

J. H. PEDEN.
HARROW.

APPLICATION FILED MAY 27, 1909.

948,769.

Patented Feb. 8, 1910.

3 SHEETS—SHEET 1.

FIG. 1.

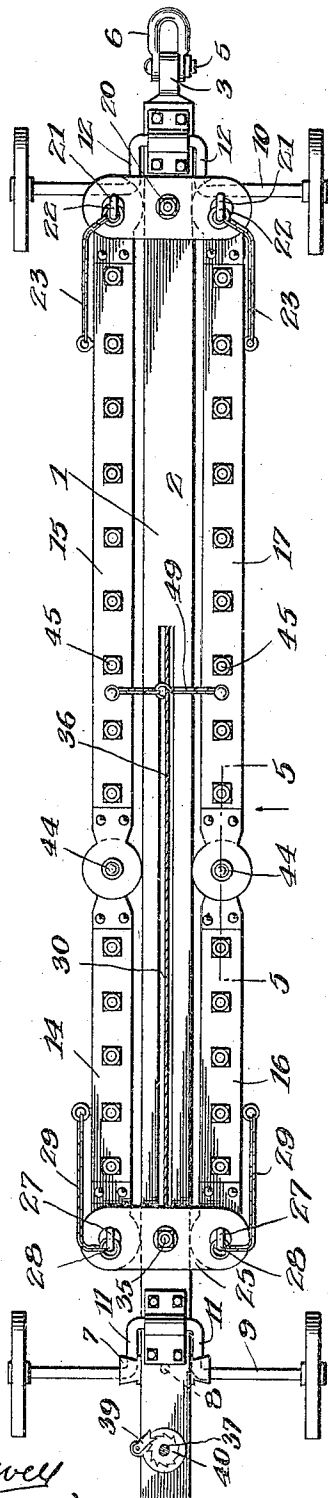
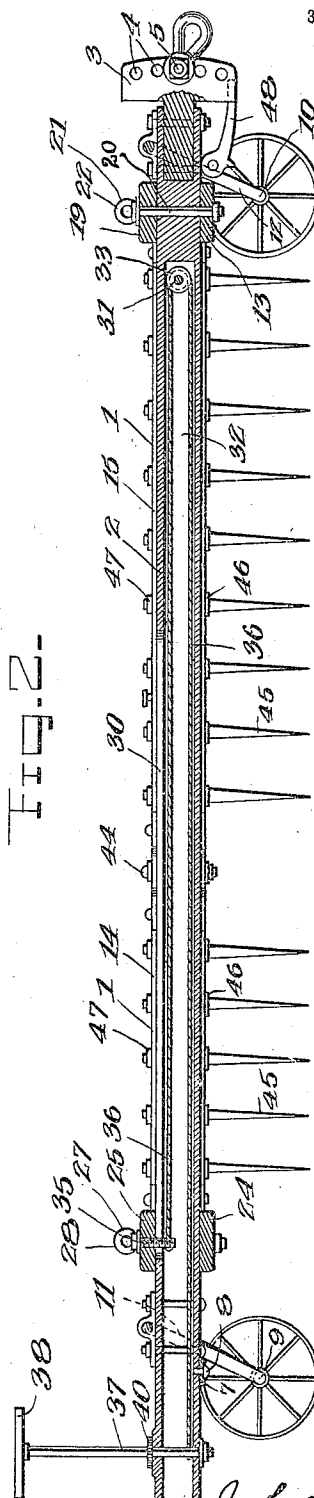


FIG. 2.



Witnesses
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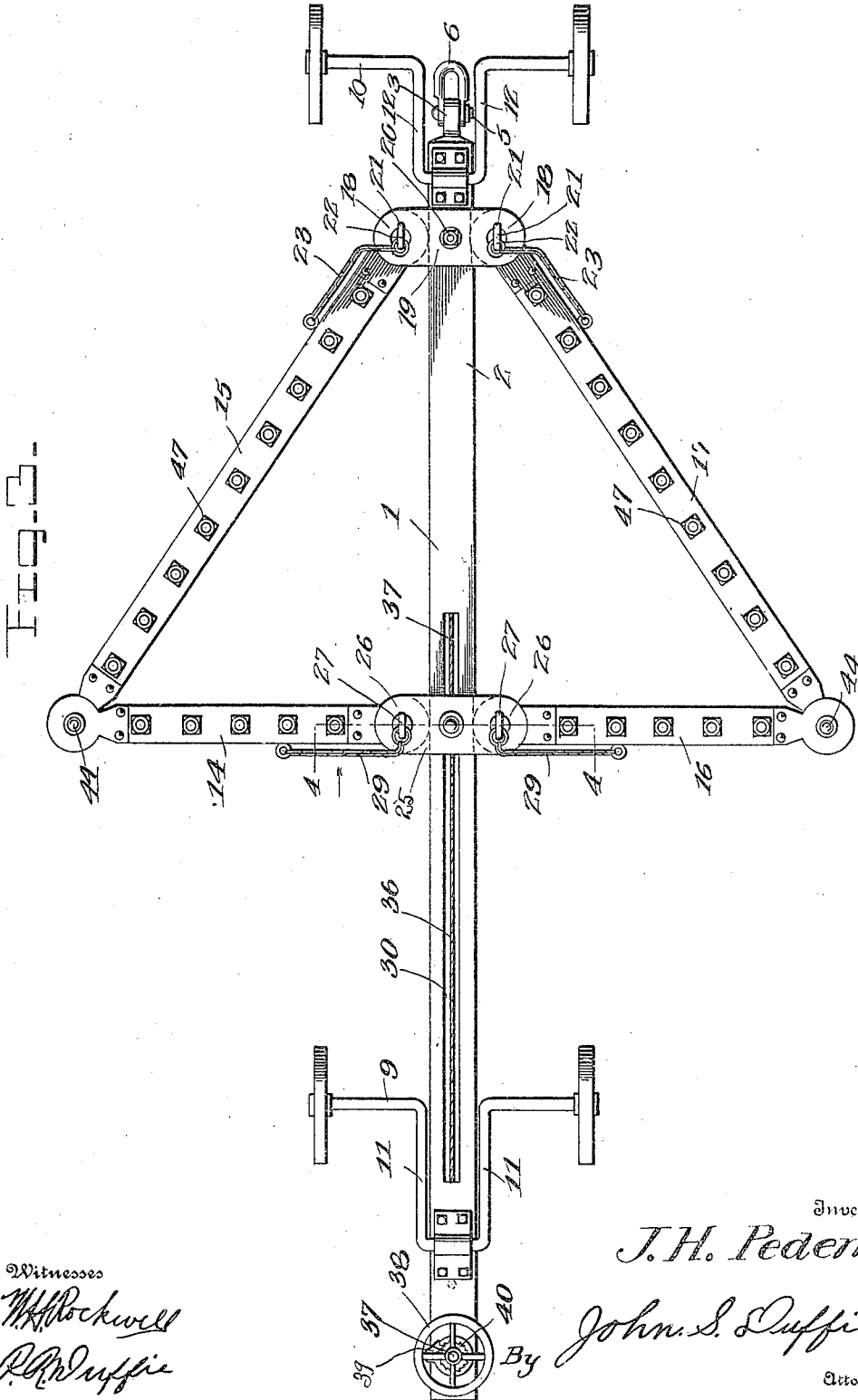


FIG. 1.

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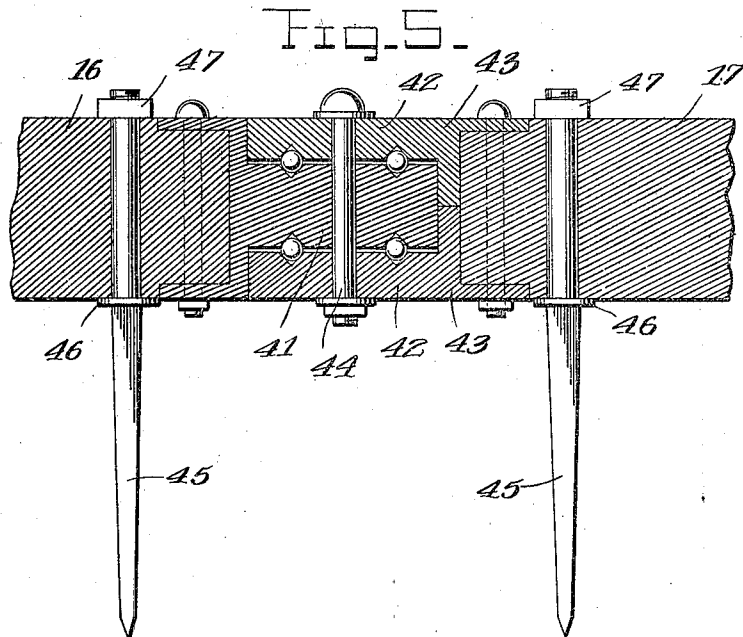
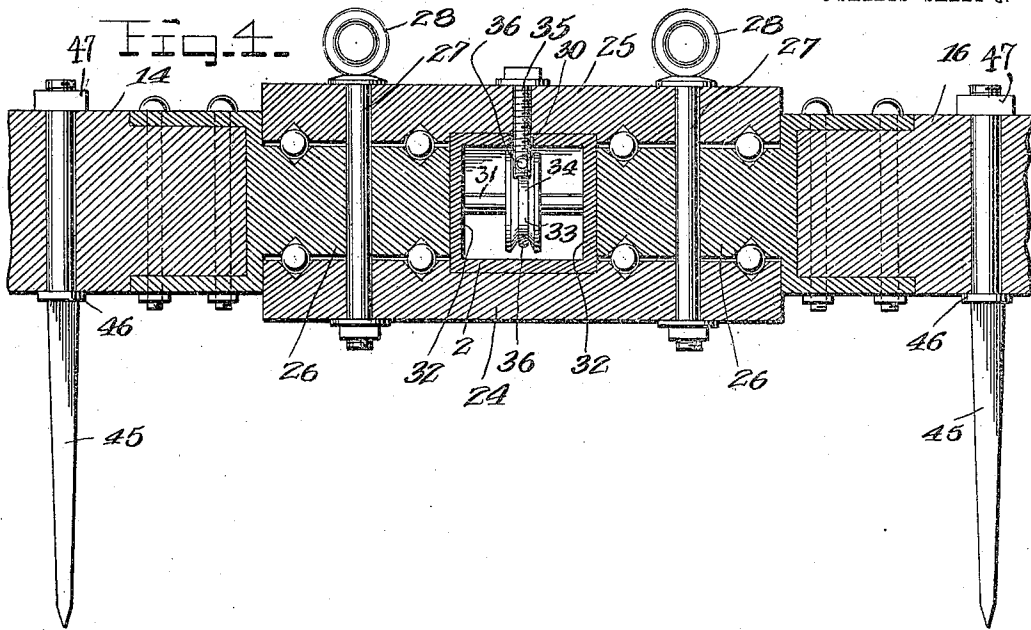
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3 SHEETS—SHEET 3.



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UNITED STATES PATENT OFFICE.

JOHN H. PEDEN, OF HOT SPRINGS, ARKANSAS.

HARROW.

948,769.

Specification of Letters Patent.

Patented Feb. 8, 1910.

Application filed May 27, 1909. Serial No. 498,595.

To all whom it may concern:

Be it known that I, JOHN H. PEDEN, a citizen of the United States, residing at Hot Springs, in the county of Garland and State of Arkansas, have invented certain new and useful Improvements in Harrows, of which the following is a specification.

This invention relates to adjustable and foldable harrows, and the main object of my device is to produce a harrow, the width of which may be varied.

Another object of my invention is to produce a harrow which may be entirely folded so that the teeth-supporting bars will lie parallel with the longitudinal beam thereof.

I attain these objects by virtue of the novel features of construction and arrangement of parts as are fully brought forth in this specification, illustrated in the accompanying drawings forming a part thereof and in which the preferred embodiment of my invention is illustrated, the novel features of my device being pointed out in the claims hereunto appended.

Reference being had to the drawings: Figure 1 is a top plan view of the invention. Fig. 2 is a longitudinal vertical sectional view of my device. Fig. 3 is a top plan view of my invention in open or unfolded position. Fig. 4 is an enlarged segmental vertical transverse section taken on the line 4-4 of Fig. 3. Fig. 5 is a segmental longitudinal vertical section taken on the line 5-5 of Fig. 1.

In detail, my invention is described as follows:

The harrow 1 is provided with a longitudinal beam 2 at the forward end of which there is provided a clevis 3 wherein is found a plurality of perforations 4 through one of which is inserted a bolt 5 which holds in place a lap link 6. At the rear end of said beam 2 is a crosspiece 7 which is pivotally held to the under face of said beam by means of a vertically disposed bolt 8. Said beam is mounted upon the shafts 9 and 10, said shafts being of such construction that they may be, at will, thrown in such position that the longitudinal beam 2 will lie on the ground against the under face thereof as illustrated in Fig. 3. When said shafts are in such position as to enable them to support said beam a certain distance from the ground, the crosspiece 7 is turned so that its axis will be at right-angles to the longitudinal axis of said beam, when the substan-

tially vertical portions 11 of said shaft 9 bind against the forward edge of said cross-piece. At the forward end the substantially vertical portions 12 of said shaft 10 bind against the forward edge of a plate 13, which will be more fully described hereinafter.

The harrow proper is composed of four bars 14, 15, 16, and 17. Said bars 14 and 15 are arranged on the left side of said longitudinal beam. Said bars 16 and 17 are arranged on the right-hand side of said longitudinal beam. The bars 15 and 17 are pivotally held at the forward ends by means of ball-bearing connections 18 to the plates 13 and 19; said plates 13 and 19 are securely held to the longitudinal beam by means of nut and bolt connections 20 passing there-through. Passing through suitable corresponding perforations in each of the forward ends of said bars 15 and 17 are suitable pins 21 which have formed at their upper ends eyelets 22. One end of a chain 23 is secured to each of said eyelets, the other end of the chain being held to the adjacent bar 15 or 17. The rear ends of said bars 14 and 16 are pivotally connected to plates 24 and 25 by means of ball-bearing joints 26. Passing through corresponding registering perforations in each of the rear ends of said last-mentioned bars are the pins 27 adapted to be securely held in position. Each of said pins has formed at its upper end an eyelet 28 to each of which is connected a chain 29, said chains having their other ends secured to their adjacent bars 14 or 16. The construction of the plates 24 and 25 together with their corresponding pins 27 and the ball-bearing arrangements is similar to that of the plates 13 and 19, pins 21, together with their ball-bearing arrangements. Therefore it was thought unnecessary to illustrate more than one of these ball-bearing joints or hinges in section. Said plates 24 and 25 form a sleeve which is slidably held to said longitudinal beam. Said longitudinal beam is hollow and is provided with a longitudinal slot 30 cut in the upper wall thereof. Rotatably mounted upon a transverse shaft 31, whose bearings are the side walls 32 of said longitudinal beam and arranged at the forward end thereof, is a pulley 33 provided with an annular groove 34. Extending downward from said plate 25 and held securely in position thereon is a projection 35

which extends into the longitudinal beam through said slot 30. A rope or cable 36 has one of its ends secured to the lower end of said projection 35, said cable extending
 5 forwardly, traveling around said pulley 33, then extending rearwardly, its other end being secured to a vertical shaft 37 which is held to the rear end of said longitudinal beam by suitable bearings. When said shaft
 10 37 is revolved by means of the hand wheel 38 said cable entwines around the lower end thereof, drawing the plates 24 and 25, together with the rear ends of said bars 14 and 16, forwardly until said harrow 1 is at a
 15 desired width, when a dog 39 is allowed to engage a ratchet 40 keyed to said shaft 37. The rear ends of said bars 14 and 16 may be drawn forward until said bars are in alignment with each other, as illustrated in Fig.
 20 3, when said dog is again caused to engage the ratchet 40. When it is desired to fold the harrow said dog 39 is released from engagement with the ratchet, allowing the cable to unwind from said shaft 37. This
 25 will allow the plates 24 and 25 to slide rearwardly so that the harrow will again assume its normal folded position. Said bar 14 is hinged to the bar 15 and said bar 16 is hinged to the bar 17 by similar ball-bearing joints, as
 30 illustrated in Fig. 5. Each of the rear bars has a forward reduced portion 41 which is received by the rear prongs 42 of the bifurcated portion 43 of said forward bars 15 or 17. A pin 44 is passed through corresponding
 35 registering perforations in each of said reduced portions and the prongs of said bifurcated portions, said pins being securely held in position by suitable means. A plurality of teeth 45 pass through each of said
 40 bars. Said teeth are held against upward movement by means of collars 46 and against downward movement by means of nuts 47. It will be obvious that the bars should be formed solid, in order to add additional
 45 weight to the harrow and as a more substantial supporting medium for said teeth. There is a front tooth 48 pivotally held to the forward end of said longitudinal beam. Said tooth may be adjusted so that it will

assist the other teeth, or so that it will rest 50 against the lower end of the clevis 3.

When the harrow is not working it is placed in folded position, being securely held in such position by means of a chain 49.

Although I have specifically described the 55 construction and arrangement of the several parts of my invention, yet I may exercise the right to make such changes in the form or construction thereof as do not depart from the scope of the appended claims, 60 and which will be obviously necessary in the manufacture thereof.

What I claim as new is:

1. In a harrow a plurality of teeth-supporting bars, a hollow longitudinal beam, 65 two of said bars hinged together on each side of said beam, the forward end of the forward bars non-slidably hinged to the forward end of said beam, the rear ends of the rear beams slidably hinged to said beam 70 near its rear end, means to cause said rear bars to assume different positions along said beam, said rear bars co-acting with said forward bars to cause said harrow to assume various shapes and widths, said means 75 being within said hollow beam, means to hold said bars in their different positions in relation to said longitudinal beam.

2. In a harrow a longitudinal beam, a plurality of teeth-supporting bars arranged 80 in pairs, the forward ends of the forward of said bars non-slidably hinged to the forward end of said longitudinal beam, the rear ends of the rear bars slidably hinged to said beam near the rear end thereof, said 85 longitudinal beam being hollow, means within said beam to cause said bars to assume different positions in relation to said beam, said means comprising a cable, a pulley and a shaft, and means for the rotation 90 of said shaft.

In testimony whereof I affix my signature, in presence of two witnesses.

JOHN H. PEDEN.

Witnesses:

G. W. LOOKADOW,
 ASA DICUS.