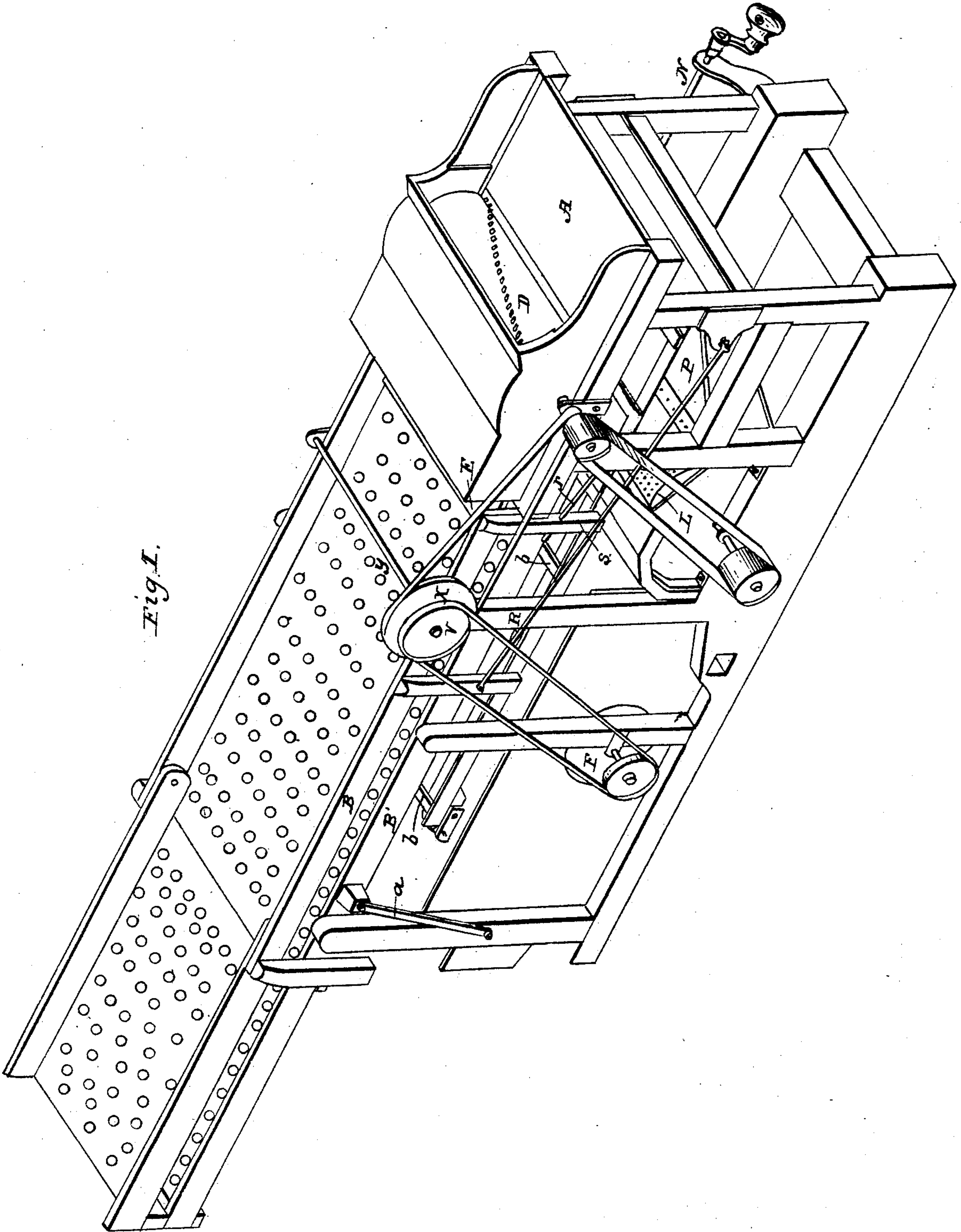


## Clover Thrasher and Huller.

2 Sheets—Sheet 1.

No. 20,249.

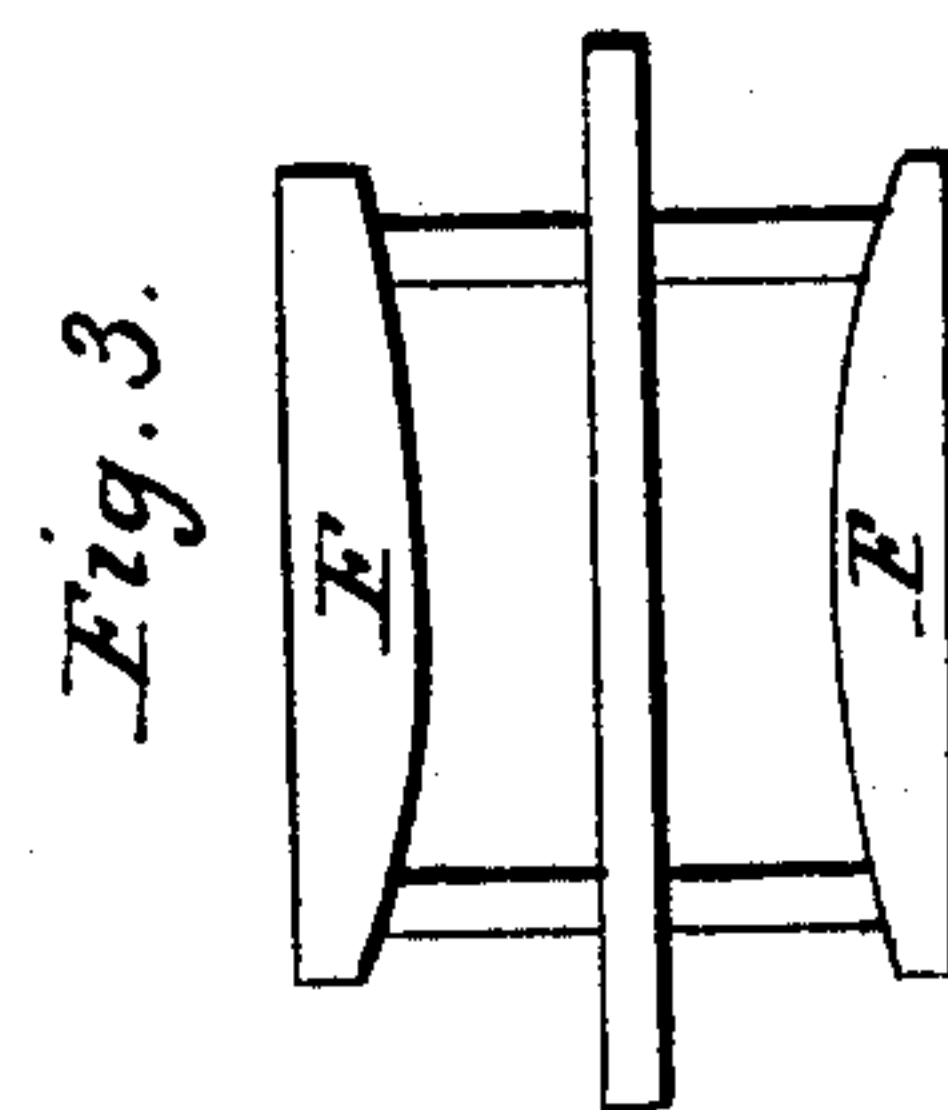
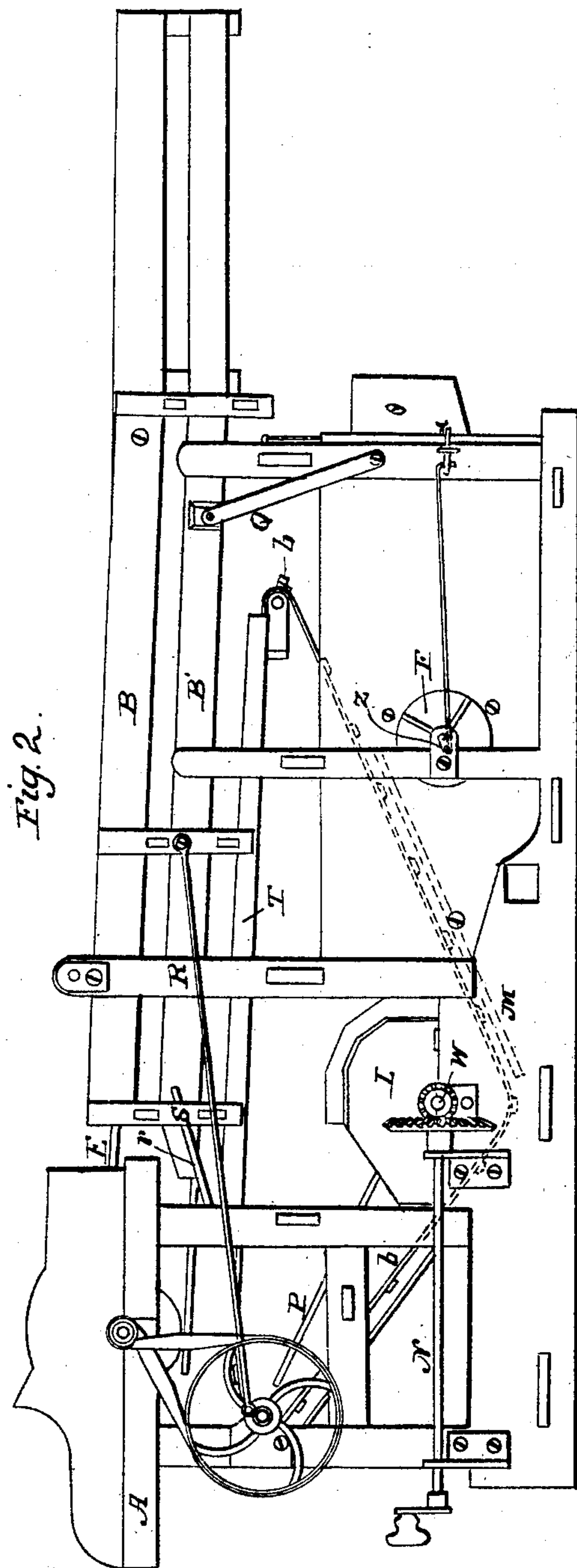
Patented May 18, 1858.



J. C. BIRDSELL.  
Clover Thrasher and Huller.

No. 20,249.

Patented May 18, 1858.





# UNITED STATES PATENT OFFICE.

JOHN C. BIRDSELL, OF RUSH, NEW YORK.

## MACHINE FOR HULLING AND THRESHING CLOVER.

Specification forming part of Letters Patent No. 20,249, dated May 18, 1858; Reissued April 8, 1862, No. 1,299.

*To all whom it may concern:*

Be it known that I, JOHN C. BIRDSELL, of Rush, in the county of Monroe and State of New York, have made and invented certain  
5 new and useful Improvements in Machines for Threshing and Hulling Clover, of which the following is a full and accurate description, reference being had to the accompanying drawings, making part of this specification, and to the letters of reference marked  
10 thereon, same letters referring to like parts in all the drawings.

Of said drawings Figure 1 is a perspective view of my machine. Fig. 2 is a side elevation—opposite to the side seen in Fig. 1,  
15 and Fig. 3 shows the form of the fan vanes.

To explain the nature of my invention it will be best to describe the process of threshing and hulling the clover—following it  
20 through its various stages. The clover having been placed on the feed table A, passes over the threshing drum D, where all the clover is beaten loose. The straw is now carried forward over the apron E to the upper  
25 bolt B—the clover-seed passing through the holes therein and falling on to the under bolt B' where it is still further cleaned. Through the under bolt it passes on to the table T. These two bolts are hung upon the  
30 vibrating arms *a a* (Figs. 1 and 2) and also slide on the inclined rods *r, r*, (Figs. 1 and 2) which pass through the side bars *s, s*, attached thereto. A vibrating motion being now communicated to the bolts by means of  
35 the connecting rods R R (Figs. 1 and 2) as the bolts are pushed forward they will rise and carry the straw with them; and as they drop on the return movement they slide from under the straw leaving it very nearly  
40 at the point to which it was carried. Thus the straw is gradually moved backward and finally ejected at the rear of the machine—this dropping motion serving at the same time to effectually separate the clover from  
45 the straw, which (the clover) falls on to the table T, is carried forward by the belt of slats *b b* and having fallen down the inclined plane P passes into the rasped cylinder L where it is effectually hulled by a well  
50 known process. After passing through the hulling apparatus it is again caught by the

slatted belt *b b* and carried up the inclined plane M and over the fan cylinder on to the sieve (*o*) where it is finally cleaned by the blast and riddling process in the usual man-  
55 ner and passes off into any convenient receptacle placed to receive it. As however the great body of the clover always lies in the middle of the sieve it is essential that the force of the blast should be greater there  
60 than at any other point. To effect this I construct my fan blades as shown in detail in Fig. 3—viz., broader in the middle than at either end—thus giving a greater body of wind to the central portion of the blast. 65

Motion is communicated to the several parts as follows: The shaft N receives motion from any prime mover; the large bevel wheel on this shaft drives the pinion W on the hulling cylinder—all which are seen in  
70 Fig. 2. A pulley (1) at the end of the hulling cylinder (L) (Fig. 1) drives the threshing drum D. A pulley (3) on the threshing drum axle carries a belt to drive the pulley (*x*) placed on an axle (*y*) above the bolt. 75 The pulley (*v*) on this shaft drives the fan (F) while a pulley (5) (Fig. 2) at the other end of the threshing drum axle drives the belt of slats (*b b*) by means of a roller on the shaft which carries pulley (6). Pulley (6) 80 carries a crank pin or pitman (R) which communicates a vibrating motion to the bolts B B'. The sieves receive their vibrating motion from a crank (*z*) on the fan shaft. 85

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

The arrangement of the slotted belt (*b b*), with the bolt (B, B'), table T, threshing  
90 cylinder, D, hulling cylinder (L), and fan (F) the whole operating in the manner and for the purpose substantially as set forth, it being understood that I claim the above described devices and arrangements only as ap-  
95 plied to the combination of clover hulling machines.

JOHN C. BIRDSELL. [L. s.]

Witnesses:

JOHN KLINE,  
A. K. AMSDEN.