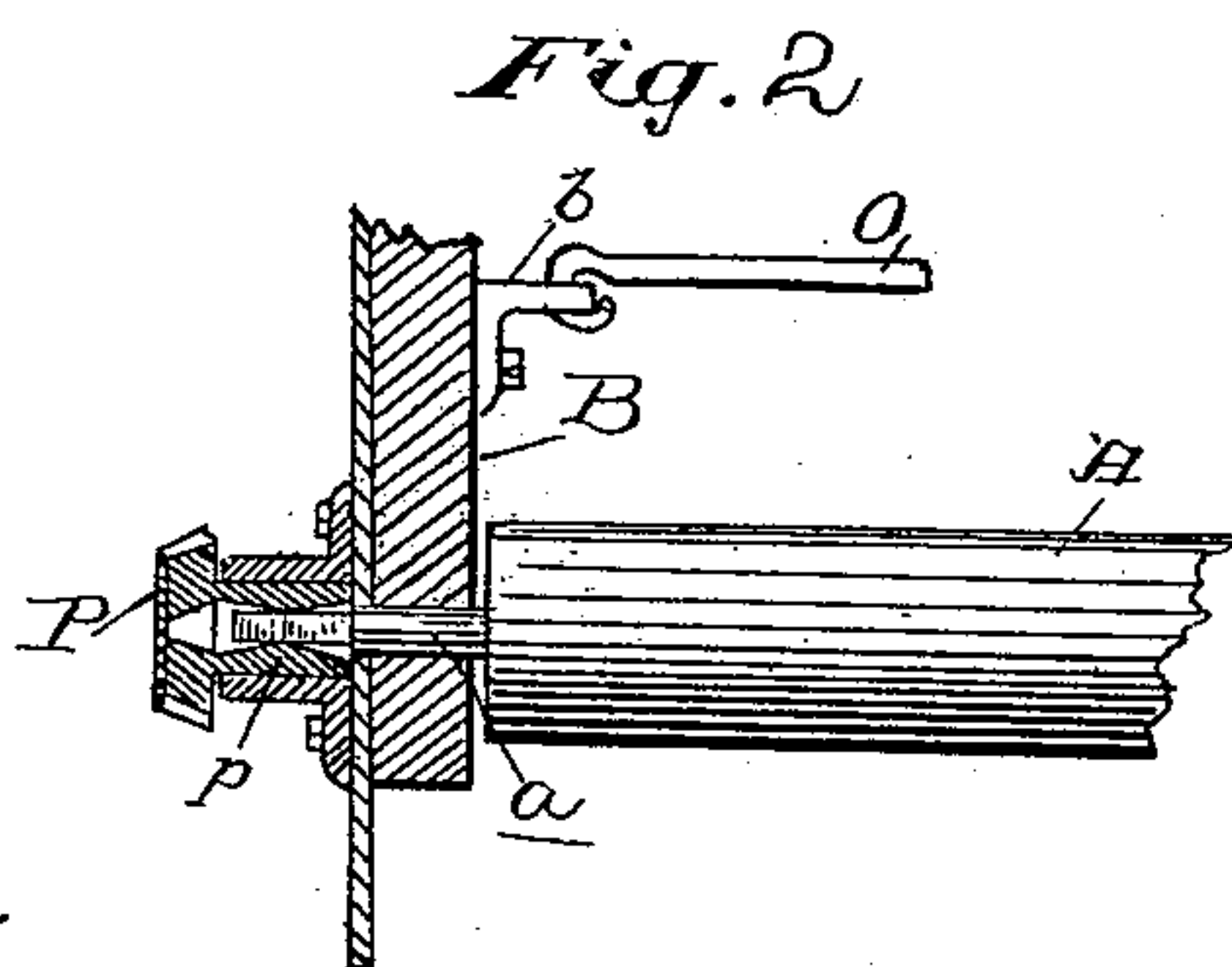
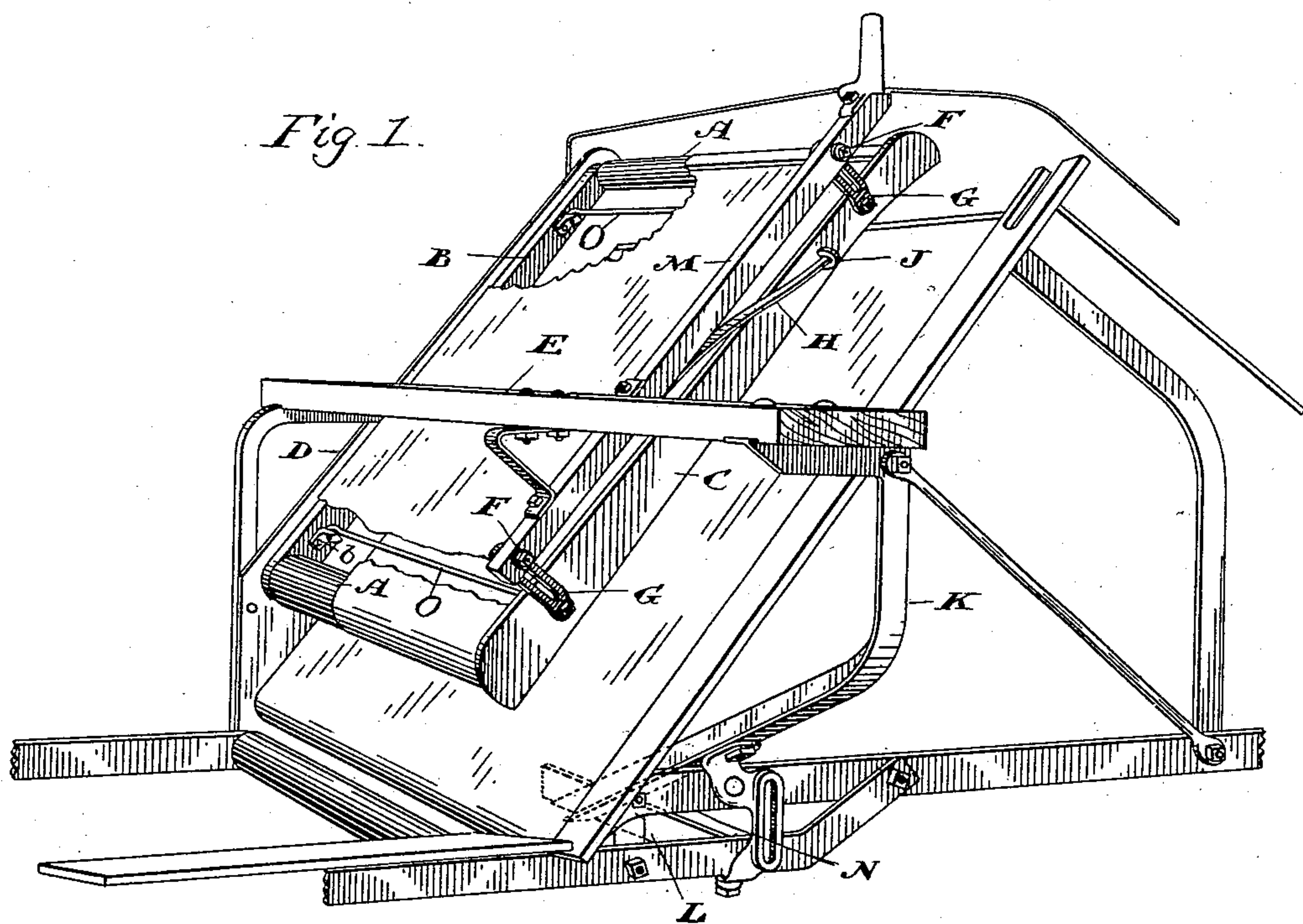


(No Model.)

L. M. JONES & J. WEDLAKE.
HARVESTER BINDER.

No. 450,024.

Patented Apr. 7, 1891.



Witnesses

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UNITED STATES PATENT OFFICE.

LYMAN M. JONES AND JAMES WEDLAKE, OF BRANTFORD, CANADA, ASSIGNORS
TO A. HARRIS SON & COMPANY, (LD.) OF SAME PLACE.

HARVESTER-BINDER.

SPECIFICATION forming part of Letters Patent No. 450,024, dated April 7, 1891.

Application filed February 20, 1890. Serial No. 341,194. (No model.)

To all whom it may concern:

Be it known that we, LYMAN MELVIN JONES, manufacturer, and JAMES WEDLAKE, machinist, both of the city of Brantford, in the county of Brant, in the Province of Ontario, Canada, have jointly invented a certain new and useful Improvement in Harvester-Binders, of which the following is a specification.

The object of the invention is to arrange the elevator of the harvester-binder in such a manner that it will freely elevate grain longer than the width of its canvas, also act so lightly on the heads of the shorter grain that all danger of thrashing the grain is avoided, and accommodate itself to elevate continuously heavy or light grain, holding it with sufficient pressure to prevent it working endwise; and it consists in the peculiar construction, arrangement, and combinations of parts herein-after more particularly described, and then definitely claimed.

In the accompanying drawings, Figure 1 is a perspective view of the elevating-table of a harvester, the upper elevating-frame being arranged substantially in accordance with our invention, the canvas of the said upper elevating-frame being removed; Fig. 2, an enlarged detail showing the jointed or flexible connections between the fixed side of the frame of the upper elevating-canvas and the movable side thereof.

A represents the upper canvas rollers, suitably journaled on the end pieces B C. The spindle of at least one of the rollers A projects through the elevator side piece D, and is provided with a gear or sprocket wheel in order to connect with the driving mechanism of the machine.

We do not claim anything peculiar in the arrangement of our gearing for driving the rollers A, and therefore we do not exhibit the whole of said gearing in the drawings. We may mention, however, that the journals, journal-boxes, or their connections must be arranged in the elevator side piece D to permit the elevator-frame formed by the rollers A and end piece C to rock when the rear end of the frame is raised by the passing of the grain between the two elevating canvases.

We show one mode of making the connection between the parts on an enlarged scale

in Fig. 2, in which it will be seen that the side piece B has brackets *b*, in which are set the bars O, which are connected to the side bar C. The spindle *a* of the roller A is squared and works in a correspondingly-shaped hole in the hub *p* of a wheel P, which is connected to and driven by the gearing of the machine. As the corners of the square makes the diameter of the spindle larger measured from corner to corner than when measured from side to side, and the hole in the wheel-hub is of corresponding size, the roller is driven regularly by the gear as if the connection between the journal and gear were rigid. The hole in which the spindle *a* is set is larger at each end than in the middle, to allow of the other end of the roller rising and falling without binding therein.

It will be observed that we remove the elevator side piece, which in other machines is placed on the rear of the elevator, similar to the front side piece D shown in the drawings. By this rear side piece being removed the heads of any long grain which may be elevated will extend beyond the upper canvas, and, in fact, may project outside of the machine.

The rear end of the upper canvas-frame may be left perfectly free, as its weight will generally be found sufficient to cause the canvas to act upon the grain. In the drawings, however, we show the rear of this frame connected at each end to a bar M (connected to the seat-board E) by a bolt F, extending from the bar M and passing through a slot made in the bracket G, which is fastened to the end piece C, as indicated. By this arrangement the loose end of the frame of the upper canvas is supported, but at the same time is so held that it may be pushed upwardly to leave sufficient space for the passage of the grain being elevated. In order to provide additional pressure on top of the grain, we provide a spring-bar H, connected at one end to the bar M, and passed through an eyebolt J, fixed to the end piece C.

We do not confine ourselves to any particular location for either the spring H or the brackets G, as they may be placed in any suitable position, or, as we have before intimated, they may sometimes be dispensed with

altogether. In order to support the rear of the seat-board E so that the said support shall not interfere with the passage of the grain when longer than the weight of the elevator-table, we provide an iron or steel support K, rigidly bolted at its lower end to the sill L or its equivalent, and extending obliquely from that point beyond the end of the machine, where it extends uprightly to form a support, as shown in Fig. 1. The said support, after leaving the sill L or its equivalent, rests upon the extension N of the wheel-frame or its equivalent, and extending obliquely, as shown in the drawings, leaves sufficient space below it to admit the truck-wheels commonly employed for transporting the harvester.

What we claim as our invention is—

1. A harvester-binder provided with a rigid front side piece D, having bearings for the upper and lower canvas rollers, said upper canvas rollers being journaled at their outer ends in a rear side piece C, flexibly connected to said front side piece, substantially as described.

2. In a harvester-binder having both upper and lower canvas rollers journaled in a rigid front side piece and the upper rollers journaled in a rear side piece flexibly connected to the front side piece, and a polygonal spindle for one of said upper rollers, in combination with a driving gear-wheel having a hub with a tapering aperture to allow of the rear end of said roller rising and falling, substantially as described.

3. A diagonal support K, bolted to the sill L and resting on the extension N of the wheel-frame, extending obliquely to a point outside of the elevator-frame, where it is turned upwardly to form a support for the rear of the seat-board E, substantially as hereinbefore specified.

Brantford, January 22, 1890.

LYMAN M. JONES.
JAMES WEDLAKE.

In presence of—

JAMES HARLEY,
A. W. GRANTHAM.