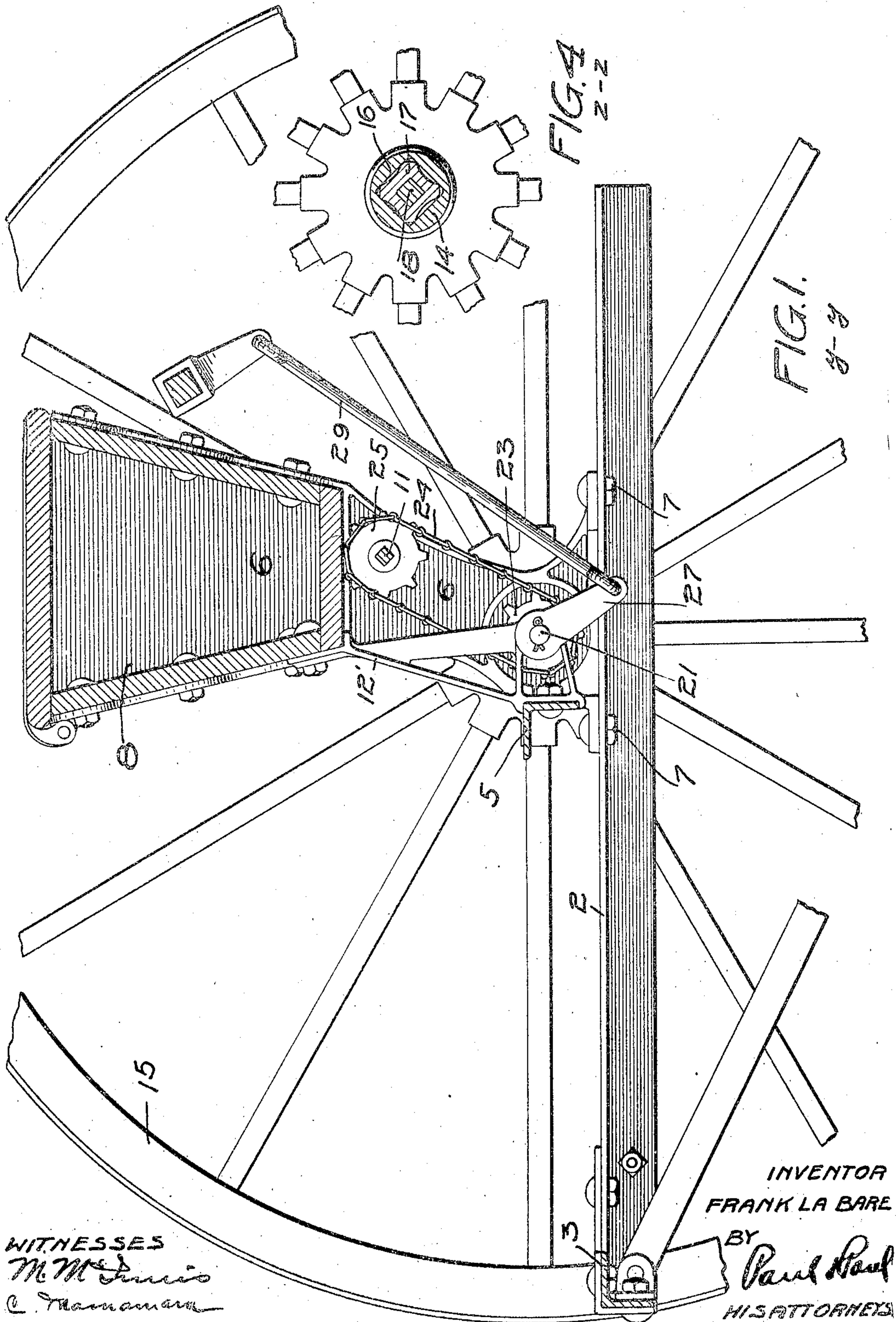


No. 827,694.

PATENTED JULY 31, 1906.

F. LA BARE.  
SEEDER AND DRILL.  
APPLICATION FILED JULY 6, 1905.

2 SHEETS—SHEET 1.



WITNESSES  
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2 SHEETS—SHEET 2.

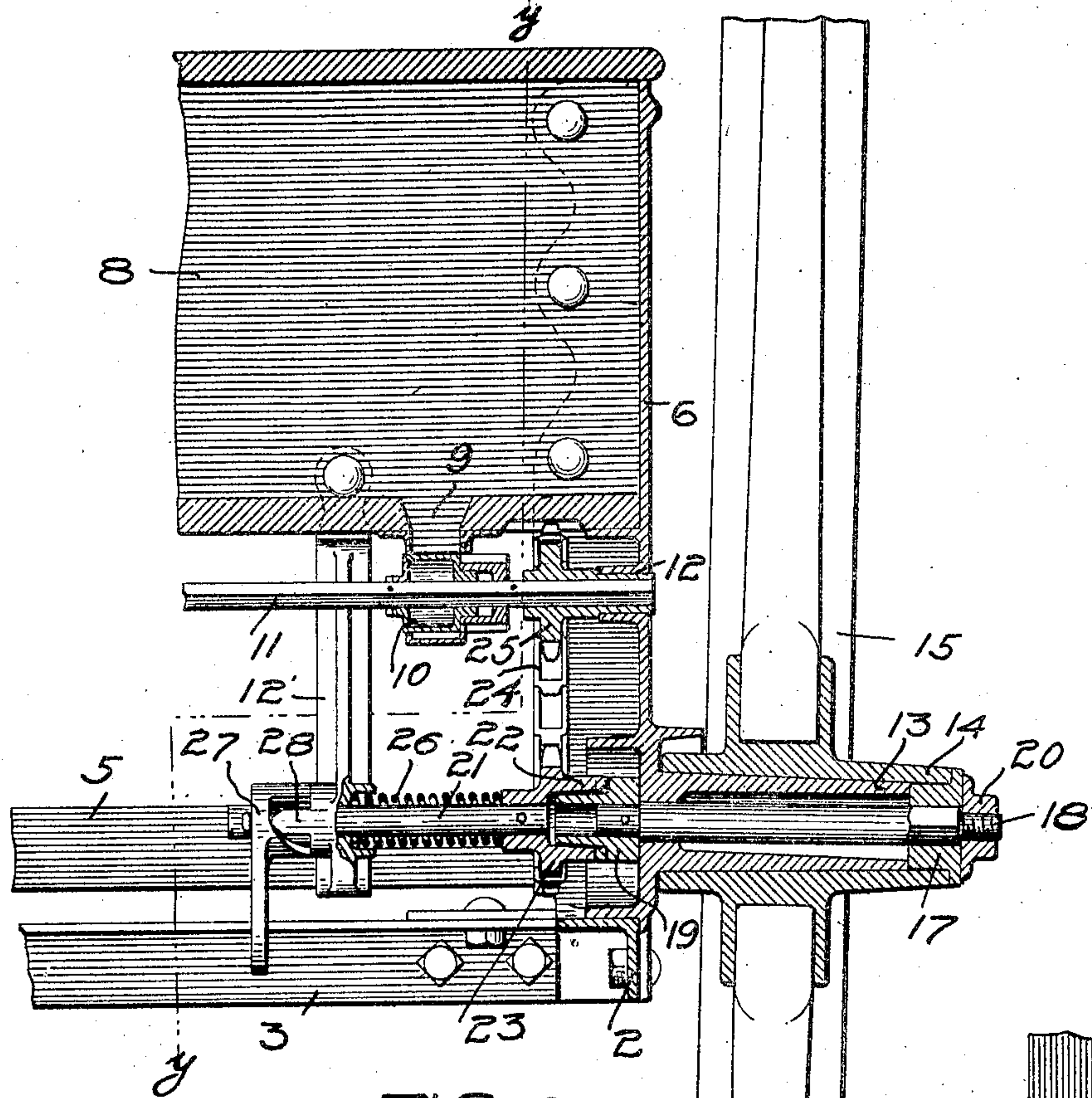


FIG. 2.

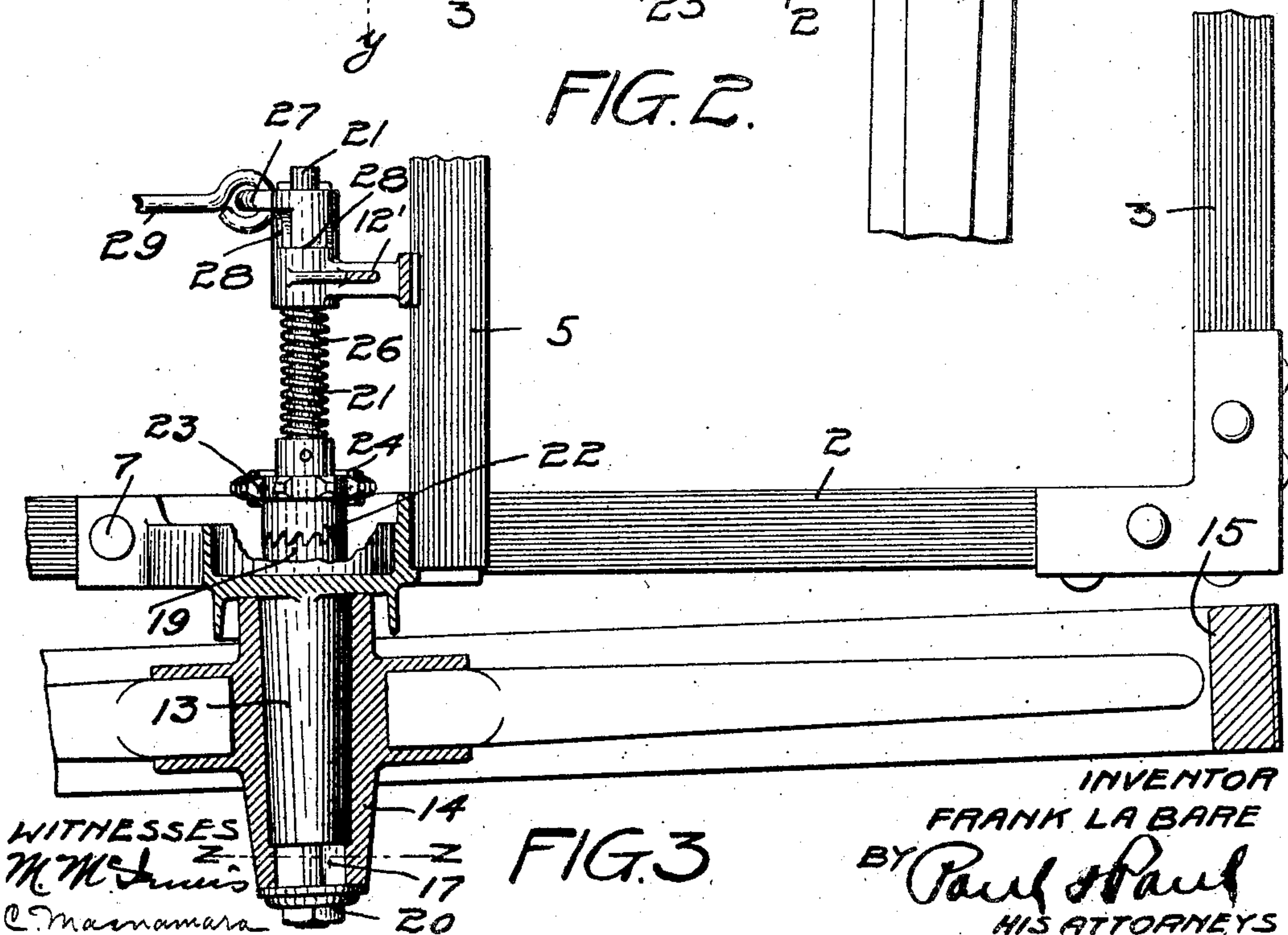


FIG. 3

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# UNITED STATES PATENT OFFICE.

FRANK LA BARE, OF OWATONNA, MINNESOTA, ASSIGNOR TO OWATONNA MANUFACTURING CO., OF OWATONNA, MINNESOTA, A CORPORATION OF MINNESOTA.

## SEEDER AND DRILL.

No. 827,694.

Specification of Letters Patent.

Patented July 31, 1908.

Application filed July 6, 1905. Serial No. 268,322.

*To all whom it may concern:*

Be it known that I, FRANK LA BARE, of Owatonna, Steele county, Minnesota, have invented certain new and useful Improvements in Seeders and Drills, of which the following is a specification.

My invention relates to seeders and drills, and particularly to the manner of mounting the wheel-spindles thereon.

The object of my invention is to provide a seeder and drill of light but strong and durable construction and of comparatively light draft.

The invention consists generally in providing a rigid frame whereon the seed-hopper is supported and mounting the wheel-spindles rigidly on said frame between it and the hopper.

Further, the invention consists in the combination with a rigid frame supporting the seed-hopper and the wheel-spindles bolted to said frame and tilted forward slightly to provide a forward gather or draw to the wheels.

Further, the invention consists in various constructions and combinations, all as hereinafter described, and particularly pointed out in the claims.

In the accompanying drawings, forming part of this specification, Figure 1 is a transverse vertical section through the frame of a seeder with my invention applied thereto, taken substantially on the line *y y* of Fig. 2. Fig. 2 is a vertical detail sectional view illustrating the position of the wheel-spindle and hub with respect to the hopper. Fig. 3 is a horizontal sectional view showing in detail the forward tilt of the wheel-spindle, and Fig. 4 is a sectional view on the line *z z* of Fig. 3.

In the drawings, 2 represents one side of the seeder-frame connected with the opposite side by a forward cross-bar 3 and an intermediate bar 5, said parts being all composed, preferably, of angle-bar iron on account of its strength and rigidity as compared with its weight.

6 is a standard bolted at 7 to the side of the frame and extending vertically above said frame and supporting the hopper 8 at or near its upper end. This hopper is provided with the usual discharge-openings 9, (a series of which extend across the machine,) leading to feed-wheels 10, mounted on a shaft 11, which has a bearing 12 in the standard 6 and is simi-

larly supported at the opposite side of the machine. A bracket 12' connects said hopper and the bar 5. Near the lower end of the standard 6 above the frame a wheel-spindle 13 is provided. This spindle is preferably formed integral with the standard 6, is tapered toward its outer end; and, as shown clearly in Fig. 3, is tilted forward slightly, so that one side is in a plane parallel with the cross-bars of the frame. A similar construction is provided at the other side of the machine. The hub 14 of the wheel 15 fits on said spindle, and the forward inclination of the spindle causes the wheel to draw in slightly or gather in front of the axle and lighten the draft, whereas in machines of this character the wheels usually have a tendency to swing out in front of the axle, becoming more marked the longer the machine is used until finally the spread or outward swing will be so great as to increase materially the draft of the machine. This difficulty is obviated by mounting the spindle as described. I prefer also to provide a slight downward dip or inclination to the spindle, as shown in Fig. 2, so that the distance between the bases of the wheels will be less than at their tops. This will have the effect of drawing in the wheels and preventing them from spreading and increasing the draft of the machine. The outer end of the wheel-hub has a square socket 16 to receive a correspondingly-shaped block 17, fitting within said socket and on the squared end of a rod 18, which extends through the spindle and the standard 6 and is provided with a clutch member 19. A nut 20 fits the threaded outer end of the rod 18 and locks the parts together. A rod 21 carries a clutch member 22, having a sprocket 23, driven from the rod 18 and connected through a belt 24 with a gear 25. A spring 26 normally holds the clutch 22 in engagement with the clutch member 19. A cam-lever 27 is mounted on the rod 21 and engages a lug 28 to put the spring 26 under compression and separate the parts of the clutch. This lever 27 is controlled by the operator through a link mechanism 29.

The hopper being supported on the standards above the frame and wheel-spindles is relieved entirely of all strain and can be made of comparatively light-weight material without impairing the strength or rigidity of the machine. Furthermore, the placing of



the wheel-spindles above the frame and between it and the hopper allows the use of larger wheels without raising the draft-line.

I claim as my invention—

5 1. The combination, in a drill or seeder, with a frame, of standards secured thereon, a hopper supported at each end in said standards, and wheel-spindles carried by said standards between said frame and hopper, and tilted forward slightly, whereby a forward gather or draw will be given to the wheels, for the purpose specified.

15 2. The combination, in a seeder or drill, with a frame composed of angle-bar iron, of standards mounted on each end of said frame and projecting upwardly therefrom, a seed-hopper having its ends supported by said standards, and wheel-spindles formed integrally with said standards, and arranged between said frame and hopper, and tilted forward, whereby a forward gather or draw will be given to the wheels, substantially as described.

25 3. The combination, in a seeder or drill, with a frame composed of angle-bar iron side rails 2, and cross-bars 3 and 5, of standards 6 secured to said side rails near said cross-bar 5, and projecting upwardly therefrom, a hopper having its ends supported by said standards, brackets 12' connecting said cross-bar 5 and said seed-hopper, and wheel-spindles formed integrally with said standards and arranged between said side rails and said hopper, substantially as described.

35 4. The combination, in a seeder or drill, with a frame, of standards secured on said frame at each side thereof and projecting upwardly therefrom, a seed-hopper supported

upon, and having its ends formed by, said standards, and wheel-spindles projecting outwardly from said standards above said frame and below the bottom of said hopper, substantially as described. 40

5. The combination, in a seeder or drill, with a frame, composed of angle-bar iron, of standards secured to each side of said frame and projecting upwardly therefrom, a seed-hopper, supported at its ends by said standards and provided with a series of discharge-openings, a shaft mounted in said standards below said hopper, and provided with a feed-wheel for each of said openings, wheel-spindles projecting outwardly from said standards above said frame and below said hopper, suitable wheels mounted on said spindles, and means for operating the shaft carrying said feed-wheels. 45 50 55

6. The combination, in a seeder or drill, with a frame, of standards secured thereon at each side and projecting upwardly therefrom, a seed-hopper, supported at its ends by said standards and provided with a series of feed-openings, a shaft mounted in said standards below said hopper and provided with a feed-wheel for each of said feed-openings, wheel-spindles projecting outwardly from said standards, wheels mounted on said spindles, and driving means connecting one of said wheels with the shaft carrying said feed-wheels, substantially as described. 60 65 70

In witness whereof I have hereunto set my hand this 30th day of June, 1905.

FRANK LA BARE

Witnesses:

A. C. PAUL,  
C. MACNAMARA.