(No Model.)

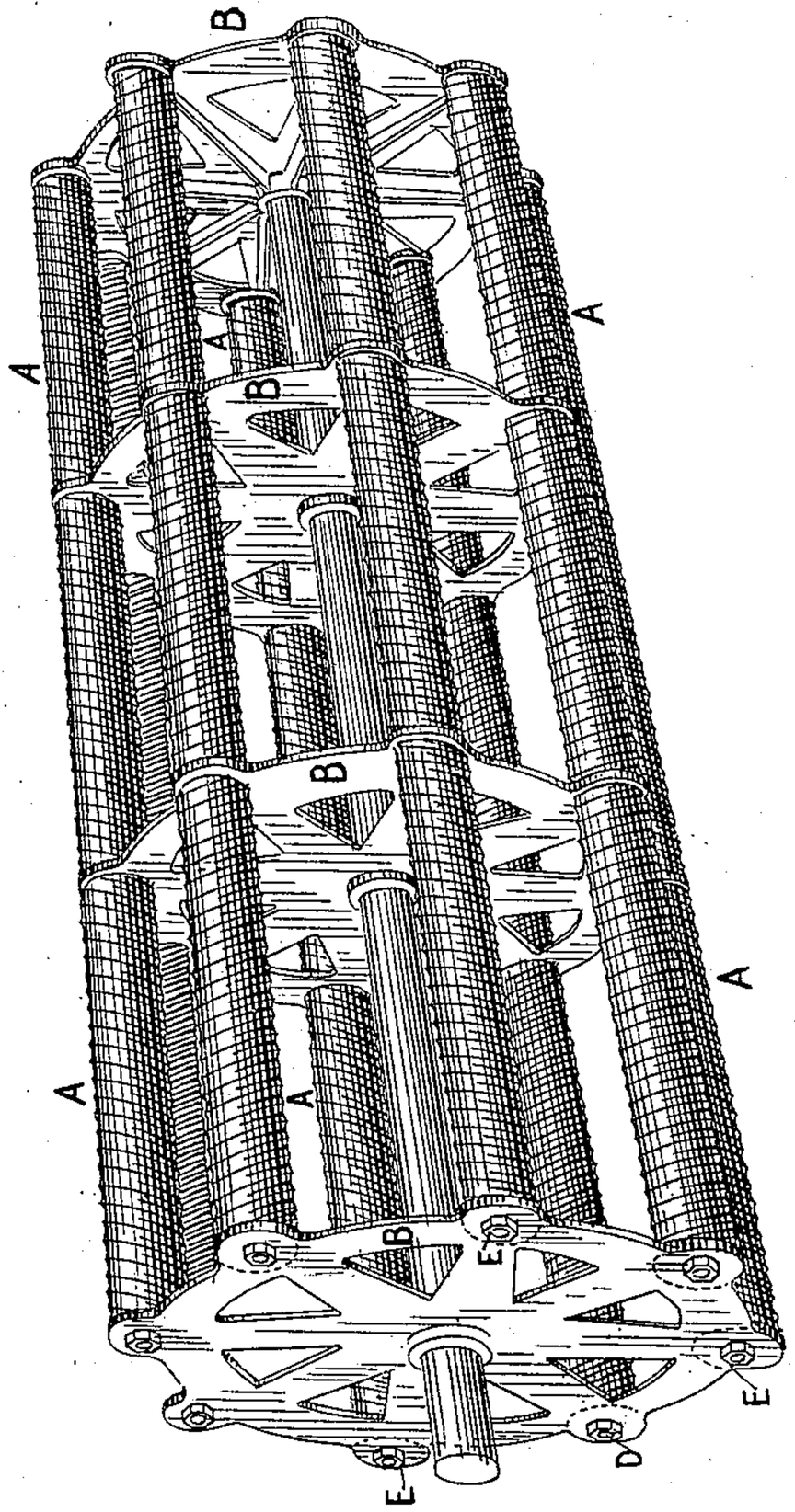
3 Sheets—Sheet 1.

C. WOOLNOUGH.

THRASHING MACHINE.

No. 324,063. Patented Aug. 11, 1885.

FIG: 1.



Witnesses

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Inventor

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(No Model.)

3 Sheets—Sheet 2.

C. WOOLNOUGH.

THRASHING MACHINE.

No. 324,063. Patented Aug. 11, 1885.

FIG. 2.

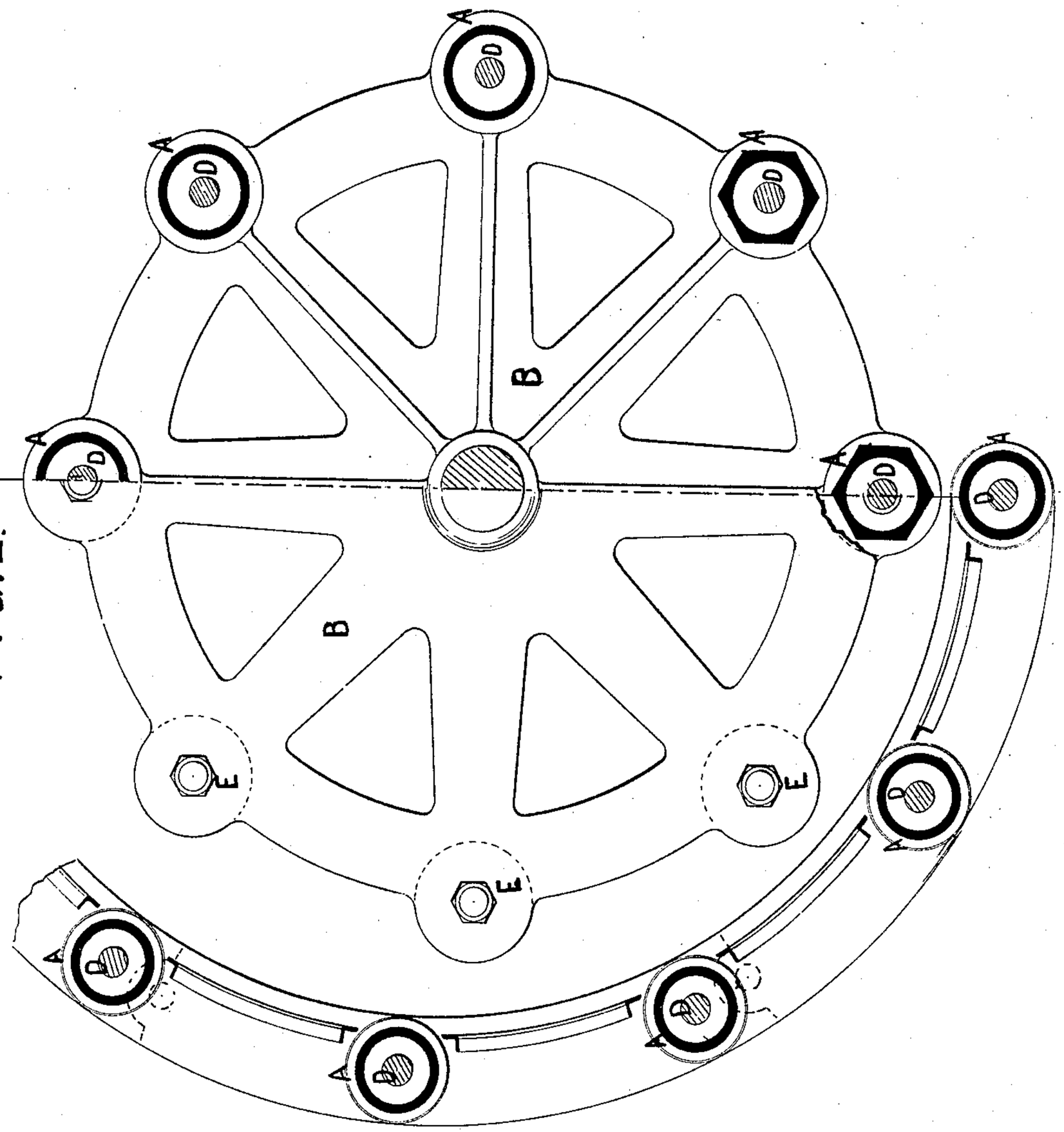
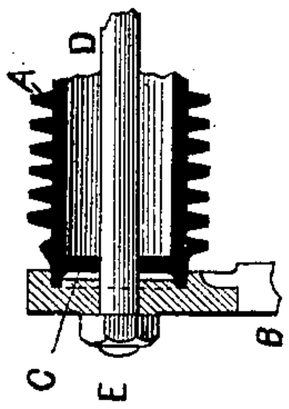


FIG. 4.



Witnesses

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3 Sheets—Sheet 3.

C. WOOLNOUGH.

THRASHING MACHINE.

No. 324,063. Patented Aug. 11, 1885.

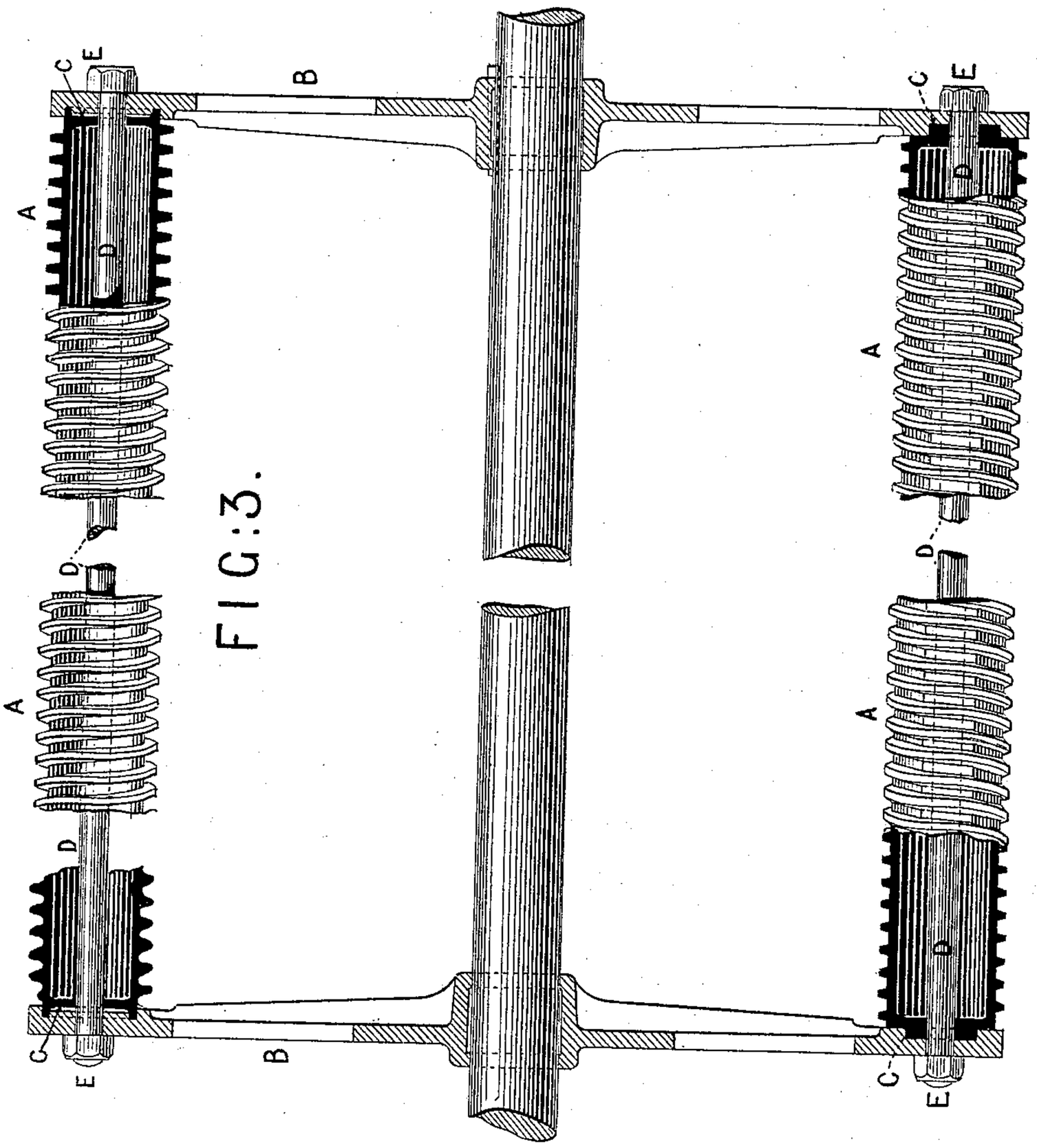

FIG. 3.

Witnesses

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UNITED STATES PATENT OFFICE.

CHARLES WOOLNOUGH, OF HENHAM, COUNTY OF SUFFOLK, ENGLAND.

THRASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 324,063, dated August 11, 1885.

Application filed February 24, 1885. (No model.) Patented in England December 19, 1884, No. 16,711.

To all whom it may concern:

Be it known that I, CHARLES WOOLNOUGH, a subject of the Queen of Great Britain, residing at Henham, in the county of Suffolk, England, engineer, have invented certain new and useful Improvements in Thrashing-Machines, of which the following is a specification.

The object of my invention is to construct beaters, concaves, and drums for thrashing-machines which are simple in construction, efficient in action, and most easy of adjustment.

Heretofore the beaters of thrashing-machines have generally been made of plates or bars of metal with grooves, channels, or serrations on their working-surface, and sometimes two of such plates have been put opposite to one another, or back to back, and these plates were adapted to being reversed for wear. Now, according to my invention, I make the beaters continuous all round on the working surface or surfaces. The base or inner diameter of the working-surfaces of these beaters may be of any approved shape or form in section, which would vary according to the shape of the working-surfaces. Thus the base may be circular or polygonal. Beaters constructed in this way are fitted into recesses in the drum-heads and concaves, whereby the strain is taken off the bolts which hold the sections together. These bolts extend from end to end of the drum or concave and are secured by nuts. When it is required to renew the working-surface of the beaters, the nuts are loosened and the beaters turned the required distance. The nuts are then tightened up and the machine is ready to work again. In this way the working-surfaces of the beater may be changed without removing the drum from the machine, which is of great importance where skilled labor is not available. These continuous beaters are also fitted to the concaves as well as to the drum.

The accompanying drawings illustrate the manner in which I carry my invention into effect.

Figure 1 is a perspective view of a beater-drum detached constructed according to my invention. Fig. 2 shows in half-end view and in half cross-section a beater-drum and a concave; and Fig. 3 is a view, partly in elevation and partly in longitudinal vertical section, of the beater-drum; and Fig. 4 is a cross-section of one frame of the concave and a partial longitudinal section of a beater connected therewith.

A is the continuous beater. At top in Figs. 2 and 3 the inner diameter of the working-surfaces is shown circular in section, and at the other end or bottom the inner diameter is shown polygonal. This continuous beater is preferably cast in one piece and hollow, as shown, having the working-surfaces on the circumference all round the same.

B B are the drum-heads. C C are the recesses in same. D D are the bolts extending through and from end to end of the beaters. E E are the nuts on the drum-head for tightening up the bolts and for securely holding the whole structure in position.

To renew the working-surface, loosen the nuts E. The beaters A A can then be turned so as to change the working-surface thereof when required, and on screwing up the nuts E E the bolts D D are tightened and the beaters A A again secured in position, and this can be easily done without removing the drum from the machine.

I have shown two drum-heads, but any number may be used, according to the length of the beater.

By reference to Fig. 4 it will be seen that the manner of connecting the beaters to the frames of the concaves is the same as that of connecting the beaters to the drum-heads.

A represents the beaters; B, the frame of the concave; C, the recess in the frame of the concave into which the end of the beater is received; D, the tie-bolt, and E the nut upon the tie-bolt D, and by which the parts are clamped and held to place.

I claim as my invention—

1. The combination, in a thrashing-machine, with the shaft and drum-heads B, formed with recesses C, of the hollow beater-cylinders A, having roughened or ribbed surfaces, and having their ends fitted into the recesses C, the bolts D passing through the

beater-cylinders and heads, and their nuts E for clamping and holding said beaters A between the drum-heads B, substantially as specified.

2. The combination, in a thrashing-machine, with the frames of the concaves formed with recesses C, of the hollow beater-cylinders A, having their ends fitted into recesses C, the bolts D passing through the beater-cylinders and heads, and their nuts E, substantially as specified.

CHARLES WOOLNOUGH.

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