Oct. 16, 1928. 1,687,516

B. ROLLMAN

PRESS

Original Filed Nov. 16, 1925 4 Sheets-Sheet 1

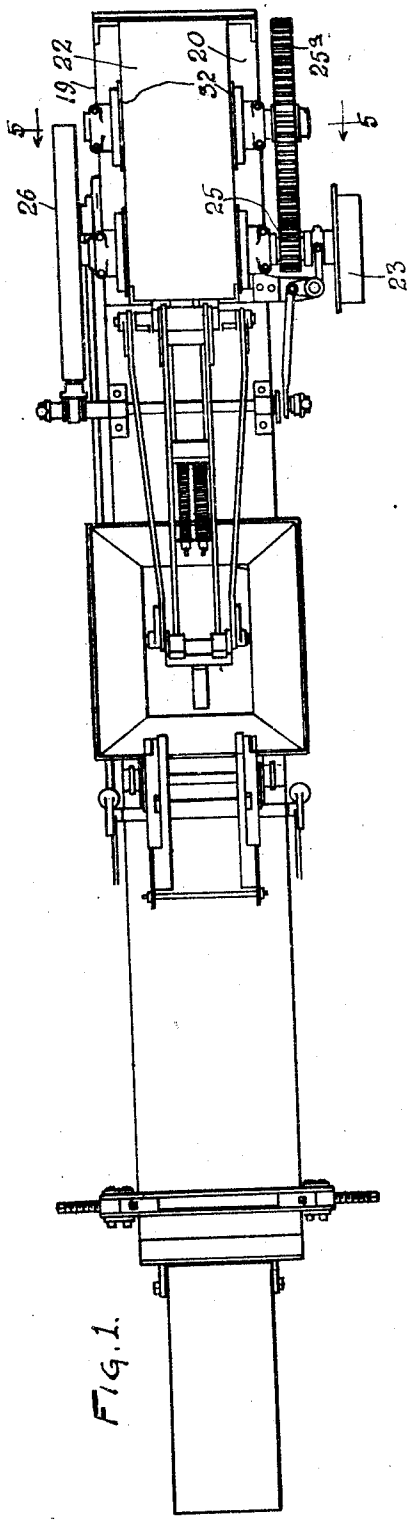


FIG. 1.

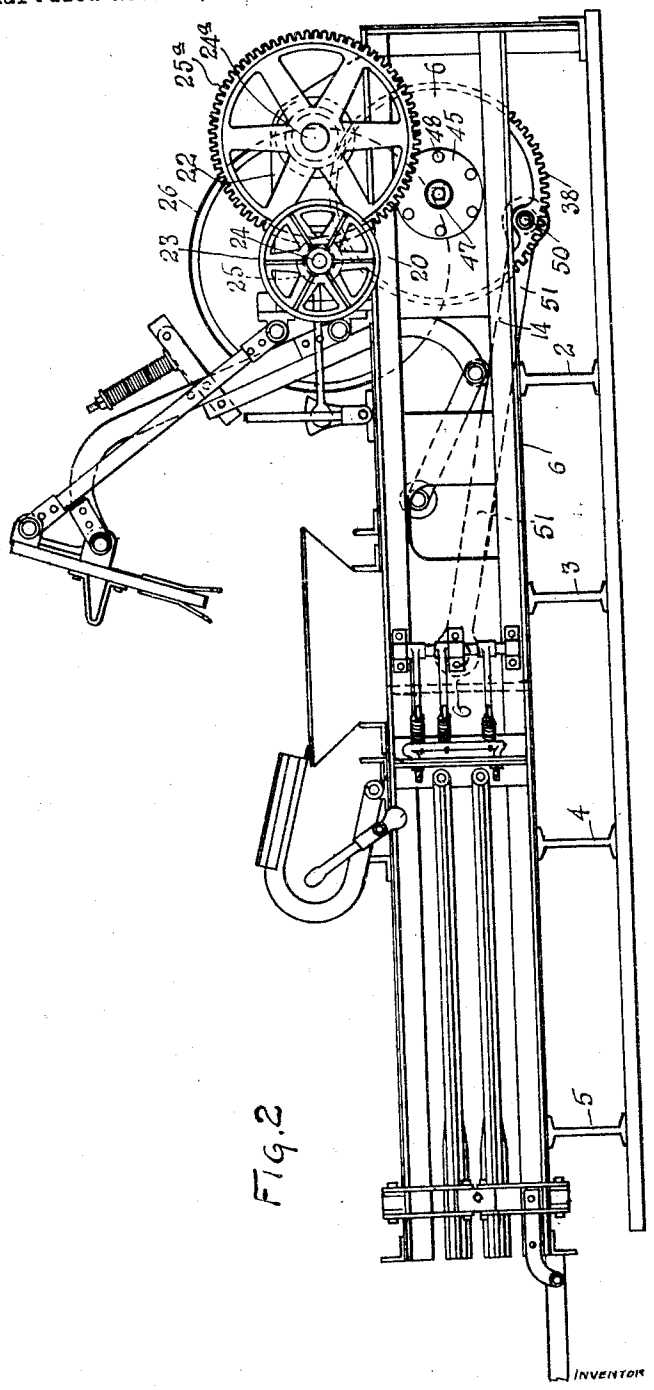


FIG. 2.

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B. ROLLMAN

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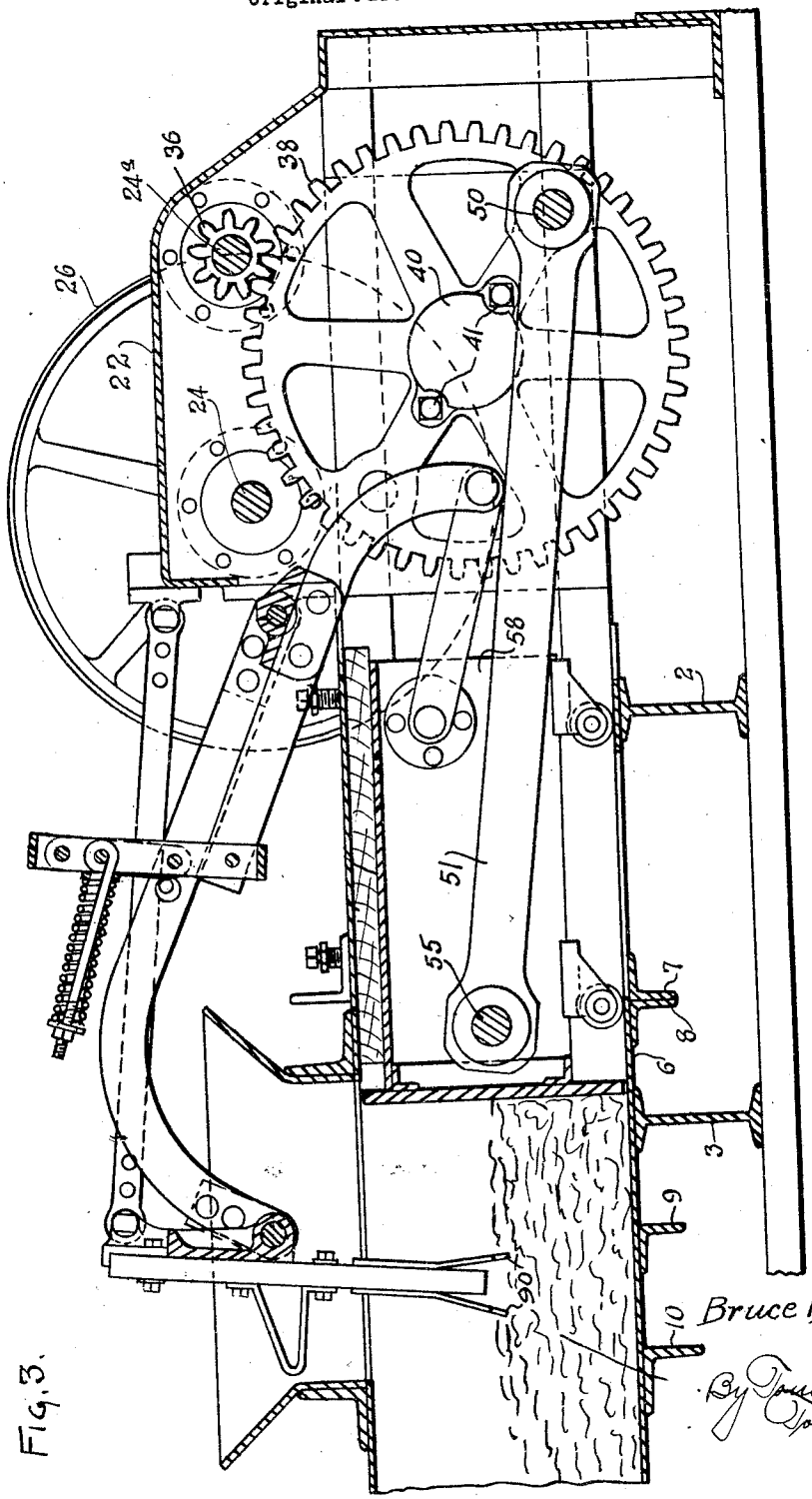


Fig. 3.

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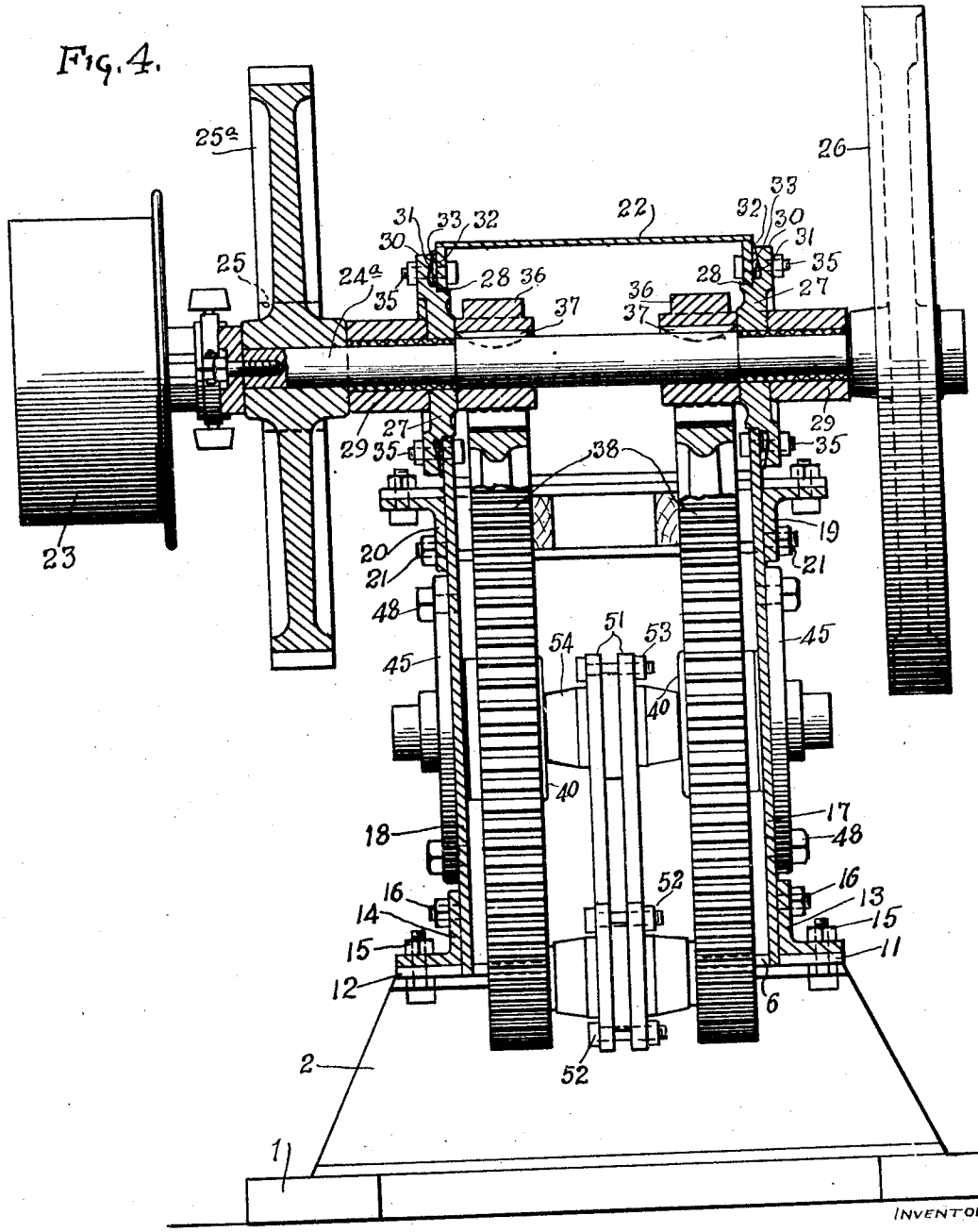
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B. ROLLMAN

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Fig. 4.



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B. ROLLMAN

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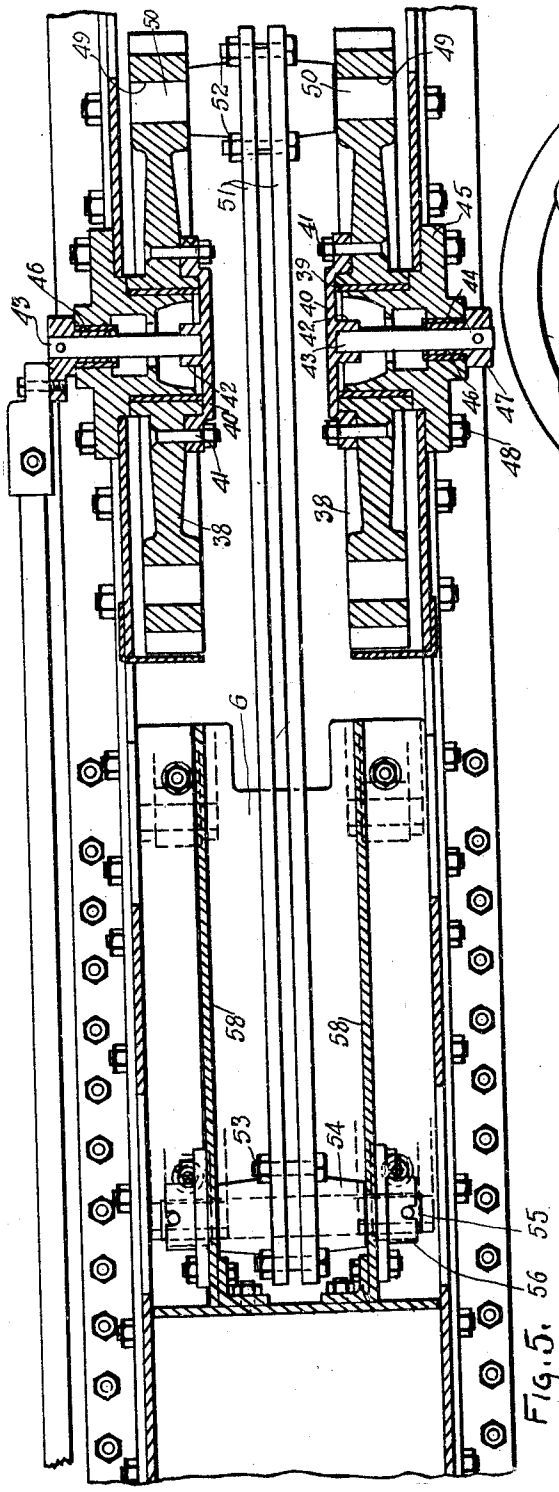


Fig. 5.

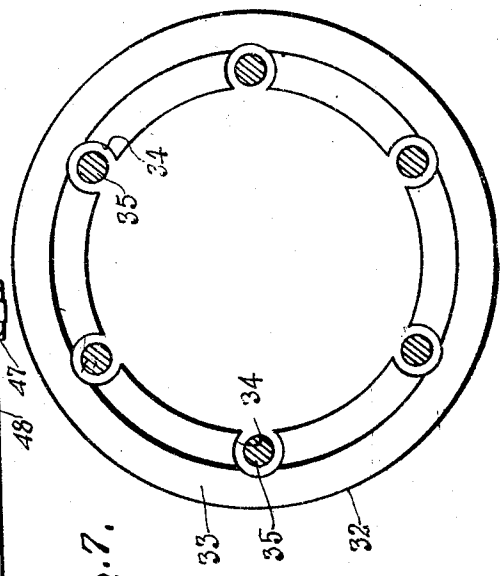


Fig. 7.

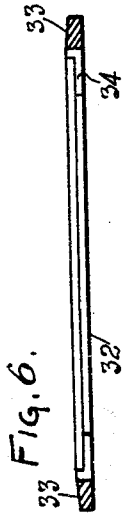


Fig. 6.

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Patented Oct. 16, 1928. 1,687,516

UNITED STATES PATENT OFFICE.

BRUCE ROLLMAN, OF BELLEVUE, OHIO, ASSIGNOR TO THE OHIO CULTIVATOR COMPANY, OF BELLEVUE, OHIO, A CORPORATION OF OHIO.

PRESS.

Original application filed November 16, 1925, Serial No. 69,392. Divided and this application filed May 3, 1926. Serial No. 106,337.

My invention relates to presses, and in particular to a press for the baling of paper, or other finely divided and fragmentary material, and this is a division of my application, No. 69,392, filed November 16, 1925.

It is the object of my invention, as described in this specification, especially to provide an improved gear mechanism for the operation of presses of this type, and to provide certain features thereof which are replaceable and readily adjustable to accommodate the parts to each other.

In the accompanying drawings, which show the preferred embodiment of my invention:

Figure 1 is a top plan view of the complete press.

Figure 2 is a side elevation of the complete press with the feeding board in its elevated position.

Figure 3 is a longitudinal section taken on a vertical plane through the baling end of the press, showing the feeding board in its lowered position.

Figure 4 is a section on the line 5—5 of Figure 1, showing the driving shaft and the method of adjusting it in its horizontal position with reference to the rest of the mechanism.

Figure 5 is a section on the line 6—6 of Figure 2, showing the arrangement of the lower bearings of the lower stud shafts and gears, together with a section showing the construction of the plunger head.

Figure 6 is a section through the wedge ring used in the adjustment of the bearings and shaft position, such as shown in Figure 4.

Figure 7 is a plan view of this ring showing the apertures for the clamping bolts.

Referring to the drawings in detail, 1 is a base or platform on which is mounted the press. A plurality of transverse I-beams, 2, 3, 4 and 5, are arranged transversely on this platform for the purpose of supporting the bottom plate 6. This plate is further reenforced by a plurality of transverse angle irons 7, 8, 9 and 10. Side rails 11 and 12 of the plate 6 are provided on this support, longitudinally, upon which members 11 and 12 are the angle irons or rails 13 and 14 which are supported and bolted by the bolts 15. To these lower rails 13 and 14 are bolted by the bolts 16 the side plates 17 and 18. These side plates extend upwardly within and above upper rails 19 and 20 which are bolted thereto by the bolts 21. These side plates are capped at their upper end by a plate 22.

23 designates a driving pulley which is driven by a belt from any suitable source of power. This pulley is mounted upon the driving shaft 24 which carries the driving pinion 25 which drives a driven gear 25^a on the driven shaft 24^a. On the other end of the shaft 24 is a flywheel 26.

The shaft 24^a is journaled in a plate 27, the inner margins of which rest upon the shoulders 28 of the side plate. As these side plates are roughly formed and as the disks 27 are likewise relatively roughly formed, it may result that the driving shaft is not in its proper position in a suitable horizontal plane. In order to prevent the necessity for a heavy, perfectly manufactured structure for this purpose which would be prohibitive in its expense, I provide the following arrangement for adjusting this driving shaft in its horizontal plane, so that it will turn in its bearings 29 in the plane desired.

This disk 27 is provided with flanges 30 having concave faces 31. Between this concave face and the side plate is a wedge disk 32 having a wedge margin with a convex surface 33. This disk is provided with slots internally disposed, designated 34, through which the bolts 35 pass for retaining the several members together in position on the side plate. Thus, if it is desired to change the angularity of the driving shaft to the horizontal plane, a shifting of this wedge plate upwardly or downwardly will effect the desired end. Bolts can then be clamped and the structure will be held in the desired position.

On this driven shaft 24^a are a pair of spaced pinions 36, held in position by the keys 37 in the conventional way. These pinions engage with their respective gears 38. These gears are mounted on suitable shafts carried by the side plates, as will be more fully seen in Figure 5. The gears 38 are known as the pitman gears. They are mounted upon a bearing sleeve 39 over the end of which is a plate 40 bolted to the gear by the bolts 41. A receiving cup 42 on the inside of this plate receives a square shaft 43, the other end of which turns in a bearing 44 on the interior of the plate 45 which carries the stud shaft 46 for supporting the gear and its bearing 39. This square shaft

43 carries a retaining cotter or sleeve 47. The plate 45 is bolted to the side plates by the bolts 48.

On the rim of each gear is an aperture 49 carrying the end of a cross pin 50, on which is journaled a pair of plates 51 constituting the pitman. These plates are bolted together by the bolts 52. A similar arrangement is found at the other end of the pitman which are bolted together by the bolts 53 on a sleeve 54 mounted on a cross pin 55 which is journaled in the bearings 56 and bolted by the bolts 57 on the vertical plates 58, which constitute a portion of the plunger.

It will be understood that the means of adjusting the horizontal position of the driven shaft is also used in connection with the driving shaft. It can be used with the other shafts, as desired.

It will be also understood that I desire to comprehend within my invention such modifications as may be necessary to adapt it to varying conditions and uses.

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

In a baler, a bed plate, side plates, upper and lower rails, said side plates extending above the upper rails, stud shafts carried in the lower portions of said side plates, and bearing members carried in the upper portions of said side plates for the driving and driven shafts which actuate gears carried on said stud shafts, gears, a thrust plate therebetween carried thereby and a pitman carried between said gears on said thrust plate at one end and on a reciprocating plunger at the other, adapted to reciprocate between said side plates.

In testimony whereof, I affix my signature.

BRUCE ROLLMAN.