

M. G. HUBBARD.
GLENER AND BINDER.

No. 281,367

Patented July 17, 1883.

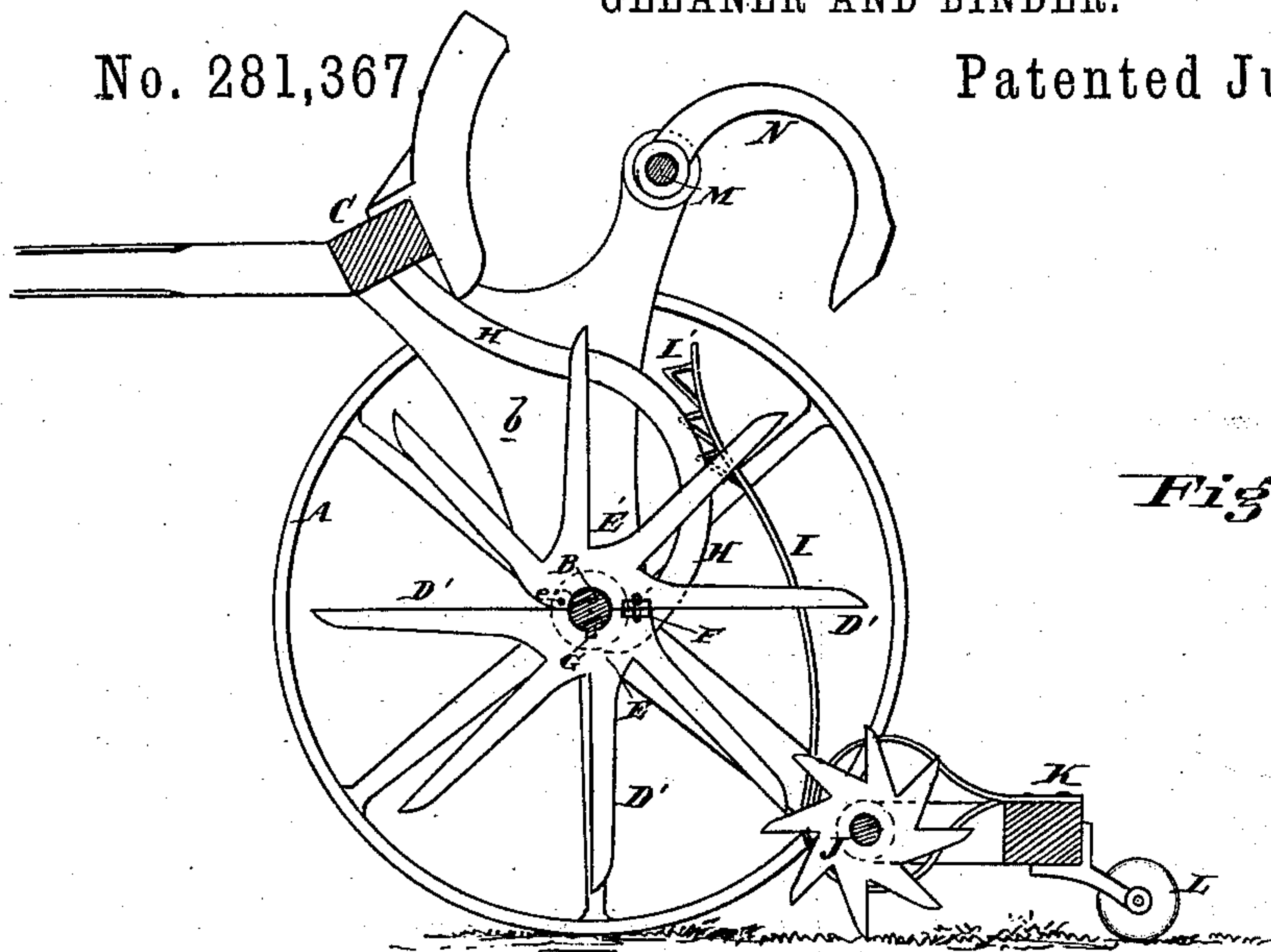


Fig. 1

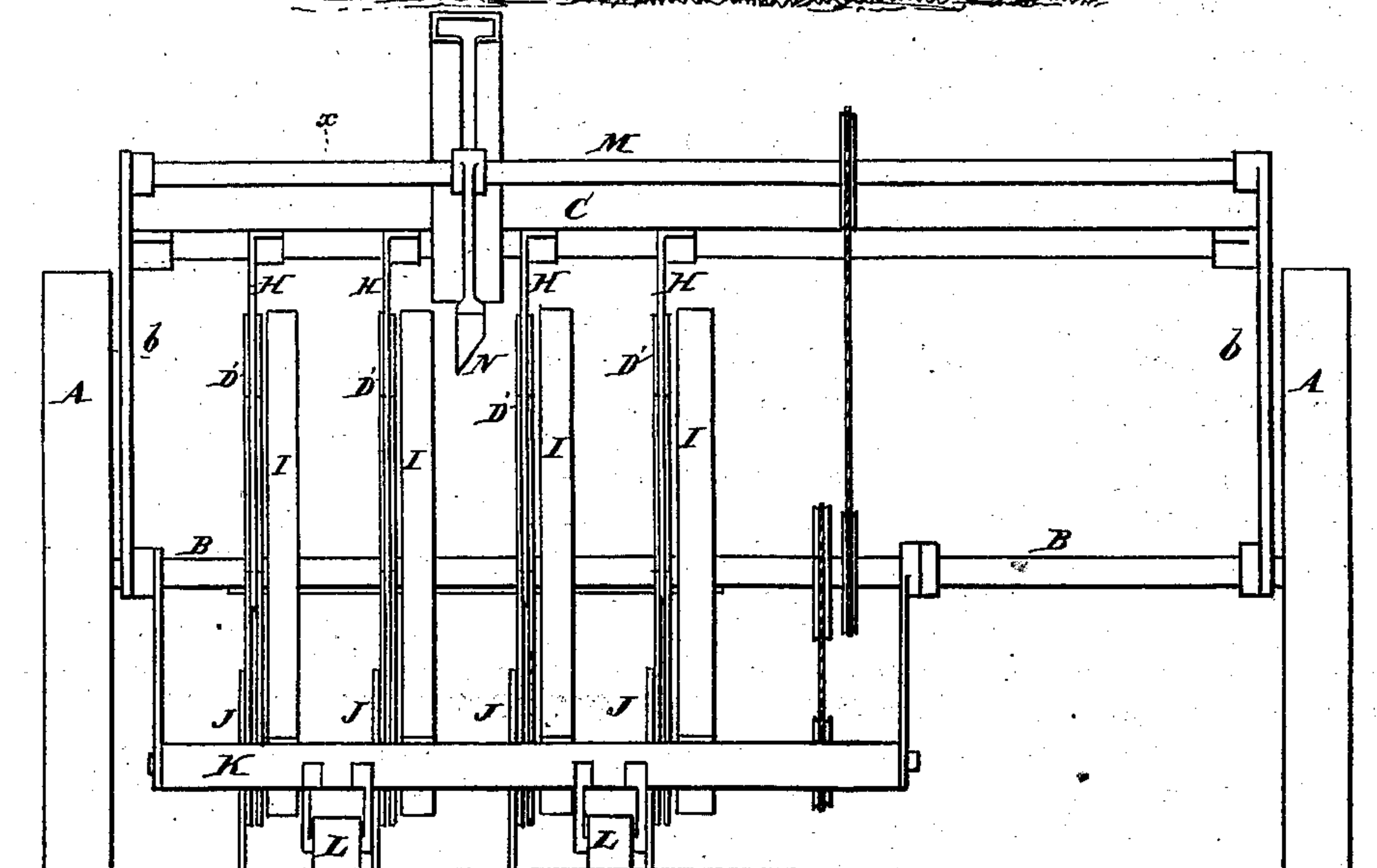


Fig. 2

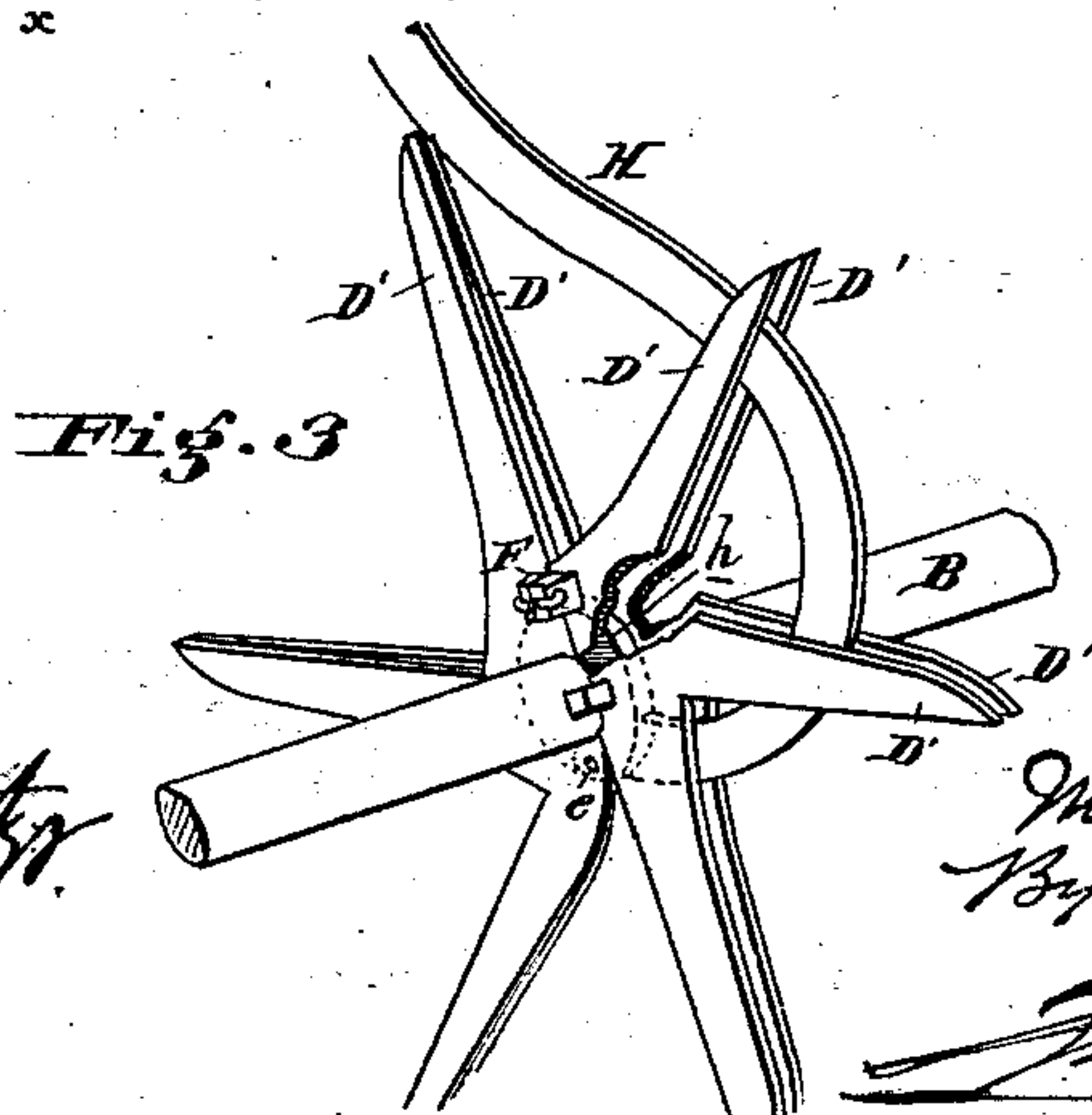


Fig. 3

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By his atty.

UNITED STATES PATENT OFFICE.

MOSES G. HUBBARD, OF NORRISTOWN, PENNSYLVANIA.

GLEANER AND BINDER.

SPECIFICATION forming part of Letters Patent No. 281,367, dated July 17, 1883.

Application filed February 3, 1882. (No model.)

To all whom it may concern:

Be it known that I, MOSES G. HUBBARD, of Norristown, in the county of Montgomery and State of Pennsylvania, have invented an
5 Improvement in Gleaners and Binders, of which the following is a specification.

My invention has reference to gleaning and binding harvesters, but more particularly to the elevating devices for that class of machines
10 which is fully and clearly described in the following specification, and shown in the accompanying drawings, which form part thereof.

The object of this invention is to provide elevating devices which shall not draw straw
15 from the gavel while elevating it to a position within reach of the binder-arm; further, to so construct the elevating cylinder and its arms that it can readily be taken off its shaft or put on the same in sections; further, to provide
20 guide-scrolls which shall prevent any tendency of the grain to fall backward.

In the drawings, Figure 1 is a cross-sectional elevation of my improved gleaner and binder on line *xx*, Fig. 2. Fig. 2 is a rear elevation
25 of same, and Fig. 3 is a perspective view of a portion of the elevating devices.

A A are the driving and supporting wheels.

B is the driving-shaft, and is supported in bearings or brackets *b*, secured to the frame C.
30 The shaft B carries, secured to it, a series of elevating-arms, D', which constitute the elevating-cylinder. These arms D' radiate from a hub, E, which is made with a groove, *h*, upon its periphery and between said arms D', and
35 it is further bisected and the two halves are pivoted or hinged together at *e*, and after encircling the shaft B they are clamped thereon by bolts or clamps through the lugs, as at F. The hub is prevented from turning upon the
40 shaft by the key G.

The arms D' are made of flat spring metal, tapering in shape, and arranged side by side, as shown in Fig. 3, and the two ends are made to spring together to form substantially one
45 point. Working between these arms D' are rigid guide-scrolls H, which have one end resting upon the hub E and in the groove *h*, and the other or upper end secured firmly to the frame C, said scrolls being so arranged
50 relatively to the elevating-cylinder that they

gradually become more and more removed from the center, but always remain in the same plane with the arms D'.

Pivoted to the shaft B is the trailing-frame K, which runs upon rollers L and carries the
55 gleaning-cylinder J. The guide-scrolls I are secured to the trailing-frame, then pass under and nearly around the gleaning-cylinder, then up with a reverse curve toward the binder-shaft M, which is arranged above the elevat-
60 ing-cylinder, and carries the binder-arm N. The upper and forward side of the scroll I is provided with one or more teeth, I', as shown, which allow the grain to pass up freely be-
65 tween the scrolls H and I, but prevent it fall- ing back again. The scrolls I are springs, and are arranged to one side of scrolls H.

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

1. The double elevating-arms on the elevat-
ing-cylinder, in combination with the rigid
elevating-scroll H, having its lower end ar-
ranged between said arms, substantially as
described. 75

2. In an elevating-cylinder for a gleaner
and binder, the elevating-arms secured to or
forming part of sections of a hub, said sec-
tions being united together to form a complete
ring, in combination with the shaft and means
80 to secure said ring rigidly upon said shaft, substantially as and for the purpose specified.

3. The elastic grain-supporting scroll I, hav-
ing one or more teeth or ledges at or near its
top, in combination with devices to elevate the
grain and keep it pressed against the scroll,
substantially as and for the purpose specified. 85

4. In a gleaner and binder, the combination
of double elevating-arms D', rigid scrolls H,
held between them, and spring-supporting
90 scroll I, having one or more teeth, I', or ledges, at or near its top, substantially as and for the purpose specified.

In testimony of which invention I hereunto
set my hand.

MOSES G. HUBBARD.

Witnesses:

R. S. CHILD, Jr.,

R. M. HUNTER.