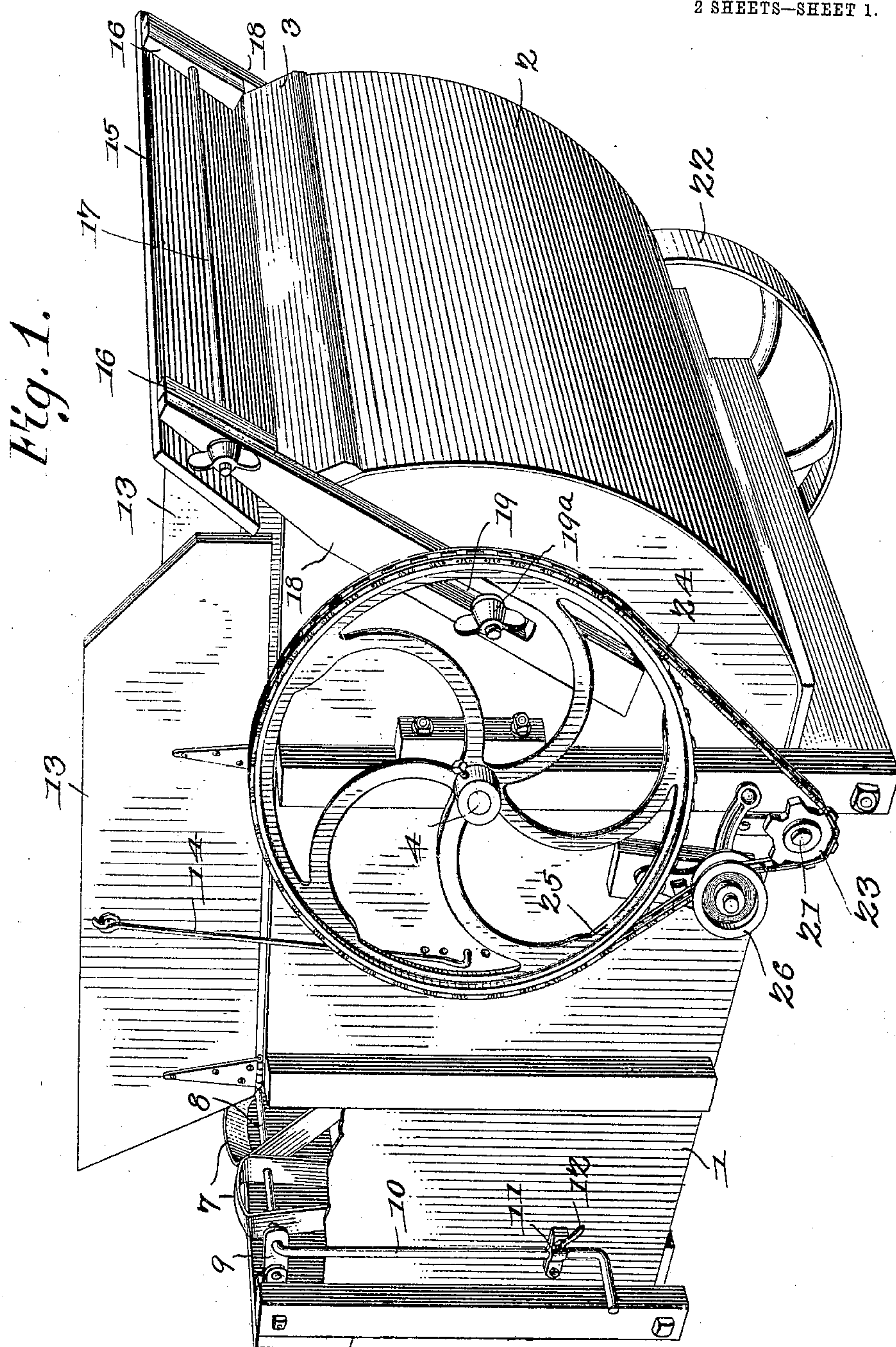


No. 810,937.

PATENTED JAN. 30, 1906.

H. GUDERIAN.
FEEDER FOR CLOVER HULLERS.
APPLICATION FILED DEC. 30, 1904.

2 SHEETS—SHEET 1.



Witnesses
E. J. Stewart
Wm. Bagger

Hugo Guderian, Inventor.
by *C. A. Snow & Co*
Attorneys

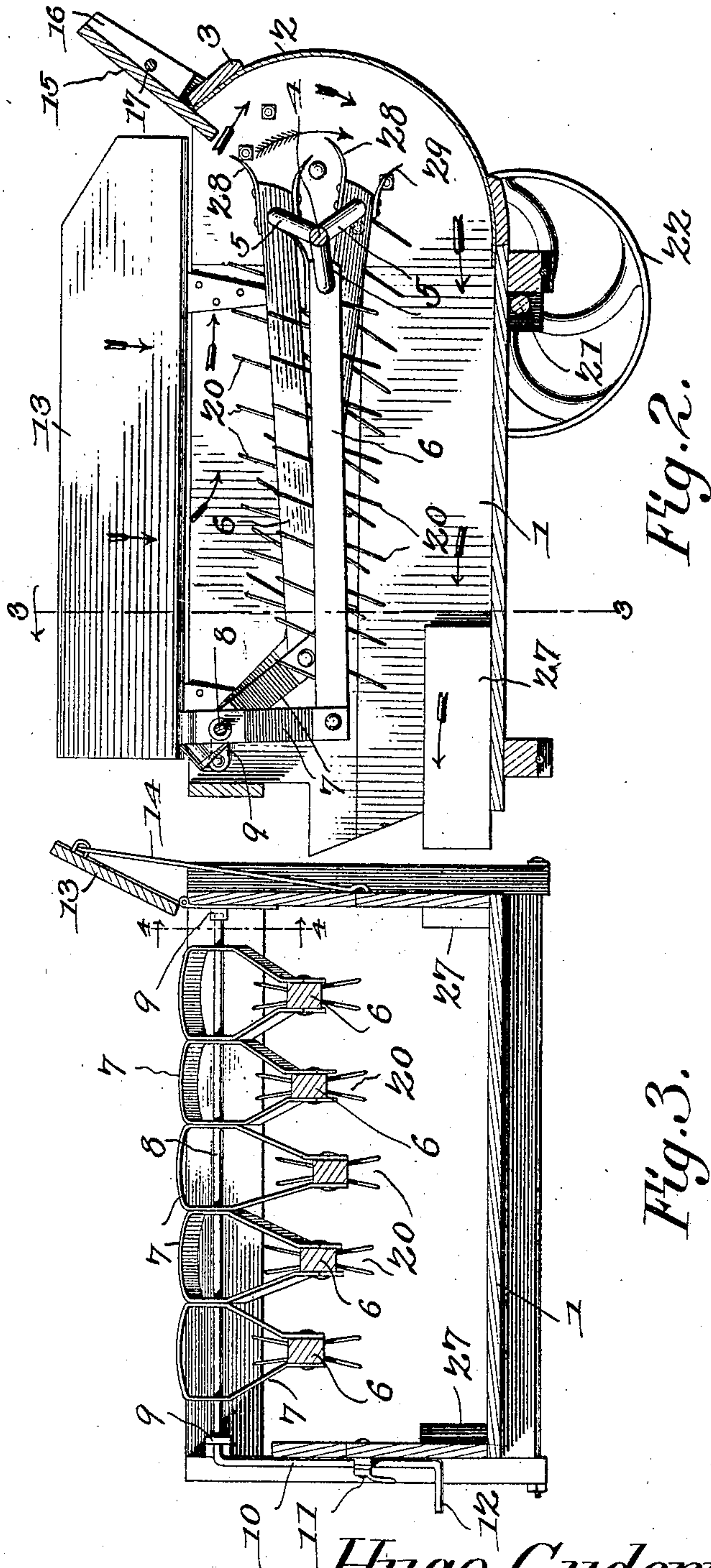
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by *C. A. Snow & Co.*
Attorneys

UNITED STATES PATENT OFFICE.

HUGO GUDERIAN, OF GOOD THUNDER, MINNESOTA.

FEEDER FOR CLOVER-HULLERS.

No. 810,937.

Specification of Letters Patent.

Patented Jan. 30, 1906.

Application filed December 30, 1904. Serial No. 238,997.

To all whom it may concern:

Be it known that I, HUGO GUDERIAN, a citizen of the United States, residing at Good Thunder, in the county of Blue Earth and State of Minnesota, have invented a new and useful Feeder for Clover-Hullers, of which the following is a specification.

This invention relates to feeders for clover-hullers, and it has among its objects to simplify and improve the construction and operation of this class of devices.

With these and other ends in view, which will readily appear as the nature of the invention is better understood, the same consists in the improved construction and novel arrangement and combination of parts, which will be hereinafter fully described, and particularly pointed out in the claims.

In the accompanying drawings has been illustrated a simple and preferred form of embodiment of the invention, it being, however, understood that no limitation is necessarily made to the precise structural details therein exhibited, but that the right is reserved to any changes, alterations, and modifications to which recourse may be had within the scope of the invention and without departing from the spirit or sacrificing the efficiency of the same.

In said drawings, Figure 1 is a perspective view of a device constructed in accordance with the principles of the invention. Fig. 2 is a longitudinal vertical sectional view. Fig. 3 is a vertical transverse sectional view taken on the line 3 3 in Fig. 2. Fig. 4 is a sectional detail view taken on the line 4 4 in Fig. 3.

Corresponding parts in the several figures are indicated by like characters of reference.

In carrying this invention into practical operation a casing 1 is provided, which is preferably rectangular in cross-section and which is provided at one end with a curved closure 2, the latter being preferably of sheet metal and reinforced at its upper edge by a transverse brace 3.

The sides of the casing are provided with bearings for a shaft 4, which is concentric with the curved end piece 2, and upon said shaft are formed a plurality of cranks 5, diverging or radiating in several directions. These cranks support a plurality of feed-bars 6, which are mounted pivotally upon said cranks and the opposite or rear ends of which are supported pivotally by links consisting of yokes 7, which are pivotally mounted upon a cross-bar or shaft 8. Said shaft is supported

by means of links 9 9, connected pivotally with the inner sides of the casing, and one end of said shaft has a depending arm 10, secured adjustably in a clip or clamping device 11 upon the outer side of the casing and having a handle 12, by means of which it may be conveniently manipulated.

The sides of the casing are provided at their upper edges with lids 13, which may, but which do not necessarily, extend the entire length of the casing and which are provided with hook members 14, whereby they may be connected with the sides of the casing below their upper edges, and thus be sustained in an open position, as shown in the several figures of the drawings, so as to form upward extension of the sides of the casing for the reception of the material which is to be fed.

In the front end of the casing is fitted a feed-board or gage-board 15, provided with cleats 16, which are perforated for the passage of a bolt or rod 17, extending through arms 18, which may be clamped against the ends of the board by tightening said bolts. The arms 18 have slots 19 for the passage of binding-screws 19^a, which engage the side of the casing with which the arms carrying the gage-board are thus adjustably connected. This gage-board may be adjusted to and secured at various distances from the crank-shaft 4, and consequently from the front ends of the feed-bars 6, and it may be tilted upon the bolt or rod 17 to various inclined positions. Each of said feed-bars is provided with a plurality of spikes or barbs 20, which are extended upwardly and forwardly from the upper sides and downwardly and rearwardly from the lower sides of said feed-bars. In Fig. 3 of the drawings said spikes have been shown as being outwardly divergent from the bars with which they are connected in order that the material to be fed may be more effectively acted upon; but it is to be understood that other well-known feeding means, such as serrated sheet-metal plates, commonly known as "fish-backs," may, when desired, be substituted for the spikes herein shown.

Bearings are provided for a transverse shaft 21, carrying at one end a band-wheel 22 or other suitable means for receiving motion from the source of power. The opposite end of said shaft carries a sprocket-pinion 23, which is connected by a chain 24 with a sprocket-wheel 25 upon the crank-shaft 4,

which is thereby driven. A chain-tightening pulley 26, of ordinary construction, is also provided.

The casing, which is open in the lower part 5 of its rear or discharge end, is provided with interiorly-disposed bracing-blocks 27, which may also be utilized as connecting means for supporting the device in operative position upon the furrow to which material is to be 10 fed.

In operation the material which is to be operated upon is disposed upon the upper sides of the feed-bars 6, to which a reciprocatory and oscillatory movement is imparted 15 by the crank-shaft, which is rotated in the direction shown by the arrow in Fig. 2 of the drawings. The front ends of the feed-bars are provided upon their upper and under sides with hook members 28 29, which are 20 curved, respectively, upwardly and downwardly in the direction of the gage-board 17. The material will be fed by the spikes upon the upper sides of the feed-bars in a forward direction and will be carried by the hook 25 members 28 under the lower edge of the feed-board and downwardly along the curved end member 2, which, as described, is concentric with the shaft 4. When the material reaches the bottom of the casing, it will be operated 30 upon and fed in a rearward direction by the spikes or feed members upon the under sides of the feed-bars and will pass through the opening in the rear end of the casing to the huller. It will thus be seen that the material 35 will be compelled to pass entirely around the front ends of the feed-bars and the entire length of the under sides of said feed-bars before it is delivered at the rear end of the casing. Consequently said material, which is 40 usually in a more or less tangled and matted condition, will be torn asunder and will be presented to the huller in excellent condition to be acted upon by the threshing-cylinder and concave. Moreover, the quantity of 45 material fed may be quickly and accurately regulated by simply adjusting the gage-board 17. By moving the latter in the direction of the crank-shaft the throat or passage for material from the upper sides of the 50 feed-bars will be diminished and a less quantity will consequently be fed, thus avoiding any possibility of slugging the huller. When the material to be fed is in good condition, the feed-board or gage-board may be re- 55 tracted and the feed be properly regulated.

As will be readily seen, this improved device is extremely simple in construction, and it has been practically proven to be very efficient in operation. The device need occupy 60 but little space, inasmuch as, owing to the fact that all material is compelled to pass through the entire length of the casing, comparatively short feed-bars may be employed with excellent results.

65 The position of the rear ends of the feed-

bars may be very quickly and easily adjusted by simply raising and lowering the supporting-shaft 8, which may be accomplished by properly adjusting the depending arm 10 of said supporting-shaft in the clip or clamping 70 device 11. The supporting-shaft 8 will be sufficiently supported by said clamping device in connection with the links 9, inasmuch as no great rigidity is necessary or desirable.

Having thus described the invention, 75 what is claimed is—

1. In a feeder, a plurality of feed-bars supported for reciprocation and oscillation, feed members upon the upper sides of said bars for feeding material in one direction over the 80 ends of the bars, feed members upon the under sides of said bars for feeding material in the opposite direction, and means, including a curved member, forming a closure at the front end of the casing and constituting 85 guiding and supporting means for the material operated upon.

2. In a feeder, a casing having a curved end piece, a shaft concentric with said end piece and having a plurality of cranks, feed- 90 bars supported pivotally upon said cranks, links pivotally supporting the opposite ends of the feed-bars, feed members connected with the upper sides of the feed-bars for feeding material in the direction of the curved 95 end piece, and means connected with the under sides of the feed-bar for feeding material in the opposite direction.

3. In a feeder, a casing open at one end and having a curved end piece at the oppo- 100 site end, a shaft approximately concentric with said curved end piece and having a plurality of cranks, feed-bars connected pivotally with said cranks, supporting means for the opposite ends of said feed-bars, feed 105 members upon the upper sides of the feed-bars for feeding material in the direction of the curved end piece, feed members upon the under sides of the feed-bars for feeding material in the opposite direction, and a gage- 110 board supported adjustably with relation to the crank-supported ends of the feed-bars.

4. In a device of the class described, a casing, feed members movably supported in said casing for the reception and support of the 115 material to be fed and for conveying said material in one direction over the ends of said feed members, a pair of longitudinally-slotted arms connected adjustably with and extending above the casing, and a gage-board 120 supported pivotally between said arms and adjustable thereby with relation to the ends of the feed members over which the material is fed.

5. In a feeder, a casing, a plurality of feed 125 members supported for reciprocation and oscillation and constituting supporting means for the material to be operated upon, means connected with said feed members for feeding material in one direction over the ends of 130

said feed members, a gate or gage board supported by the casing and adjustable with relation to the ends of the feed members over which material is fed, and means connected
5 with the under sides of the feed members for engaging the material fed over the ends of the latter and for moving said material over the bottom of the casing in the direction of the discharge end of the latter.

10 6. In a feeder, a casing open at one end and having a curved end piece at the opposite end, a shaft approximately concentric with said curved end piece and having a plurality of cranks, feed-bars connected pivot-

ally with said cranks, hangers constituting 15 supporting means for the opposite ends of said feed-bars, and curved hook members upon said feed-bars extended upwardly and downwardly in the direction of the curved end piece of the casing.

20 In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

HUGO GUDERIAN.

Witnesses:

EDWARD GUDERIAN,
F. H. MORLOCK.