

J. M. ENGLISH.

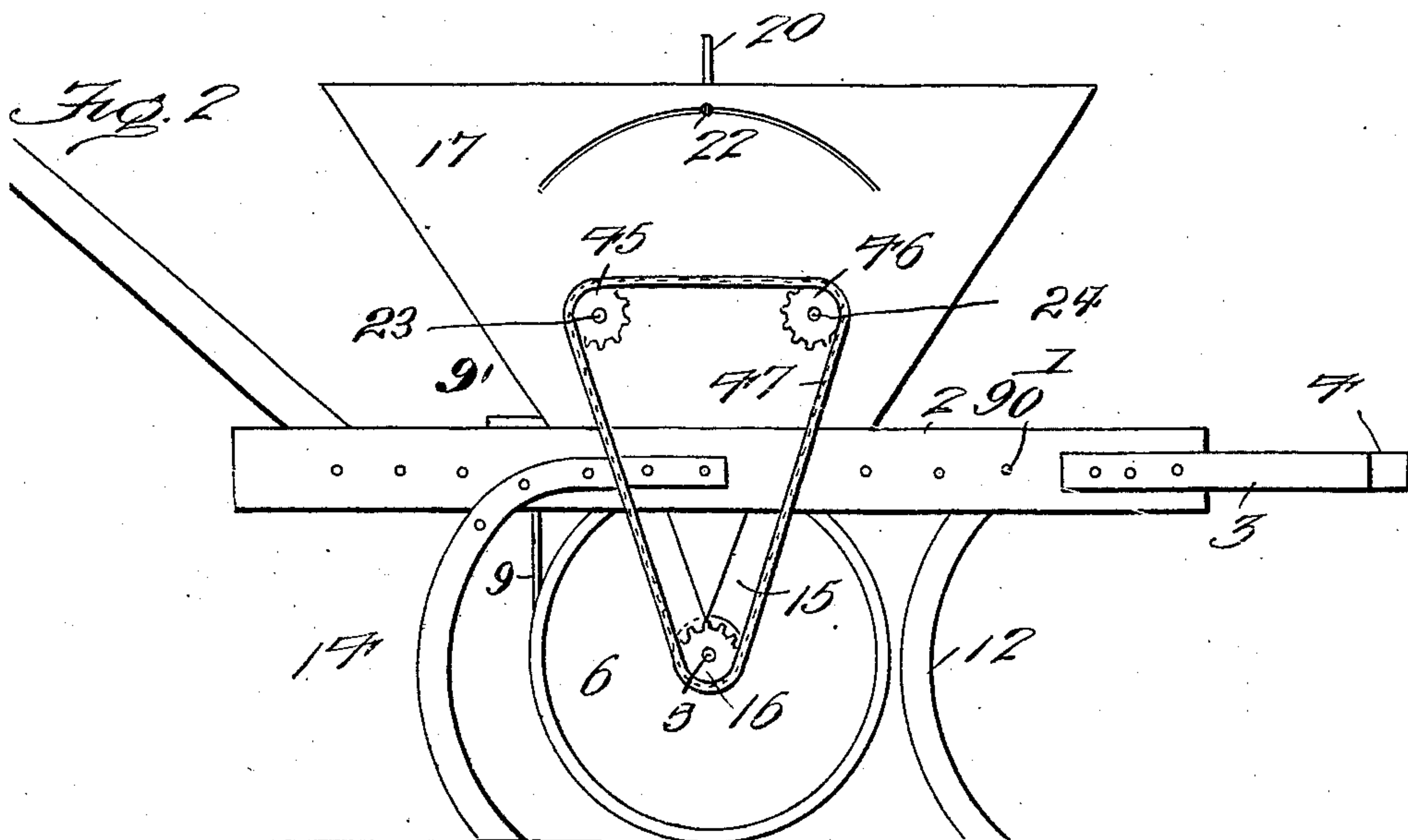
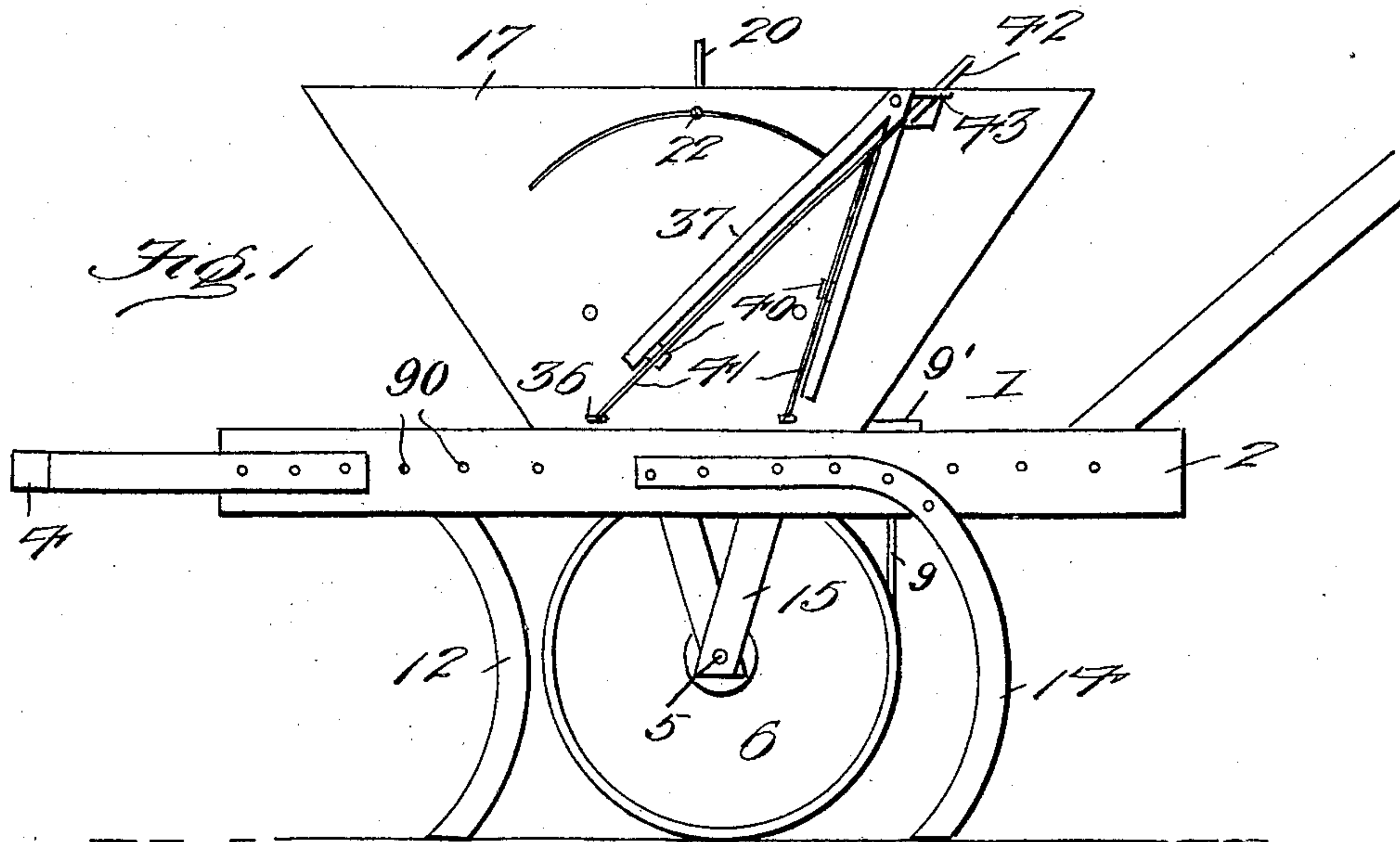
PLANTER.

APPLICATION FILED FEB. 26, 1908.

907,759.

Patented Dec. 29, 1908.

4 SHEETS—SHEET 1.



Witnesses

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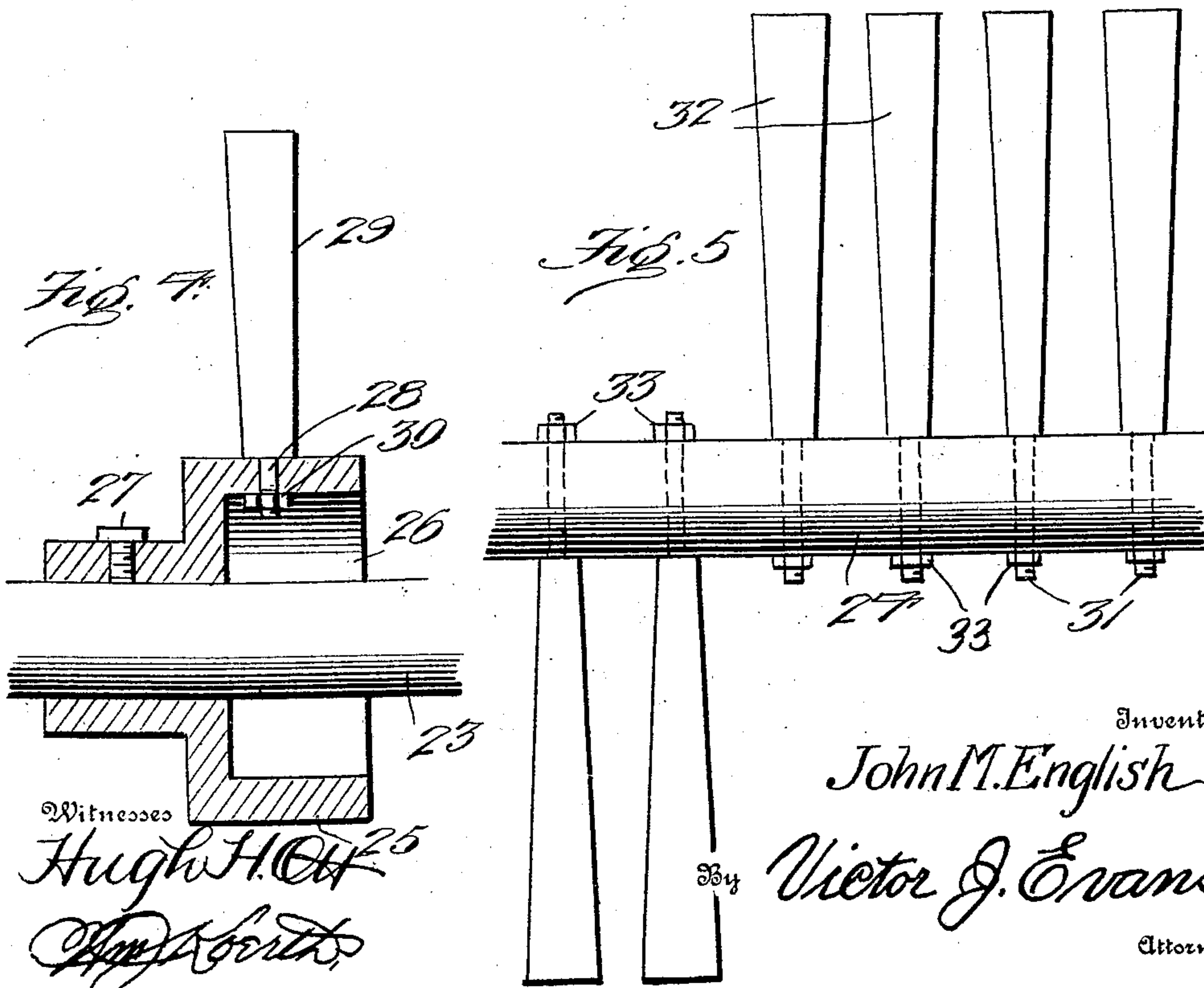
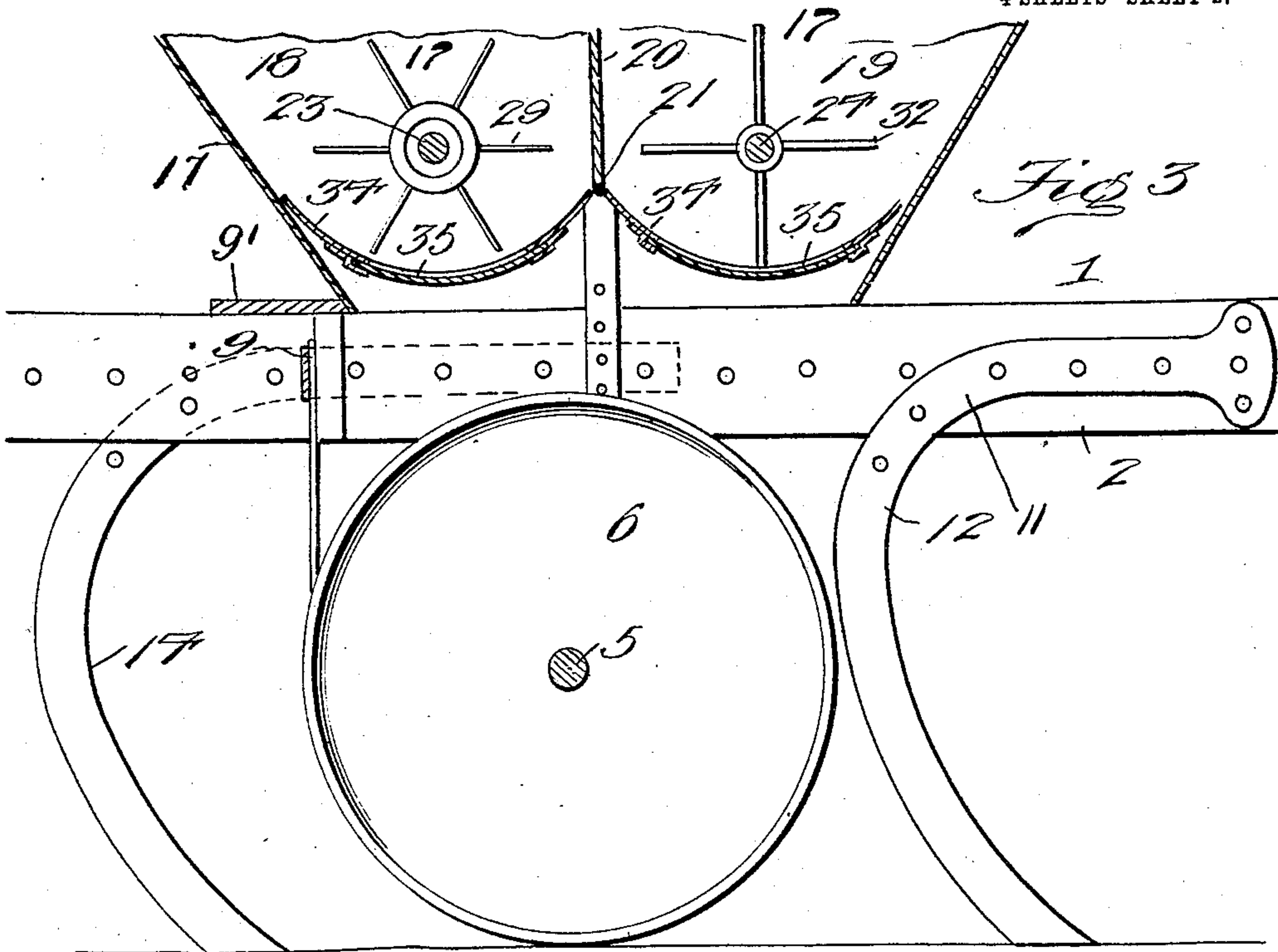
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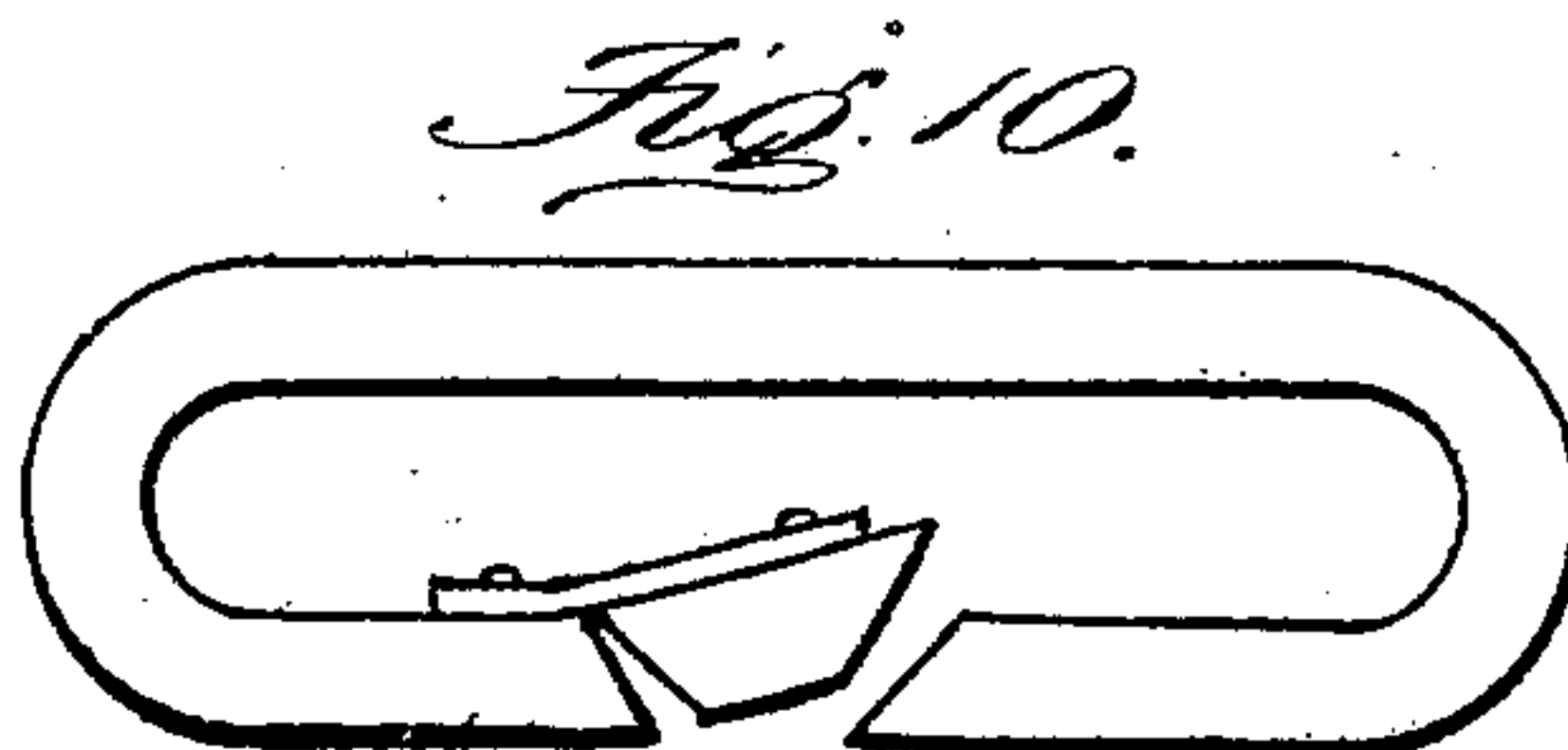
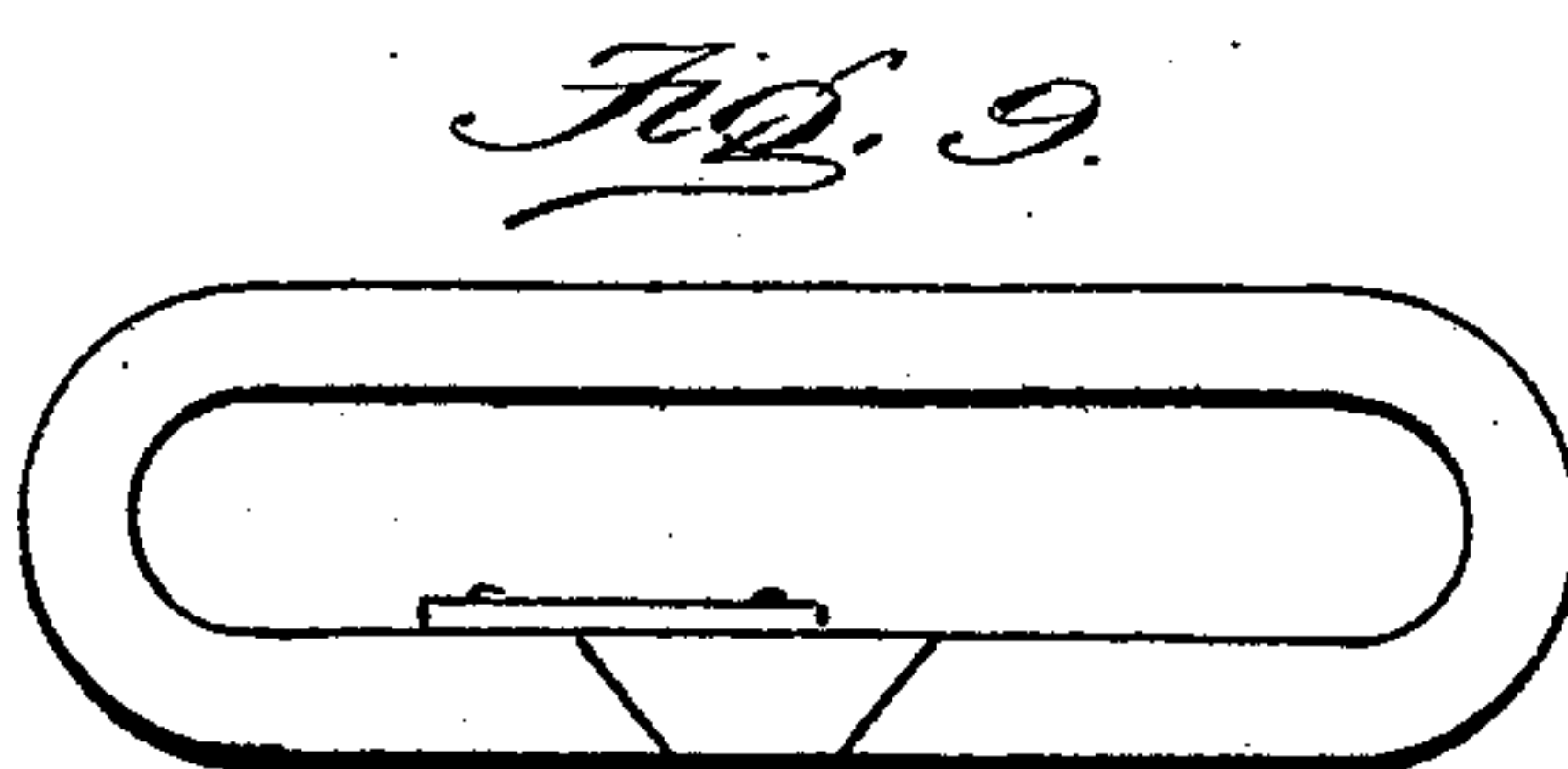
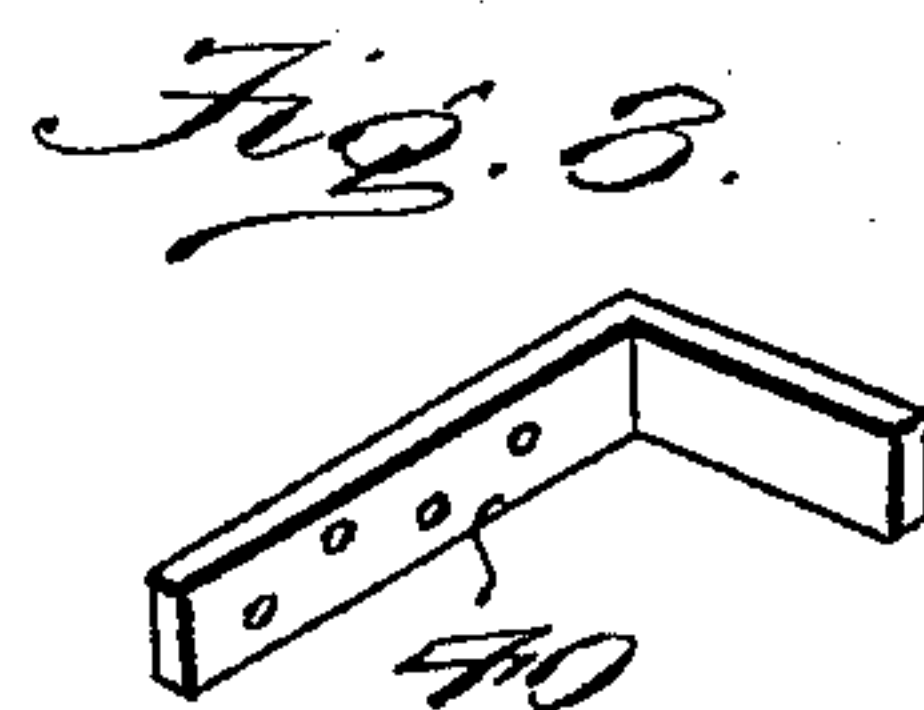
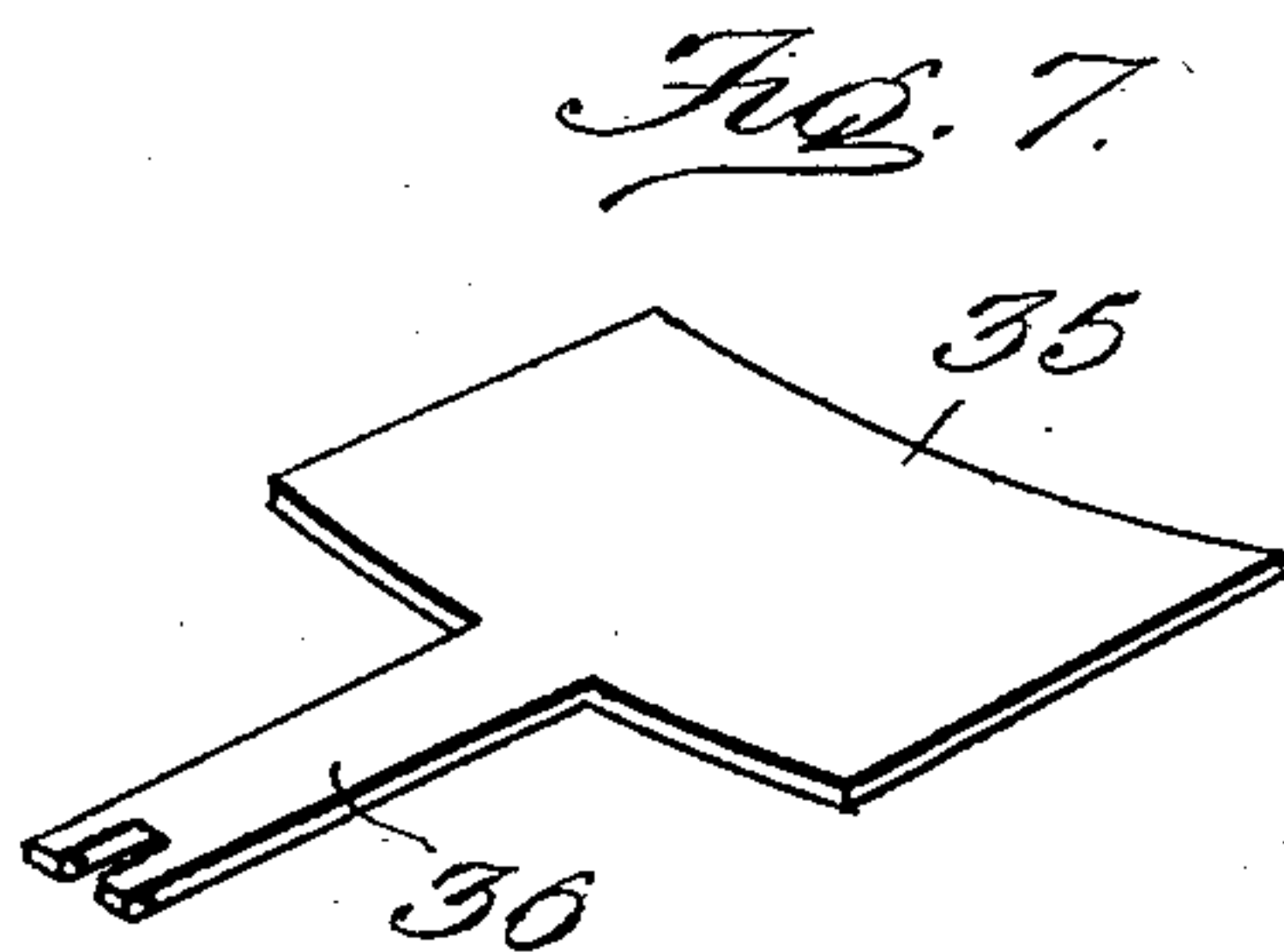
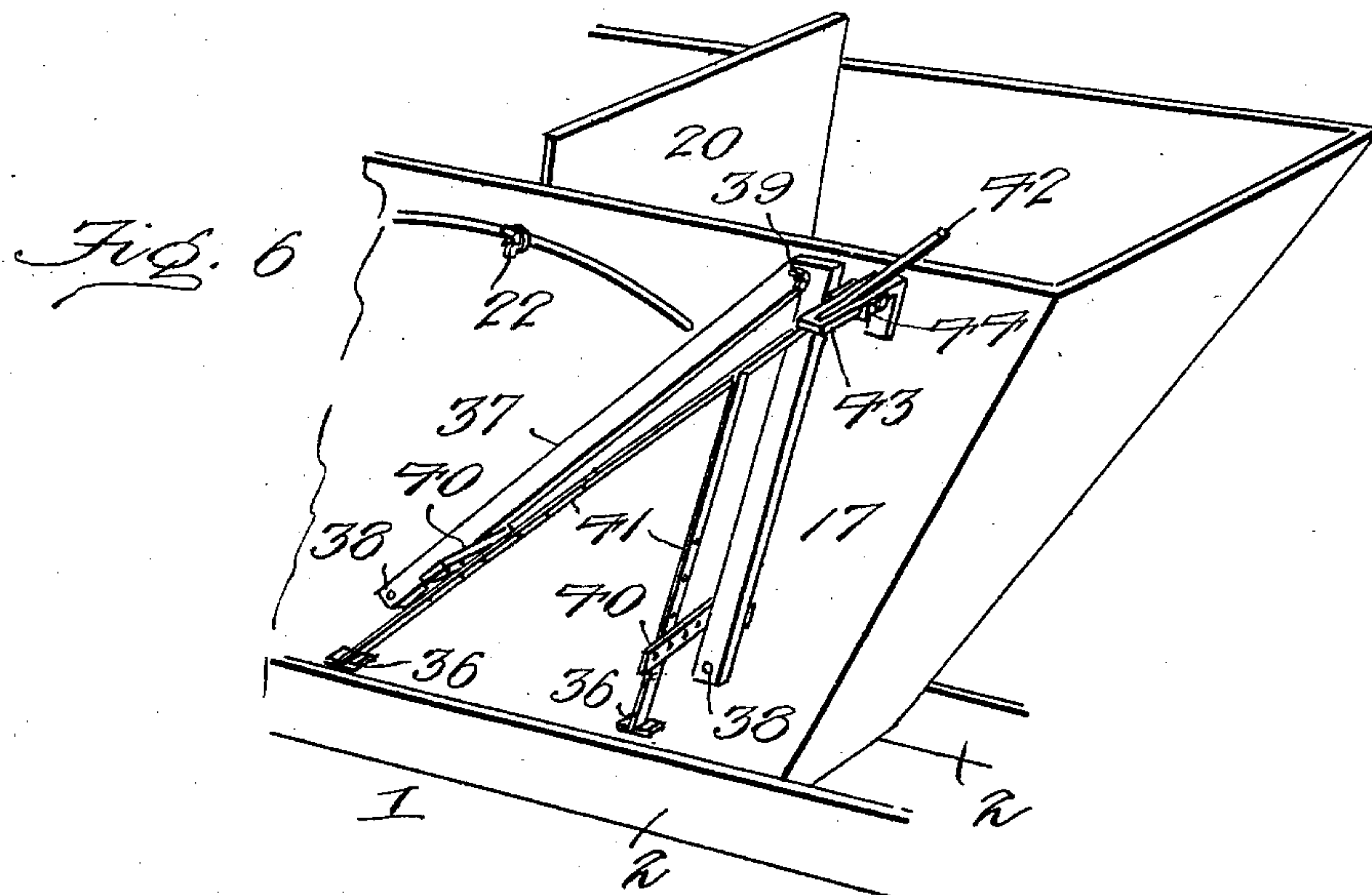
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4 SHEETS—SHEET 3.

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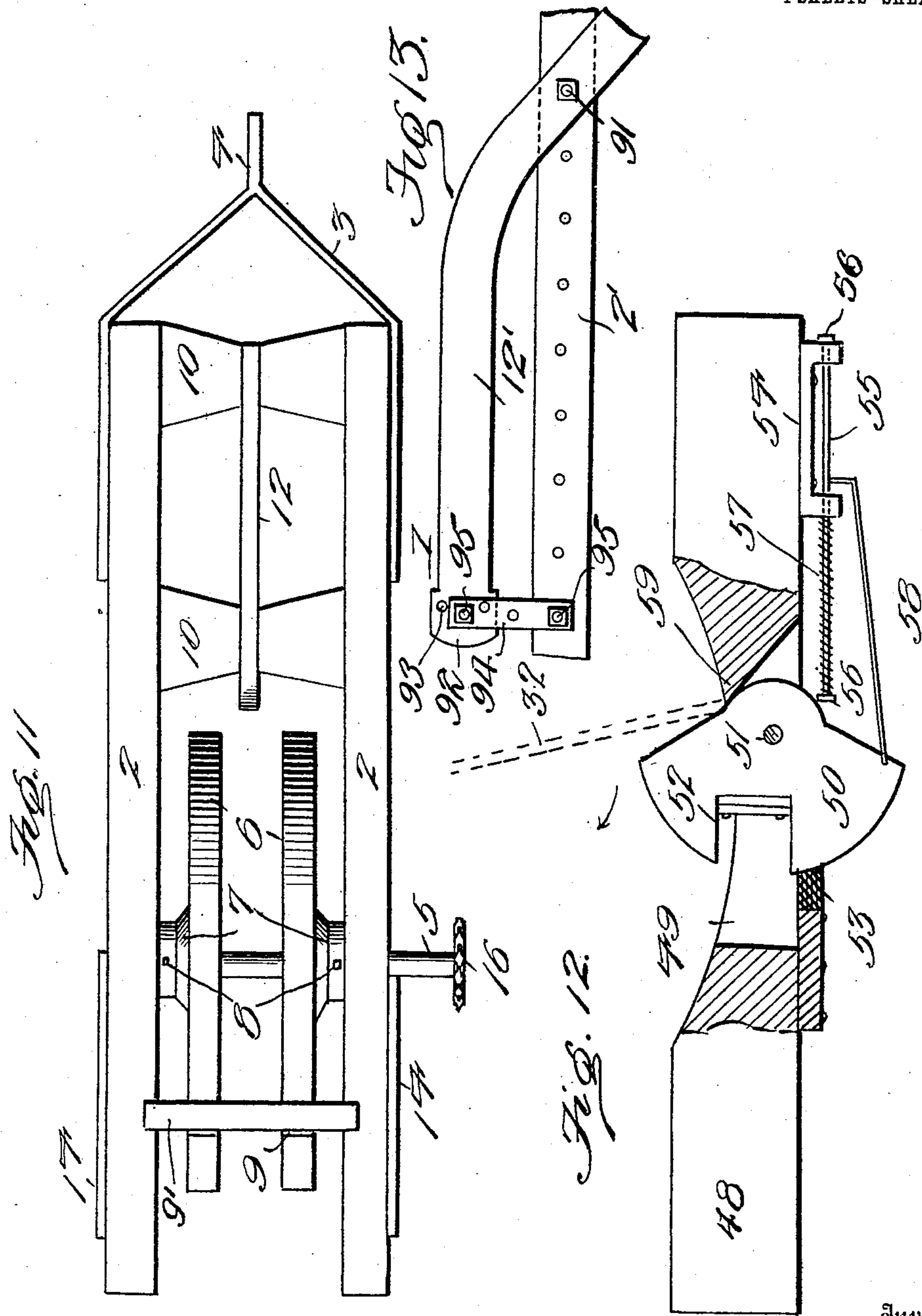


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4 SHEETS—SHEET 4.

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# UNITED STATES PATENT OFFICE.

JOHN M. ENGLISH, OF SOSO, MISSISSIPPI.

PLANTER.

No. 907,759.

Specification of Letters Patent.

Patented Dec. 29, 1908.

Application filed February 26, 1908. Serial No. 417,916.

*To all whom it may concern:*

Be it known that I, JOHN M. ENGLISH, a citizen of the United States, residing at Soso, in the county of Jones and State of Mississippi, have invented new and useful Improvements in Planters, of which the following is a specification.

This invention relates to a combined fertilizer distributor and grain drill, and the object of the invention is to provide a machine of this character which is comparatively simple in construction, cheap to manufacture, and the parts of which are so combined as to accomplish the purposes for which they are intended, efficiently and with certainty.

With these and other objects in view which will appear as the description progresses the invention resides in the novel construction and arrangement of parts hereinafter fully described and claimed.

Figure 1 is a side elevation of a device constructed in accordance with my invention. Fig. 2 is a similar view looking at the device from the opposite side. Fig. 3 is an enlarged, partial, central longitudinal section of the same. Fig. 4 is a cross sectional view of a coupling and agitator arms employed upon one of the shafts of the hopper. Fig. 5 is a side elevation of the opposite shaft of the hopper, illustrating the means employed for securing and adjusting the agitator arms thereon. Fig. 6 is a fragmentary perspective view of the hopper, illustrating the central divisional board and the mechanism employed for regulating the openings of the hopper. Fig. 7 is a perspective view of one of the slides employed with my invention. Fig. 8 is a perspective view of one of the L-shaped brackets employed for regulating the slide-adjusting arms. Fig. 9 is a side elevation of a lap link employed with this invention. Fig. 10 is a similar view, showing the catch of the link opened. Fig. 11 is a top plan view of the frame of my device, the hopper being removed and the device employed as a cultivator. Fig. 12 is a partial sectional view of the mechanism employed upon my device when used as a drill. Fig. 13 is a partial elevation illustrating another manner of securing the cultivator beam to the frame.

In the accompanying drawings the numeral 1 designates the frame of my improved device. This frame 1 comprises a pair of longitudinal beams, connected at one of their ends with a bail 3, having a central projection 4, by which the animals are attached to

the device. The frame 1 is provided with an axle 5, arranged near the opposite end of the frame to that of the bail 3. The axle 5 is provided with a pair of wheels 6, having collars or hubs 7, provided with bolts or other retaining elements 8, by which the wheels are adjustably secured upon the axle. With this arrangement it will be noted that the wheels may be adjusted towards or away from each other. The frame is also provided with a transverse member 9' directly above the wheel 6, provided with scrapers 9 so that the wheels are effectively scraped upon each revolution and the transverse member effectively retains the longitudinal beams 2 in spaced relation with each other. Positioned between the beams 2, and at a point adjacent the bails 3, are a series of spacing blocks 10, each adapted to receive between them a standard 11 of a cultivator 12. The beams or arms of the cultivator are provided with a series of apertures, adapted to aline with similar apertures upon the spacing blocks 10 and the sides of the longitudinal beams 2. With this arrangement, it will be noted that the cultivator may be adjusted to any desired position upon the frame, and by reference to Fig. 3 of the drawings it will be noted that the head of the front standard of the cultivator is enlarged and provided with a series of vertical perforations corresponding with those just described, and that by inserting rods or bars 13 adapted for engagement with the perforations, and that by arranging the bar 13 engaging the perforations in the enlarged head of the standard that the shoe of the cultivator may be raised or lowered to accommodate various conditions of the soil. The frame 1 is also provided with a series of rearwardly disposed cultivators or coverers 14, having their longitudinal arms provided with perforations 90, adapted to aline with the perforations in the rear of the longitudinal frames 2. By this arrangement it will be seen that the rear cultivators may be readily adjusted upon the frame, either longitudinally or horizontally as required, it being understood that the perforations or openings extend upon the faces of the cultivator beams 14 below the horizontal line.

Positioned upon the beams 2 of the frame are downwardly extending axle bearing members 15, adapted for the reception of the shaft or axle 5. This axle 5 is extended upon one side of the frame of the device, and is provided with a suitable cogged or sprocket



wheel 16, the purpose of which will hereinafter be set forth.

Removably mounted upon the frame 1, is a suitable hopper 17. This hopper is divided into two compartments 18 and 19 by a suitable division board 20. This board 20 is pivotally secured to the frame of the hopper as at 21, and extends upwardly beyond the upper surface of the hopper. The sides of the hopper are provided with a partial cylindrical recess adapted for the reception of suitable pintles, provided upon each end of the dividing board engaging the inner side of the hopper, and the pintles may be screw threaded and adapted for the reception of winged nuts 22, by which the dividing board 20 may be retained in an adjusted position upon either compartment of the hopper. Each of the compartments 18 and 19 are provided with transverse shafts 23 and 24. The shaft 23 positioned within the compartment 18 is adapted for the reception of a plurality of couplings 25. These couplings 25 are preferably cylindrical in cross section, and are provided with enlarged recesses 26. The opposite end of the collar 25 is provided with a retaining element 27, by which the coupling or collar is effectively secured upon the shaft 23. The enlarged portion of the collar is provided with a suitable recess adapted for the reception of a pintle 28 integrally formed upon an agitator arm 29. A retaining nut 30 is adapted to engage the threaded inner extremity of the pintle 28, and thus effectively secure the agitator arm upon the collar and allow for it being turned upon the pintle and be retained in any adjusted position desired. A plurality of these couplings and agitator arms are employed upon the shaft 23, and the smaller end of the coupling is adapted to engage with the recessed collar of the opposite coupling, not shown. By this construction it will be noted that the agitator arms may be swung into any desired position upon the collar of the coupling, and that the coupling carrying the agitator arm may be adjusted to any desired radius in their relations to the shaft 23.

The opposite compartment 19 of the hopper 17 has its shaft 24 provided with a series of openings, arranged at any desired inclination in relation to the plane of the shaft. These openings are adapted for the reception of the reduced portions or pintles 31 provided upon agitator arms 32. Suitable retaining elements, as nuts 33 are adapted for engagement with the threaded extremities of the pintles 31, and are adapted to press the enlarged shoulders of the arms tightly against the shaft 24, and to secure the arms in any desired angle in relation to the plane of their pintles. Directly below each set of the radiating agitator arms, the compartments of the hopper are provided with circular bottoms 34. These bottoms 34 are each

provided with suitable aprons ledges or ways adapted for engagement with the slides 35, having reduced portions 36 extending beyond one side of the hopper. Positioned upon the side of the hopper upon which the reduced arms 36 of the slides 35, are held is a V-shaped member 37, having the extremities of its arms secured to the hopper as at 38, while its apex is provided with a suitable perforation adapted for engagement with a pintle provided upon the side of the hopper near its upper edge. The V-shaped member is adapted to be sprung towards and away from the side of the hopper by the rotation of a thumb-nut 39 engaging the pintle at the apex of the member, as it is rotated to force the member toward or away from the side of the hopper. Positioned between the arms of the V-shaped member and the sides of the hopper are L-shaped brackets 40. The outwardly projecting arms of these members are each provided with a series of perforations, adapted for engagement with a series of similar perforations upon the arms of a V-shaped lever 41 provided upon this side of the hopper. The lower extremities of the arms of the lever 41 are adapted to engage the projecting portions 36 of the slides 35. The upwardly projecting portion 42 of the V-shaped lever is adapted to engage within a slotted bracket 43 and be securely retained thereon by a slide 44 engaging one edge of the portion 42 and preventing motion of the said projection. It will be noted that as the L-shaped members 40 are adjusted upwardly or downwardly upon the arms of the V-shaped member 37, that any desired amount of leverage may be imparted upon the slides 35, and that with this arrangement the slides may be adjusted within their openings independently of each other.

The shafts 23 and 24 project outwardly beyond the side of one part of the hopper, and are each provided with sprocket wheels 45 and 46, each extending a distance from the hopper approximately equaling that of the cog wheel 16, upon the shaft 5 of the frame, previously referred to. A sprocket chain 47 is adapted for engagement with the sprockets 45, 46 and 16, and it will be seen that upon the rotation of the wheels 6 of the frame the shafts 23 and 24 of the hopper will be forced to revolve and the agitator arms 32 and 29 rotate and force the fertilizer or seed through the openings provided within the bottom of the hopper.

From the above description it will be noted that I have provided the simple and inexpensive device for distributing fertilizer or seed, one wherein the frame of the device may be readily separated from the hopper and the lower portion of the frame used as a drill. It will be further seen that I have provided an agricultural device, having a hopper divided into compartments, and be-



ing constructed with a divisional board pivotally secured and adapted to be swung into either of the compartments and to be securely retained in its adjusted position. It will be still further noted that I have provided a hopper having separate compartments and slides for said compartments, the openings of the slides being readily adjusted by a single lever, and the width of either of the openings being adjusted independent to that of the other opening, and that the agitating arms contained by each compartment may be readily regulated on their axles at any desired angle and securely retained in their adjusted position.

In converting my improved device into a cotton or corn planter, whereby it is desired to deposit a single grain into the ground at one time, I dispense with the slides 35 and in their place substitute a base 48, of a width approximately equal to that of the openings in the bottom of the hoppers. This member 48 is provided with a central opening 49 provided for the reception of a grain depositing element 50. This element 50 is constructed as a segment and extends the entire width of the opening 49 and is retained in position within the opening by a pivotal connection 51. The front portion of the dropper is cylindrical and is provided with a transverse opening 52 adapted for the reception of a single grain of corn or other seeds to be planted. The lower wall of the cutaway portion 52 extends a slight distance above the lower portion of the hopper, and the cylindrical face of the segment 50, is adapted to be engaged by a suitable brush 53 provided upon the lower surface of the portion 48, and adapted to fill the space formed by the cut-away portion between the dropper and the opposite wall of the cut-away portion. The under face of the portion 48 opposite to that of the cut-away portion 49 is provided with a suitable bracket 54, having downwardly extending ears provided with suitable perforations and adapted for the reception of a spring-pressed rod 55. This rod is provided upon each of its ends with heads 56 and interposed between one of these heads and one of the ears of the dropper 50 is a helical spring 57 normally adapted to force the rod in the direction of the dropper 50. Secured upon the rod 55 and the lower extension of the dropper 50 is a rod 58 normally tending to force the dropper into normal position illustrated in Fig. 12 of the drawings. As illustrated in this figure the dropper is of substantially quadrant form in side elevation, and the inner projecting portion is adapted to bear against a shoulder 59 provided by the cut-away portion 49 of the element 48. The upwardly extending portion of the quadrant, is adapted to lie within the path of the agitator arms provided within the hoppers, and it

will be noted that when the seed is positioned within the recess 52, and the arm of the agitator revolving in the direction shown by the arrow, the lower extremity of the arm contacts with the upper portion of the quadrant and oscillates it upon its pivot 51, until the grain contained in the pocket or cut-away portion is deposited. The brush 53 effectively prevents more grains from dropping than that deposited in the pocket 52. The quadrant 50 is returned to normal position by the spring 57 acting between the head 56 of the rod 55 and the depending ear of the bracket 54, forcing the rod 58 forward and causing the oscillation of the quadrant.

From the above description it will be seen that I have provided a simple cheap and effective means for depositing single grains for planting, which may be easily and quickly secured to the frame of the mechanism heretofore described, one wherein means are provided to effectively prevent more than a single grain being deposited at a time.

The lap links illustrated in Figs. 9 and 10 of the drawings are adapted for use in adjusting the endless chain 47 upon the cog wheels 16 and 45, and 46, and it will be seen that a chain of any particular construction or length may be readily secured together without the trouble of disconnecting the links or welding the connecting link to the remainder of the chain.

While I have described the preferred embodiment of the invention, it will be understood, that minor particulars of construction may be resorted to without departing from or sacrificing any of the advantages thereof.

In Fig. 13 I have shown a slightly modified form of attaching the cultivator standard to the beam of the frame. In this instance the standard 12' has its body or inclined portion pivoted to the beam 2' as at 91, while the standard is provided with an extending portion positioned above the beam and having an enlarged head 92 provided with a plurality of perforations 93. Connecting the enlarged head 92 of the standard 12' and the beam 2' is a link 94. This link 94 is provided with a plurality of perforations any of which being adapted for the reception of retaining elements 94, such as bolts, by which the link is connected with the members 12 and 2'. By this construction it will be noted that the standard 12' may be readily adjusted in relation to its pivot 91 upon the beam 2'.

Having fully described my invention what is claimed as new is:—

1. In a machine of the character described, a hopper, a dividing board pivotally secured in the center of the hopper, means for retaining the dividing board in position within the hopper, axles for each of the compartments provided by the dividing board, agitator arms carried by the axles, said arms being adjustable in relation to the angular plane of the



axles, slides beneath the agitator, means for adjusting the width of the openings formed by the slides independent of each other, and means for rotating the agitators.

5 2. In a machine of the character described, a hopper divided into compartments by a pivotally arranged dividing board, agitators within each of the compartments, slides beneath the agitators, projections upon the  
10 slides, a V-shaped lever engaging the projections, the arms of the V-shaped lever provided with a series of perforations L-shaped brackets provided with perforations slidably mounted upon one side of the hopper and  
15 arranged at right angles to the arms of the lever, pins provided for the perforations of the brackets and arms of the lever whereby one of the arms may be arranged beyond the line of the other arm, and means for rotating  
20 the agitators.

3. In a machine of the character described, a hopper provided with compartments, agitators within the compartments, slides beneath the agitators, arms upon the slides, a  
25 V-shaped lever having its arms engaging the arms of the slides, a V-shaped member se-

cured upon the side of the hopper in proximity with the lever, the arms of the said member pivotally connected with the hopper, the apex of the member provided with  
30 means whereby it may be adjusted towards or away from the side of the hopper, L-shaped members having their outer arms provided with a series of perforations and their smaller arms adapted for engagement between the  
35 sides of the hopper and the arms of the V-shaped member, a pivot connection between the projecting arms of the L-shaped members and the arms of the V shaped lever, a bracket upon the hopper provided with an  
40 opening adapted for the reception of a continuation of the V shaped lever, means provided upon the bracket for holding the lever within the bracket, and means for revolving  
45 the agitators within the hopper.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN M. ENGLISH.

Witnesses:

HENRY HILBUN,  
J. T. GRICE.