C. R. TAYLOR.

HARROW.

No. 192,094. Patented June 19, 1877.

Fig 1

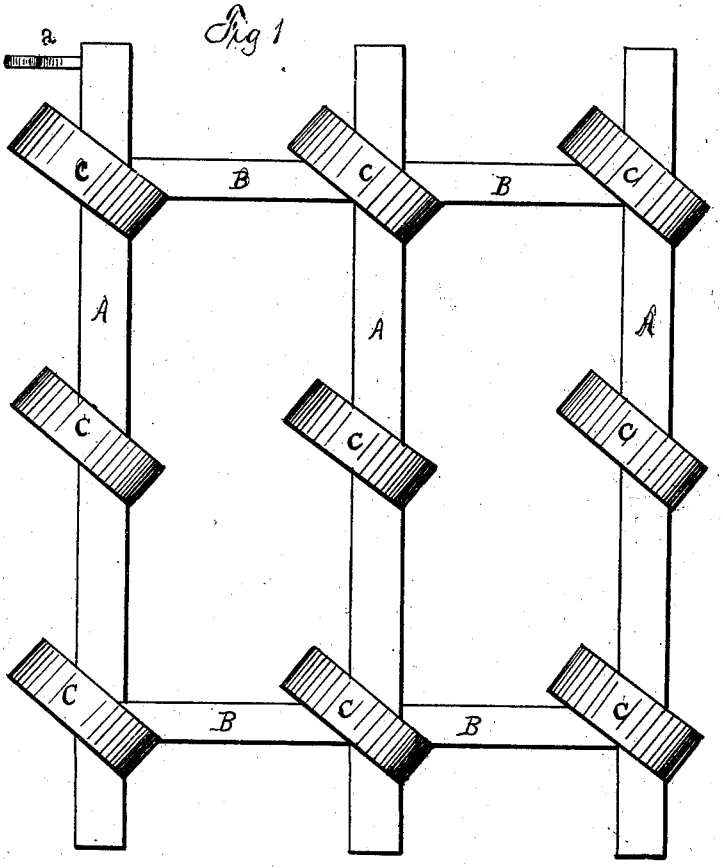


Fig 2.

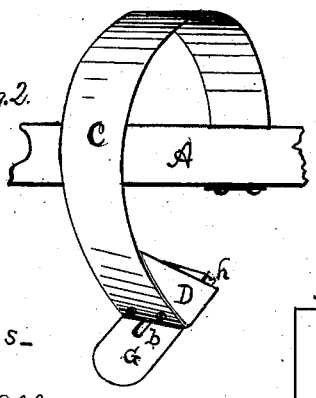


Fig 4

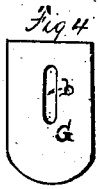
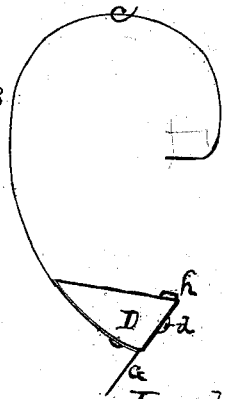


Fig 3



Witnesses.
R. M. Barr.
H. S. D. Haines

Inventor.
Carlo R. Taylor
per F. A. Lehmann atty

UNITED STATES PATENT OFFICE.

CARLO R. TAYLOR, OF SOUTH BEND, INDIANA, ASSIGNOR OF ONE-HALF HIS RIGHT TO JOHN GRANT, OF CHICAGO, ILLINOIS.

IMPROVEMENT IN HARROWS.

Specification forming part of Letters Patent No. **192,094**, dated June 19, 1877; application filed June 5, 1877.

To all whom it may concern:

Be it known that I, CARLO R. TAYLOR, of South Bend, in the county of St. Joseph and State of Indiana, have invented certain new and useful Improvements in Harrows; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

The nature of my invention consists in the construction and arrangement of a harrow, as will be hereinafter more fully set forth.

The annexed drawing, to which reference is made, fully illustrates my invention.

My harrow is composed of a series of parallel beams, A A, connected together and held a suitable distance apart by means of cross-bars B B, which form the harrow-frame, and is to have the team attached in one corner, as at *a*. C C represent flat coiled springs, of any desired number, and attached to the beams A. One end of each spring C is attached to the under side of the beam at such an angle that the line of the spring, as it coils upward and forward over the beam, and then downward under the same, will be on a line parallel with the line of the draft. On the lower end of the spring C is attached a shoe, D, of substantially the form shown in the drawing, and in such a manner that a slot or opening will be left at the extreme end of the spring sufficiently large to admit of the blade G, which forms the harrow-tooth. The lower end of the blade G is rounded, as shown, and the blade has a central slot, *b*, running longitudinally therein.

The blade is fastened by means of a screw, *d*, passed through a hole in the end of the shoe, through the slot *b* in the blade, and screwing into a block or nut, *h*, within the shoe, whereby the blade becomes firmly and securely fastened in place. By means of the slot *b* the blade can easily be adjusted up and down, as required, and the base or lower portion of the coiled springs C serves as a gage for regulating the depth of the teeth.

It will be noticed that as the harrow moves forward, and the blades catch in the ground, the tendency is to coil the springs more and more, increasing their tension in proportion to the resistance, and thus insuring a perfect and even work of the harrow over the ground.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The flat adjustable blade G, attached to a coiled spring, and forming a harrow-tooth, as herein set forth.

2. The combination of the coiled spring C, shoe D, and adjustable blade G, substantially as and for the purposes herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 5th day of June, 1877.

C. R. TAYLOR.

Witnesses:
R. M. BARR,
W. H. KERN.