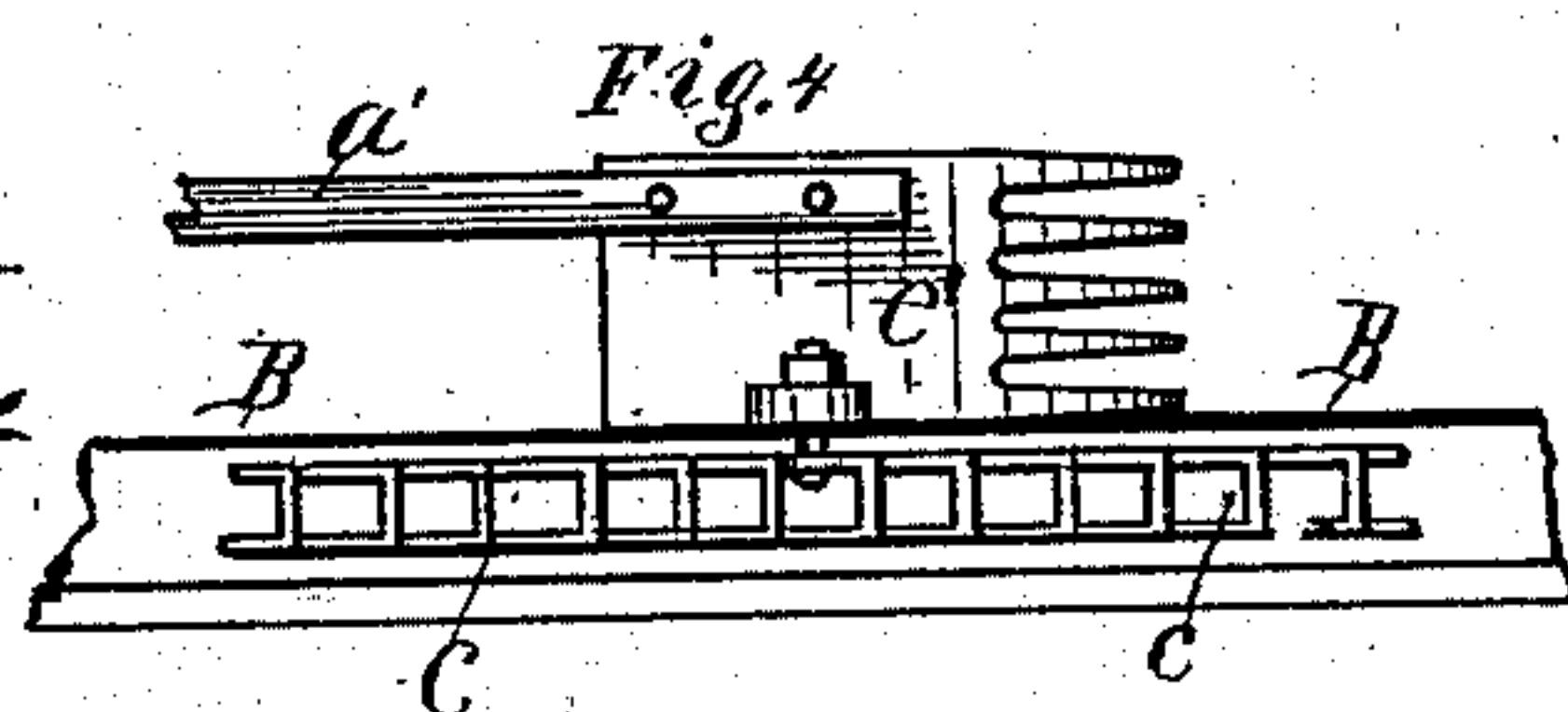
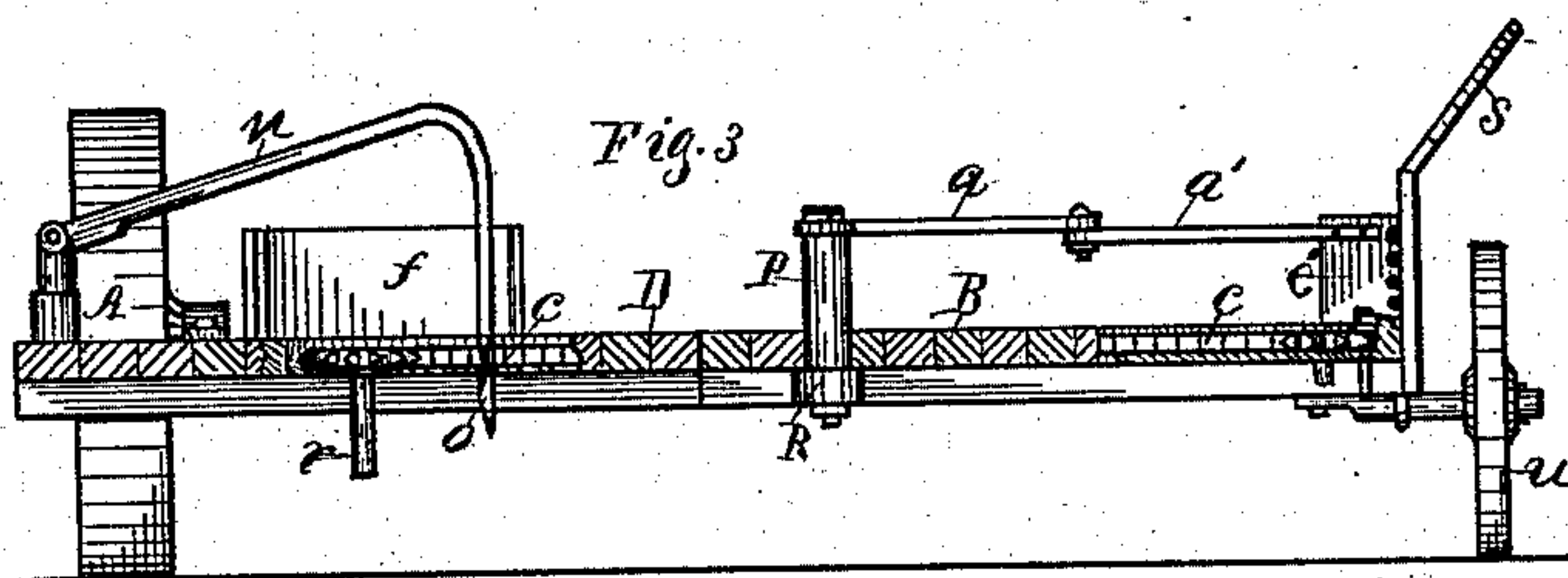
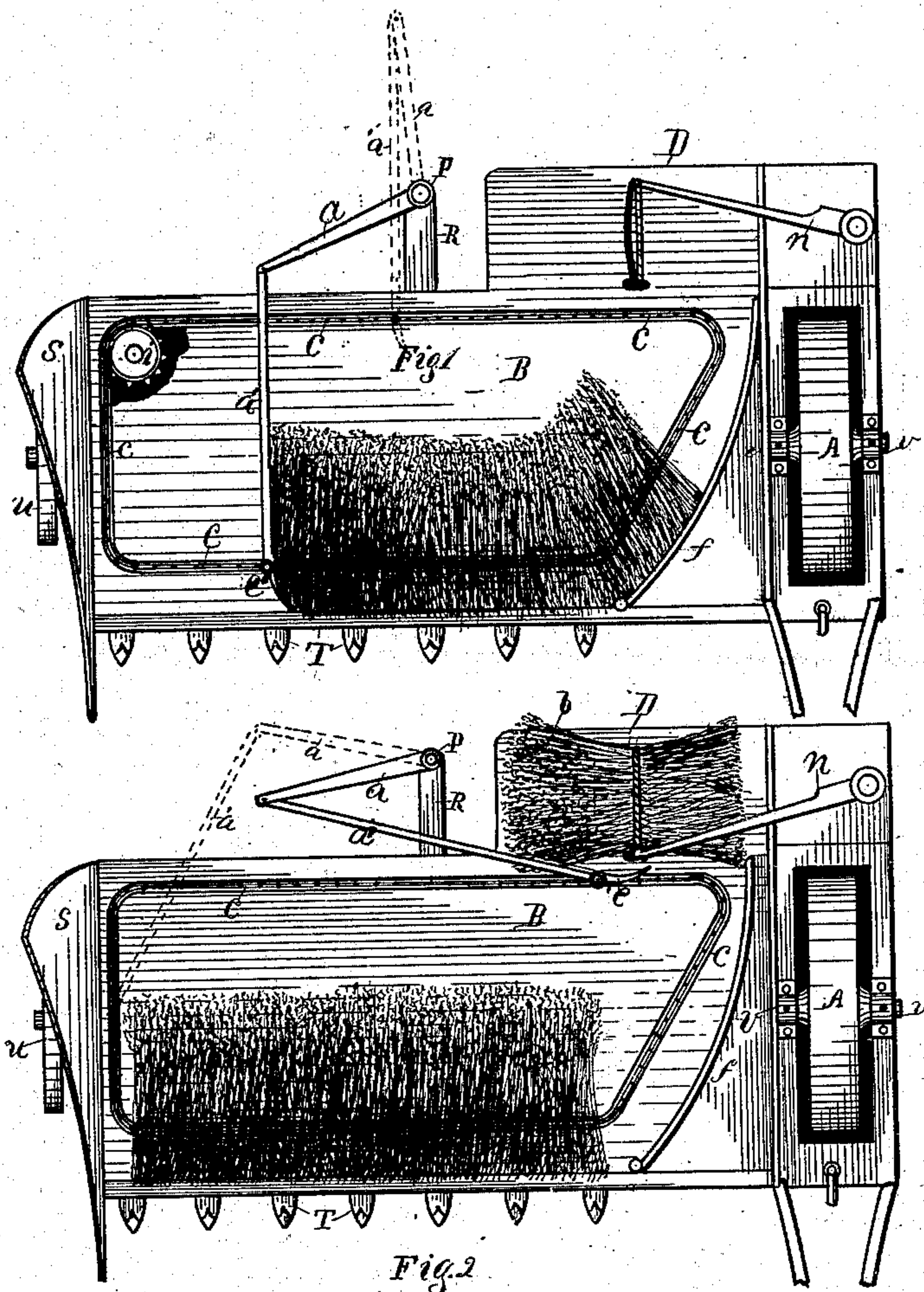


(No Model.)

R. E. STRAIT.  
GRAIN BINDER.

No. 288,509.

Patented Nov. 13, 1883.



Attest.  
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John D. Chase

Inventor.  
Ransom E. Strait  
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Att'y.



# UNITED STATES PATENT OFFICE.

RANSOM E. STRAIT, OF GALESBURG, MICHIGAN.

## GRAIN-BINDER.

SPECIFICATION forming part of Letters Patent No. 288,509, dated November 13, 1883.

Application filed September 7, 1882. (No model.)

*To all whom it may concern:*

Be it known that I, RANSOM E. STRAIT, a citizen of the United States, residing at Galesburg, county of Kalamazoo, State of Michigan, have invented a new and useful Grain-Binder, of which the following is a specification.

My invention relates to that class of grain-binders which have a groove around the cutter-bar platform, in which is located an endless chain belt carrying a bundle-gatherer, for collecting the grain as it falls upon the platform and forming it into bundles preparatory to being bound; and my invention has for its object certain improvements in said parts, hereinafter described and claimed, whereby the bundle may be bound immediately by the side of the chain-groove, the operation facilitated, and superfluous auxiliaries heretofore used dispensed with.

In the drawings forming a part of this specification, Figure 1 is a top view of my improved binder; Fig. 2, same, showing a gavel bound; Fig. 3, rear view of the machine, and Fig. 4 a view of the grain-gatherer.

B is the cutter-bar table, T the cutter-bar, and A the drive-wheel. Sprocket-wheels *i* are located at the corners of the table, Figs. 1 and 3. Four or more wheels may be used at whatever location desired, to keep the chain-band *c*, which they carry, in proper position to effect the purpose for which it is intended. The chain *c* and wheels *i* are located below the upper surface of the table, said chain moving around in a channel or groove. To one of the wheels power-gear may be connected from the drive-wheel A. *r* shows a broken shaft which may be used for this purpose. The grain is compressed and swept around to the place of binding by a grain-gatherer, *e'*, pivotally connected with the chain *c*.

The construction thus far described is similar in general to that heretofore known; but in this device the binding mechanism is located immediately by the side of the chain-groove, Fig. 2, and the gatherer *e'* is provided with two bars, *a' a*, pivoted together, as shown, and pivotally connected with standard R at P, the whole so arranged and located in relation to the place of binding that the gatherer *e'* sweeps the bundle around to a position parallel with the cutter-bar and by the side of the chain-groove, and when at the place of binding is

disengaged from the bundle and moves on around the table to gather another bundle, Fig. 2. Any suitable needle-bar and knotter may be located at the proper place by the side of the chain-groove.

*f* is a guide-board which the butts of the grain-straw engage as the bundle is swept around to the place of binding. This keeps the straw even. The end of the guard-board *f* next to the cutter-bar is hinged in a manner that the rear end may be moved in or out and fixed in such a position, according to the length of the grain, that the portion of the bundle around which the band is to be located will be at the right point to receive said band when the gatherer *e'* moves away from the bundle.

In the operation the gatherer *e'* strikes in at the side of the grain, as shown by dotted lines in Fig. 2, and sweeps it around the platform, with the butts of the straw against the guide-board *f*, to the place of binding. As the rear end of arm *a'* at this juncture of the operation is carried rearwardly, Fig. 2, the gatherer *e'* is disengaged from the bundle, as before explained.

By this improved construction the bundle is bound immediately by the side of the chain-groove, thus obviating the necessity of transferring it to other localities to be bound, and dispensing with cumbersome mechanism.

I do not claim the combination of binding mechanism with an endless chain carrying a grain-gatherer adapted to collect the grain and sweep it around the platform; but

What I do claim is—

The combination, with the platform, binding mechanism located by the side of the chain-groove, and a guide-board hinged at the end nearest the cutter-bar, of a chain-band carrying a pivoted gatherer, said gatherer having arms composed of the two parts pivoted together and to the standard in relation to the needle-bar and guide-board shown, whereby said gatherer sweeps the bundle around to the positions specified with the butts engaging the guide-board, and moves away from it when in said position, all substantially as set forth.

RANSOM E. STRAIT.

Witnesses:

JOHN H. CHASE,  
ERNEST E. SWAN.