3 Sheets--Sheet 1.

J. H. ADAMSON.

Combined Harvesters and Thrashers.

No. 140,396. Patented July 1, 1873.

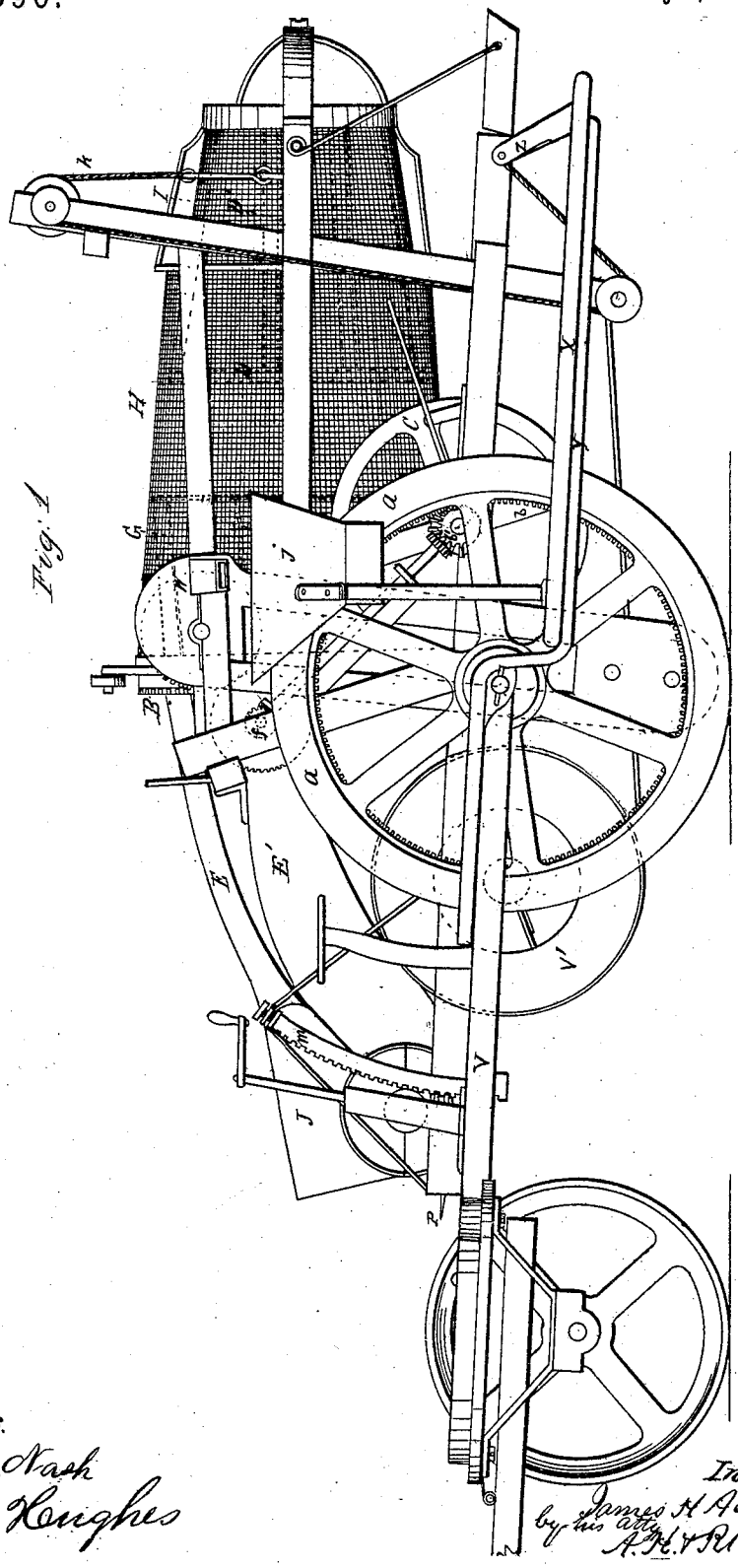

Fig. 1

Witnesses.
Calvin Nash
Alonzo Keighes

Inventor.
James H Adamson
by his atty
A. H. & R. K. Evans.

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Fig: 4.

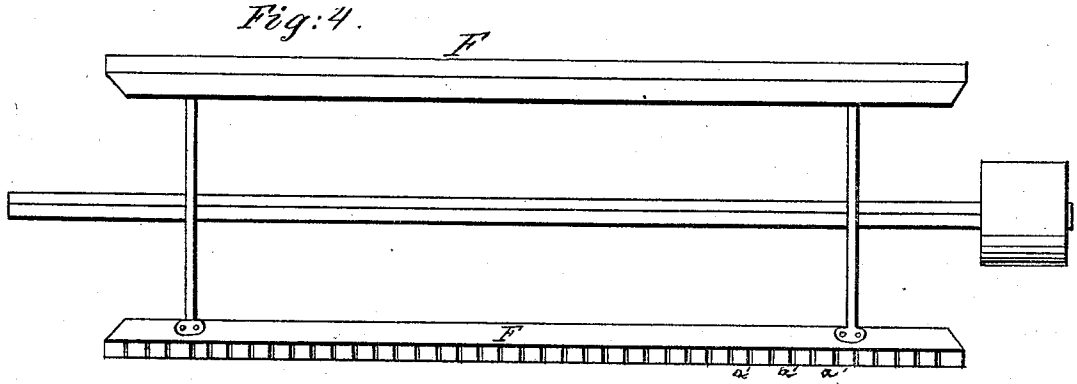
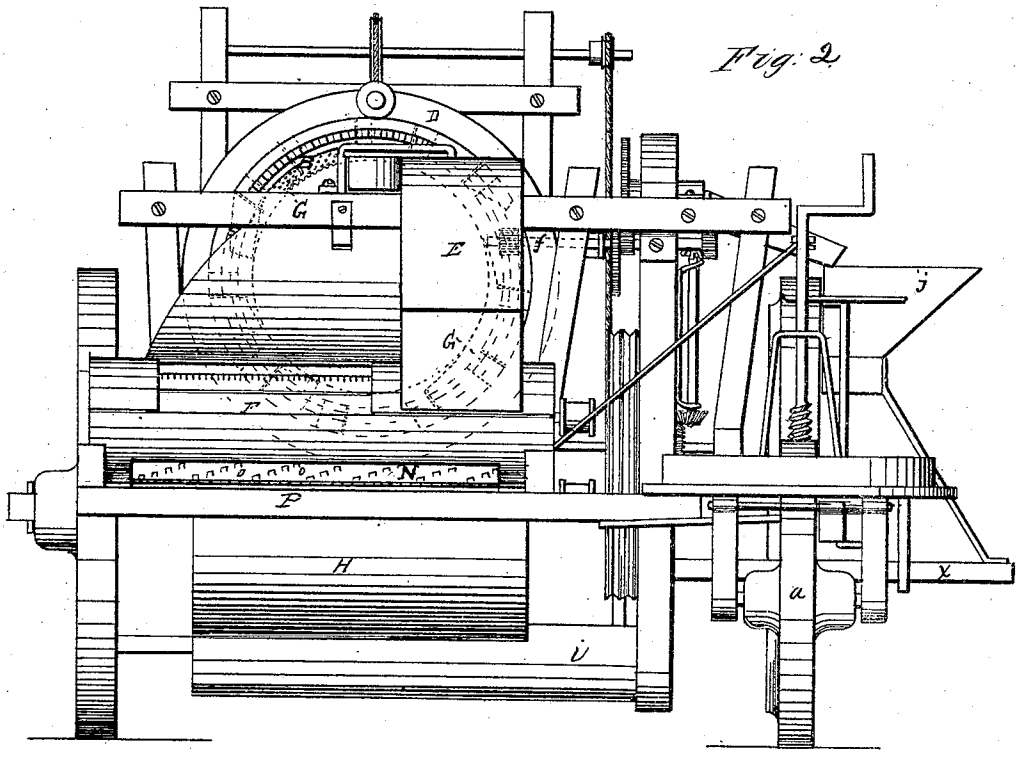


Fig: 2.



Witnesses.
Calvin Nash.
Alonzo Knights

Inventor
James H. Adamson
by his attys.
A. H. & R. K. Evans.

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J. H. ADAMSON.

Combined Harvesters and Thrashers.

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Fig: 6

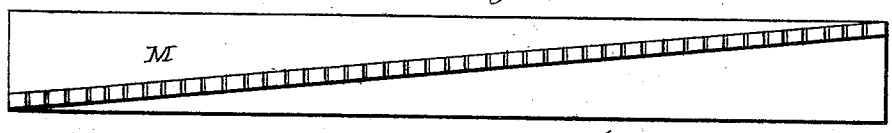


Fig: 7.

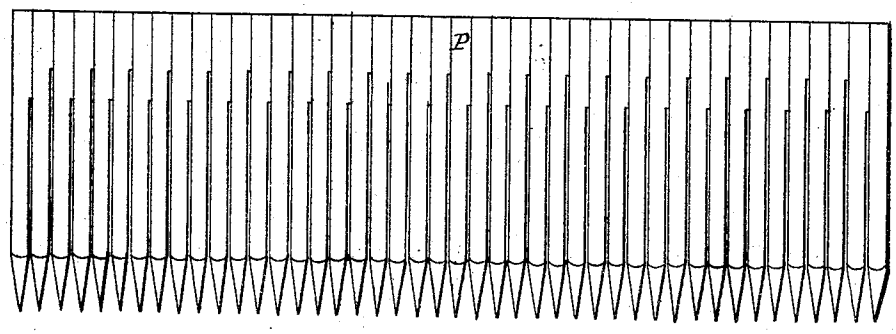
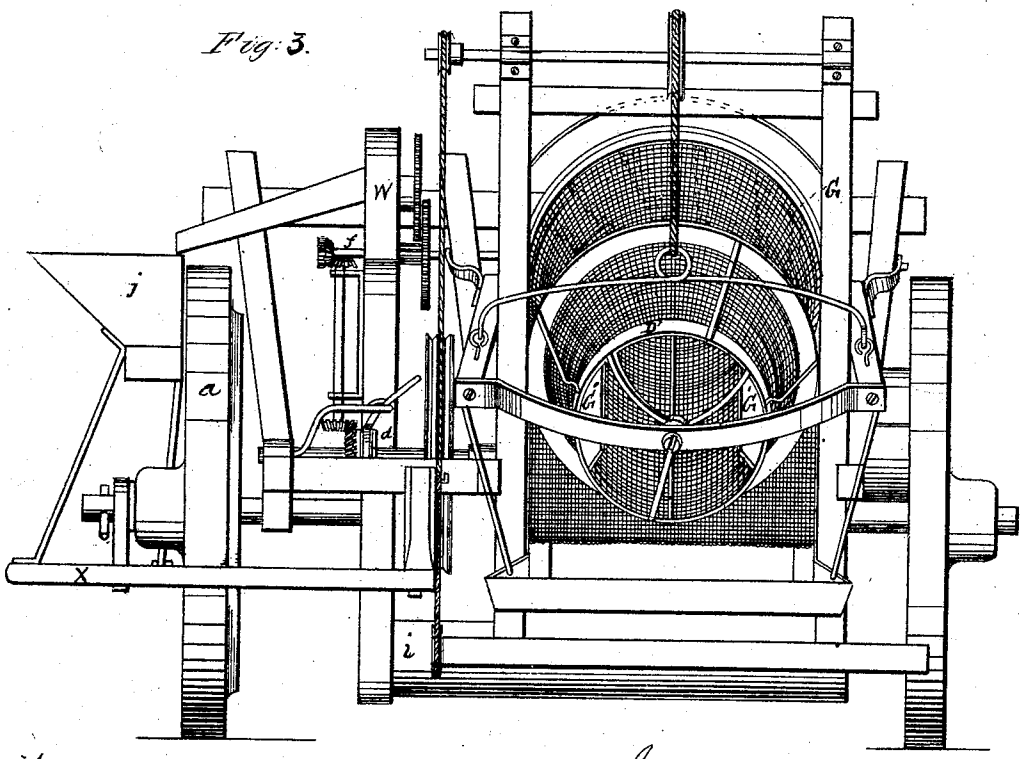


Fig: 3.



Witnesses.
Calvin Nash.
Alonzo Hughes

Inventor.
James H. Adamson.
by his attys
A. H. & R. K. Evans

UNITED STATES PATENT OFFICE.

JAMES HAZEL ADAMSON, OF AUBURN, AUSTRALIA, ASSIGNOR TO WILLIAM TAYLOR AND M. STUART TAYLOR, OF ALAMEDA, CALIFORNIA.

IMPROVEMENT IN COMBINED HARVESTERS AND THRASHERS.

Specification forming part of Letters Patent No. **140,396**, dated July 1, 1873; application filed May 14, 1872.

To all whom it may concern:

Be it known that I, JAMES HAZEL ADAMSON, of Auburn, county of Stanley, Australia, have invented Improvements on Adamson's Reaper and Dresser; and I do hereby declare the following description and accompanying drawings are sufficient to enable any person skilled in the art or science to which it most nearly appertains to make and use my said invention or improvements without further invention or experiment.

In the drawings accompanying this specification, Figure 1 is a side elevation of my improved reaper. Fig. 2 is a front view of same. Fig. 3 is a back elevation; and Figs. 4, 5, 6, and 7, show details of construction.

My invention consists, first, of the cone D, constructed of a double casing of wire-gauze, as shown in Fig. 3, the object of which is to clean the grain more effectually, the gauze of the inner casing D′ being of coarser mesh than the outer one, in order to allow the grain to escape more readily while the straw is carried out. A series of vanes, G G, attached to the interior of the cone, incline at an angle of about forty-five degrees from a line radiating from the center of the cone, as shown in Fig. 3, and carry up the unthrashed heads and deposit them in the spout E, (see Fig. 1,) through which they are carried back to the beaters F to be again subjected to the beating operation. On the bottom of the concave N, (see Fig. 2,) I rivet a series of lugs, *o o*, but these lugs may be riveted to a separate plate, M, (see Fig. 6,) which can be removed when not required, and when used can be adjusted forward until the lugs are caused to pass through the slots in the beaters F, thus securing a more thorough thrashing of the grain when tough or damp. I prefer to arrange the lugs spirally or diagonally to the beaters, (see Fig. 2,) and a lug opposite the center of each tooth in the comb P. Corresponding slots are cut in the beaters F. (See Fig. 4.) By the spiral arrangement of the lugs, they will engage the beaters one at a time and equalize the resistance, whereby a slack-belt can be employed. One or more rows of these lugs may be used.

My invention further consists in extending every alternate slot in the comb P about an inch and a half further back than the adjoining or intermediate teeth, as shown in Fig. 7, by which means I equalize the stroke of the beaters, and secure a better thrashing of the heads by keeping them separate a short distance from each other, the heads of grain thus forming more than one row when struck by the beaters.

The working of my improved reaper is as follows: The traveling-wheel *a* carries a cog-wheel, *b*, (inside gear,) which operates upon a pinion, *b′*, on the main shaft. This shaft carries the belt-wheel C, which communicates motion by means of a belt to the beaters F, which by their rapid revolution beat off and at the same time thrash the heads of grain. The main shaft also carries a bevel-pinion, *d*, which gears into a similar pinion on another shaft, and communicates the required motion to the elevators W. The cross-shaft *f* carries a bevel-pinion which gears into the crown-wheel B, (see Fig. 2,) attached to the end of the cone D, which thereby rotates slowly and assists the wind in carrying out the straw. The grain drops upon the screen H, by which it is carried into the trough *i*, from which it is taken by the elevator W, and discharged into the hopper *j*, to which is suspended a bag ready for its reception.

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

1. The cone D, when constructed of two or more concentric perforated or gauze tubes, in combination with the conveying-tube E, beaters F, and comb P, constructed and operated substantially as and for the purpose set forth.

2. The concave N with its series of lugs *o o*, in combination with the beaters F F with their corresponding slots, and the comb P, all constructed and arranged as described.

3. The comb P, having a slot between each alternate tooth extended, for the purpose of allowing the beaters to operate on the heads successively, as specified.

In witness that the above-described invention is claimed by JAMES HAZEL ADAMSON, he has hereunto set his hand and seal.

JAMES HAZEL ADAMSON. [L. S.]

Witnesses:

JAS. E. DEMPSTER,
Notary Public, Port Adelaide, South Australia.

W. B. WEBB,
His Clerk.