F. E. SHAFER.

HULLING CYLINDER FOR CLOVER AND ALFALFA HULLERS.

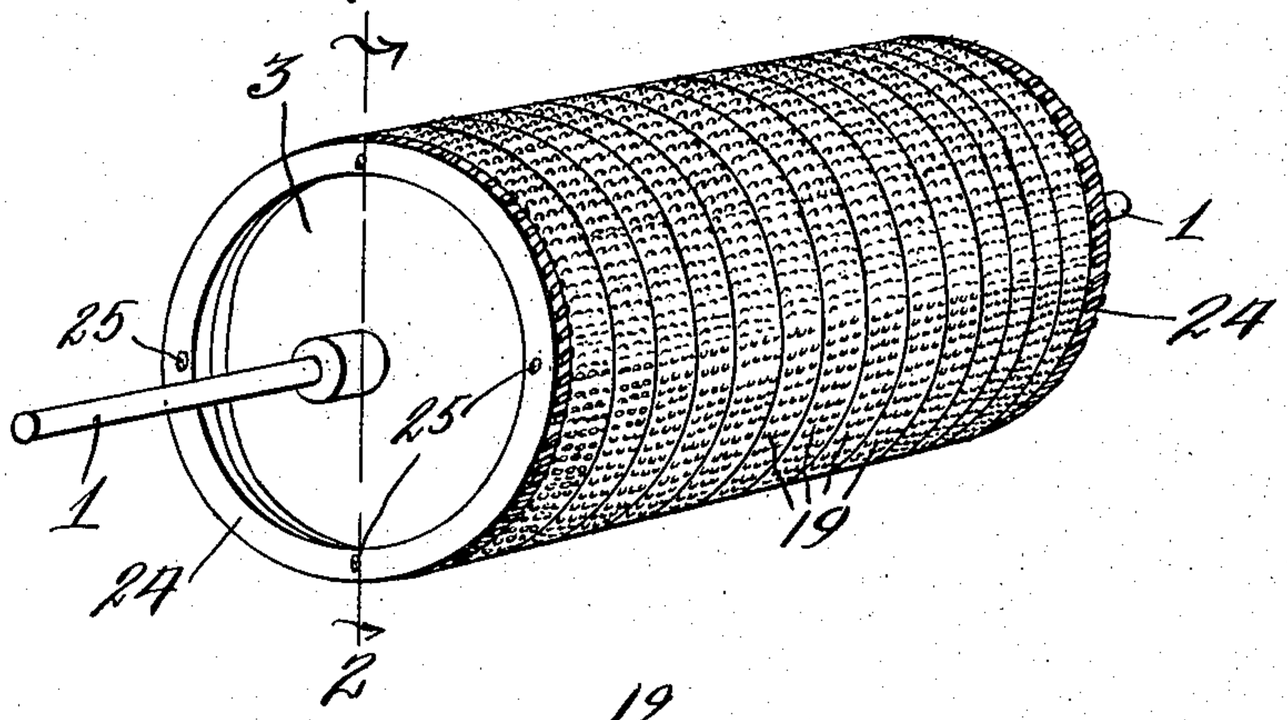
APPLICATION FILED MAR. 4, 1915.

1,166,549.

Patented Jan. 4, 1916.

2 SHEETS—SHEET 1.

Fig. 1.



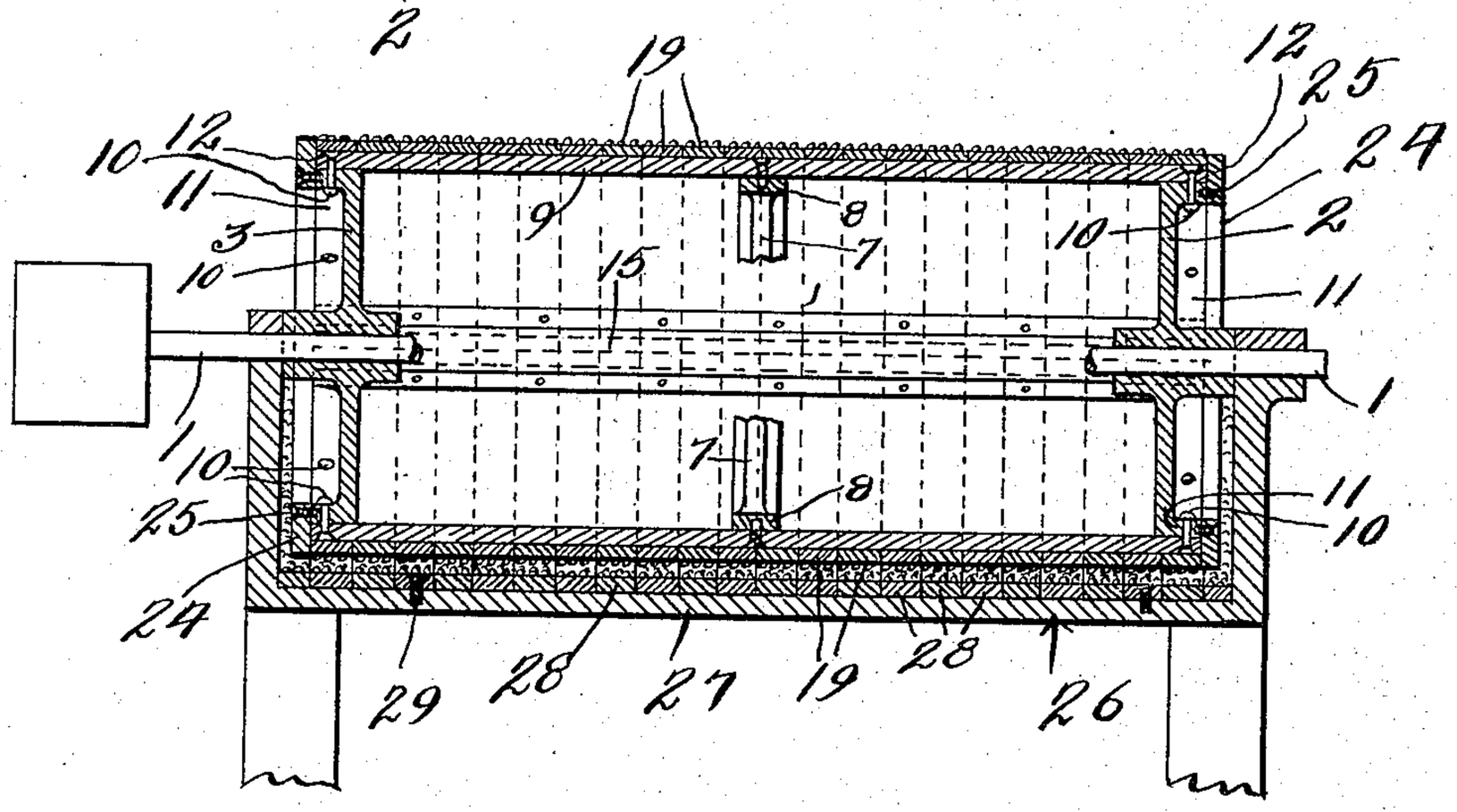


Fig. 2.

Witnesses
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2 SHEETS—SHEET 2.

Fig. 3.

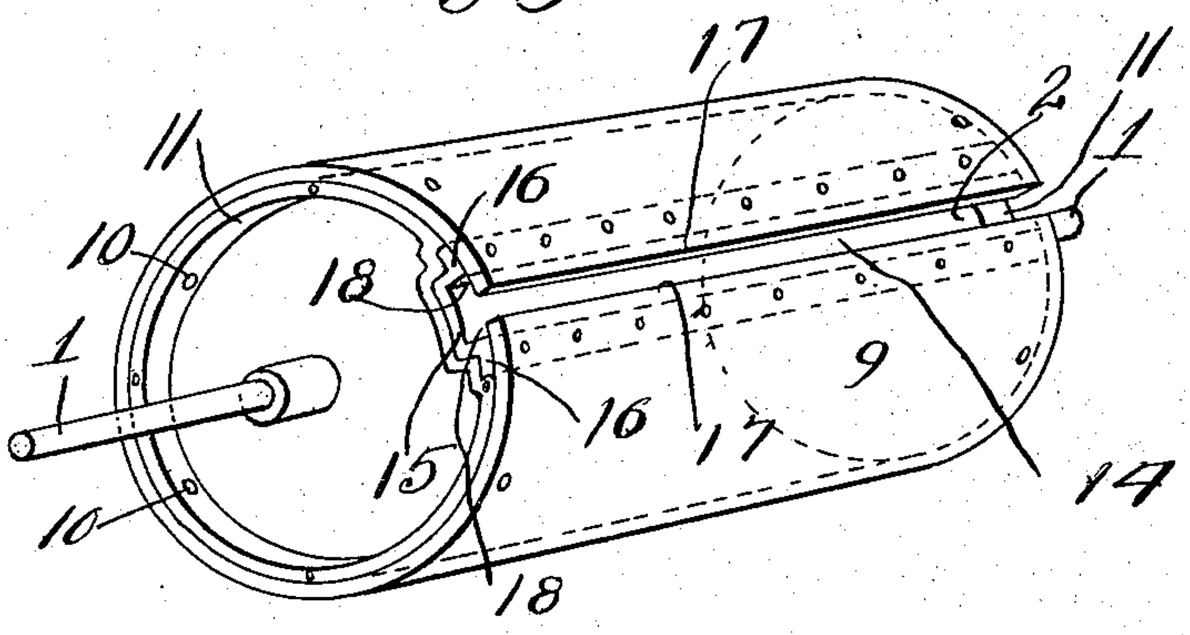
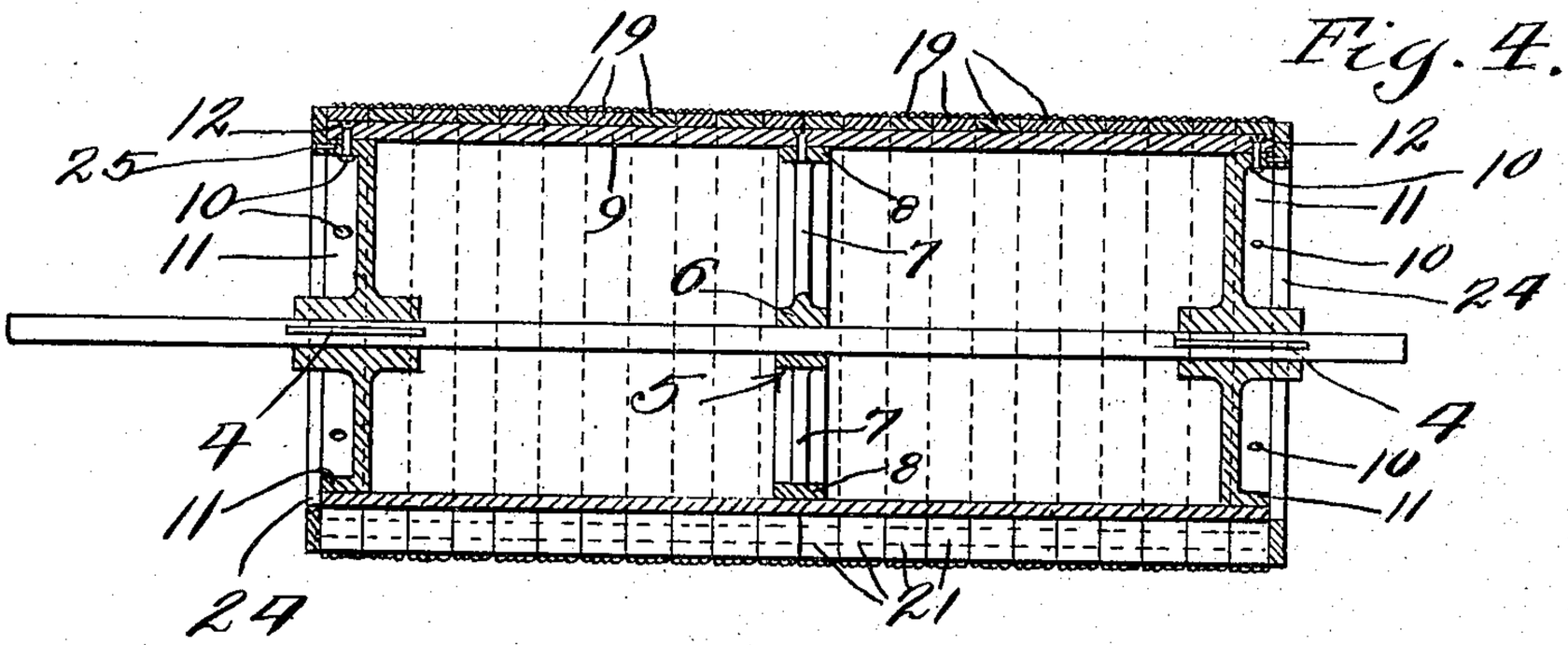


Fig. 4.



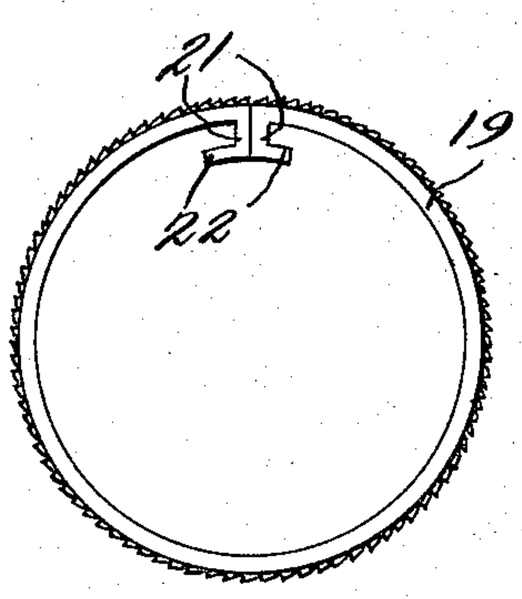


Fig. 5.

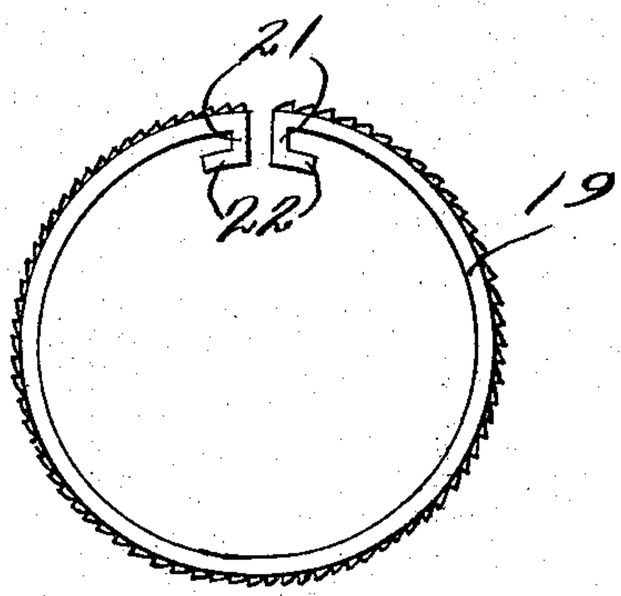


Fig. 6.

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UNITED STATES PATENT OFFICE.

FREDERICK E. SHAFER, OF IDAVILLE, INDIANA.

HULLING-CYLINDER FOR CLOVER AND ALFALFA HULLERS.

1,166,549. Specification of Letters Patent. Patented Jan. 4, 1916.

Application filed March 4, 1915. Serial No. 12,158.

To all whom it may concern:

Be it known that I, FREDERICK E. SHAFER, a citizen of the United States, residing at Idaville, in the county of White and State of Indiana, have invented a new and useful Hulling-Cylinder for Clover and Alfalfa Hullers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to an improved metal hulling cylinder designed for use in connection with clover and alfalfa hullers and the like.

One of the objects of the invention is the provision of a cylinder preferably constructed of sheared rolled steel, and where the adjacent edges of the steel plate are located an angular strap is bolted to the adjacent portion of said plate, thereby holding said adjacent edges separated, forming an opening or slot, in which the hulling rasp bands are arranged, to hold the bands in position.

Another feature of the invention is the provision of end cylinder rings to prevent endwise movement of the rasp band.

Another object of the invention is to construct the cylinder entirely from suitable metal, thereby dispensing with the employment of wood, screws and nails.

Another object of the invention is to provide a simple, efficient, practical, inexpensive and substantially indestructible hulling cylinder, which will only necessitate but a few moments to remove the old rasp bands, for the arrangement of new ones, and in no way requiring the use of nails and the like, whereas as in the old form or construction a multiplicity of nails must be driven, in order to renew the rasp bands.

Another object of the invention is to provide an improved cylinder having means to prevent the rasp bands from becoming loose, while the cylinder is in operation.

In practical fields the details of construction may necessitate alterations, falling within the scope of what is claimed.

In the drawings: Figure 1 is a view in perspective of the improved cylinder constructed in accordance with the invention. Fig. 2 is a longitudinal sectional view on line 2—2 of Fig. 1. Fig. 3 is a perspective view of the cylinder showing the rasp bands removed. Fig. 4 is a longitudinal sectional view, which view extends longitudinally through the recess 18, showing how the parts 21 and 22 are received in said recess. Fig. 5 is an enlarged detail view of one of the rasp bands. Fig. 6 is an enlarged detail view of one of the rasp bands similar to that shown in Fig. 5, showing the same with its ends partially sprung apart.

Referring more especially to the drawings, 1 designates a shaft, on which the cylinder heads 2 and 3 are keyed or feathered, as shown at 4. Also arranged on the shaft is a central spider member 5, comprising a hub 6 and radial arms 7 and the ring 8, which are secured to the casing 9 of the cylinder. The casing 9 of the cylinder is constructed of sheared rolled steel, the end edge portions of which are bolted or riveted as shown at 10 to the lateral flanges 11 of the cylinder head, said bolts or rivets are countersunken in the cylinder casing, as shown at 12. The sheared rolled steel plate which forms the cylinder wall is formed in a cylindrical contour on the cylinder heads with its adjacent edge portions separated, forming a slot or opening 14, there being a strap or plate 15 having angular longitudinal edge portions 16 bolted to the cylinder plate, so as to hold the adjacent edges spaced apart as shown. Moreover, the angular portions 16 are spaced or offset from the adjacent edge portions 17, to form the recesses 18. Where the plate or strap 15 is arranged the end cylinder heads and the ring 8 of the central spider are recessed, to receive the plate or strap 15. The rasping bands 19 which are constructed of single lengths of sheared rolled steel having outer rasping surfaces, are fitted snugly upon the cylinder, one closely adjacent the other, and are provided with angular ends 21 to be received in the slot or opening 14. The parts 22 of the angular ends 21 of each band are received in the recesses 18, said recesses being of sizes corresponding to the size of said parts 22, so as to closely receive said parts. The adjacent end portions 17 are separated only sufficient to form the slot or opening 14 of a size just sufficient to receive the thicknesses of the two angular ends 21 of said band, so as to hold the band securely thereon. It is to be noted that the bands are inserted or arranged on the cylinder endwise thereof, the angular ends 21 and the parts 22 entering the slot or opening 14 and the recesses 18. To prevent endwise movement of the bands, after they are arranged on the cylinder end

cylinder rings are provided, and these rings 24 are bolted to the end flanges 11 of the cylinder head, by means of tapered bolts 25. These rings 24 are of sufficient diameter that is, from opposite peripheral portions, in order to project beyond the cylinder wall proper, in order to form flanges as shown, to hold the rasping bands in place.

A cylinder constructed in accordance with the invention and provided with a rasping band is designed to coöperate with a suitable concave 26, which may be constructed of sheared rolled steel and shaped to form a concaved plate 27, to which the concaved rasping bands 28 are bolted, as shown at 29, said bolts being countersunken as shown. It has been found that by the use of this form of hulling cylinder together with the foregoing constructed concave, that the hulling of clover and alfalfa and the like may be accomplished more efficiently, and that the cylinder may be easily repaired and in considerably less time than heretofore, especially in renewing the rasping bands.

The invention having been set forth, what is claimed as new and useful is:—

A hulling cylinder comprising cylinder heads having laterally extending annular flanges, said flanges being constructed to form transverse channels being alined, said channels having adjoining recesses, an elongated strip being bent to form a longitudinally extending channel and having longitudinally extending flanges to seat in said recesses, said channeled strip engaging the channels of the flanges and connecting said heads, a sheet metal cylinder wall having its adjacent longitudinal edges spaced apart and partially overlying the channel in the strip, a plurality of rasping bands fitting the exterior of the cylinder wall and having angular adjacent ends extending between the longitudinal adjacent edges of the wall and engaging under the portions of the wall which overlie the channel of the strip, and means bolted to the cylinder heads to prevent endwise movement of the rasping band.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

FREDERICK E. SHAFER.

Witnesses:

EARL BURGETT,

ERLE COWGER.