

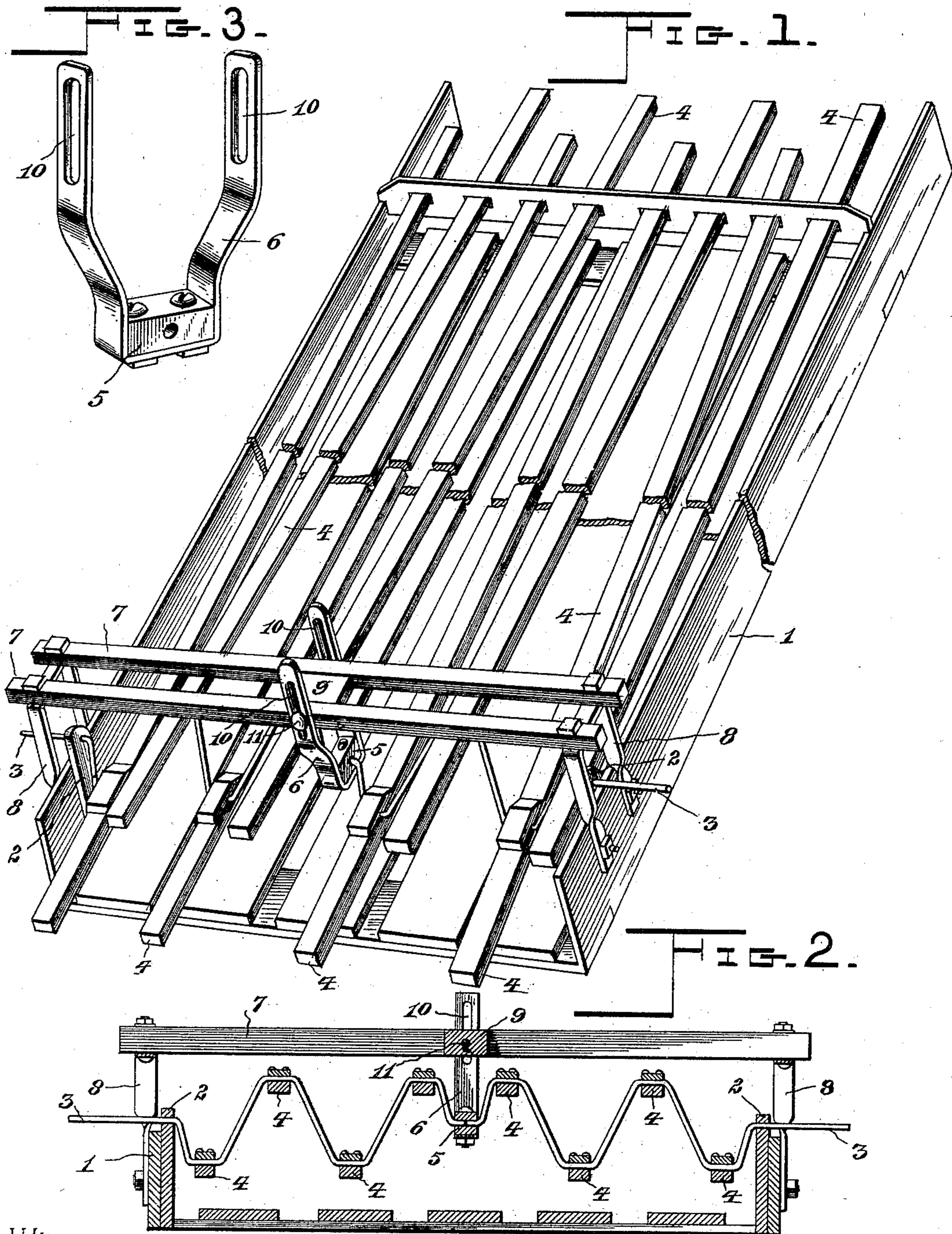
No. 619,201.

Patented Feb. 7, 1899.

J. MARTIN.  
HAY LOADER SHAFT.

(Application filed Sept. 12, 1898.)

(No Model.)



Witnesses  
John F. Deufferwiel  
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By his Attorneys,

Joseph Martin

Inventor

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# UNITED STATES PATENT OFFICE.

JOSEPH MARTIN, OF HARTWICK, IOWA.

## HAY-LOADER SHAFT.

SPECIFICATION forming part of Letters Patent No. 619,201, dated February 7, 1899.

Application filed September 12, 1898. Serial No. 690,759. (No model.)

*To all whom it may concern:*

Be it known that I, JOSEPH MARTIN, a citizen of the United States, residing at Hartwick, in the county of Poweshiek and State of Iowa, have invented a new and useful Hay-Loader Shaft, of which the following is a specification.

My invention relates to hay-loaders, and particularly to an operating-shaft and means for supporting the same adapted for use in connection with hay loaders, rakes, and tedders and other agricultural and analogous machines wherein is required a crank-shaft of considerable length adapted for reciprocating or imparting a plunging movement to a plurality of bars, such as forks and the like.

The specific object of my invention is to provide means whereby the center or intermediate portions of a crank-shaft designed for a purpose such as that named may be prevented from sagging, and thus cramping the parts operated by the shaft.

Further objects and advantages of this invention will appear in the following description, and the novel features thereof will be particularly pointed out in the appended claims.

In the drawings, Figure 1 is a perspective view of a device constructed in accordance with my invention. Fig. 2 is a transverse sectional view of the same, taken parallel with and in the plane of the crank-shaft. Fig. 3 is a detail view of the intermediate hanger.

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

1 designates a frame which may be of the construction ordinarily employed in connection with hay-loaders, and mounted in transversely-alined bearings 2 upon this frame is a crank-shaft 3, having a plurality of cranks with which are connected oscillatory bars 4, adapted to receive a combined oscillatory and reciprocatory or plunging movement. This shaft is of sectional construction, with its members in axial alinement, and the inner extremities of the members are mounted in a bearing 5, formed in a hanger 6, of stirrup shape, depending from a support 7, extending transversely across the frame 1. The extremities of this support are connected with the frame 1 by means of brackets 8, of yoke shape, or the equivalent thereof, and said support may, as illustrated in the drawings, consist of

parallel bars spaced apart at their centers by a block 9, said bars being terminally bolted to the above-described brackets. The hanger, in the lower end of which is formed the intermediate bearing for the crank-shaft, is provided with upwardly-extending arms arranged upon opposite sides of the transverse support and longitudinally slotted, as shown at 10, to receive a securing-bolt 11. By means of this hanger the inner ends of the crank-shaft sections or members may be adjusted relatively to the outer extremities thereof to insure an accurate alinement of the said shaft sections or members, and hence the proper relative positions of the parts to insure efficient operation; but it will be understood that the efficiency of the device described for supporting a long driving-shaft at points between its terminal bearings is not limited to its use in connection with a hay-loader, although in this relation said device is particularly advantageous from the fact that the means for driving the crank-shaft of a hay-loader are usually located at the ends of the crank-shaft or at one of them, and ordinarily there is no provision made for communicating motion to the same at any other points. This being the case, the weight of the crank-shaft and its attachments or the means which are operated thereby are such as to cause the sagging of the shaft at its center, and hence the binding of the cranks in the driven parts. Furthermore, it will be understood that I do not limit myself to a single intermediate hanger, as it is obvious that a plurality thereof may be employed arranged at intervals throughout the length of the crank-shaft, said shaft being divided to form a corresponding number of sections or members or consisting, as in the construction illustrated, of only two sections, when the application of power to drive the crank-shaft can be made at only two points, as at the remote extremities thereof.

Having described my invention, what I claim is—

1. In a device of the class described, the combination with a supporting-frame and a divided or sectional crank-shaft mounted at its remote ends in bearings in the frame in axial alinement, of a support extending transversely across the frame parallel with said crank-shaft, a hanger depending from the sup-



port at an intermediate point and provided with a bearing for the contiguous aligned extremities of the crank-shaft sections or members, and means for adjusting said hanger in  
5 a direction perpendicular to the axis of the crank-shaft, substantially as specified.

2. In a device of the class described, the combination with a supporting-frame and a divided or sectional crank-shaft having its remote extremities mounted in bearings in the  
10 frame, of a support arranged transversely upon the frame above the plane of the crank-shaft, an armed hanger depending from said support at an intermediate point and provided  
15 with a bearing for the reception of the contiguous aligned extremities of the crank-shaft sections or members, the arms of said hanger being longitudinally slotted, and a securing-bolt carried by the support and engaging  
20 the slots in the arms of said hanger, for securing the latter at the desired adjustment, substantially as specified.

3. In a device of the class described, the combination with a frame and a divided or

sectional crank-shaft having its members 25 mounted at their remote extremities in bearings in the frame, brackets arranged upon the frame contiguous to the extremities of the crank-shaft, a support secured terminally to said brackets and extending transversely 30 above and parallel with the crank-shaft, said support consisting of parallel bars secured at the desired interval by spacing-blocks, a stirrup-shaped hanger depending from the support at an intermediate point and provided 35 with a bearing for the contiguous aligned extremities of the crank-shaft sections or members, and means for securing the hangers at the desired adjustment, substantially as specified. 40

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

JOSEPH MARTIN.

Witnesses:

N. J. VICKERY,

JOHN S. ORMISTON.