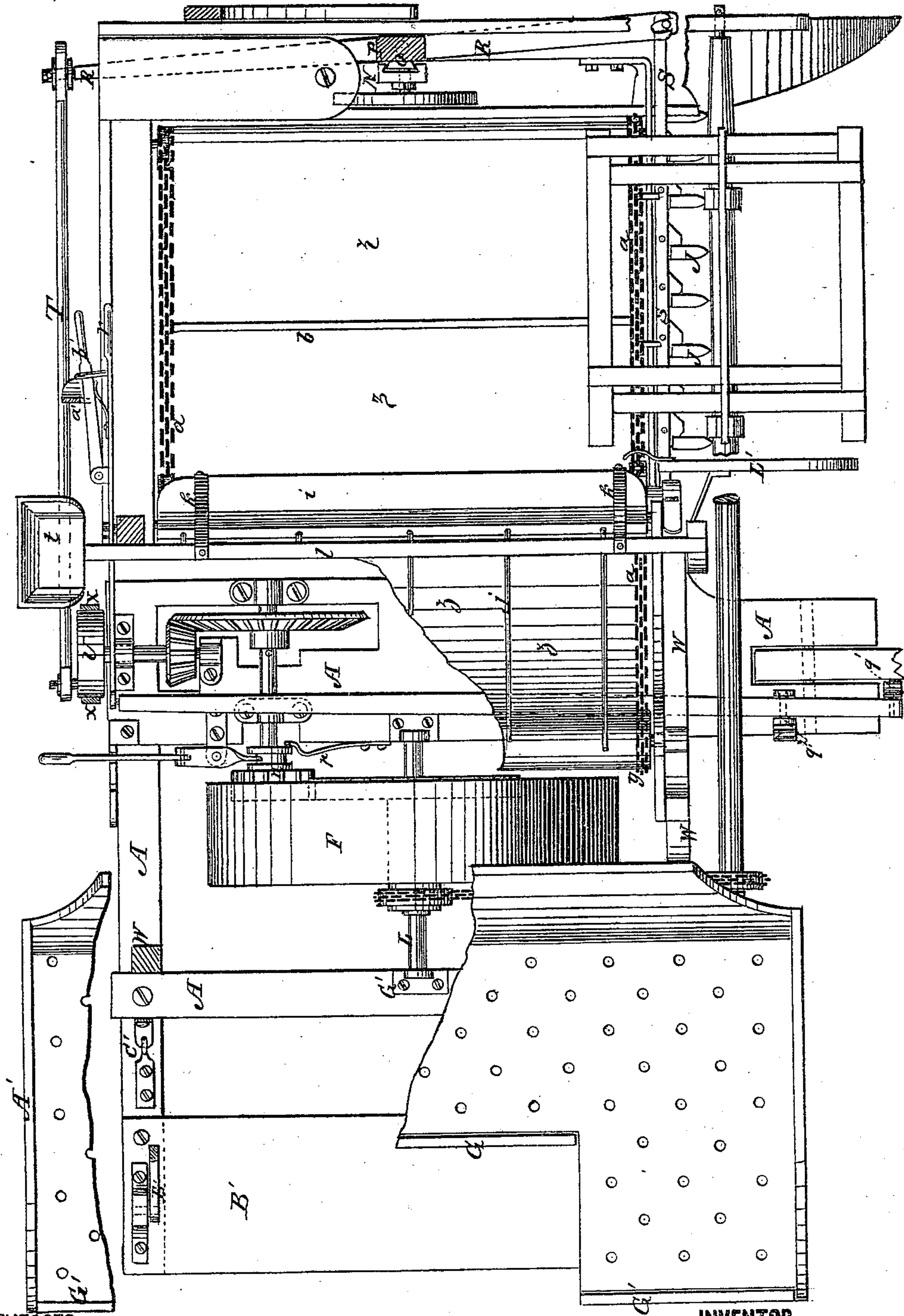


M. L. & J. M. KELLAR.
Harvesters.

No. 148,709.

Patented March 17, 1874.

Fig. 1.



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INVENTOR.

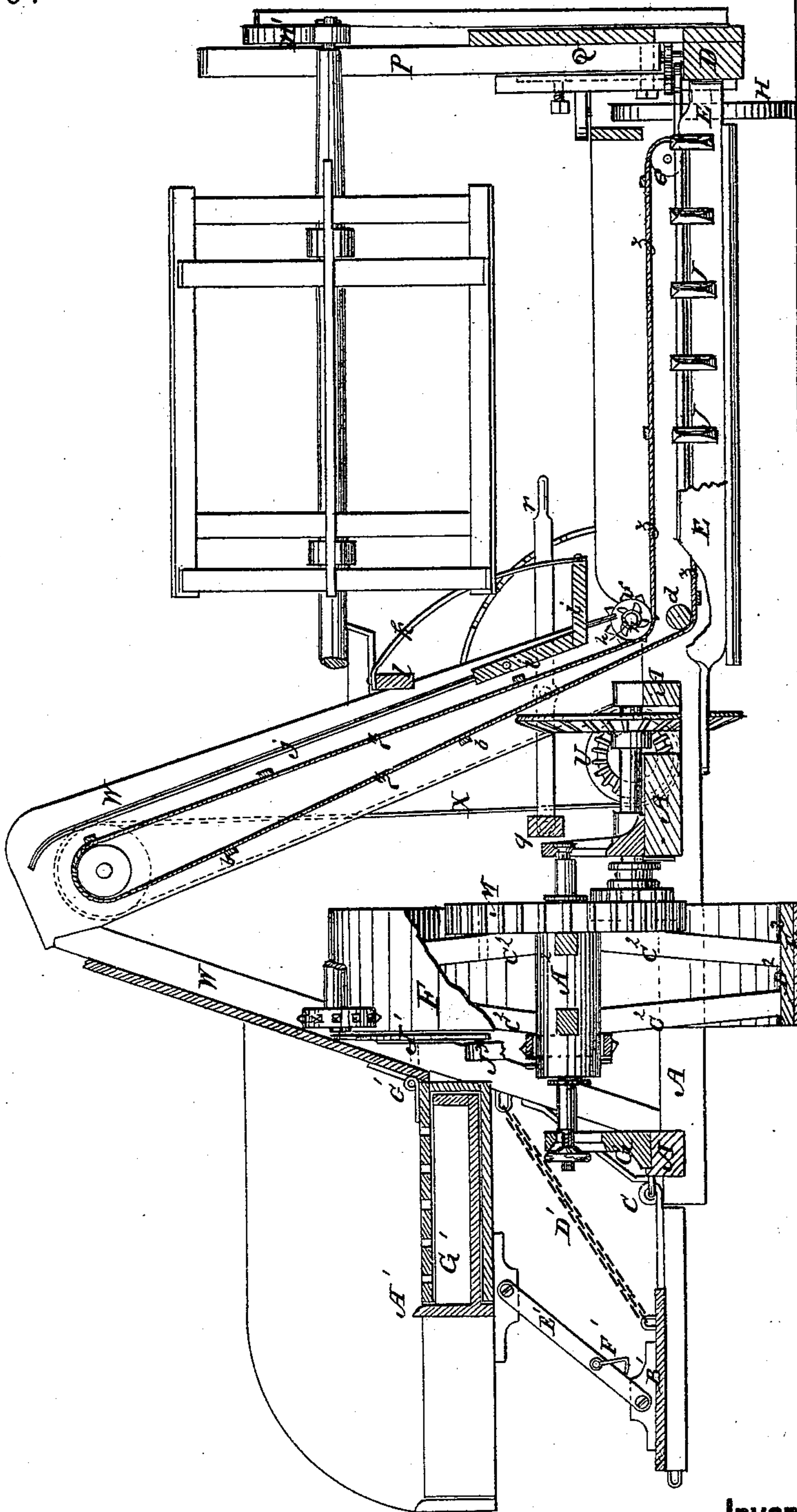
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Fig. 3.

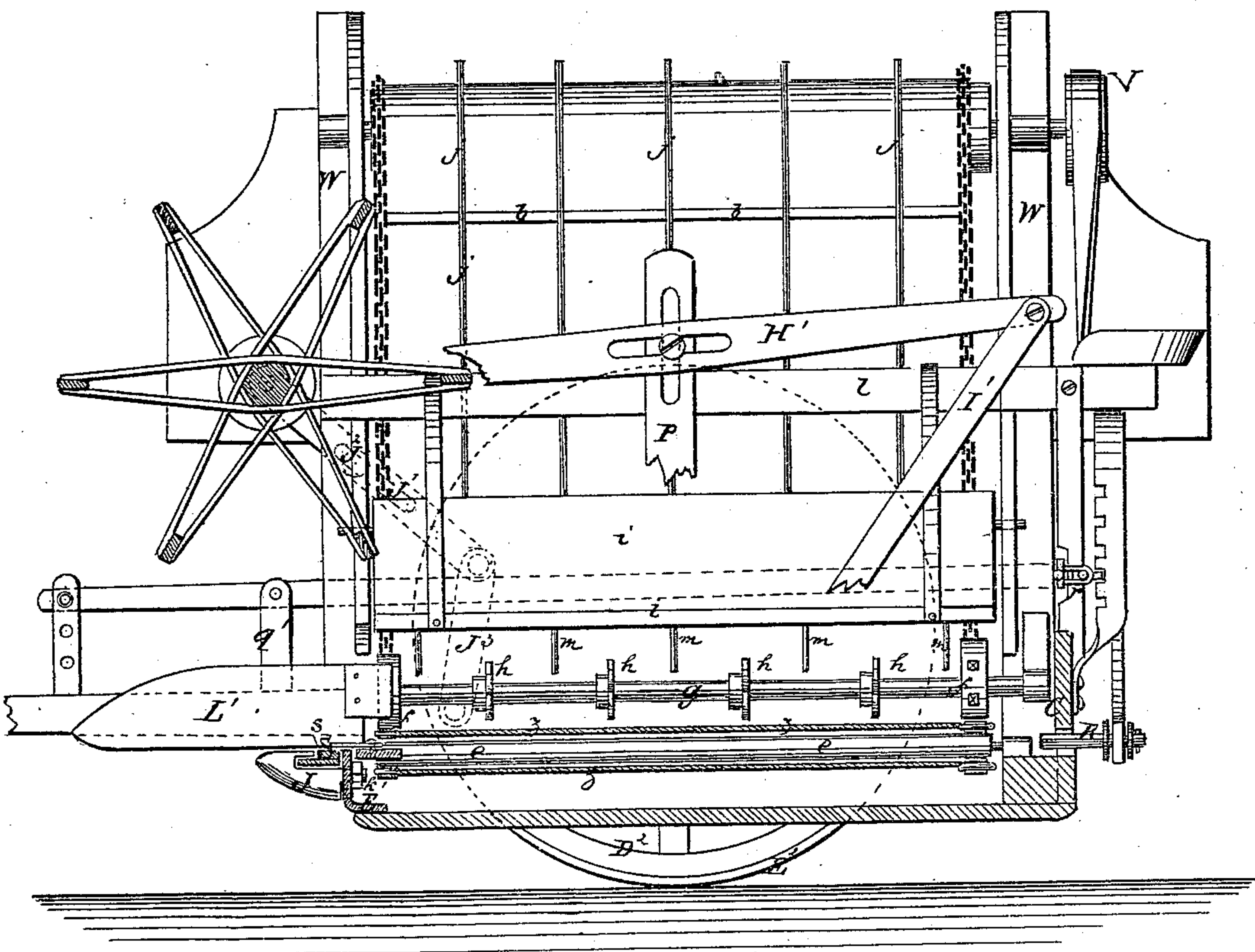
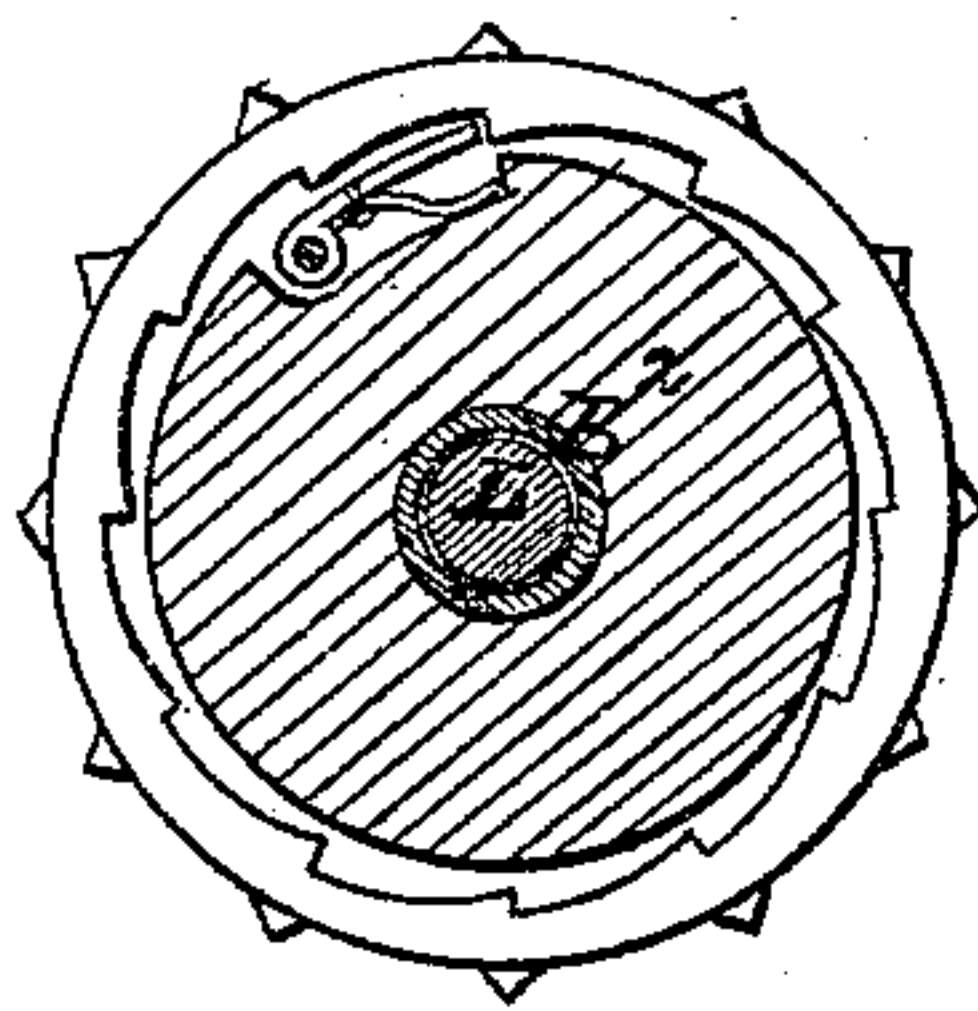


Fig. 4.



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UNITED STATES PATENT OFFICE.

MARTIN L. KELLAR AND JAMES M. KELLAR, OF LUZERNE, IOWA.

IMPROVEMENT IN HARVESTERS.

Specification forming part of Letters Patent No. 148,709, dated March 17, 1874; application filed November 8, 1873.

To all whom it may concern:

Be it known that we, MARTIN LUTHER KELLAR and JAMES MISKEL KELLAR, of Luzerne, in the county of Benton and State of Iowa, have invented a new and Improved Harvester, of which the following is a specification:

The invention will first be fully described, and then pointed out in the claims.

Figure 1 is a plan view of our improved harvester, with some parts in section. Fig. 2 is partly a front elevation and partly a transverse section. Fig. 3 is a section of the grain-carrier, finger-bar, cutter, and reel; and Fig. 4 is a detail sectional view.

Similar letters of reference indicate corresponding parts.

The frame is mounted on two wheels, F and H, and is constructed as follows: The first or main frame is constructed, in rectangular form, of four pieces, A, of timber, and is suspended on the main or driving wheel F, and carries the gearing for operating the cutter-bar and the grain-carrier. The second frame is constructed of two pieces of timber, C D, and an iron finger-bar, E, connected together, and attached to the under side of the first frame by means of bolts. The sickle-bar is constructed of a broad piece of iron, bent in the form of an angle-bar, and at the left end it is bent back, and firmly bolted to the timber of the frame. (See Fig. 1.) At the right end it is twisted flat, and firmly bolted to the under side of the first frame. The guard-fingers J are attached to the finger-bar by means of screws and nuts on the back end of the guard-fingers. The drive-wheel is attached to the main frame by means of uprights G, with slots, in which the ends of axle L are arranged to be adjusted to vary the height of the frame. The driving-wheel is constructed of a long wooden hub, A², a straight cast-iron thimble, B², two rows of spokes, C², a broad wooden felly, D², and a broad iron tire, E². To the right end of the hub is attached a driving cog-wheel, M, which is connected by a ratchet, so as to slip and not turn the machine when it goes backward. The grain-wheel H is of solid cast-iron, and is attached to the beam D by means of an axle, fastened to a broad flanged piece, N, of iron, made to slide over another piece, O, of iron, from which a bolt projects to fasten piece N,

and it passes through a slot in piece N to admit of raising and lowering the wheel. Both plates are attached to the standard P for reel-bearer. The standard P for the reel-bearer is attached to the frame by means of an iron plate, Q, firmly fastened thereto and to the left side of the standard, to support it above beam D, to give room for the sickle-lever R at the lower end of the standard. The sickle-lever is constructed of solid iron, and works on a pivot directly under the above-described standard. To the front end of the lever is attached the sickle S, by means of a pivot working in an open-ended slot in the end of the lever. The back end of the lever is attached to a pitman, T. The pitman is attached to a crank band-wheel, U, which is driven by the gearing on the main frame, and connects with and operates a drum, V, at the top of frame W by a belt, X, on which roller are spur-wheels Y, which operate an endless apron or grain-carrier, Z, by means of chains *a* attached to its edges, and held in position by means of slats *b* and fastenings thereon. This apron is passed under a small roller, *d*, at the end of the sickle, thence around another small roller, *e*, at the end of the sickle, and under two spur-wheels, *f*, which are attached to a shaft, *g*, at the angle of the horizontal and upright part of the carrier, on which shaft are four smaller spur-wheels, *h*, to pass the grain under it, the shaft being operated by the chains on the edges of the apron. Above the last-described shaft and spur-wheels is fastened (on pivots) a foot-board, *i*, with spring-rods *j* attached thereto, and extending along up the apron, for holding the grain against it when elevating the grain. The pressure of the springs is regulated by means of two straps, *k*, of iron, attached to the foot-board and connecting with the cross-piece *l* that supports the driver's seat. Under the foot-board are spikes *m*, extending down to the shaft, to prevent the grain from winding on the shaft. The driving-pinion *n* is held in gear by means of a spring, *p*, fastened to the main frame and pressing against the pinion. The pinion is thrown out of gear by means of a lever working in a groove in the pinion. The front of the machine is raised and lowered by means of a long lever, *q*, connected to the tongue at its front end by a link,

and pivoted on an upright, q' , attached to the front of the main frame, the back end of the lever being attached to a small lever, r , which passes under the driver's seat t , to be operated at the left hand of the seat. Said lever ranges along a notched quadrant, a' , and is fastened to it at any point by a spring-catch, u' . On the right hand of the drive-wheel, and attached to the uprights or supports W of the drum-roller and to the main frame, is a binder's table, A' , and foot-board B' , being jointed thereto by hinges C' , so arranged as to admit of raising the chest and foot-board to a perpendicular position. The table and foot-board are held in place or supported by means of chains D' , attached to the foot-board and the supporters of the drum-roller. The table and foot-board are also connected by rods E' . There is a hook, F' , on the connection between the table and foot-board, and a staple in the edge of the foot-board, to hold the table and foot-board in place when raised to a perpendicular position. The left hand or back end of the table has a hinged board or leaf. The table has three drawers, G' , which are held shut by means of hooks and staples; and the lid or top board of the table is perforated, to allow the shelled grain to pass through into the drawers, to be saved. The reel-bearer H' is adjustable up and down on its slotted standard P . It is also adjustable up and down on the brace to which the rear end is connected, to vary the height of the reel; and it is also adjustable forward and backward both on the standard P and the brace I . The right-hand end is adjustable up and down by the vibrating and slotted support J^1 , which works on a binding-screw, J^2 , which holds it fast, and is

pivoted to the foot-piece J^3 . L' is a grain-gatherer at the inner end of the sickle, to protect the spur-wheel for the chain of the carrier from objects that might come against it.

By connecting the sickle with the crank-wheel by the outside horizontally-vibrating lever and the pitman at the rear, in the manner described, the power is applied almost directly in the line of the sickle. Moreover, the lever is removed from the angle of the endless carrier, where it is more convenient for oiling, &c., and does not interfere with the carrier.

By employment of the chains on the edges of the apron and the spur-wheels on the drums, all liability of the slipping of the apron and failure to work properly is avoided. The chains also serve to prevent the escape of loose heads and shelled grains.

Having thus described our invention, we claim as new and desire to secure by Letters Patent—

1. The combination of spikes m projecting from the driver's foot-board with the shaft that crosses the carrier at the angle of elevation, as set forth.

2. The shaft g , with spur-wheels for the chains, and also for forcing the grain up the elevator, arranged in the angle of the apron, as described.

3. The combination of drawers with a binder's table, having a perforated top, to save the loose grain, as specified.

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