(No Model.)

A. R. TROUTMAN.

HARROW.

No. 573,315. Patented Dec. 15, 1896.

Fig. 3.

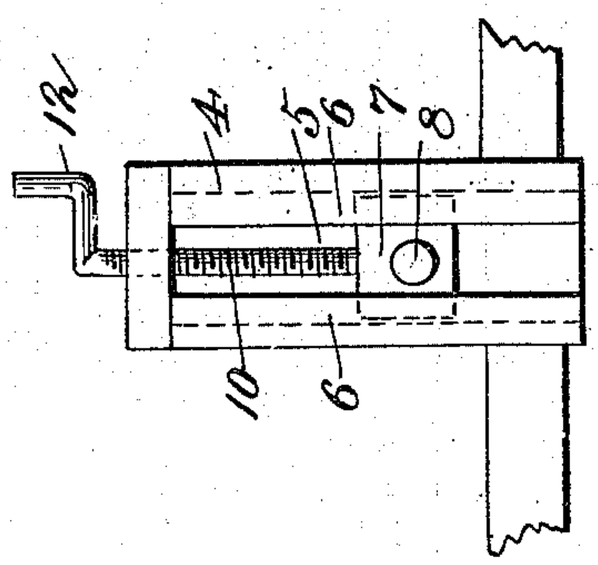

Fig. 4.

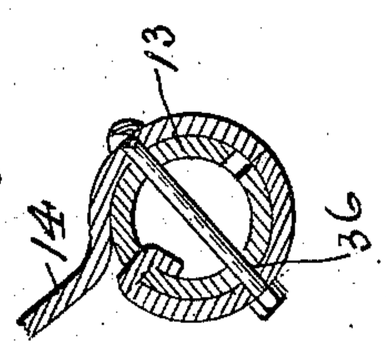

Fig. 2.

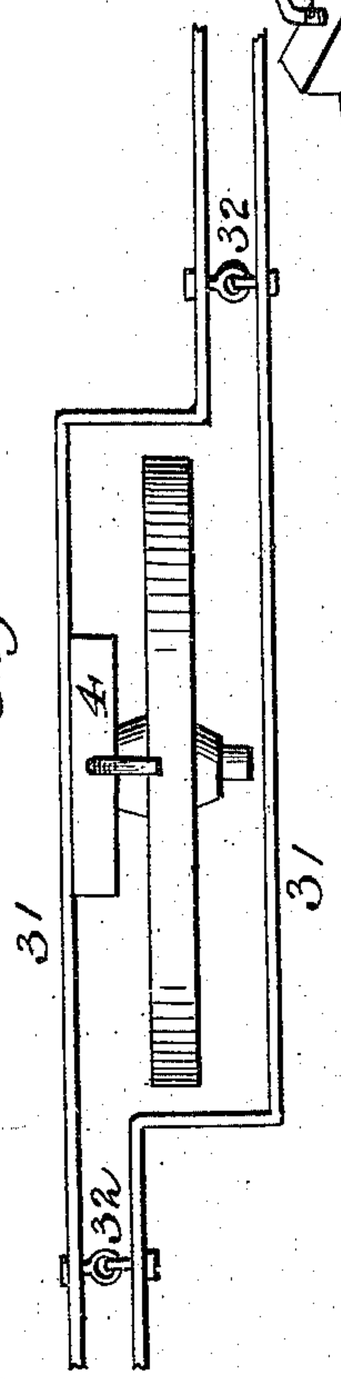

Fig. 1.

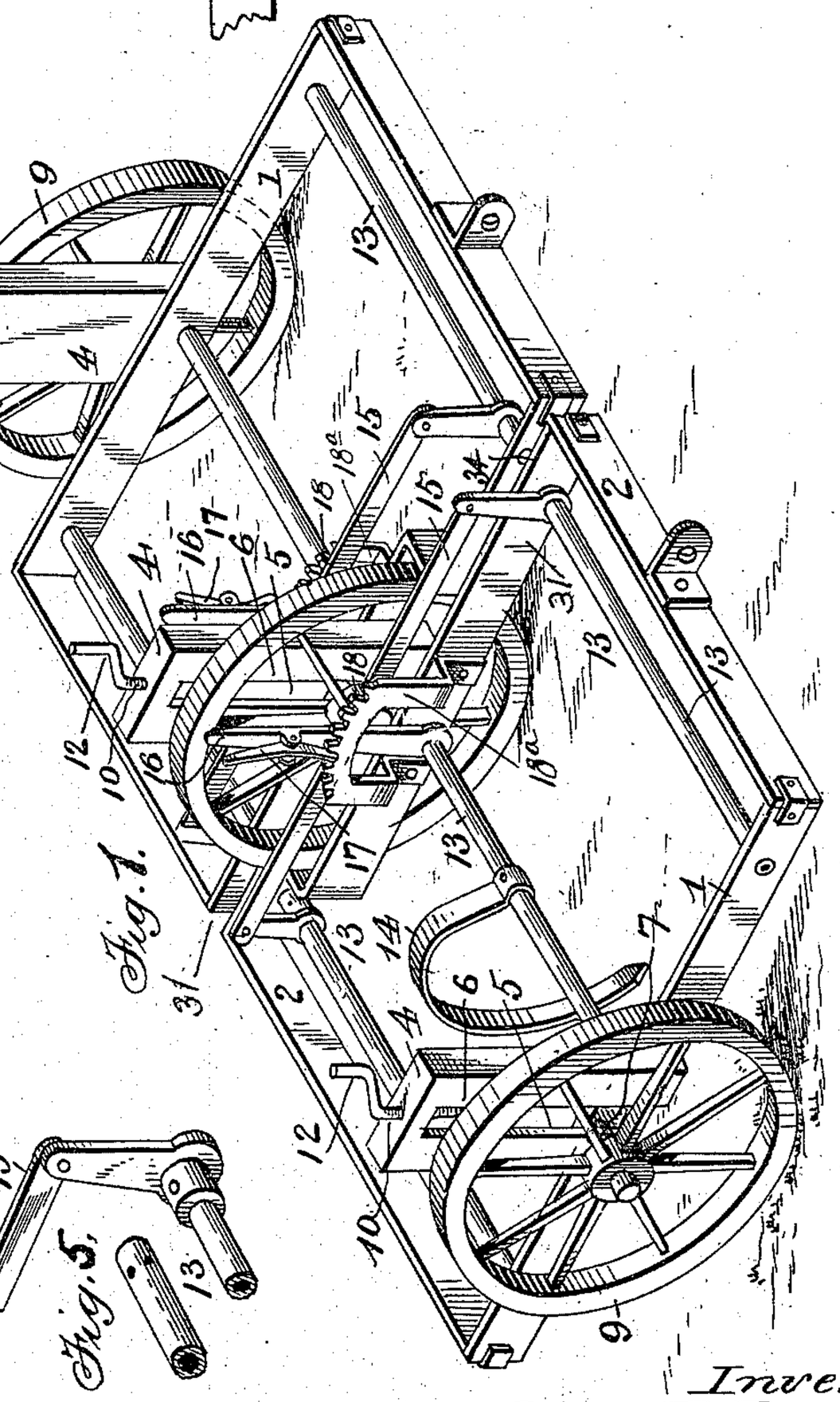

Fig. 5.

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UNITED STATES PATENT OFFICE.

ADAM R. TROUTMAN, OF MILLERSTOWN, PENNSYLVANIA.

HARROW.

SPECIFICATION forming part of Letters Patent No. 573,315, dated December 15, 1896.

Application filed February 3, 1896. Serial No. 577,862. (No model.)

To all whom it may concern:

Be it known that I, ADAM R. TROUTMAN, a citizen of the United States, and a resident of Millerstown, in the county of Perry and State of Pennsylvania, have invented certain new and useful Improvements in Harrows; 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.

My invention relates to sectional harrows; and its object is to provide an improved construction of the same which shall possess superior advantages with respect to efficiency in use.

The invention consists in the novel construction and combination of parts hereinafter fully described and claimed.

In the accompanying drawings, Figure 1 is a perspective view of a harrow constructed in accordance with my invention. Fig. 2 is a detail plan view showing the central supporting-wheel and the manner of connecting the sections together. Fig. 3 is a side elevation view showing one of the brackets and the vertically-adjustable bearing. Figs. 4 and 5 are detail views.

In the said drawings, the reference-numeral 1 designates side bars, to which are secured the front and rear transverse bars 2, forming two rectangular sections connected together as hereinafter described. Secured to the said side bars are vertical brackets 4, having vertical recesses 5, over which project inwardly-extending flanges 6, forming a way to receive a vertically-movable rectangular bearing 7, to which is secured the stud-shaft 8, to which shafts the side wheels 9 are journaled. Working in a screw-threaded aperture in the top of the bracket is a vertical screw-rod 10, having a crank 12, by which it may be rotated. The lower end of the rod rests upon the bearing and serves to adjust the same so as to regulate the height of the wheels with respect to the frame. Journaled in the said side bars are a number of tooth-shafts 13, each provided with a series of curved spring-teeth 14. There are three of these shafts shown, the front and rear of which are connected together by a bar 15, to which is pivoted a lever 16, secured to the central shaft. By actuating this lever the bar can be oscillated to raise or lower the said shafts and regulate the depth of penetration of the teeth. Said lever is provided with a spring-pawl 17, which engages with rack-teeth 18 in a segment-bar 18^a, secured to the bar 3 for holding the lever in position.

The inner side bars of the sections or frames are bent near each end at a double right angle and secured to the front and rear bars of the frame. One of these bars has secured to it the bracket in which is located the bearing for the central wheel. This bracket and the bearing and wheel are identical with those at the outer sides of the sections or frames. Near each end the bars 31 are connected together by links 32 and are formed with holes 34, in which the teeth-bars, each made in two parts, are journaled.

In Fig. 4 I have shown the preferred manner of securing the teeth 14 to the shaft 13. The said shaft is provided with a number of holes or apertures at suitable points, with which the inner ends of the teeth engage. The teeth are then bent around the shaft, and bolts 36 are passed through registering apertures in the shaft and tooth, by which the latter are firmly held in place.

Having thus fully described my invention, what I claim is—

In a sectional harrow, the combination with the two rectangular sections, the inner or adjoining sides of which are formed near opposite ends with right-angled bends, the eyes pivotally connecting said sides together, the brackets secured to the outer sides of said frames formed with recesses and overlapping flanges, the vertically-movable bearings located therein the stud-shafts secured to said bearings, the wheels journaled thereon and the regulating-screws, of the bracket secured to the inner side of one of said frames, the vertically-adjustable bearing the stud-shaft secured thereto, the central wheel journaled thereon and located between the inner sides of said frames, the regulating-screw and the rotatable tooth-bars and the teeth, substantially as described.

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

ADAM R. TROUTMAN.

Witnesses:
CORBETT J. SINGER,
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