

C. A. A. RAND.
 STRIPPER HARVESTER.
 APPLICATION FILED NOV. 10, 1910.

996,794.

Patented July 4, 1911.
 2 SHEETS—SHEET 1.

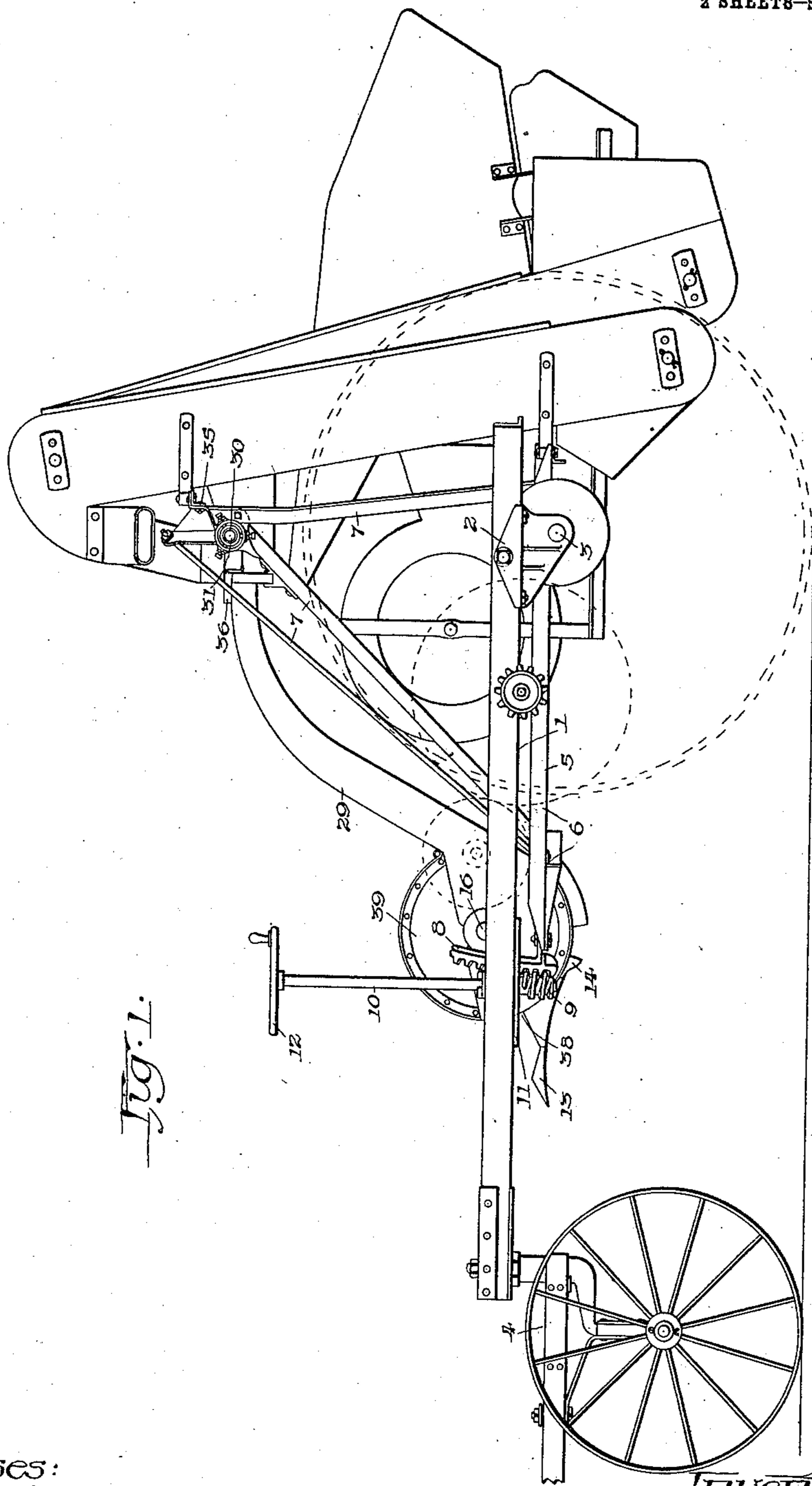


Fig. 1.

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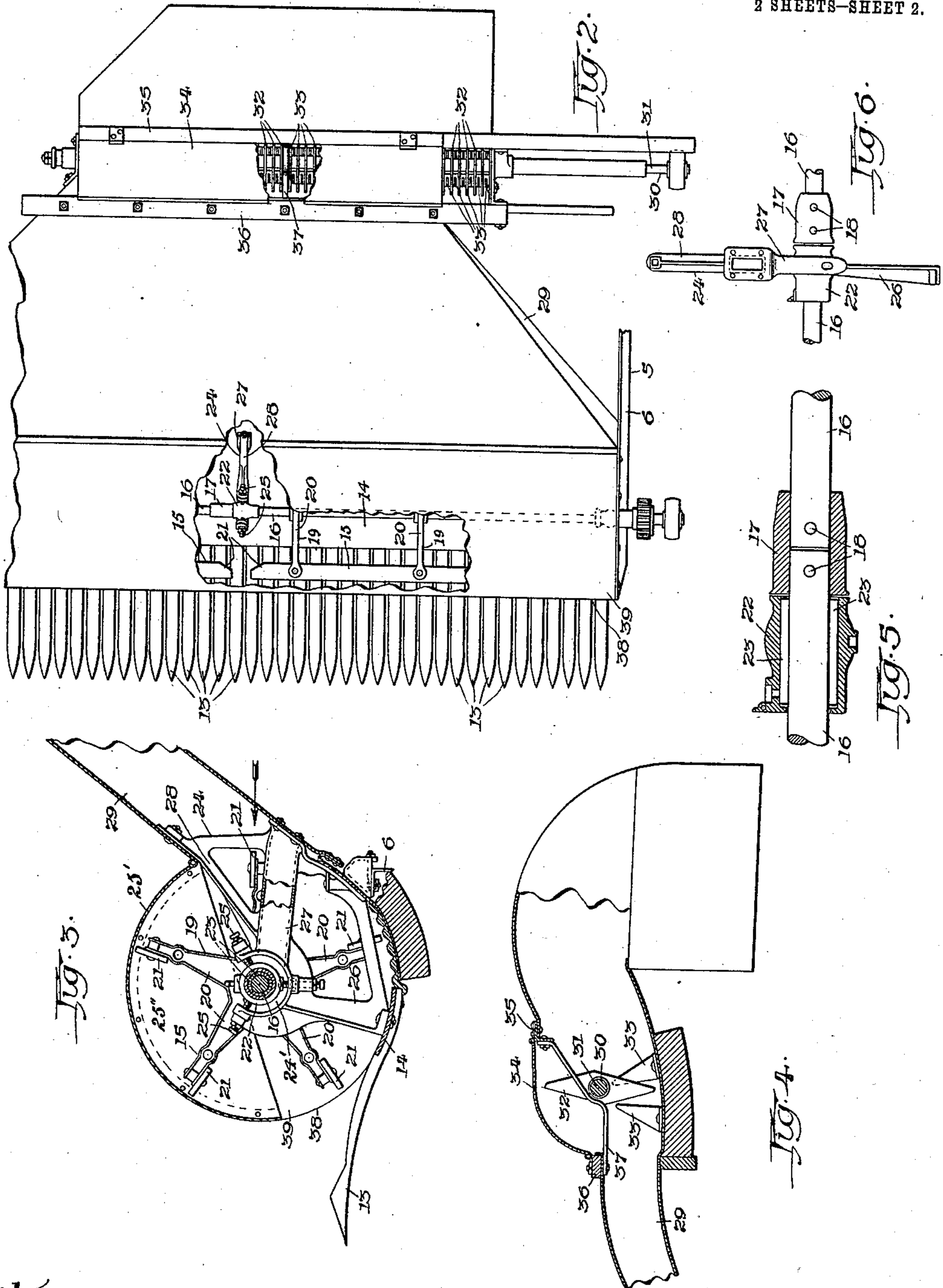
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UNITED STATES PATENT OFFICE.

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STRIPPER-HARVESTER.

996,794.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, CHARLES A. A. RAND, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Stripper-Harvesters, of which the following is a specification.

My invention relates to stripper harvesters, and in particular to the manner of constructing and mounting the shaft of the stripping cylinder, and to means for preventing vibration of the shaft of the peg drum; its object being to provide a construction insuring efficiency of operation under the varying conditions of the crop and consequent variable strains upon the operative parts of the machine. This object is attained by means of the mechanism illustrated in the accompanying drawing, in which—

Figure 1 represents a side elevation of a stripper harvester embodying my invention; Fig. 2 is a top plan view of part of Fig. 1, showing the manner of mounting and supporting the shafts of the stripping cylinder and the peg drum; Fig. 3 is a sectional end elevation of the stripping cylinder illustrating the manner of mounting it upon its central bearing; Fig. 4 is a sectional end elevation of the peg drum, illustrating the manner of mounting a supplemental support for the central portion of its shaft; Fig. 5 is a sectional detail of the central portion of the two-part stripping cylinder shaft and its bearing box; and Fig. 6 represents a rear elevation of the bracket in which the central bearing box of the stripping cylinder shaft is mounted as indicated by the arrow in Fig. 3.

The same reference characters designate like parts throughout the several views.

1 represents a wheel frame member having a bracket 2 secured to its rear end, in which is mounted an axle 3, its forward end supported upon a tongue truck 4.

5 represents a supplemental frame mounted upon the axle in a manner to permit it to rock about the axis thereof, and including longitudinally arranged members 6 and upwardly converging members 7, the forward end of the frame being connected with the wheel frame by means of a sector 8 and worm 9 and an operative shaft 10 mounted in a bearing 11 carried by the wheel frame, having the worm 9 secured to its lower end and a hand wheel 12 to its upper end where-

by the mechanism may be manipulated in a manner to rock the supplemental frame relative to the wheel frame in a common way for the purpose of adjusting its operative height.

13 represents the stripping fingers, having their rear ends secured to a bar 14 forming part of the supplemental frame.

15 represents the stripping cylinder that is partially inclosed by a casing 15', including a two-part shaft 16, having its opposite ends journaled in bearings carried by the supplemental frame member 6, the two parts of the shaft being connected near the center thereof by means of a coupling block 17 and pins 18, whereby the shaft is allowed a limited amount of flexibility in the operation of the machine. Secured to each part of the shaft are spider members 19, having radial arms 20, to the outer ends of which are secured stripping blades 21 that cooperate with the inner ends of bar 14 in stripping the heads from the stalks. The central portion of the shaft 16, at one side of the coupling member, is journaled in a bearing block 22 provided with antifriction rollers 23, the bearing block being supported by means of a bracket 24, having an elliptical opening 24' arranged below the shaft and radially arranged set screws 25 adjustably mounted therein and having their inner ends engaging with the bearing block in a manner whereby it may be adjusted for the purpose of properly alining the shaft.

The stripping cylinder casing includes a hood 25' that is hinge connected at its rear edge with a fixed part of the machine and provided with segmental end walls 25'' that partly close the opposite ends of the casing, the front edge of the hood being raised above the stripping fingers and leaving an open mouth in front of the casing to receive the incoming grain in the usual way.

The bracket includes a depending lug member 26 that is secured to bar 14, a rearwardly extending hollow arm 27, and an upwardly and rearwardly extending arm 28, the two arms having their rear ends secured to the lower and upper walls, respectively, of a conduit 29 leading rearward and upward from the stripping mechanism to the peg drum 30, which includes a shaft 31 mounted in bearings at the upper end of the supplemental frame and having teeth 32 secured thereto that cooperate with fixed

teeth 33 secured to the lower wall of the conduit, in separating the grain from the straw.

34 represents a drum cover hinged to a transverse member 35 of the supplemental frame in rear of the peg drum and closing upon a transverse member 36 of said frame in front of said drum, and 37 is a yoke having its opposite ends secured to the transverse bars and having its central portion contacting with the central portion of the peg drum shaft upon the upper forward portion of its periphery in a manner to resist a bending movement of the shaft under the strain of its operation. The hollow arm 27 of the shaft supporting bracket 24 is open to the atmosphere in rear of the conduit 29, and forms a passageway for air that extends forward toward the axis of the cylinder thereby permitting the induced current of air to flow through the arm to the center of the casing to increase the supply drawn through the drum 39 by the operation of the stripping cylinder, and forced thereby upward through the conduit in a manner to deliver the heads of grain to the peg drum. The air drawn through the hollow arm passes directly to the center of the stripping cylinder and supplements that drawn from opposite ends thereof in a manner to cause a current of even intensity through the length of the cylinder to flow upward through the conduit 29.

What I claim as my invention, and desire to secure by Letters Patent, is:

1. A stripper harvester having, in combination, a stripping cylinder, a drum par-

tially surrounding said cylinder and open along the lower part of its forward periphery to receive the grain, said cylinder including a two-part shaft journaled in bearings at opposite ends thereof, the inner ends of said shaft being loosely connected by means of a coupling block and pins, a bearing box at one side of said coupling block and having said shaft journaled therein, said block being supported by means of a bracket having a hollow arm the arm extending from the exterior of the drum to near the axis of the stripping cylinder, being operative as an air conduit to supplement the amount drawn through the drum.

2. A stripper harvester having, in combination, a stripping cylinder, a drum partially surrounding said cylinder and open along the lower part of its forward periphery to receive the grain, a conduit leading upward from the rear side of said drum, said cylinder including a shaft journaled in bearings at opposite ends thereof, and a bearing box in which the center of said shaft is journaled, a bracket supporting said bearing block, said bracket having a hollow arm having one end secured to the rear wall of said conduit, said arm extending from the exterior of the drum to near the axis of the stripping cylinder and being operative as an air duct communicating with the atmosphere in rear of said conduit and with the interior of said drum.

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."