T. Welch.

Harvester Pitman.

No. 49,183. Patented Aug. 1, 1865.

Fig. 1.

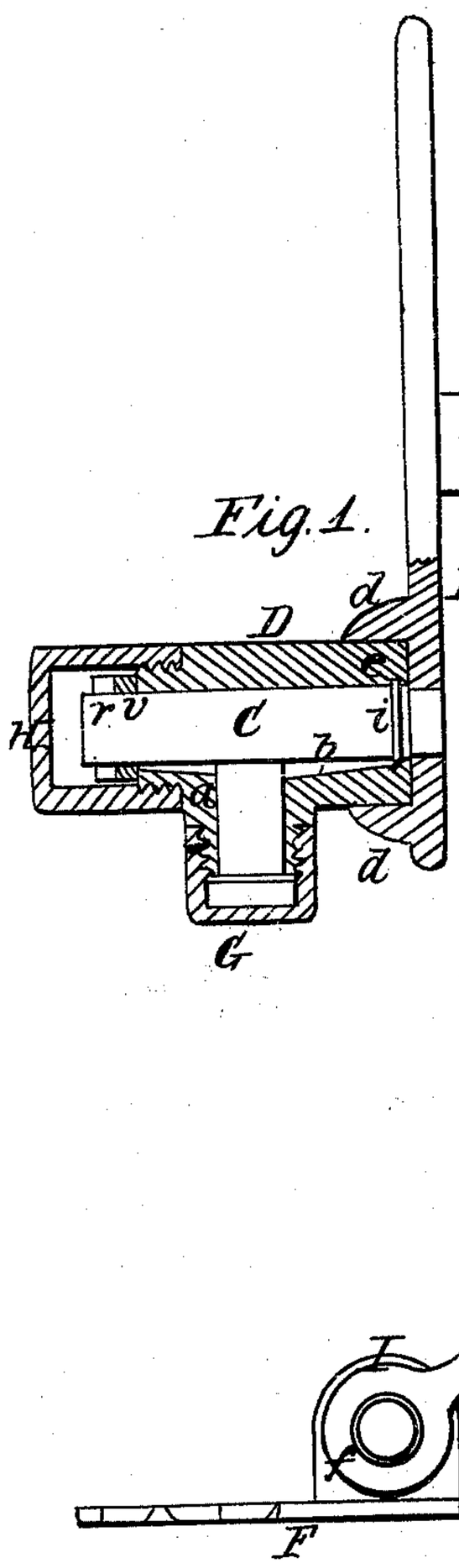


Fig. 2.

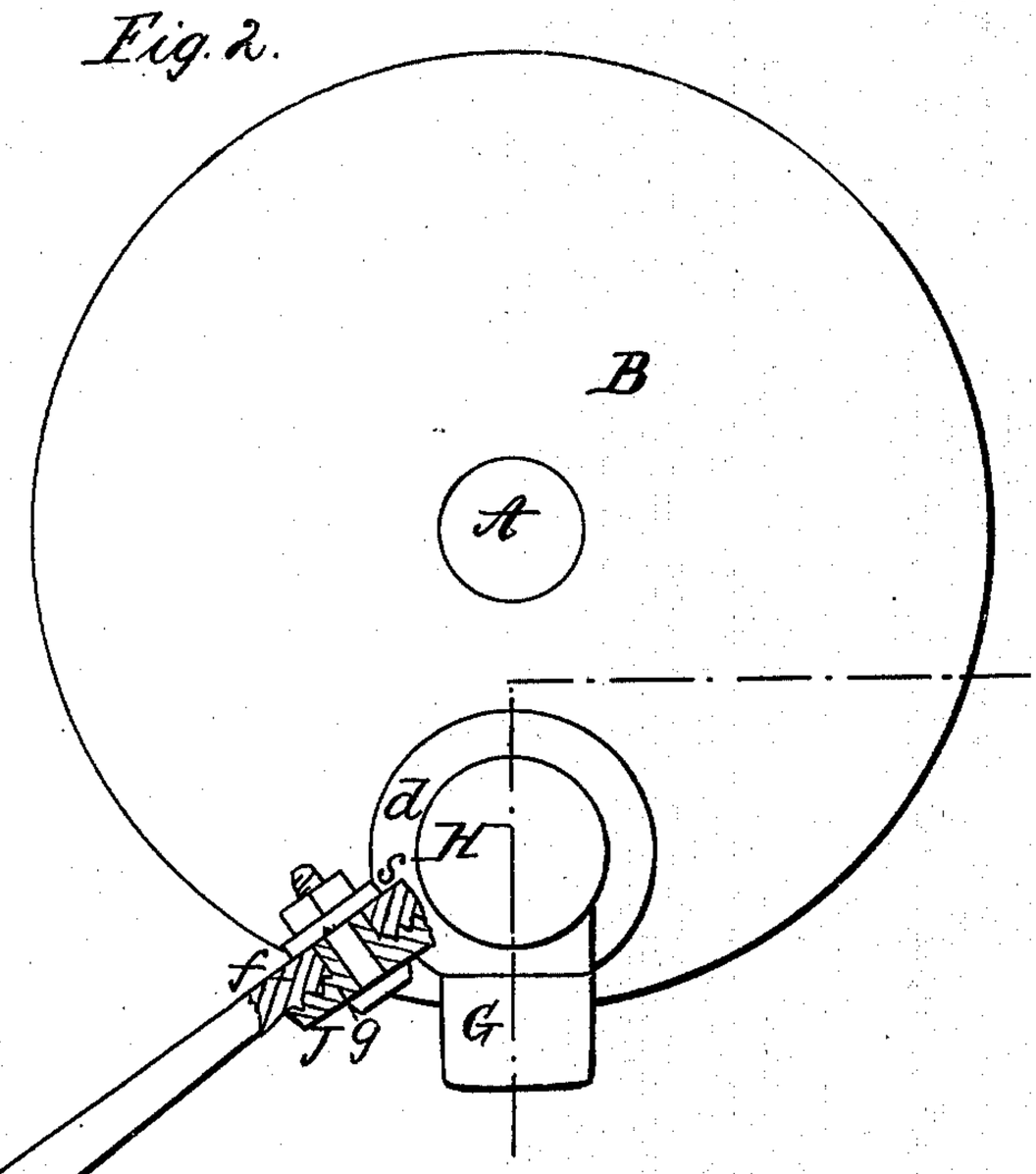
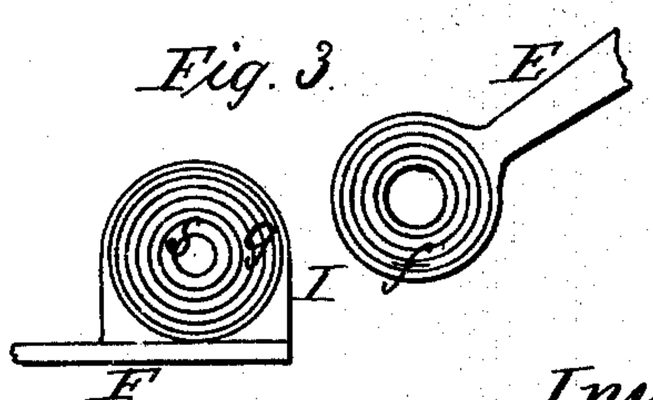


Fig. 3



Witnesses,
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Inventor
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UNITED STATES PATENT OFFICE.

THOMAS WELCH, OF CHURCHVILLE, NEW YORK.

IMPROVEMENT IN HARVESTERS.

Specification forming part of Letters Patent No. **49,183,** dated August 1, 1865.

To all whom it may concern:

Be it known that I, THOMAS WELCH, of Churchville, in the county of Monroe and State of New York, have invented certain new and useful Improvements in the Crank-Pins and Boxes of Reapers and Mowers; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a longitudinal section through the box and crank-pin. Fig. 2 is a front elevation of the parts, with the upper serrated joint, J, of the pitman R shown in section. Fig. 3 is a detached face view of the inside of the two serrated-faced joint-plates of either end of the connecting-rod.

Similar letters of reference indicate corresponding parts in the several figures.

One of the greatest obstacles met with in running reapers and mowers is in being unable to prevent the crank-pin and box from heating and cutting out, and the great cause of that is inefficiency of the means heretofore known or used to lubricate that part of the machine, while it is necessarily run at a high speed, and is constantly exposed to grit and dust, which settles in the joints.

The object of my invention is, mainly, to meet these objections by providing a constant fountain of oil to the pin, by so inclosing it in the box as to prevent leakage, and also to entirely prevent any dust or dirt from working into the box.

To enable others to make and use my invention, I will describe it in detail.

A in the drawings represents a section of the ordinary crank-shaft of reapers and mowers; B, the balance-wheel; C, the crank-pin; D, the box; E, the connecting-rod; F, a portion of the knife-bar; G, the hanging oil cup or fountain; and H the tight cap over the end of the crank-pin.

I cut a small channel, *i*, in the pin, near its junction with the wheel, and a corresponding channel, *e*, in the box. These channels prevent the oil from gushing out at that end of the box. I attach a reservoir, G, for oil to the under side of the box, so as to communicate directly with the pin C, and I cut channels in the box D under the pin, descending each way in to the oil-cup G, as seen at *a* and *b* in Fig. 1. The tight cap H being screwed to the end of the box effectually prevents the oil from escaping at that end, and also keeps out all grit and dirt; and the longitudinal channels *a* and *b* in the under side of the box return the collections from each way into the reservoir G. The projecting rim *d* of the wheel is provided, in part, as an additional preventive of the escape of oil, but more especially to prevent grit, &c., from working into the joint.

The pivoted joints I and J (shown in Figs. 2 and 3) are designed to permit any changes in the relative position of the cutter-bar with the crank-shaft or the balance-wheel, which changes are sometimes unavoidable, and in some cases even desirable.

The plates *f* and *g*, which constitute the joint, are made male and female, as shown in the drawings, one being cast with a stud, *s*, which constitutes the axis for the other to turn upon, and the washer under the nut of the clamping-bolt is forced down against the end of this stud, if it is to be used as a loose joint; but if it is to be set to be used in any particular direction, the stud *s* should be shortened, so that the clamping-bolt shall bind the parts together. The wear in this joint is distributed on all sides of the axis by the annular serrations. By arranging the axis of the joint of one end of the rod E at right angles to that of the other end the parts are forced to retain their relative position vertically, however much they may be changed horizontally.

The box D is secured to the pin C by the pin *r* and washer *v*, after which the cap H is screwed on.

It will be seen that the oil will be dashed against the crank-pin at every revolution.

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

1. The combination and arrangement of the box D, constructed as shown and described, with the crank-pin C, socket *d*, wheel B, or its equivalent, and driving-shaft A of reapers and mowers, for the purposes specified.

2. The joints I and J, constructed and arranged as shown and described, in combination with the crank-box D and cutter-bar F, for the purpose set forth.

THOMAS WELCH.

Witnesses:

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