

No. 770,979.

PATENTED SEPT. 27, 1904.

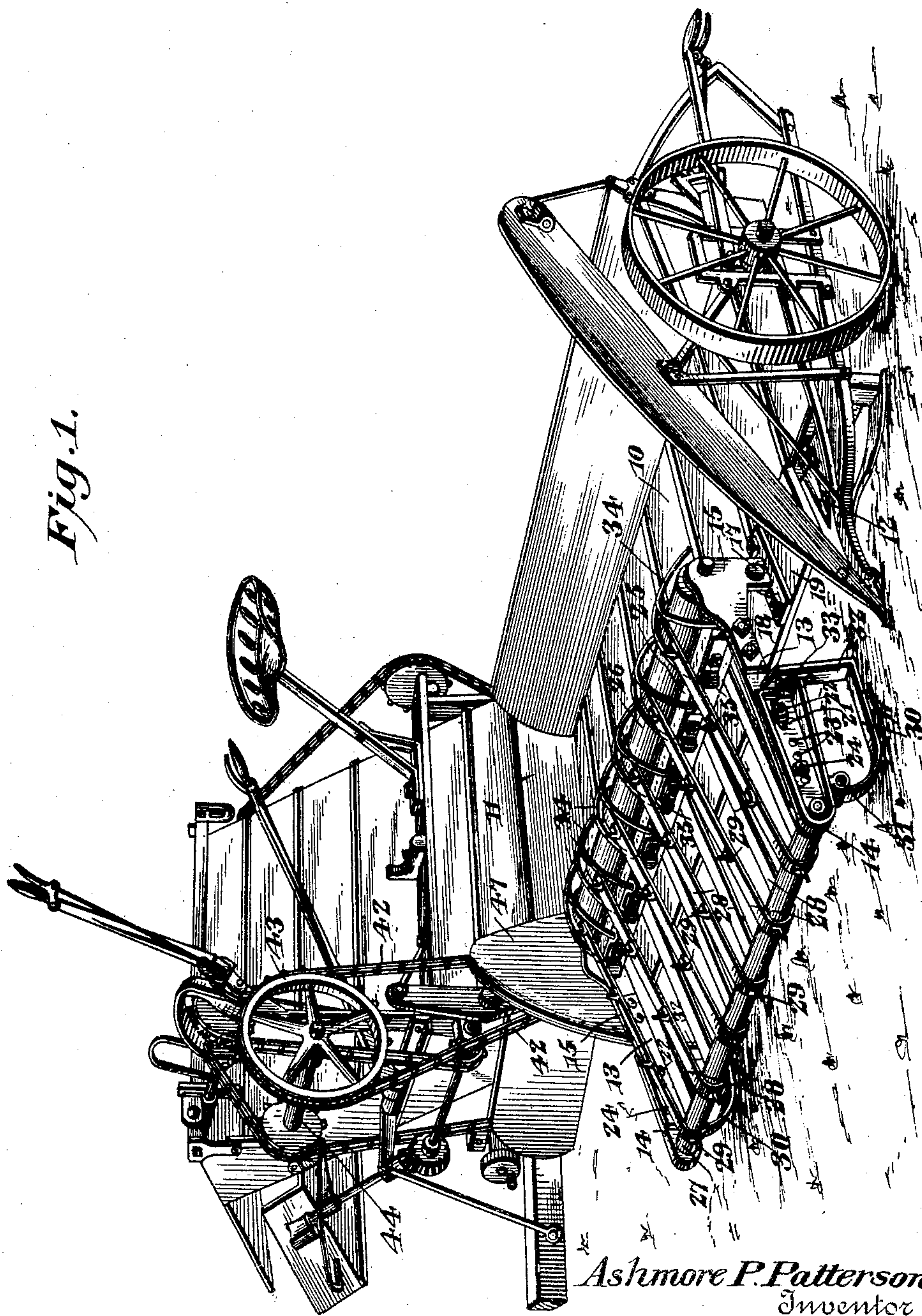
A. P. PATTERSON.
GLEANER ATTACHMENT FOR BINDERS.

APPLICATION FILED SEPT. 5, 1903.

NO MODEL.

2 SHEETS—SHEET 1.

Fig. 1.



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CLEANER ATTACHMENT FOR BINDERS.

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NO MODEL.

2 SHEETS—SHEET 2.

Fig. 2.

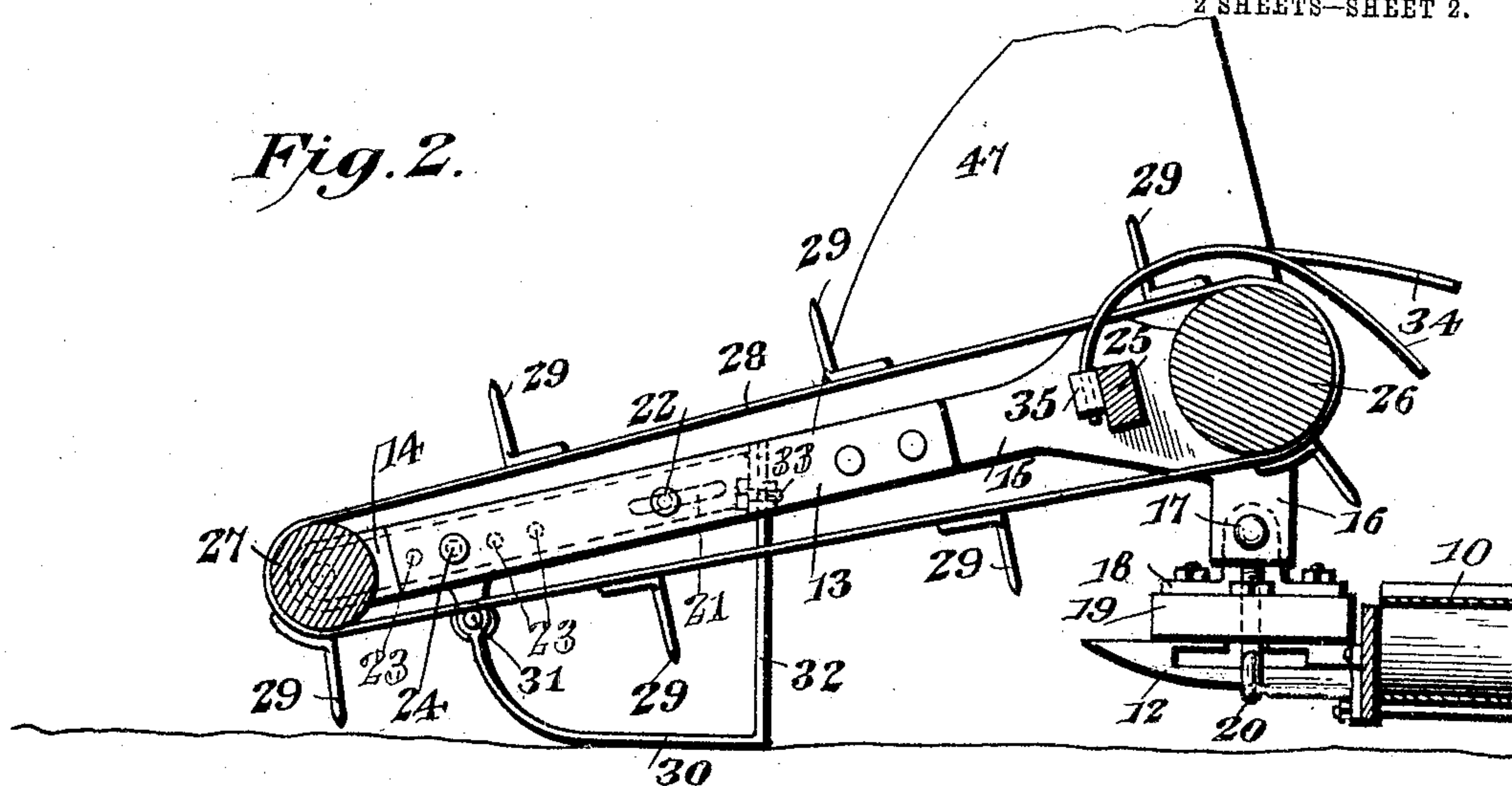


Fig. 3.

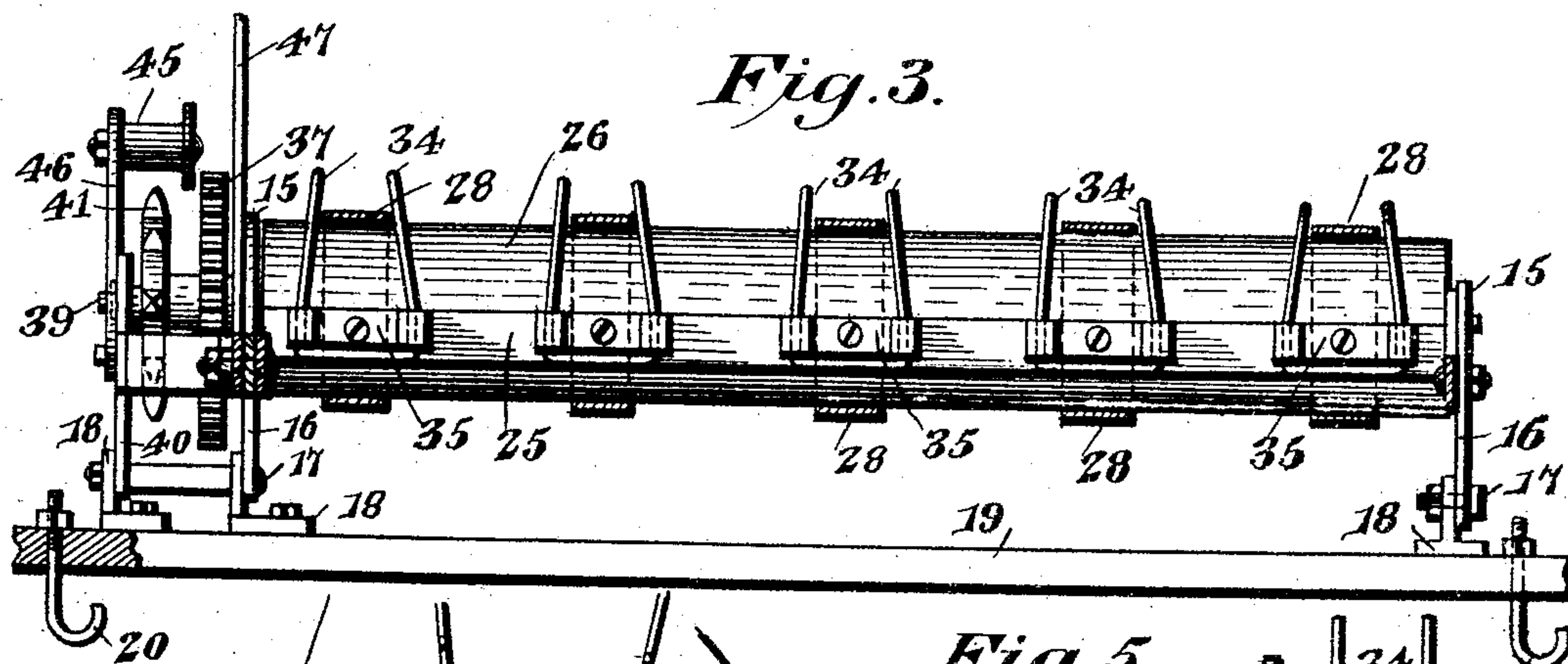


Fig. 4.

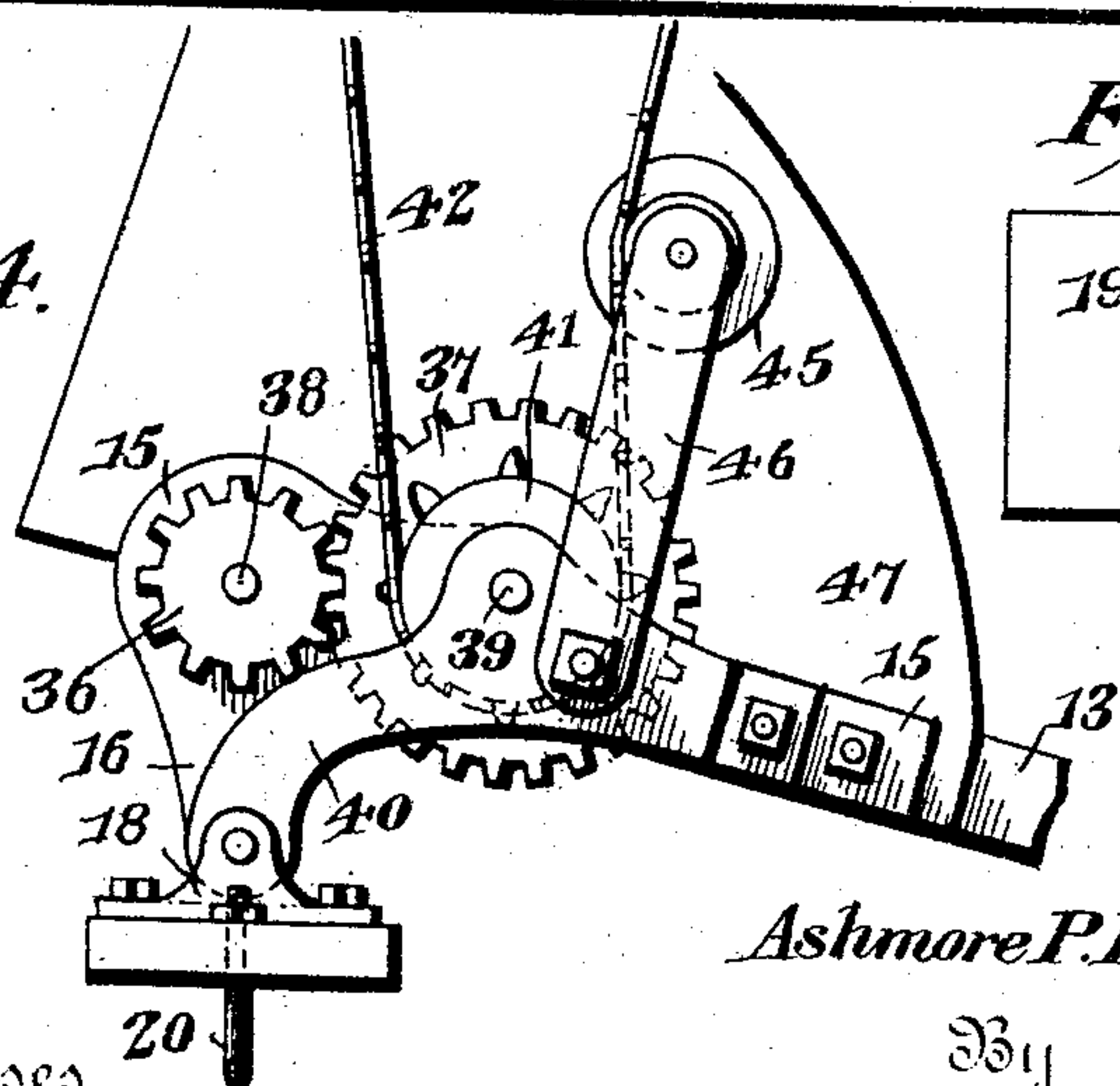
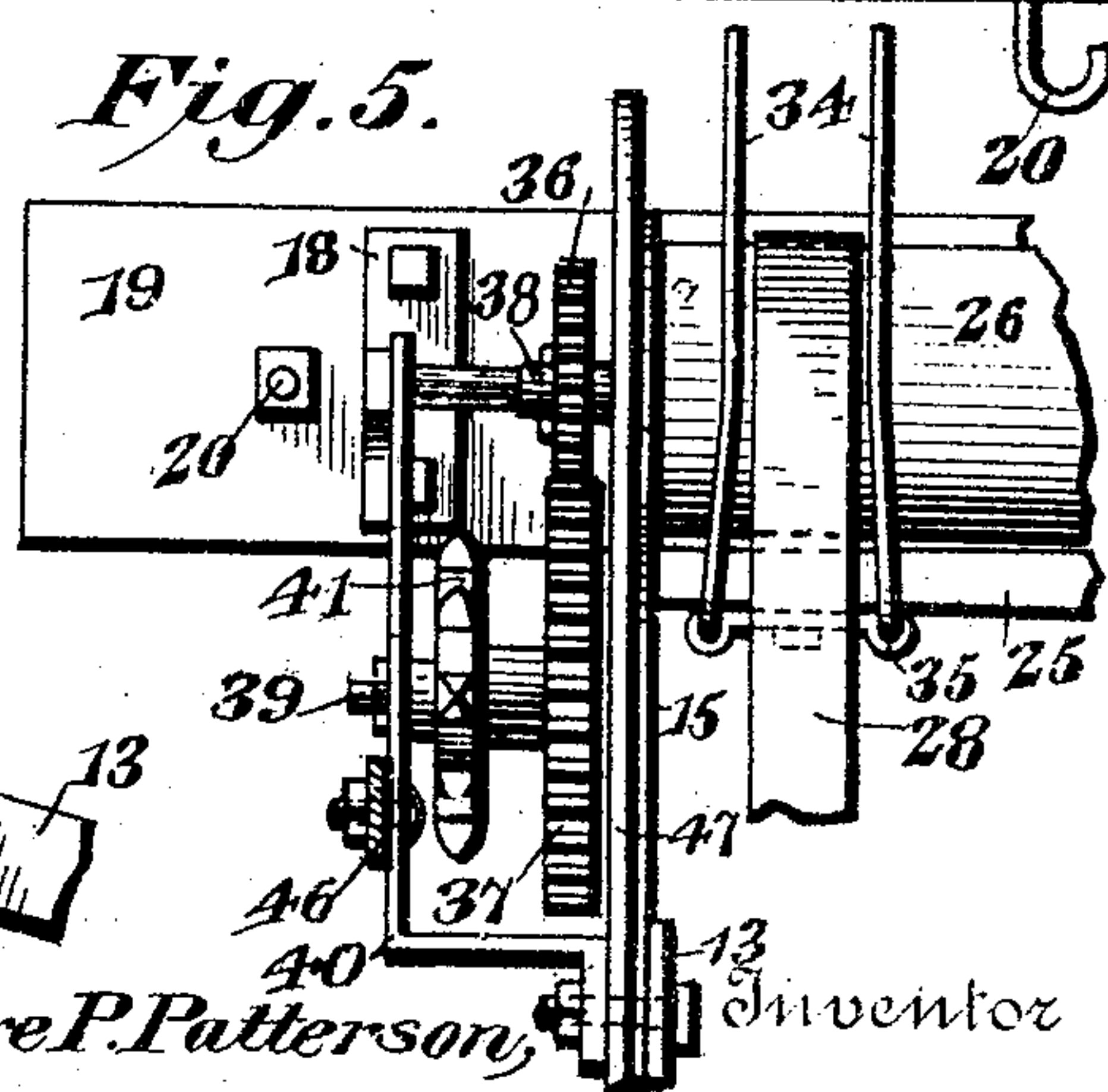


Fig. 5.



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GLENER ATTACHMENT FOR BINDERS.

SPECIFICATION forming part of Letters Patent No. 770,979, dated September 27, 1904.

Application filed September 5, 1903. Serial No. 172,191. (No model.)

To all whom it may concern:

Be it known that I, ASHMORE P. PATTERSON, a citizen of the United States, residing at Lansdowne, in the county of Delaware and State of Pennsylvania, have invented a new and useful Gleaner Attachment for Binders, of which the following is a specification.

The present invention relates to means which may be attached to any ordinary type of binder and will elevate the grain onto the platform thereof.

The object is to provide an extremely simple attachment of the above character which can be readily applied to the binder, will efficiently perform its work on both level and uneven ground, and will properly position the grain on the platform-carrier of the binder.

An embodiment of the invention which has proven entirely satisfactory and is at present considered the preferable one is illustrated in the accompanying drawings and described in the following specification. An inspection of the claims hereto appended will, however, show that the invention is not limited to the specific details of construction set forth, but may be changed and modified in various ways.

In the drawings, Figure 1 is a perspective view of a self-binder, showing the gleaner attachment in place thereon. Fig. 2 is a sectional view, on an enlarged scale, through the attachment. Fig. 3 is also a sectional view taken at right angles to Fig. 2. Fig. 4 is a detail elevation of the gearing employed. Fig. 5 is a top plan view thereof.

Similar reference-numerals indicate corresponding parts in all the figures of the drawings.

The binder is of a well-known type and includes a suitable platform, having a transversely-moving apron or carrier 10 thereon, which carrier delivers the grain to the elevator 11. The front end of the platform is provided with the usual guards 12, in which the cutter-bar operates, said cutter, however, being removed when the gleaner is applied.

The gleaner which constitutes the present invention is preferably constructed as follows: A frame is employed consisting of spaced side bars, each of which is formed of slidably-associated sections 13 and 14. The sections 13

carry at their rear ends brackets 15, having downturned ears 16, that are pivoted by suitable bolts 17 to ears 18, which are fastened to the upper face of an attaching-bar 19. This bar in the present structure is adapted to rest upon the guards 12 and is secured thereto by suitable hook-bolts 20, passed through the bar and embracing the guards. The sections 14 are each in the form of a casting and preferably fit against the outer faces of the sections 13. Said sections 14 are provided in their rear portion with longitudinally-disposed slots 21, through which are passed bolts 22, that also pass through the sections 13. Openings 23 are also formed in the sections 14 and receive bolts 24, that are attached to the sections 13. It will thus be seen that by this arrangement the side bars of the frame are extensible, as the bolts 22 and 24 permit the adjustment of the sections. A cross-bar 25 connects the brackets 15, and in rear of said cross-bar is located a roller 26, journaled in the brackets. Another roller, 27, is journaled in the front ends of the sections 14, and belts 28 pass about these rollers, said belts being provided with suitable outstanding fingers 29. In order to properly position the front end of the gleaner above the ground, ground-supports are employed in the form of shoes or runners 30, said runners being hinged, as shown at 31, at their front ends to the front portions of the sections 14. The rear ends are provided with upstanding terminal portions 32, having adjustable connections with the rear ends of the sections 14 by means of bolts 33. Thus by adjusting said rear ends of the runners it will be evident that the front end of the gleaner can be elevated to a greater or less degree above the surface of the ground. In order to properly deliver the grain from the belts upon the carrier, rearwardly-extending curved fingers 34 extend over the roller 26 and above said carrier. These fingers are preferably formed of looped wires secured to the bar 25 by clips 35, that engage intermediate portions of said looped wires and are fastened to the bar. By reference to Fig. 3 it will be seen that these fingers are located in different elevations. In other words, the outermost are lower, and the height of the same is consecutive-

tively increased to the innermost. These fingers are arranged in sets that embrace the rear portions of the belts and preferably converge in rear of the same.

5 While any suitable means may be employed for driving the gleaner, there is shown a pair of intermeshing gear-wheels 36 and 37, the former of which is fixed to the gudgeon 38 of the rear roller, the other being suitably secured to a stub-shaft 39, journaled in a bracket 40, secured to the rear bracket 15. The shaft 39 is also provided with a sprocket-wheel 41, about which passes a sprocket-chain 42, that constitutes the driving medium between the binder and gleaner attachment. This sprocket-chain 42 passes about a larger sprocket-wheel 43, affixed to the large reel-shaft 44 of the machine, the reel having first been removed. A tension-idler 45 is preferably journaled upon a link 46, pivoted to the bracket 40. The gearing is protected by a guard-plate 47, fastened to the rear portion of the attachment, said plate serving to prevent the straw from becoming entangled in the gearing.

25 In applying the structure shown to a binder the cutters and the reel are first removed, after which the attaching-bar 19 is placed upon the guards and fastened in place. The sprocket-wheel 43 is then suitably secured to the reel-shaft and connected with the gearing by the sprocket-chain 42. After the front end of the gleaner has been adjusted by raising or lowering the shoes, so that the teeth or fingers 29 will just pass over the surface of the ground, the machine is ready for operation. It will therefore be apparent that as said machine is advanced the belts will be moved and the fingers will engage the grain, carrying it rearwardly onto the fingers 34. These fingers serve to strip the grain from the belts, and they also coact with the platform-carrier apron to properly position the grain thereon. In other words, the heads, passing over the lowermost fingers, drop immediately upon the apron or conveyer, while the butts will be retarded sufficiently to permit the apron to swing the grain, so that it will lie transversely of the same. Thence it will be elevated in the usual manner to the binder mechanism.

This machine has proven entirely satisfactory in operation, and as it has a pivotal connection with the platform it will accommodate itself to the unevenness or roughness of the ground and at the same time will always act efficiently. The attachment, moreover, is one that can be easily applied and removed from the binder, the hook-bolts serving to securely connect the two. While this is the preferable manner of securing the attachment, it will be evident that other means may be employed and that it can be fastened to any convenient portion of the platform or the parts carried thereby without departing from the

spirit of the invention. Furthermore, while the mechanism is shown as operated from the reel-shaft it will be evident that it may be readily connected with any rotating element located adjacent and in suitable relation thereto.

From the foregoing it is thought that the construction, operation, and many advantages of the herein-described invention will be apparent to those skilled in the art without further description, and it will be understood that various changes in the size, shape, proportion, and minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

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

1. In a gleaner attachment, the combination with a harvester-platform, of a support located in advance of the platform, grain-elevating mechanism movably mounted on the support, means for driving the elevating mechanism upon said support, and means for pivotally attaching the support to the platform.

2. In a gleaner attachment, the combination with an attaching-bar, of grain-elevating mechanism pivoted to the bar, and means for attaching the bar to the platform of a binder.

3. In a gleaner attachment, the combination with an attaching-bar, of grain-elevating mechanism pivoted to the attaching-bar, and a hook-bolt carried by the bar for engagement with the guard of a binder.

4. In a gleaner attachment, the combination with the platform of a harvester having guard-fingers at its front end, of a frame located in advance of said platform and guard-fingers, an endless belt movably mounted on the frame and extending in front of the guard-fingers, and means for attaching the frame to the platform.

5. In a gleaner attachment, the combination with a frame, of rollers journaled on the frame, endless belts passing about the rollers, fingers carried by the belts, and means for securing the rear portion of the frame to a binder so that the belts will deliver the material to the platform-carrier thereof.

6. In a gleaner attachment, the combination with a frame, of rollers journaled on the frame, endless belts passing about the rollers, fingers carried by the belts, and means for pivotally securing the rear portion of the frame to the platform of the binder.

7. In a gleaner attachment, the combination with an attaching-bar, of means for securing the same to the platform of a binder, a frame pivoted at its rear end to the attaching-bar, rollers journaled upon the front and rear ends of the frame, and belts passing about the rollers and carrying outstanding fingers, the rear end of said belts being disposed above the plane of the platform.

8. In a gleaner attachment, the combination with the platform of a harvester, of a frame located in advance of the platform, grain-carrying mechanism mounted on the frame, means for attaching the frame to the platform, and a ground-support for the frame.

9. In a gleaner attachment, the combination with a frame, of grain-carrying mechanism mounted on the frame, means for pivotally attaching the rear end of the frame to a binder, and a ground-support carried by the front end of the frame.

10. In a gleaner attachment, the combination with a frame, of grain-carrying mechanism mounted on the frame, means for pivotally attaching the rear end of the frame to a binder, and an adjustable ground-support carried by the front end of the frame.

11. In a gleaner attachment, the combination with a frame, of grain-carrying mechanism mounted on the frame, means for attaching the frame to a binder, and spaced shoes carried by the frame and constituting a ground-support therefor.

12. In a gleaner attachment, the combination with an attaching-bar, of means for attaching the same to the platform of a binder, a frame pivotally secured to the bar, grain-carrying mechanism mounted on the frame, and ground-shoes pivoted at their front ends to the frame and having adjustable connections at their rear ends with said frame.

13. In a gleaner attachment, the combination with the platform of a binder, of a frame, means for attaching the frame to the platform, rollers journaled on the frame, belts passing about the rollers, and fingers carried by the frame and extending rearwardly from the same and beyond the belts, said fingers extending over the platform when the frame is attached to the same.

14. In a gleaner attachment, the combination with a frame, of grain-carrying mechanism mounted thereon, and grain-directing fingers carried by the frame and constituting supports over which the grain passes from the grain-carrying mechanism, said fingers being located in different elevations.

15. In a gleaner attachment, the combination with a frame, of means for securing the frame to a binder in advance of the platform-carrier, rollers journaled on the frame, belts passing about the rollers, and curved grain-directing fingers attached to the rear portion of the frame and located in different elevations, said fingers extending rearwardly of and above the rear ends of the carrier.

16. In a gleaner attachment, the combination

with the platform of a harvester, of a frame extending in advance of the platform, means securing the frame to the platform, grain-carrying mechanism mounted on the frame and comprising spaced endless bands, and fingers secured to the frame below the upper portions of the bands, said fingers projecting from the frame between the bands and in rear of the same over the platform.

17. In a gleaner attachment, the combination with the platform of a binder, of an extensible frame comprising slidably-associated sections, of rollers carried by the sections, a belt passing about the rollers, and means for pivotally attaching the frame to the platform.

18. In a gleaner attachment, the combination with an extensible frame including side bars that comprise slidably-associated sections, rollers journaled in the corresponding sections of the side bars, belts passing about the rollers, means for pivotally connecting the rear sections to a binder, and ground-supports connected to the front sections.

19. In a gleaner attachment, the combination with the platform and the reel-shaft of a harvester, of grain-elevating mechanism extending in advance of said platform, means for attaching the mechanism to the platform, and driving means for the elevating means, said driving means being attached to and operated by the reel-shaft.

20. In a gleaner attachment, the combination with an attaching-bar, of means for securing the same to the guards of a binder, a frame pivoted to the attaching-bar, front and rear rollers journaled on the frame, belts passing over the rollers and having fingers, a gear-wheel attached to the rear roller, another gear-wheel meshing with said first-mentioned gear-wheel and having a sprocket, a driving-sprocket, and a sprocket-chain passing about said sprockets.

21. In a gleaner attachment, the combination with the platform of a binder having guard-fingers, of a support attached to the platform and extending in advance of the guard-fingers, and an endless belt movably mounted on the support and delivering the grain to the platform, said belt extending in advance of the guard-fingers.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

ASHMORE P. PATTERSON.

Witnesses:

ELGIN ELBURT,

GEORGE E. BURNLEY.