

(Model.)

L. A. RICHARDS.

Feeder for Thrashing Machines.

No. 239,844.

Patented April 5, 1881.

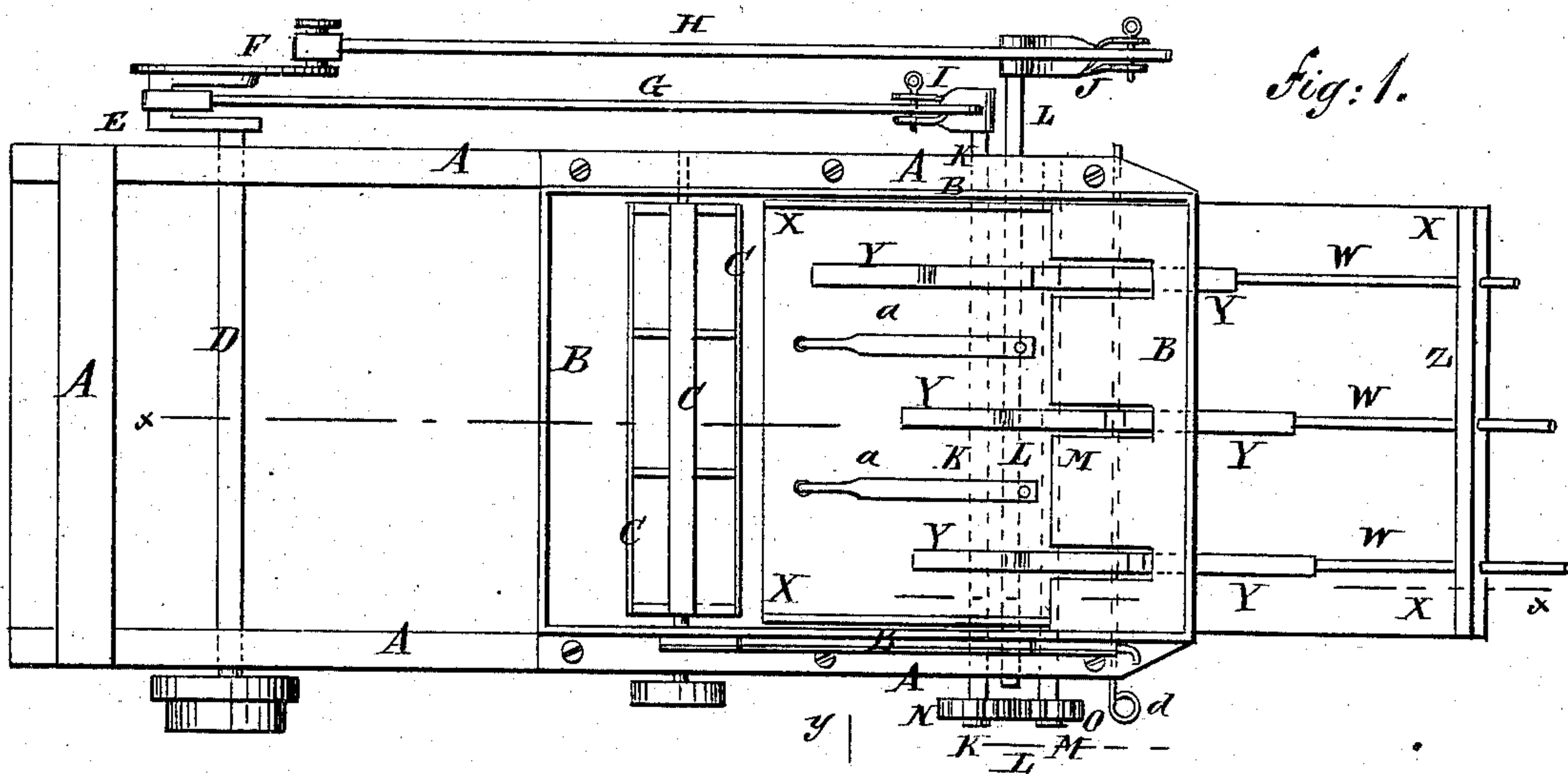


Fig: 1.

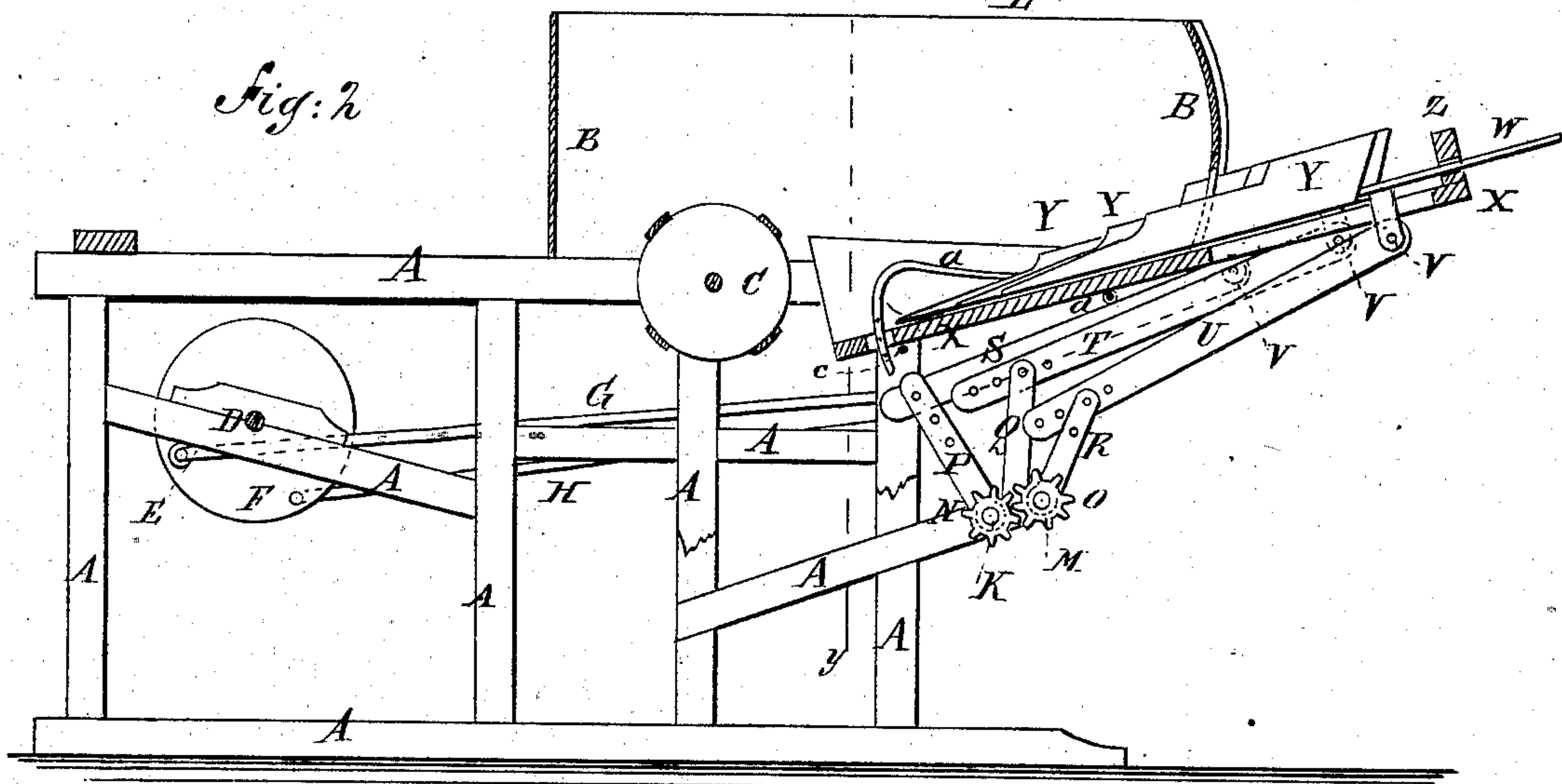
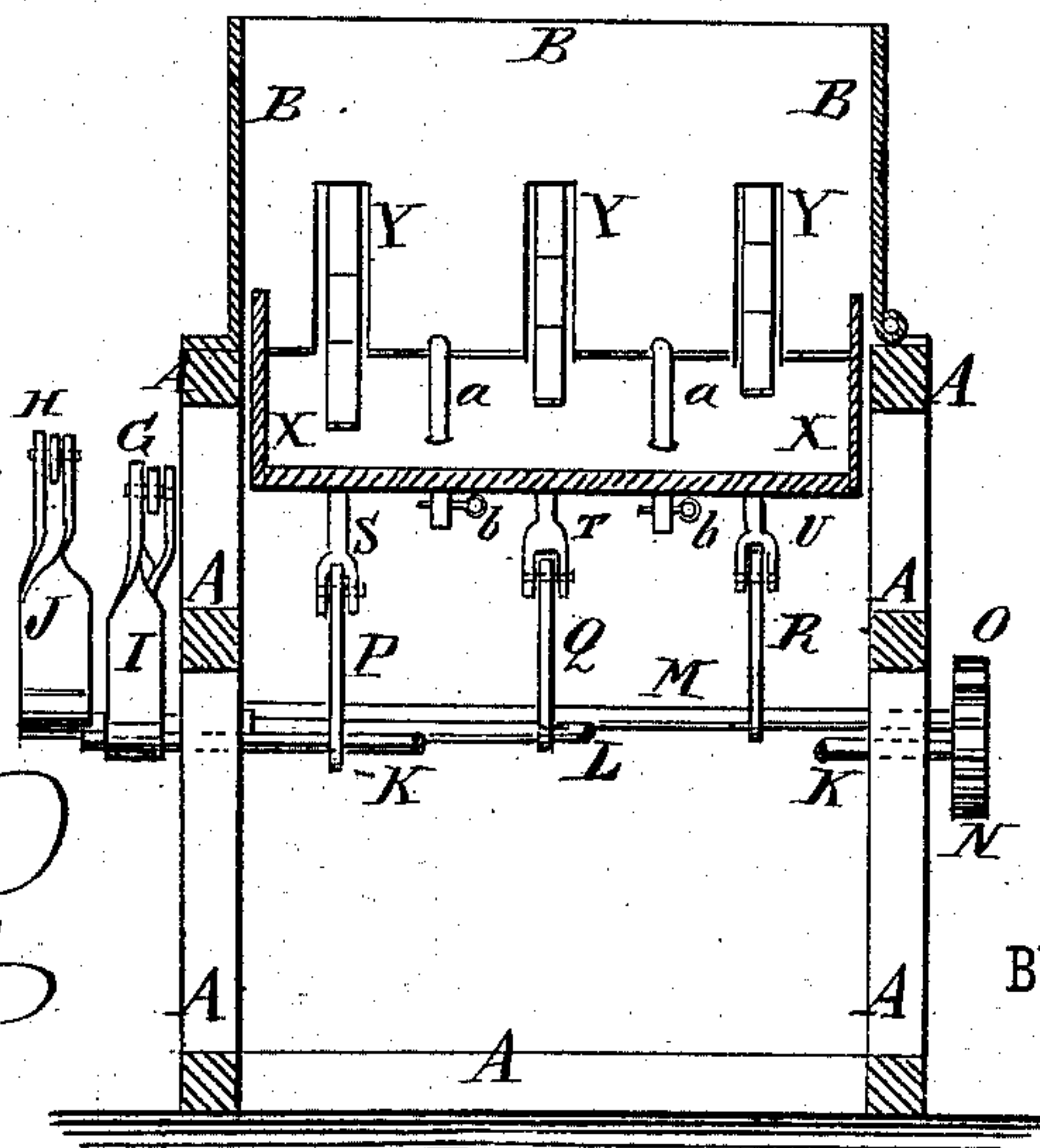


Fig: 2

Fig: 3.



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# UNITED STATES PATENT OFFICE.

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## FEEDER FOR THRASHING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 239,844, dated April 5, 1881.

Application filed September 17, 1880. (Model.)

*To all whom it may concern:*

Be it known that I, LOVELL ALEXANDER RICHARDS, of Grayson, in the county of Stanislaus and State of California, have invented a new and useful Improvement in Feeders for Thrashing-Machines, of which the following is a specification.

Figure 1 is a plan view of the improvement. Fig. 2 is a sectional side elevation taken through the line *x x*, Fig. 1. Fig. 3 is a sectional end elevation, taken through the line *y y*, Fig. 2.

Similar letters of reference indicate corresponding parts.

The object of this invention is to furnish feeders for thrashing-machines so constructed as to feed the stalks of grain to the thrashing-cylinder regularly and continuously, to prevent the machine from being choked or jarred by irregular feeding.

The invention consists in the combination, in a thrashing-machine feeder, with the push-bars and the slotted feed-table, of the rods having lugs projecting through slots in the feed-table, the guide-bar to keep the rods in line, the adjustable connecting-bars, the arms, and the three rock-shafts operated from the driving mechanism of the machine, whereby the grain is fed regularly to the thrashing-cylinder; also, in the combination, with the driving-shaft and the three rock-shafts that operate the push-bars, of the two cranks, the two adjustably connecting bars, the two arms, and the two gear-wheels, whereby the three rock-shafts are operated by two cranks, as set forth; also, in the combination, with the feed-table and the push-bars, of the adjustable stop-springs, whereby the descent of the grain is prevented, except as it is fed down by the push-bars; and also in the combination, with the feed-table and the frame of the machine, of the rods for securing the said table in place, whereby, by the withdrawal of one of the rods, the table can be turned back to give access to the thrashing-cylinder, as will be hereinafter fully described.

A represents the frame of the machine, B the casing of the thrasher, and C the thrashing-cylinder, all of which parts are constructed in the ordinary manner.

D is a shaft, which revolves in bearings attached to the frame A, and which is designed to be driven from the driving mechanism of the machine by a belt and pulleys or other suitable means.

Upon the end of the shaft D is formed, or to it is attached, a double crank, or a crank, E, and crank-wheel F, to which are pivoted the ends of two rods, G H. I prefer to use the crank-wheel F, as it allows the crank-pin to be adjusted to give a greater or less throw to the rod H. The other ends of the rods G H are pivoted to the arms I J, rigidly attached to the ends of the shafts K L. Several holes are formed in the ends of the rods G H and in the ends of the arms I J to receive the pivoting-pins, so that the throw of the shafts K L can be adjusted as required. The shafts K L, and a third shaft, M, placed parallel with the said shafts K L, revolve in bearings attached to the frame A, or to bars attached to the said frame.

To the end of the shaft K is attached a gear-wheel, N, the teeth of which mesh into the teeth of a gear-wheel, O, attached to the end of the third shaft, M, so that the shaft M will be rocked by the rocking of the shaft K, but in the opposite direction.

To the shafts K L M are rigidly attached arms P Q R, to which are pivoted the inner ends of the connecting-bars S T U. The arms P Q R and the ends of the bars S T U have a number of holes formed through them to receive the pivoting-pins, so that the throw of the bars S T U can be regulated as desired. The outer ends of the bars S T U are pivoted to lugs V, attached to the rods W, and which project through slots in the feed-table X. The rods W are attached at their lower ends to the feed-bars Y, and their upper ends pass through guide-holes in a cross-bar, Z, attached to the upper end of the feed-table, to cause the feed-bars Y to move back and forth in straight lines. The feed-bars Y pass through slots in the end of the box or casing B, and extend down along the feed-table X to, or nearly to, the thrashing-cylinder C. The bars Y have shoulders formed upon their upper sides, and may be adjusted to work at any desired nearness to the thrashing-cylinder C by adjusting



the pivoting-point between the bars S T U and the arms P Q R, so as to give the said feed-bars Y a longer or shorter throw.

To the upper side of the feed-table X are attached the upper ends of springs *a*, which pass down along the feed-table X, and incline upward to serve as stops to hold back the grain and prevent it from sliding down in a bunch, so that it will be fed down regularly by the feed-bars Y. The lower parts of the stop-springs *a* are curved downward, pass through holes in the lower part of the feed-table X, and have holes in their lower ends to receive the pins *b*, that prevent them from rising out of the holes in the table X. Several holes are formed in the lower ends of the stop-springs *a*, to receive the pins *b*, so that the said stop-springs *a* can be adjusted to be more or less of a check upon the grain. The feed-table X is secured in place by the rods *c d*, which pass through the frame A, or through keepers attached to the said table X, so that by detaching the bar S from its lug V, and taking out the rod *c*, the table X can be tilted outward to give convenient access to the thrashing-cylinder C.

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

30 1. In a thrashing-machine feeder, the combination, with the push-bars Y and the slotted feed-table X, of the rods W, having lugs V, the guide-bar Z, the adjustable connecting-

bars S T U, the arms P Q R, and the three rock-shafts K L M, operated from the driving mechanism of the machine, substantially as herein shown and described, whereby the grain is fed regularly to the thrashing-cylinder, as set forth. 35

2. In a thrashing-machine feeder, the combination, with the driving-shaft D and the three rock-shafts K L M, that operate the push-bars Y, of the two cranks E F, the two adjustable connecting-bars, the two arms I J, and the two gear-wheels N O, substantially as herein shown and described, whereby the three rock-shafts are operated by two cranks, as set forth. 40 45

3. In a thrashing-machine feeder, the combination, with the feed-table X and the push-bars Y, of the adjustable stop-springs *a*, substantially as herein shown and described, whereby the descent of the grain is prevented, except as fed down by the push-bars Y, as set forth. 50 55

4. In a thrashing-machine feeder, the combination, with the feed-table X and the frame A, of the rods *c d*, for securing the said table in place, substantially as herein shown and described, whereby, by the withdrawal of the rod *c*, the table can be turned back to give access to the cylinder, as set forth. 60

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Witnesses:

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