

No. 640,523.

Patented Jan. 2, 1900.

W. M. BAKER.
HARROW.

(Application filed July 15, 1899.)

(No Model.)

FIG. 1.

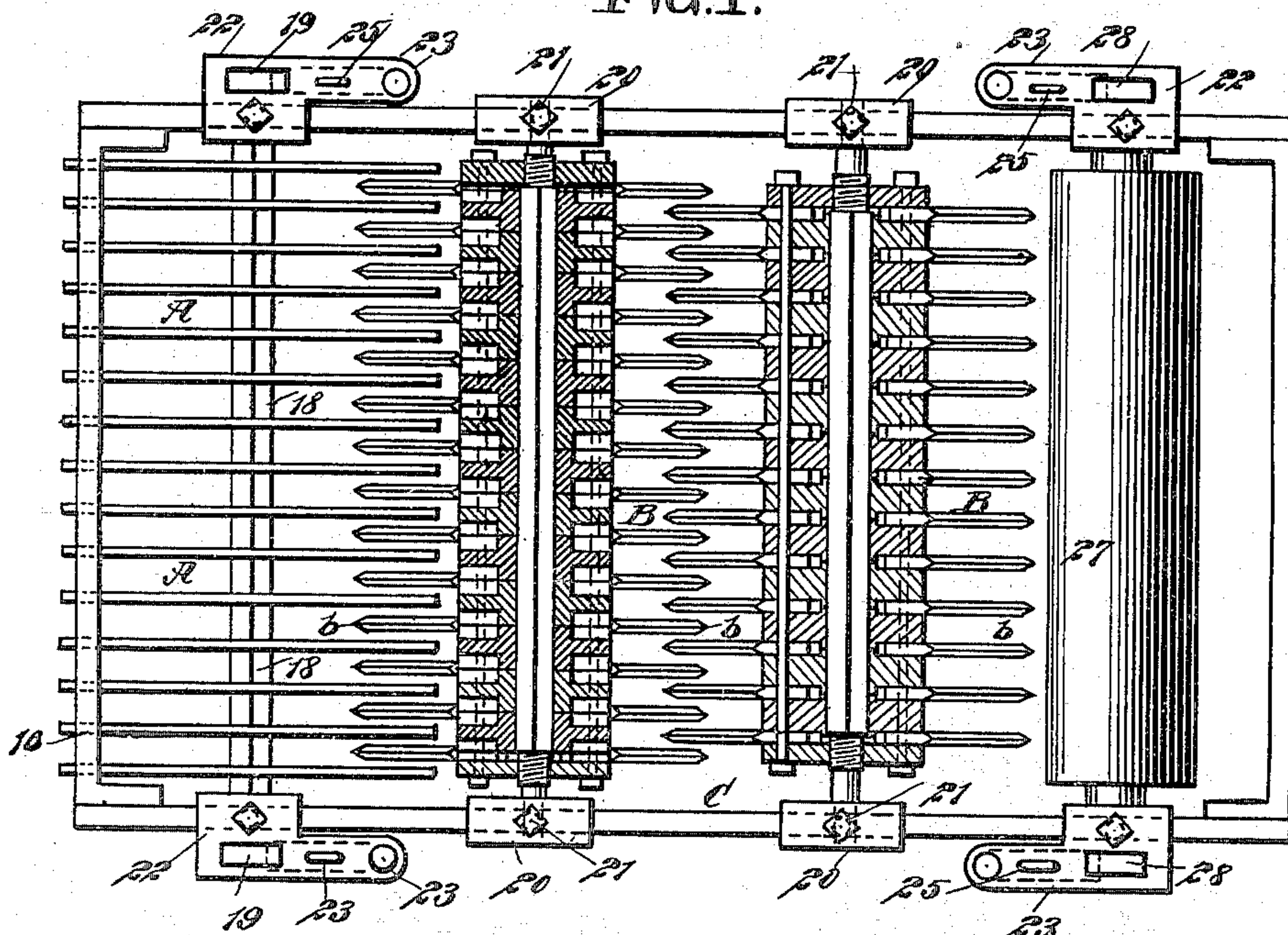


FIG. 2.

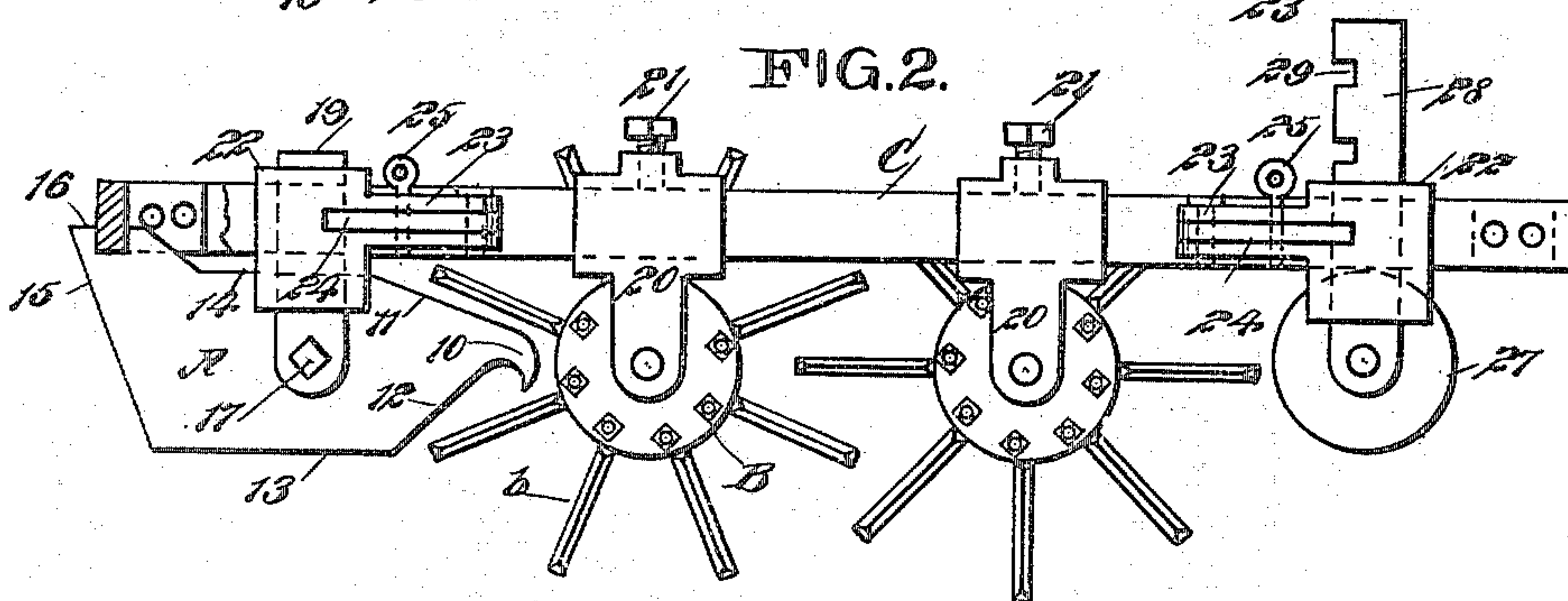
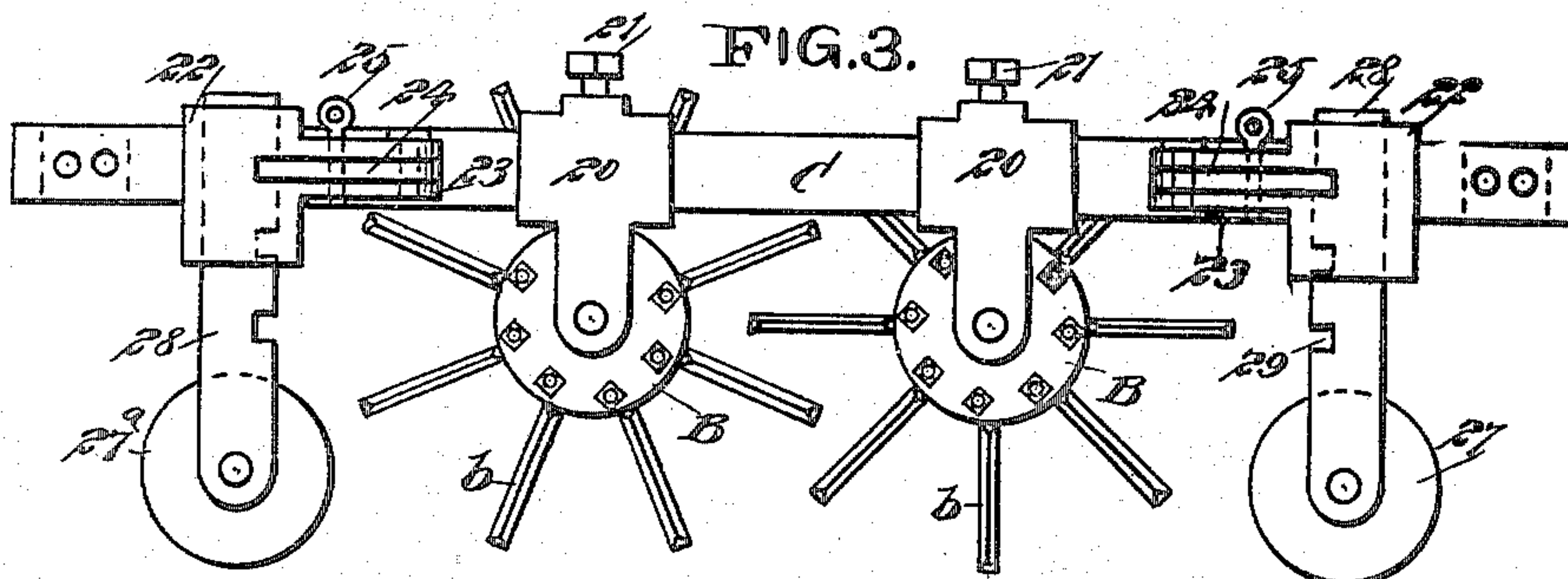


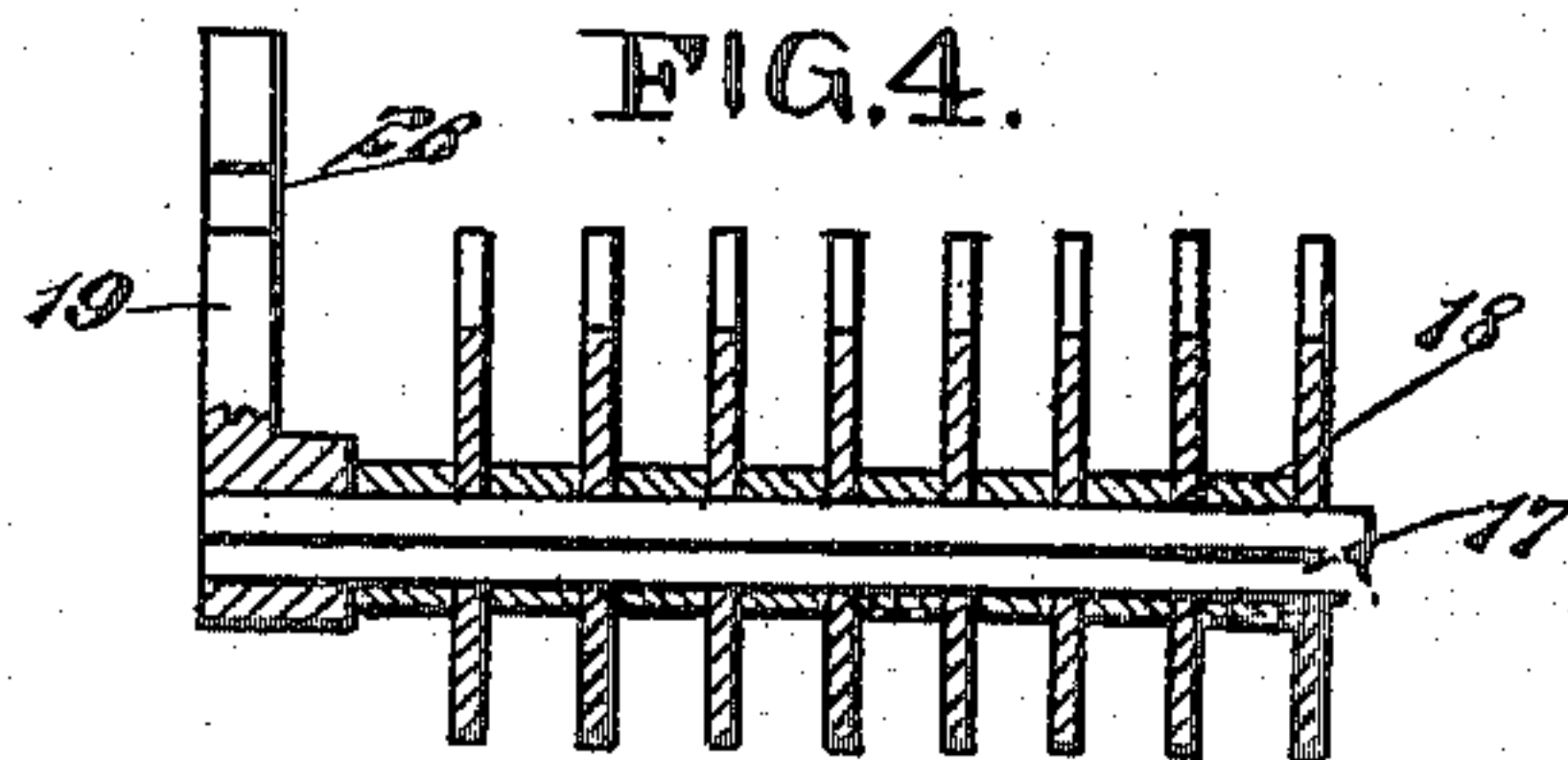
FIG. 3.




WITNESSES:

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FIG. 4.



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UNITED STATES PATENT OFFICE.

WILLIAM M. BAKER, OF FORTVILLE, INDIANA, ASSIGNOR OF ONE-HALF TO
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HARROW.

SPECIFICATION forming part of Letters Patent No. 640,523, dated January 2, 1900.

Application filed July 15, 1899. Serial No. 723,902. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM M. BAKER, of Fortville, in the county of Hancock and State of Indiana, have invented a new and Improved
5 Harrow, of which the following is a full, clear, and exact description.

The object of my invention is to so improve upon the construction of the harrow for which Letters Patent were granted to me April 25,
10 1899, No. 623,759, that the machine can be quickly adapted for work in trashy ground.

Another object of the invention is to provide a simple device which will not only remove trash from the toothed roller of a harrow,
15 but will effectually conduct the trash to the rear of the machine, and, furthermore, to so construct the cleaning device that it will also pulverize the ground taken up by the teeth of the roller.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claims.

Reference is to be had to the accompanying
25 drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a partial plan view and horizontal section of a machine to which the improvement is applied. Fig. 2 is a side elevation of
30 a machine with the improvement applied thereto, a part of the rear portion of the frame being broken away. Fig. 3 is a side elevation of a machine to which the improvement is particularly adapted, illustrating the machine as
35 now used; and Fig. 4 is a longitudinal vertical section through a series of the cleaners and a portion of the devices employed for supporting the cleaners.

The improved device consists of a blade A,
40 made of steel or other stiff sheet material. At the front central portion of the blade a downwardly-curved hook or bill 10 is formed, and the upper part of the front portion 11 of
45 the blade is curved upwardly and rearwardly from the top of said hook or bill, while the lower front portion 12 of the blade is inclined downwardly to meet a lower straight edge 13, while the upper inclined edge 11 meets an
50 upper straight edge 14. A projection 15 is formed at the upper rear corner of the blade,

and a notch 16 is made in the upper edge of this projection adapted to receive the rear beam of a harrow-frame or the equivalent of the said beam.

The blades A are arranged in series at suitable distances apart upon an angular shaft 17, as shown in Figs. 1 and 4, being spaced
55 by washers 18, and each blade has an opening at or near its center, through which the said shaft 17 is passed. The ends of the shaft 17 are rigidly held in standards 19, adapted
60 for attachment to the frame of the harrow, the blades being below the under surface of the frame.

The blades A are so grouped that their hooks or bills 10 will be intercurrent with teeth b, radiating from a drum or roller B, as
65 shown in Figs. 1 and 2. These blades are to be substituted for a plain roller when the harrow is to be used in trashy ground, and the action of the blades is such that as the toothed
70 rollers, cylinders, or drums revolve the hook ends of the blades catch the refuse material, and the blades being rigid deliver such material at the rear of the harrow. The said
75 bills or hooks likewise have the effect of pulverizing the soil.

In the form of the machine illustrated the frame C is provided with hangers 20, held to
80 slide on the side bars, being secured in adjusted position by set-screws 21, and said hangers journal the trunnions of the cylinders, drums, or rollers B. A sleeve 22 is likewise located near each end of each side bar
85 of the frame, being adjustable thereon and held in position by set-screws or their equivalents, and each sleeve 22 is provided with a lateral extension 23, slotted to receive a pivoted latch 24, the free end of the latch enter-
90 ing the body portion of the sleeve, and the latches are held in locked position by means of pins 25. The standards 19 are provided with notches 26 therein, and these standards
95 are made to enter the rear sleeves 22 from the bottom, and the latches carried by said sleeves are adapted to enter the notches 26 in the standards. Thus the standards may be
100 adjuised and locked in adjusted position. The forward sleeves 22 receive standards 28, in which a plain roller 27 is journaled, and these forward standards are likewise provided

with notches 29, into which the forward latches 24 enter.

As above stated, the improved cleaning device is adapted as a substitute for the rear roller 27^a, usually employed in machines of the above type, as is shown in Fig. 3, which rear roller is provided with standards 28, capable of sliding in the rear sleeves 22.

The downward and rearward inclination of the forward edges 12 of the blades serve to direct the trash to the rear, while the upward and rearward inclined edges 11 of the blades serve to cause any trash that might be carried up between adjacent hooks or bills to pass downward or over the hooks or bills.

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

1. In a harrow, a cleaner consisting of a blade provided with a downwardly-curved hook or bill at one end, for the purpose described.

2. A cleaning device for harrow-teeth, con-

sisting of a blade provided with a downwardly-curved bill or hook at its forward end, the top and bottom front portions of the blade being oppositely inclined from said hook or bill, and means for supporting said blade, for the purpose set forth.

3. A toothed roller or cylinder, and a series of blades having hooked forward ends arranged intercurrent with the teeth of the said roller or cylinder, for the purpose set forth.

4. The combination, with a frame and a cylinder or roller provided with circularly-arranged rows of teeth, of a series of horizontal blades provided with downwardly-curved hooks or bills at their forward ends, arranged intercurrent with the rows of teeth on the drum or cylinder, and means for supporting said blades from the said frame, as and for the purpose set forth.

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Witnesses:

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ARDEN H. THOMAS.