

(No Model.)

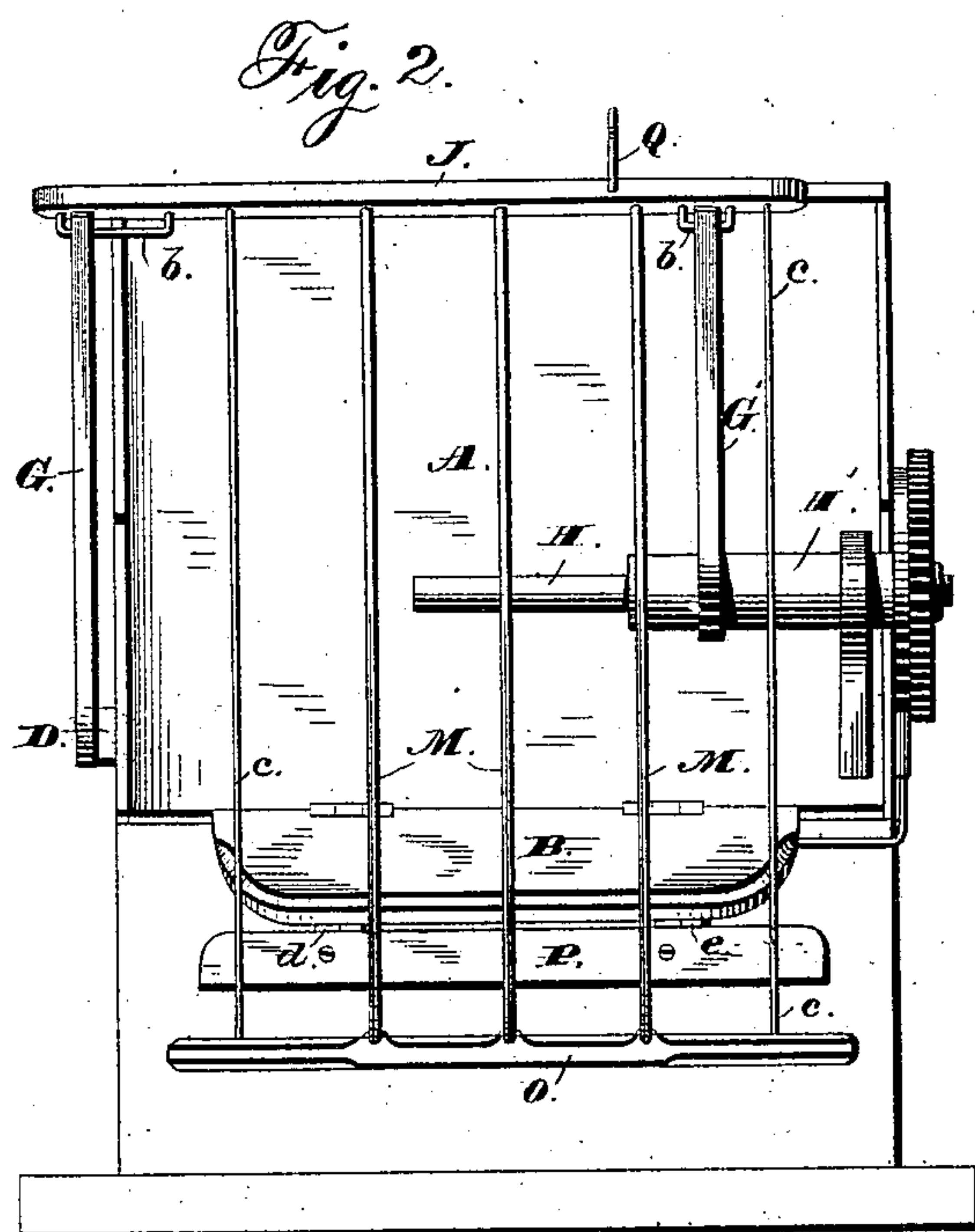
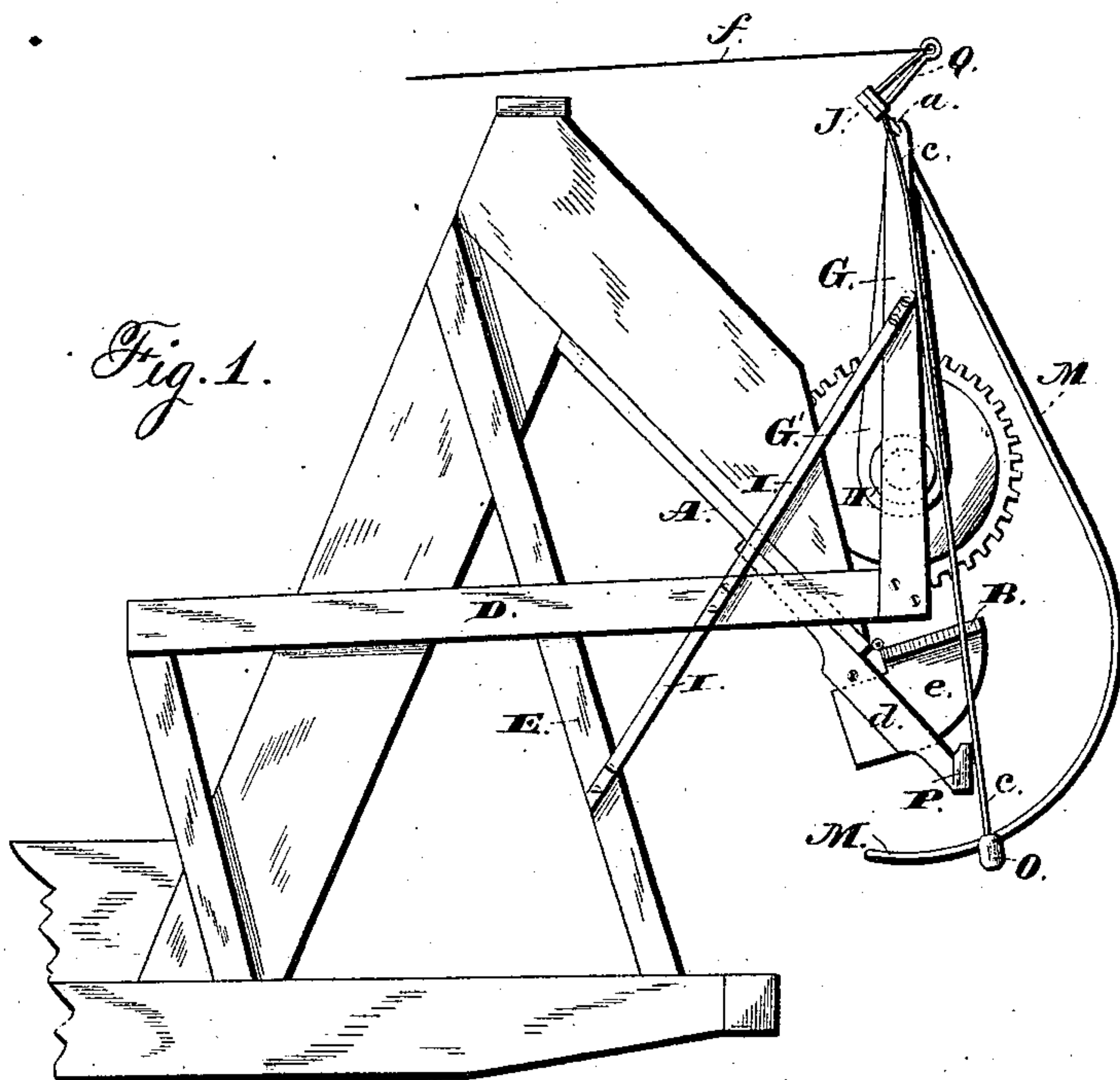
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W. COLLINS.

BUNDLE CARRIER FOR GRAIN BINDERS.

No. 291,985.

Patented Jan. 15, 1884.



WITNESSES

Jas. E. Hutchinson.
S. G. Nottingham.

INVENTOR

William Collins.
By Suggatt & Suggatt.
Attorney.

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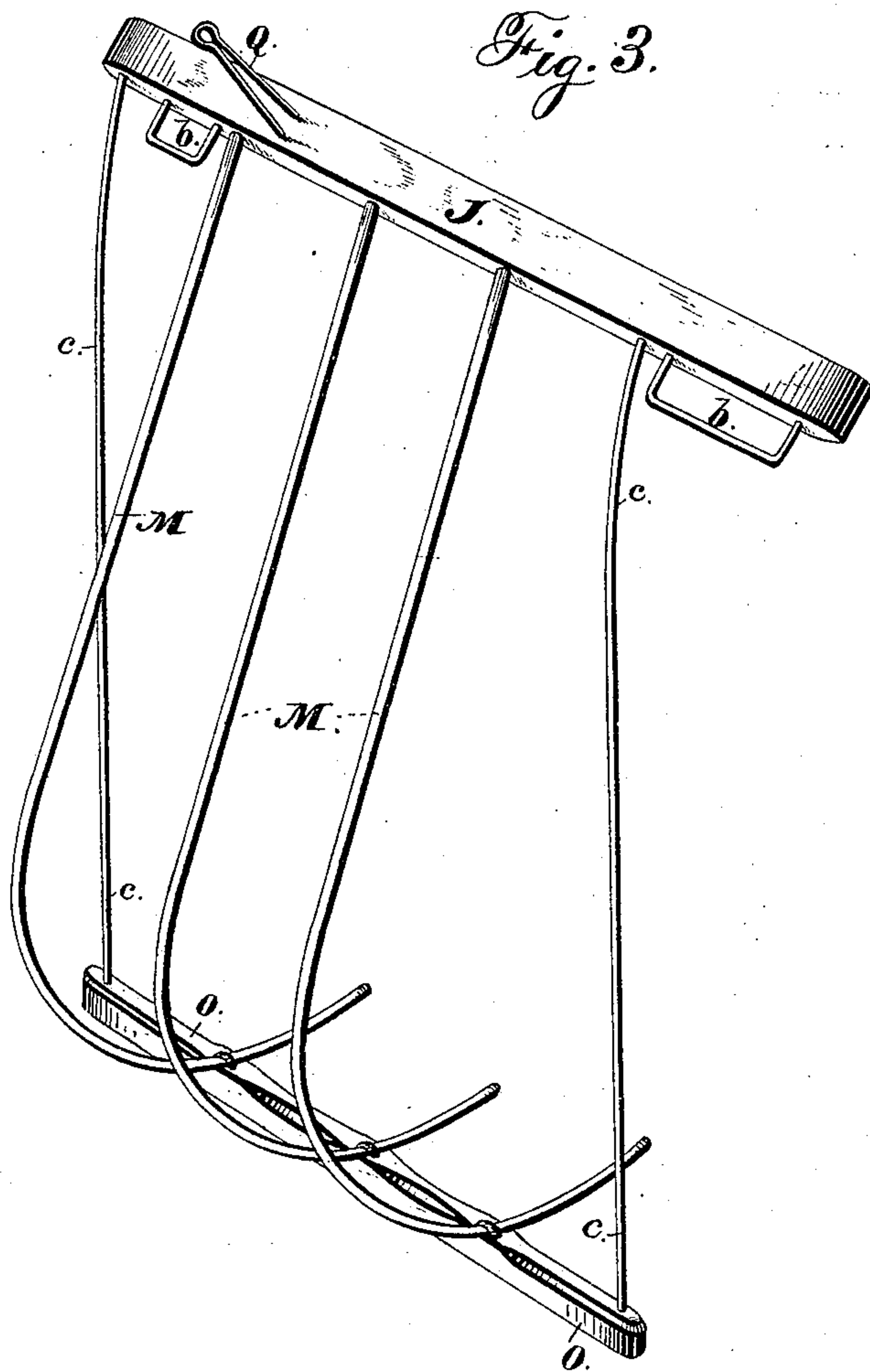
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UNITED STATES PATENT OFFICE.

WILLIAM COLLINS, OF PERHAM, MINNESOTA.

BUNDLE-CARRIER FOR GRAIN-BINDERS.

SPECIFICATION forming part of Letters Patent No. 291,985, dated January 15, 1884.

Application filed June 12, 1883. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM COLLINS, of Perham, in the county of Ottertail and State of Minnesota, have invented certain new and useful Improvements in Bundle-Carriers for Grain-Binders; 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.

My invention relates to an improvement in bundle-carriers for grain-binding harvesters, the object of the same being to provide an attachment adapted to be secured to ordinary grain-binders for the purpose of receiving the bound bundles or sheaves as they fall from the binder-table, and enabling a suitable number of them to be dropped simultaneously in rows, so that they can be readily shocked; and with these ends in view my invention consists in the parts and combinations of parts, as will be more fully described, and pointed out in the claims.

In the accompanying drawings, Figure 1 represents my invention in side elevation as attached to a binder, showing the table-gate in an elevated position. Fig. 2 is an end view of the same, showing the gate in a lowered position; and Fig. 3 is a detached perspective view of the carrier.

A represents the machine binder-table, on which the cut grain is deposited by endless aprons in the ordinary manner. This table is provided with the hinged gate B, which is adapted to hold the grain on the table before it is bound. The side beam, D, on the one side of the machine, instead of terminating alongside of the standard E, is continued outward beyond said standard and forms a support for the upright standard G. This standard G is strengthened by the brace I, which latter is connected at its outer end to the standard G, and then proceeds downwardly and inwardly, and is connected to the side beam, D, and to the standard E below the said side beam. The mechanism for operating the binder-shaft interferes with this construction on the opposite side of the machine, and hence it is necessary to secure the standard G' to the machine-frame or table in such a position as not to interfere with the other parts. In the ma-

chines where the binder-shaft H is situated above the inclined table and protected by a sleeve, H', as shown in the drawings, the standard G can be secured directly to said sleeve and answer all the necessary purposes. Both of the standards G and G' project above the table, and each is provided at its upper end with an open slot, a, in which the depending bearings b of the rock-shaft J rest. This rock-shaft is provided with a series of downwardly-projecting fingers, M, on which the bundles of grain fall as they drop from the binder-table. Any suitable number of fingers are employed, and they are so curved as to extend under the binder-table for the purpose of catching the bundles of grain as they fall therefrom.

To prevent the fingers from bending or straining under a heavy load, and also to prevent them from swinging too far under the binder-table, I have secured a cross-brace, O, to the under side of the curved portion of the fingers, and connected it to the rocking shaft by means of the rods c.

P is an abutment situated below the gate B and in close proximity to the carrier-fingers, for the purpose of preventing the bundles of grain from falling from the carrier before the latter is loaded, and also for forming a stop against which the rods c strike and limit the inward movement of the carrier. This abutment is secured to the outer ends of the beams d, which latter are secured to the under side of the table. This gate is alternately lowered and raised during the operation of binding, and to prevent the bound bundles on the carrier from falling over the abutment when the gate is elevated I have secured the curved guards e to the under side of the gate in such a position as to prevent the grain from changing its position—that is to say, to prevent the grain from passing over the abutment when the gate is elevated, which would prevent the gate from falling, and consequently retard the operation of the machine.

This carrier is so situated as to receive the bundles after they are tied and released, and as the first bundle falls onto the carrier-fingers it rests close up against the abutment and is prevented from rolling off. The second bundle falls on top of the first bundle and rests there-

on until the third bundle falls, when it crowds the fingers out and makes a space for the third, and so on until the carrier is loaded, when they are simultaneously dropped by the driver, who tilts the carrier by simply pulling on the cord *f*, which latter is secured to the arm *Q* of the rock-shaft. If the driver neglects to discharge the bundle from the carrier, the bundles continue to fall thereon, and as each bundle is deposited the carrier is swung outwardly until quite a space between the abutment *P* and the end of the curved fingers is formed, which space is bridged over by the bundles of grain. When the machine is thus overloaded, the bundle or bundles, as they leave the binder-table, fall onto the bundle or bundles overlapping the ends of the curved fingers and cause the said bundles to fall through the space between the ends of the fingers and abutment. As soon as one bundle is started the others immediately roll off of the inclined fingers onto the ground, and the carrier again swings back to its original position. In some machines the binder-table is adapted to be moved laterally, and the binder-shaft, which is secured to said table, and the standard *G*, secured to the sleeve of the binder-shaft, are necessarily moved therewith. When my device is employed on this style of machine, it is necessary to provide means whereby the standard *G* can be moved toward or away from the standard *G* without altering or changing the rock-shaft bearings. This is accomplished by elongating one of the rock-shaft bearings, so that the carrier can be moved laterally an even distance with the table.

By hanging the rock-shaft as above described, the carrier can be removed from the machine or placed in position thereon in a very few seconds and without the aid of any tools.

The manner of supporting the carrier is dependent entirely on the construction of the machine for which it is intended; and hence I would have it understood that I do not confine myself to the exact construction shown and described, but consider myself at liberty to make such changes therein as fairly fall within the spirit and scope of my invention.

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

1. The combination, with a grain-binder, of a rock-shaft, curved depending fingers secured

to said shaft, and an abutment situated below the table and above the points of the fingers, and adapted to limit the inward swing of the carrier and hold the grain on said carrier, substantially as set forth. 55

2. The combination, with a grain-binder, of a rock-shaft, curved fingers secured to the rock-shaft and adapted to receive the bundles of grain, a strengthening-brace secured to the curved fingers, rods connecting said brace to the rock-shaft, and an abutment against which the grain rests. 65

3. The combination, with a grain-binder the grain-table of which is provided with a gate, and guards secured to the lower face of said gate, of a rock-shaft, curved fingers secured to the rock-shaft, and an abutment secured to the binder-table below the gate, substantially as set forth. 70

4. The combination, with a grain-binder, of a rock-shaft, an arm secured thereto, a suitable rope or equivalent secured to the arm, curved fingers depending from the rock-shaft, a strengthening-brace connecting the fingers, rods connecting the strengthening-brace and rock-shaft, and an abutment against which the grain rests. 80

5. The combination, with a grain-binder provided with a gate, and guards secured to the gate, of the rock-shaft, curved fingers, brace, rods connecting the brace and rock-shaft, and an abutment, all of the above parts combined, constructed, and adapted to operate as described. 85

6. The combination, with the binder-table, gate, and sleeve surrounding the binder-shaft, of a standard secured to the frame of the machine, a standard secured to the sleeve, and a bundle-carrier the rock-shaft of which is provided with suitable bearings, substantially as set forth. 90

7. The combination, with a binder-table and upright standards, of the rock-shaft having the curved fingers secured thereto, and the depending bearings, one of which is elongated, substantially as set forth. 95

In testimony whereof I have signed this specification in the presence of two subscribing witnesses. 100

WILLIAM COLLINS.

Witnesses:

GEO. F. DOWNING,
S. G. NOTTINGHAM.