

SHOCKER.

APPLICATION FILED FEB. 17, 1912.

Patented Apr. 8, 1913.

3 SHEETS—SHEET 1.

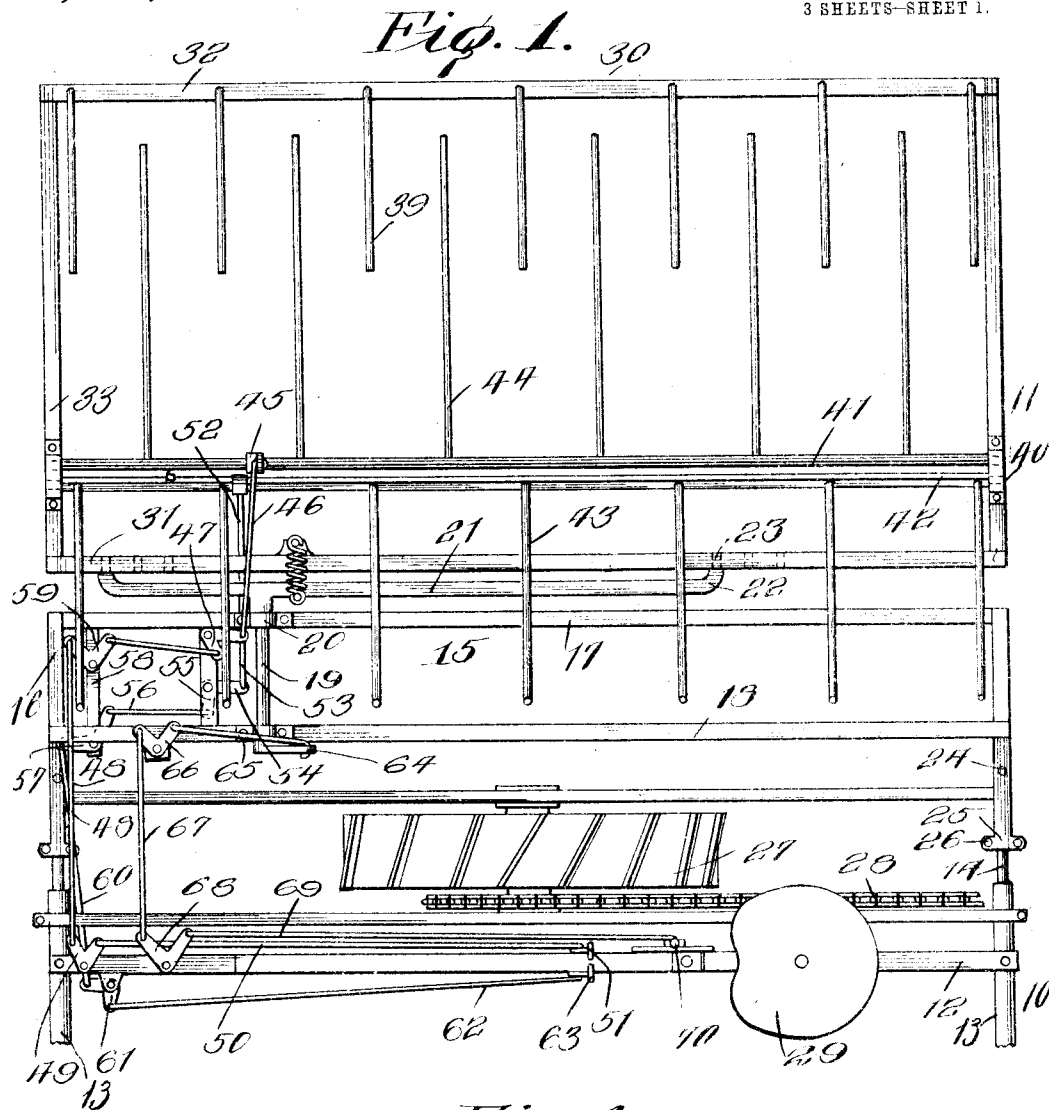
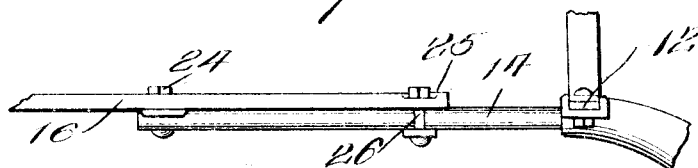


Fig. 4.



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3 SHEETS-SHEET 2.

Fig. 2.

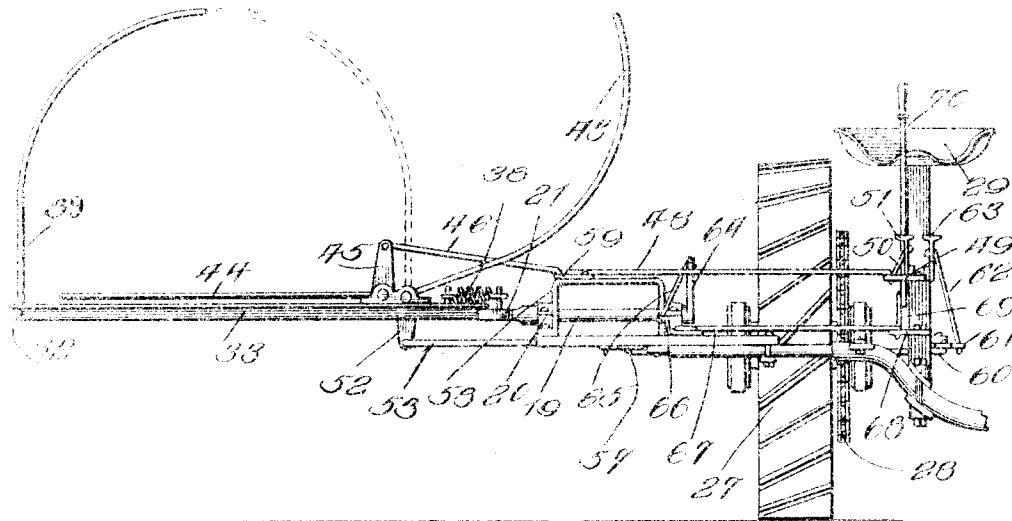
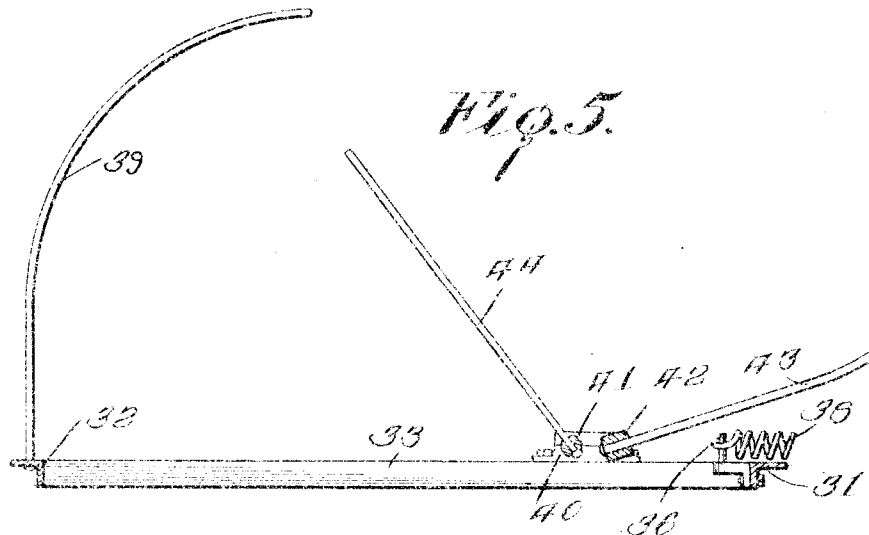


Fig. 5.



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Witnesses

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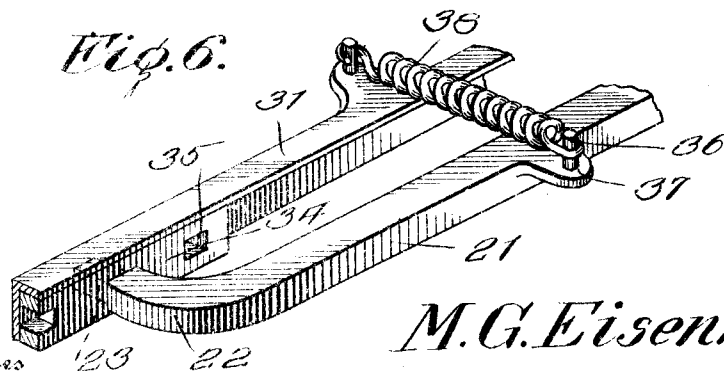
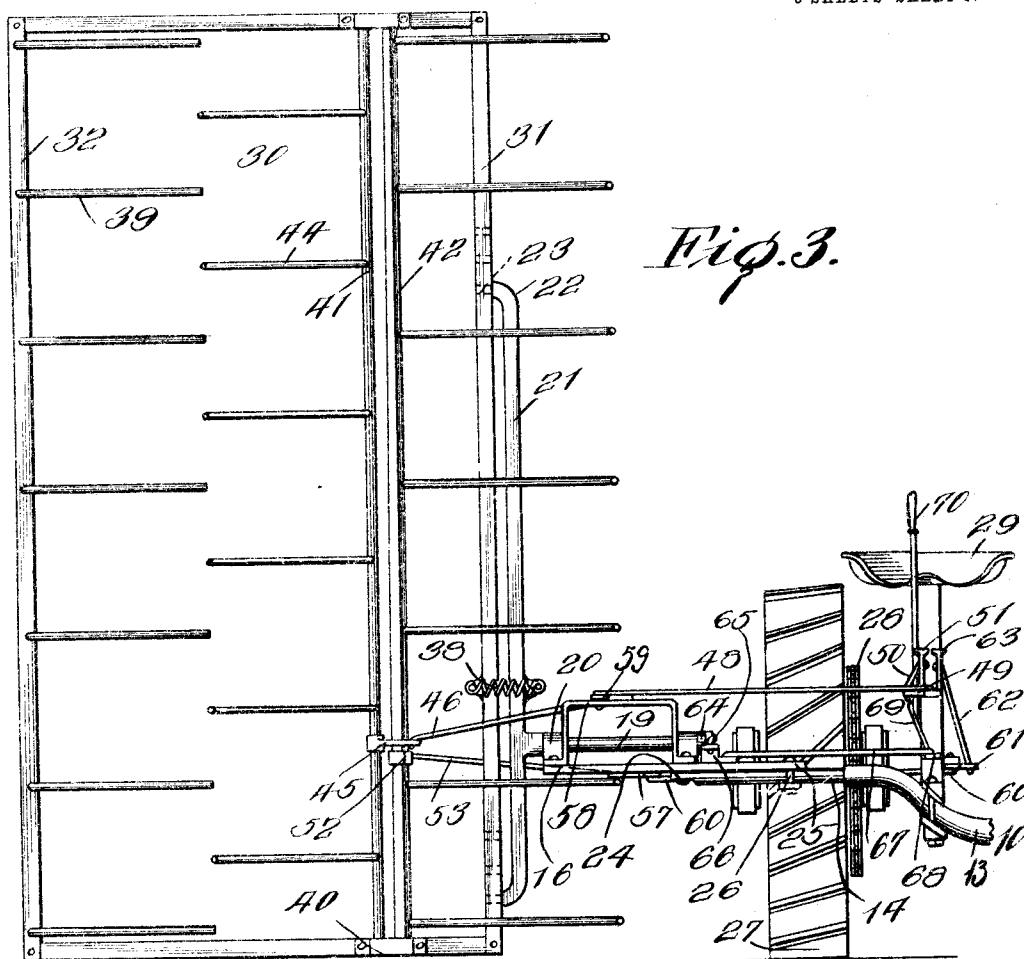
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3 SHEETS-SHEET 3.



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UNITED STATES PATENT OFFICE.

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SHOCKER.

1,058,162.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, MICHAEL G. EISENREICH, a citizen of the United States, residing at Dogden, in the county of McLean, State of North Dakota, have invented certain new and useful Improvements in Shockers; 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 appertains to make and use the same.

This invention relates to new and useful improvements in shockers and more particularly to that class adapted to be used in conjunction with binders.

An object of this invention is the provision of a shocker which can be very quickly applied to a binder of any well known type or design.

A further object of this invention is the provision of a shocker which comprises a rotatable cradle frame to which is attached means for retaining grain bundles in shocked formation and depositing the same in their said shocked formation at intervals along the path of the said binder.

A still further object of this invention is the provision of a shocker such as described which will be comparatively simple and inexpensive to manufacture, reliable and efficient in use and readily operated.

With the above and other objects in view this invention resides in the novel features of construction, formations and combinations and arrangements of parts to be hereinafter more fully described, claimed and illustrated in the accompanying drawings, in which:

Figure 1 is a top plan view of my invention with the cradle disposed in a horizontal position. Fig. 2 is a front elevation thereof. Fig. 3 is a view similar to Fig. 2 with the cradle disposed in a vertical position. Fig. 4 is a detail fragmentary view illustrating the manner of attaching the supporting frame to the binder frame. Fig. 5 is a detailed sectional view on an enlarged scale taken through the cradle and its supporting frame, and Fig. 6 is a detailed perspective view illustrating the connection between the cradle and the supporting bar.

Referring to the accompanying drawings

by similar characters of reference, the numeral 10 designates a portion of a binder frame sufficient to show its connections with my improved shocker 11. The portion of the binder frame shown comprises a plurality of longitudinal bars 12 connected at their terminals by transverse bars 13 reduced as at 14 at their connection with the U-shaped supporting frame 15. This frame consists of a pair of legs 16 connected at their outer terminals by an arch 17 and at points intermediate their ends by a longitudinal brace 18 which extends in parallel relation to the said arch bar 17. A shaft 19 is journaled in suitable bearings 20 attached to the upper sides of the bars 17 and 18 at points adjacent their forward terminals and has formed upon its outer end a longitudinal supporting bar 21 the extremities of which are curved forwardly as at 22 and provided with reduced extensions 23 for a purpose to be later disclosed. Retaining bolts 24 are passed through the legs 16 of the supporting frame 15 and through the reduced ends 14 of the bars 13, while the inner extremities of the said legs 16 are formed with cross heads 25 for engagement with U-shaped attaching clips 26. These bolts and clips 24 and 26 rigidly retain the supporting frame 15 in its normal position upon the binder frame 10 which last mentioned frame is provided with the customary traction wheels 27 driven through the medium of a chain 28. The binder frame 10 is further provided with the usual seat 29 supported upon one of the before mentioned longitudinal bars 12.

The numeral 30 designates a cradle which consists of the opposite side bars 31 and 32 formed preferably from channel iron or the like and which are connected at their opposite extremities by front and rear end bars 33. Reinforcing blocks 34 are disposed within the channel of the bar 31 adjacent the opposite ends thereof and are formed with transverse openings 35 arranged for the reception of the reduced extensions 23 of the bars 21 which are held therein by a retaining spring connected at its opposite ends to pins 36 which extend upwardly from ears 37 formed upon the outer sides of the bars 31 and 32 adjacent the shaft 19. This retaining spring is designated in the drawings by the

numeral 38. The bar 32 has attached to its upper side at intervals throughout its length a plurality of spring fingers 39 which are curved to conform to the curvature of a shock of grain. A pair of bearings 40 are secured to the end bars 33 adjacent their connection with the bar 31 and have journaled therein in spaced relation to each other a shaft 41 and a rotatable bar 42.

10 A plurality of spring fingers 43 similar to the before mentioned fingers 39 are secured to the bar 42 in registration with the said fingers 39 while secured to the shaft 41 is a series of fingers 44 adapted to close the lower side of the cradle when the latter is disposed in its horizontal position. The shaft 41 has secured thereto a laterally extending arm 45 which is connected by means of a link 46 to one arm of a bell crank lever 47, which is connected by a link to bell crank lever 59 which is in turn connected by a similar link 48 to one arm of a bell crank lever 49, the opposite arm of which is connected by an operating rod 50 to a treadle 51 mounted adjacent the seat 29 upon its supporting bar 12. A lateral arm 52 extends rigidly from the bar 42 and is connected by a link 53 to a bell crank lever 54 mounted upon the brace 55 which supports the previously mentioned bell crank lever 47. This bell crank lever 54 is connected by a link 56 to a bell crank lever 57 which is supported by a brace 58 which supports the bell crank lever 59 to which the previously mentioned link 48 is connected. The bell crank lever 57 is connected by a link 60 to a bell crank lever 61 which in turn is connected to an operating rod 62 which is attached to a treadle 63 mounted upon the bar 12 adjacent the treadle 51. The shaft 19 is formed with a lateral arm 64 which is connected by a link 65 to a bell crank lever 66 pivoted upon the forward end of the bar 18. This bell crank lever 66 is operatively connected by a link 67 to a similar bell crank lever 68 which in turn is connected by an operating rod 69 to a hand lever 70 mounted upon the bar 12 which supports the treadles 51 and 63, adjacent the said seat 29.

50 The operation of the device is as follows: The cradle 30 is disposed in its horizontal position and the fingers 44 are moved so as to close the lower side thereof by means of the treadle 51 and the fingers 43 are thrown inwardly toward the binder by means of the treadle 63 which permits the bundles of grain to be discharged from the said binder upon the fingers 44 between the said fingers 39 and 43. After sufficient number of bundles to form a shock have been deposited within the cradle upon the fingers 44 the treadle 63 is again operated to swing the fingers 43 outwardly to engage the upper sides of the said bundles to rigidly retain them against any undesired movement upon

movement of the cradle. The hand lever 70 is then operated to swing the cradle to its vertical position at which time the treadles 51 and 63 are again operated to swing the arms 44 and 43 outwardly thereby releasing the bundles and causing them to fall from the cradle in shocked formation. In order to adjust the said cradle 30 relative to the ground, the reduced extensions 23 of the bar 21 may be moved to engage other of the openings 35 which either increases or diminishes the distance between the lower end of the said cradle and the ground when the cradle is swung to its vertical position. It should be understood in this connection that various minor changes in the details of construction can be resorted to within the scope of the appended claims without departing from or sacrificing any of the advantages of the invention.

85 From the foregoing disclosure taken in connection with the accompanying drawings it will be manifest that a shocker of the nature described is provided which will fulfil all of the necessary requirements of such a device.

Having thus fully described this invention what I claim as new and desire to protect by Letters Patent, is:

1. The combination in a shocker of a supporting frame, a shaft journaled therein, a supporting bar secured to said shaft, a cradle adjustable upon the supporting bar, means for adjustably connecting the supporting bar and cradle, bundle engaging means attached to said cradle, means for operating the bundle engaging means and means for rotating the shaft and tilting the cradle.

2. The combination in a shocker of a supporting frame, a shaft journaled therein, a supporting bar carried by the shaft, a cradle frame, blocks secured thereto, said blocks having apertures formed therein, reduced extensions formed upon the supporting bar for interchangeable engagement with the apertures, a spring connecting the cradle and supporting bar, bundle engaging means carried by the cradle, means for operating the bundle engaging means and means for rotating the shaft.

3. The combination in a shocker with a supporting frame, a shaft rotatable upon said supporting frame, a bar secured to said shaft, a cradle, blocks secured to one side thereof and provided with apertures, reduced extensions formed upon the bar for engagement with the apertures, a spring secured to the cradle and bar for retaining the reduced extensions within the apertures, a bar rotatable within the cradle, spring fingers secured to said bar, a second set of spring fingers secured to the cradle for co-operation with the spring fingers carried by the bar, a shaft rotatable within the cradle, spring fingers carried by the last

mentioned shaft for coöperation with the
previously mentioned spring fingers, means
for rotating the first mentioned shaft and
tilting the cradle and means for rotating the
5 shaft and bar and operating the spring fin-
gers carried thereby.

In testimony whereof, I affix my signa-
ture, in presence of two witnesses.

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Witnesses:

R. E. PERSON,
J. A. ROSS.