

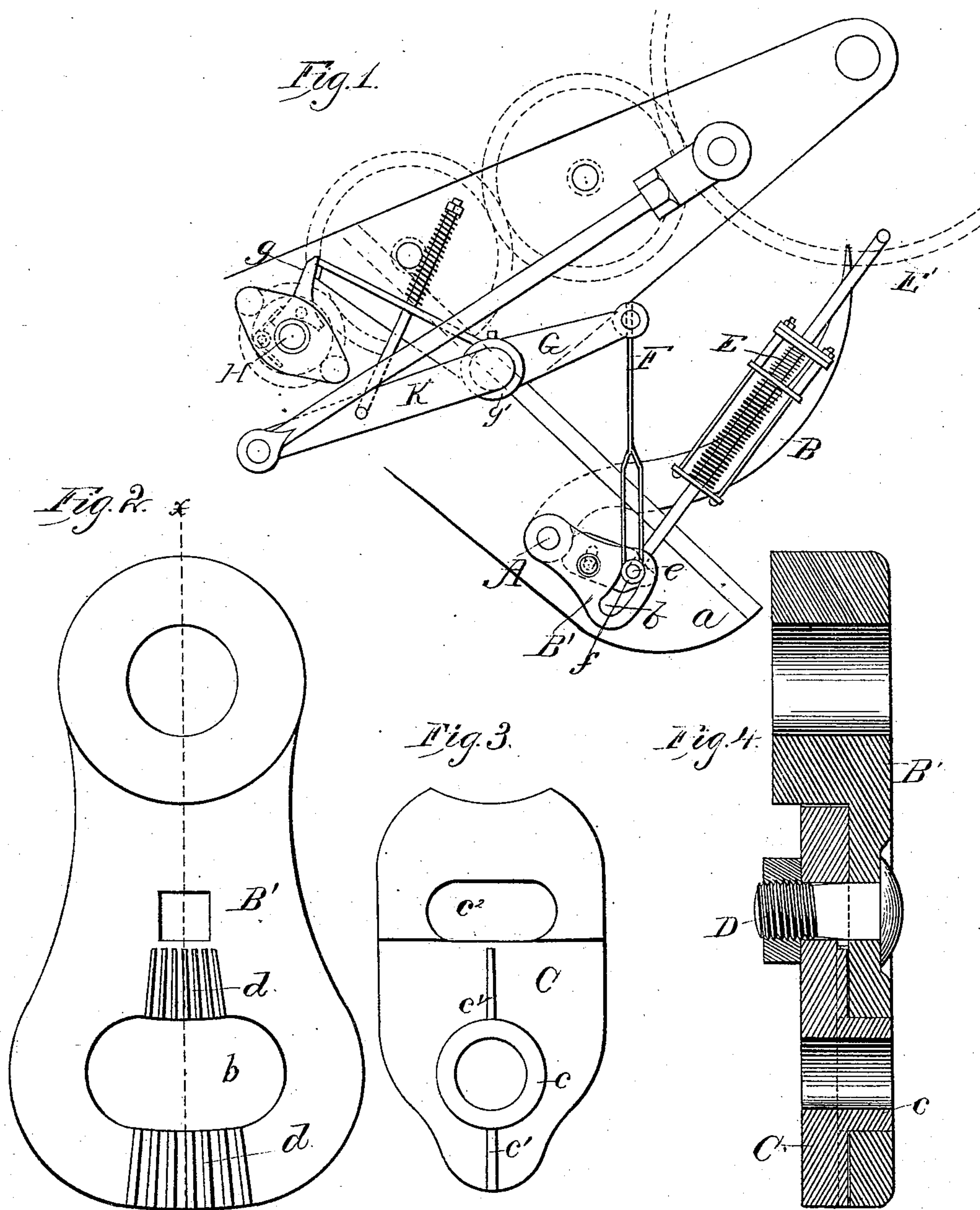
(No Model.)

J. P. BULLOCK.

GRAIN BINDER.

No. 272,828.

Patented Feb. 20, 1883.



Witnesses:

E. G. Smith  
Adolph Klein.

Inventor:

Joseph P. Bullock

By

Stout & Underwood

Attorneys.



# UNITED STATES PATENT OFFICE.

JOSEPH P. BULLOCK, OF MILWAUKEE, WISCONSIN, ASSIGNOR OF TWO-THIRDS TO THE DENNETT HARVESTING MACHINE COMPANY, (LIMITED,) OF SAME PLACE.

## GRAIN-BINDER.

SPECIFICATION forming part of Letters Patent No. 272,828, dated February 20, 1883.

Application filed November 14, 1882. (No model.)

*To all whom it may concern:*

Be it known that I, JOSEPH P. BULLOCK, of Milwaukee, in the county of Milwaukee, and in the State of Wisconsin, have invented certain new and useful Improvements in Grain-Binder Attachments; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention relates to grain-binders; and it consists in an attachment to the tripping mechanism by which the amount of grain necessary to trip the binding mechanism into gear is gaged, which will be fully described hereinafter.

In the drawings, Figure 1 is a side view of the tripping mechanism embodying my invention. Fig. 2 is an inside view of the arm of the compressor-shaft. Fig. 3 is an inside view of my adjusting attachment; and Fig. 4 is a central longitudinal section on the line *x x* of Fig. 2 of the arm of the compressor-shaft with my attachment in place.

A is the compressor-shaft, and B is a compressor-arm keyed to the shaft, just under the tyer, which latter is not shown.

B' is a crank-arm keyed to the compressor-shaft, just outside of the frame *a*. The outer end of the arm B' is wider than its inner end, and has a slot, *b*, to receive a hollow lug, *c*, that projects from the outer face of the plate C. The inner face of the arm B' is serrated or provided with ridges *d*, while the outer face of the plate C has ridges *c'* for engagement with the ridges or serrations on the arm B', and is slotted at *c''* to receive a bolt, D, by which the arm and plate are bound together.

E is a yielding rod that connects the cam and gear-wheel E' which operates the binder-arm and knot-tyer with the tripping and compressor shaft. This rod E has a lug, *e*, that passes through the hollow lug *c*, and projects far enough to take a slotted rod or strap, F, and a washer, *f*, and this strap connects the compressor with the short arm of the tripping-lever G, the long arm of which, by abutting against a pawl, *g*, on the clutch of the driving-shaft H, holds the binding mechanism out of gear while the machine is gathering a bundle. The tripping-lever G has a hub, *g'*, that fits on the shaft of the binder-arm, and has a limited play independent of said shaft, so that the short arm of lever G may be depressed by a draft on the strap F

far enough to raise its long arm out of contact with the pawl *g* to trip the machine into gear.

Operation: Fig. 1 shows the position of the parts when the binding mechanism is out of gear and the compressor-shaft is set to take the largest size of bundles—that is to say, the plate which forms the junction of the rods E and F is tightened onto the arm B' at its highest point. Now, as soon as the bundle which has been collected upon the compressor-arm B is sufficiently bulky to transmit the force of the packers, the arm B will be depressed and will partially revolve its shaft, causing the arm B' to draw upon the strap F and depress the short arm of the tripping-lever G until its long arm releases the pawl *g*, which has held the binding mechanism out of gear. To adjust the compressor for smaller bundles, I have but to loosen the plate C, raise the arm B', and tighten the plate C to it again, for, as the outer end of the plate C is always suspended in the same position by the rod E and strap F, the adjustment of the arm B' higher up on the plate C will throw the compressor-arm up nearer to the packers, and vice versa.

My present invention is designed as an improvement on the well-known Appleby binder, and therefore I have not deemed it necessary to show or describe the entire operation of the binder, but have only shown enough to illustrate my device for adjusting the trip to the size of bundles desired.

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

1. The combination, with the compressor and its shaft, of an adjustable plate for connecting said shaft with the tripping-lever and the actuating-wheel, as set forth.

2. The combination, with the compressor-shaft having the slotted arm B', of the adjustable plate C and mechanism for connecting it with the tripping-arm and the actuating-wheel, as set forth.

In testimony that I claim the foregoing I have hereunto set my hand, on this 26th day of October, 1882, in the presence of two witnesses.

JOSEPH P. BULLOCK.

Witnesses:

STANLEY S. STOUT,  
HAROLD G. UNDERWOOD.