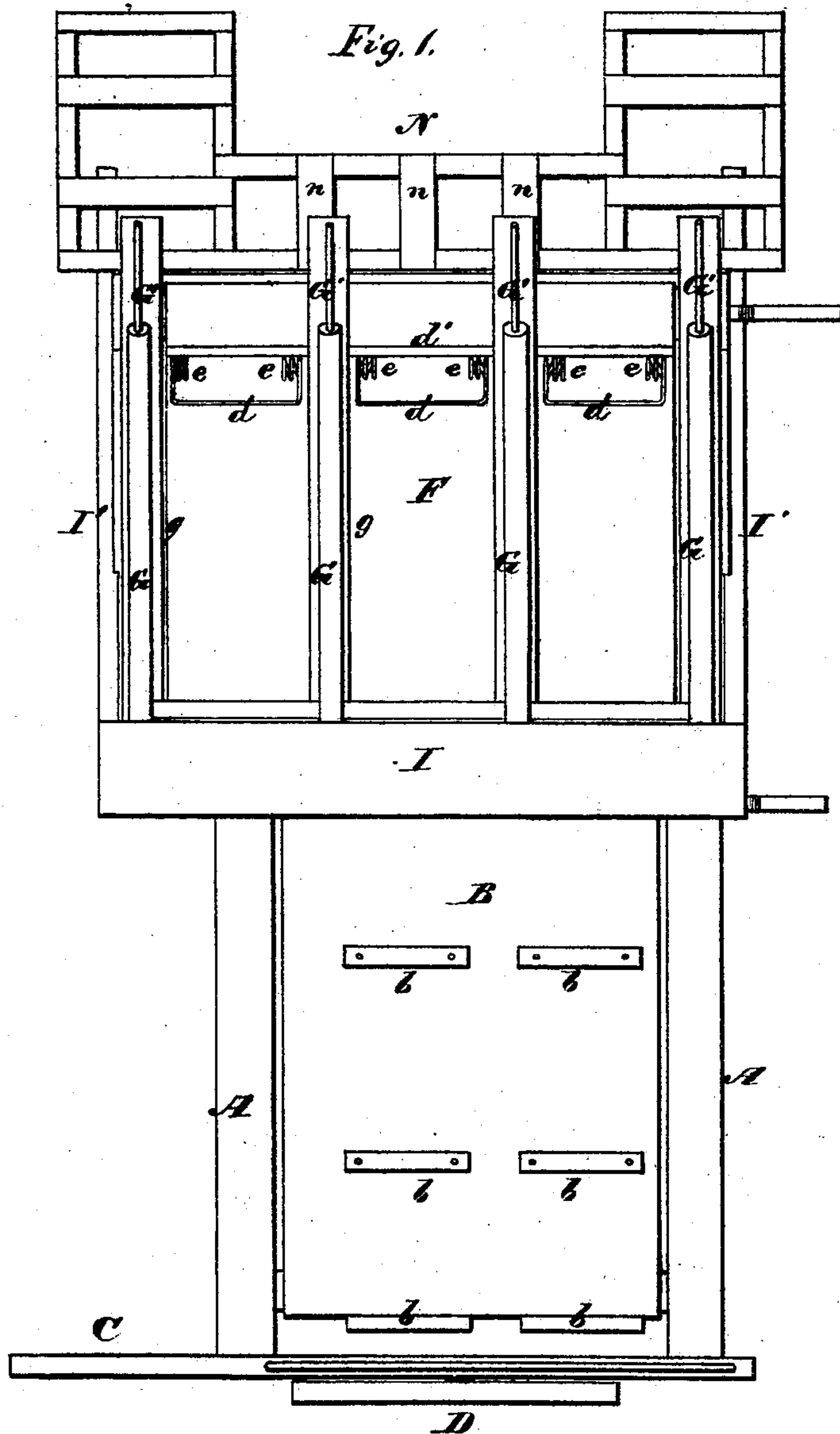


H. PORTER.
Binder's Attachments for Harvesters.
 No. 144,789. Patented Nov. 18, 1873.



Witnesses.
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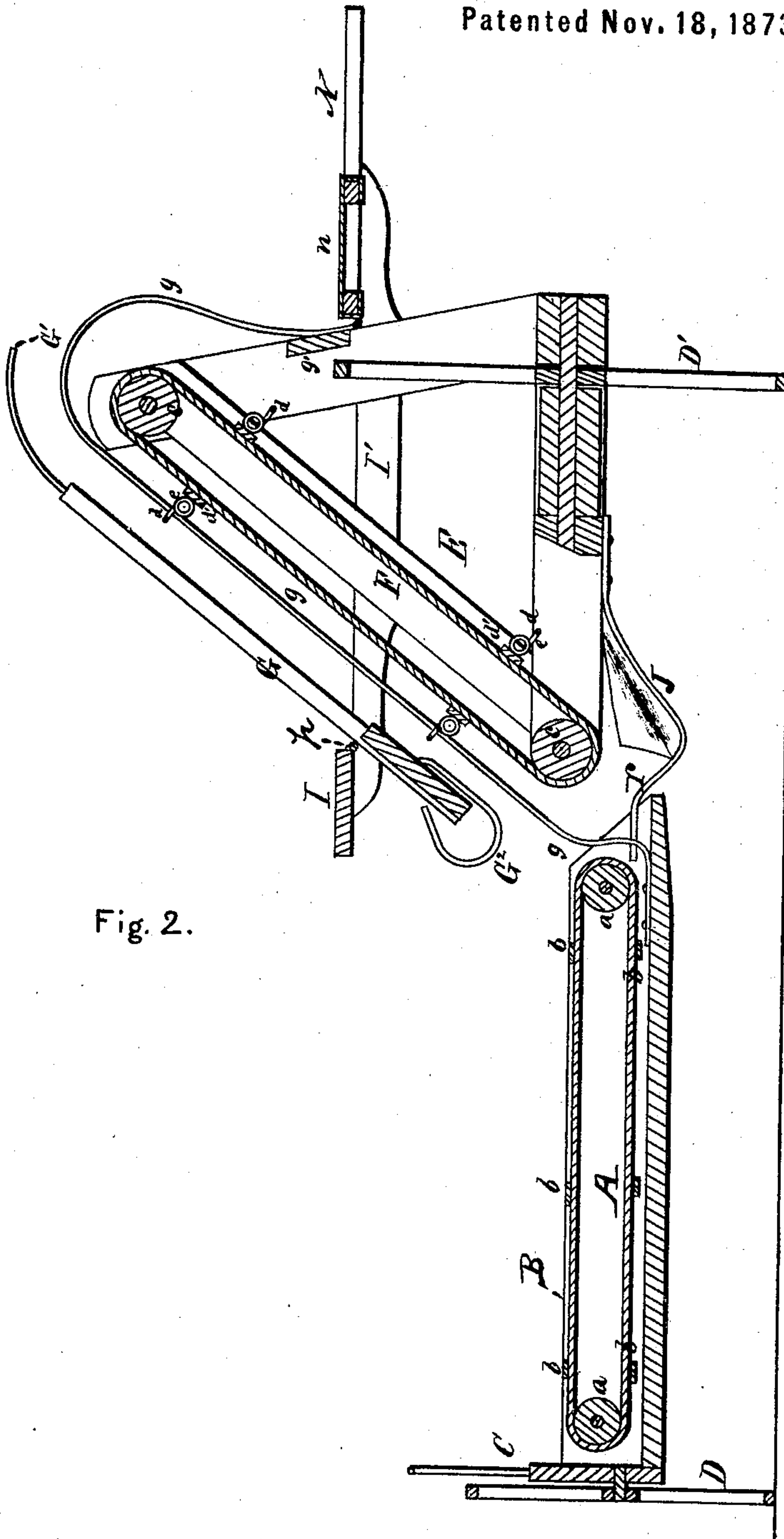


Fig. 2.

WITNESSES

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UNITED STATES PATENT OFFICE.

HENRY PORTER, OF POLO, ILLINOIS.

IMPROVEMENT IN BINDERS' ATTACHMENTS FOR HARVESTERS.

Specification forming part of Letters Patent No. 144,789, dated November 18, 1873; application filed October 18, 1873.

To all whom it may concern:

Be it known that I, HENRY PORTER, of Polo, in the county of Ogle and State of Illinois, have invented a new and valuable Improvement in Binding Devices for Reapers; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings making a part of this specification and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a plan view of my binding device for reapers. Fig. 2 is a sectional view of the same.

This invention relates to certain new and useful improvements on harvesting-machines, wherein the cut grain is moved off the platform, and then elevated and delivered upon a binder's rack to be bound. My improvement has special relation to the construction of the rack with elastic strips secured to it, so as to form a receiving-bed for the grain, and allows the binder to apply the bands to the bundles wherever he pleases, as will be hereinafter explained.

The following is a description of my improvements.

In the accompanying drawings, A represents a platform-frame, in which two parallel rollers, *a a*, have their end bearings, and B is an endless belt on the rollers *a a*, to which narrow grain-carrying strips *b b* are secured at suitable distances apart. The outer end of the platform-frame A is provided with a divider, C, and supported upon a wheel, D, and the inner end of this frame is rigidly secured to a triangular frame, E, which is mounted on a wheel, D'. For the purpose of securing the front ends of the frames A and E together, I employ a connecting-shoe, J. The frame E is provided with an inclined endless belt, F, which is applied around two horizontal rollers, *c c*, one of which is arranged in close relation to the inner roller *a* of the platform-belt B, and the other is arranged at the highest point of the frame E. On the belt F narrow strips *d'* are secured at suitable distances apart, and in lines parallel to each other. To each one of the strips I attach a number of elevating-fingers, *d*, which are

wire loops, having helical springs *e* formed on them, which springs allow the fingers to yield should they meet with any undue resistance, and then spring back to their proper places again. Between the spring-fingers *d* are narrow grain-rests *g*, which are preferably made of metal, and are secured to the inner end of the platform-frame A. From the platform-frame A the rests *g* extend upward, parallel to the belt B and in close relation to it, and at the upper end of the frame E these rests curve over the upper roller *c*, and are carried downward and secured to the board *g'*. As the rests *g* extend over the upper roller they recede from it far enough to allow the fingers *d* to fall within them, and leave the grain free to fall upon a rack, N, which is hinged to the inner side of the frame E. The rack N is a light open frame with elastic strips *n n* applied to it immediately beneath the point of discharge for the grain. The strips *n n* afford supports for the grain on the rack, and being elastic they can be stretched to one side or the other by the binder, for the purpose of allowing him to apply the bands to the bundle wherever he pleases.

When the rack is adjusted in a horizontal position it is sustained by extensions of two arms, I' I', which are secured to the front and rear ends of the frame E, and which sustain a seat, I. By turning up the rack N it will be out of the way in passing through gates.

For the purpose of receiving the grain from the platform-belt B upon the elevating-fingers *d*, and keeping it in close contact with the grain-rests *g* until it is elevated to the proper point for discharging it on the rack N, I employ guard-arms G G G, which are connected by helical springs *p* to the seat I, and extend up over the grain-rests *g* nearly as high as the curved portions thereof, and terminate in curved spring-metal extensions or fingers G¹ G¹ G¹. At the lower ends of the guard-arms, at the point where the grain is delivered from the platform-belt B upon the grain-rests *g*, curved directors G² are secured, which press the grain beneath the lower ends of the said guard-arms, so that the spring elevating-fingers *d* will take it and convey it up to the point for discharging it upon the rack N. Just beneath the directors G², and extending from

the grain-rests *g*, are inclined arms *r*, which receive the grain from the belt *B*, and hold it in proper position for the spring-fingers to take it. Belt-pulleys will be applied on the rear ends of the inner roller *a* and upper roller *c*, and motion will be communicated to these rollers, and consequently to the belts *B* *F*, from the axle of the wheel *D'*.

What I claim as new, and desire to secure by Letters Patent, is—

The binder's rack *N*, provided with flexible strips *n*, substantially as described.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

HENRY PORTER.

Witnesses:

J. D. CAMPBELL,
ORRIS MOSHER.