freely around the cog-wheels *d d'*, which are mounted to rotate upon short vertical shafts journalled in the finger-beam *e* and cap-plate *f*. The relative arrangement of the endless-chain cutter and the wheels *d d'* is clearly shown in fig. 1.

Each of the metallic sections *b* is formed with a heel or projection, *b'*, which projections engage with the cog-wheels *d d'*, and which, when the apparatus is in operation, move upon the ledges *g' g'* at the front and back of the central stationary bar *g*, around which the cutters, with their sections and links, circulate. Slits or openings are cut in both sides of the finger-beam, at suitable distances from its opposite ends, and the intervening metal is bent upward, as shown in figs. 1 and 3. Grooves are formed between the upturned portions *e'* and the ledges *g'*, and in these grooves the sections *b* travel when the apparatus is in operation.

The cap-plate *f* is screwed to the bar *g*, and confines the sections *b* upon the finger-beam when in motion. The heels *b'* of the sections *b*, in conjunction with the central bar *g* and ledges *g' g'*, prevent the wabbling of the cutters *a*, and insure a steady, uniform motion. The number of cogs on the wheels *d d'* may be varied as desired.

h h h are the fingers, and *i* is the grain-divider. These may be attached to the finger-beam *e* in such manner as experience or convenience may suggest; and the teeth *a* may be made to cut against either the upper or lower parts of the guards. The upper parts of the guards may be attached to the cap-plate *f* if desired.

The parts which support and confine the endless-chain cutter may be of wood or iron, or both of these materials may be employed; and said parts may be made or framed in connection with the platform that the grain falls upon. The platform may so join the cap-plate *f* as to cover and shield the cutters and prevent their obstruction during their return movement at the back of the finger-beam.

The endless propelling-chain, consisting of the sections *b* and links *c*, may be applied to other purposes, and is especially suited for the purpose of an endless-chain horse-power.

I do not claim novelty in any of the parts of my invention separately; but

What I do claim as new, and desire to secure by Letters Patent, is—

The combination of the chain-sections *b*, formed with projecting heels *b'*, for both driving and guiding the blades *a* and links *c* bolted to the sections *b*; the pinion *d* driving the chain, through the medium of the projecting heels *b'*; the central bar *g* with ledges *g' g'*, forming guide-ways for the heels *b*; the finger-beam *e*, with upturned flanges *e'*, and the cap-plate *f*, when the said parts are constructed, arranged, and employed in the manner and for the purpose specified.

To the above specifications of my new and useful improvement in reaping and mowing-machines I have signed my hand, this the 9th day of August, A. D. 1867.

THOMAS J. CHRISTY.

Witnesses:

ROBT. M. SCOTT,

W. H. WILLIAMSON.