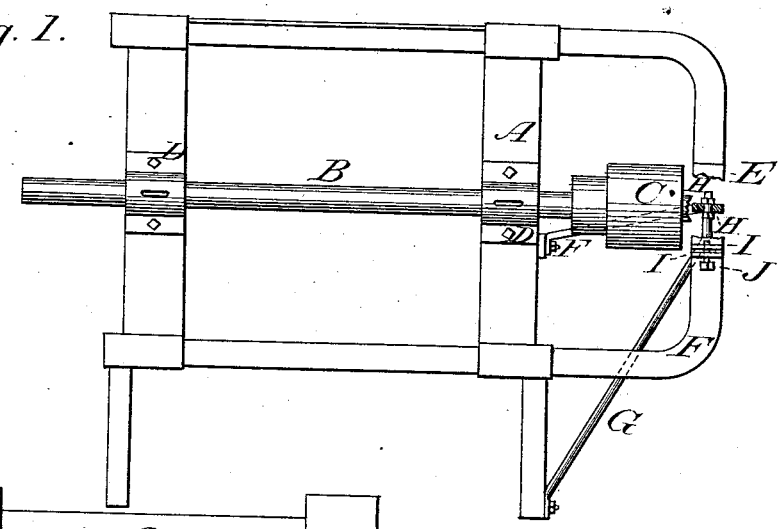
F. W. ROBINSON.
Thrashing-Machines.

No. 217,903. Patented July 29, 1879.

Fig. 1.



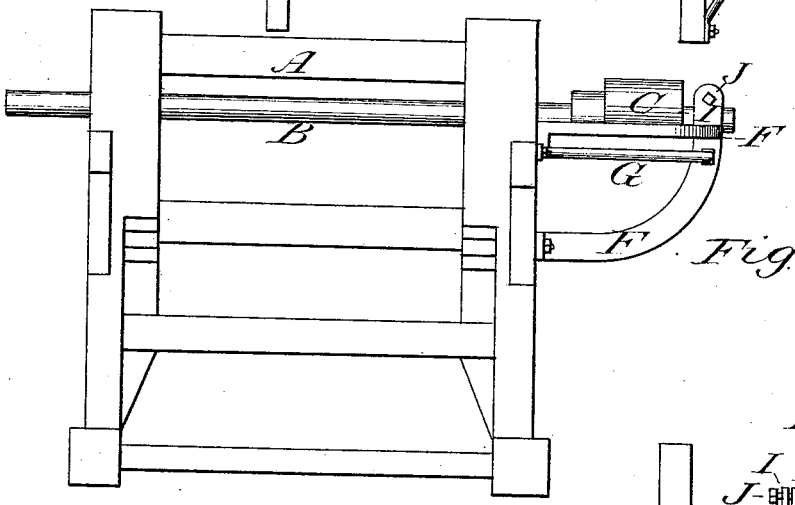
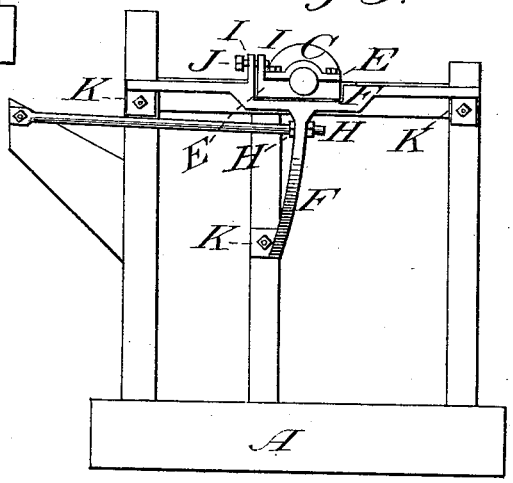


Fig. 2.

Fig. 3.



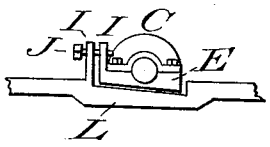


Fig. 4.

Attest:
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UNITED STATES PATENT OFFICE.

FRANCIS W. ROBINSON, OF RICHMOND, INDIANA.

IMPROVEMENT IN THRASHING-MACHINES.

Specification forming part of Letters Patent No. **217,903**, dated July 29, 1879; application filed December 3, 1878.

To all whom it may concern:

Be it known that I, FRANCIS W. ROBINSON, of Richmond, in the county of Wayne and State of Indiana, have invented a new and useful Improvement in Thrashing-Machines, of which the following is a specification.

The invention relates to the cylinder-shaft and journal-boxes of a thrashing-machine; and the object is to prevent the journals from heating.

Great trouble has been experienced by builders and operators of thrashing-machines on account of the journals of the cylinder-shaft heating, and I believe that I have discovered the cause and the remedy.

Most of the lately-constructed thrashing-machines which are run by a belt from the motive power have three journal-boxes for the cylinder-shaft. Two of said boxes are supported by the frame of the machine, and one by an iron frame attached to the main frame and outside of the principal pulley on the cylinder-shaft. This outside bearing supports the major part of the weight-tension and strain of the driving-belt, (usually from one hundred to one hundred and fifty feet in length and six inches wide.) This great strain on the projecting outside frame draws this end of the cylinder-shaft in the direction of the engine or other motive power with such force as to spring the frame, and consequently to bend the cylinder-shaft out of a straight line, causing the journal-boxes to pinch on the shaft, producing (besides loss of power) great friction, heating, and wearing, particularly on the outer-end journal-box; or, if but two journal-boxes are used, the same result is caused by drawing one end of the cylinder-shaft (and not both) in the direction of the motive power, and out of a parallel line with its bearings or journal-boxes, and the friction thus produced would cause both journals to heat. Now, to prevent this trouble, I use the following device.

In the accompanying drawings, in which similar letters of reference indicate like parts, Figure 1 is a plan and sectional view of the cylinder-frame, showing the rod G connecting with the frame F under the box E; also ears I I of box E and frame F; also nuts H H on rod G. Fig. 2 is a side elevation, giving a view of rod G, and also of ears I on the frame F. Fig. 3 is an end elevation, showing rod G with its attachments to frame A and frame F; also a vertical and horizontal view of ears I I and bolt J. Fig. 4 is an end elevation of box E and a part of frame F, showing an inclined seat on frame F for box E.

A is a section of the frame of the machine, in which the cylinder is placed. B is the cylinder-shaft. C is the main pulley on cylinder-shaft. D D are journal-boxes, in which the cylinder-shaft runs. E is also a journal-box, in which the cylinder-shaft runs, and journal-box E has a sliding motion on an inclined seat. F is an iron frame attached to frame A, and supports journal-box E. G is a rod that is secured to frame A, and passes through part of frame F. H H are nuts on rod G, for the purpose of adjusting box E. I I are projections or ears on frame F, and also on journal-box E. J is a bolt, which passes through projections I. K K K on frame F in Fig. 3 are diagonal slots. L in Fig. 4 represents an inclined seat to journal-box E on frame F.

Now I secure the rod G to a proper part of the frame A, and extend it to the perpendicular support of the frame F, through which it passes; and by means of the nuts H H the frame F, with its journal-box E, is drawn in the opposite direction from the engine or motive power, and thus compensates for the weight and tension of the main driving-belt, and holds the shaft B in line when at work.

To compensate for the extra wear on the outside journal-box, E, I provide projections or ears I I on the journal-box E, and also on the iron frame F. The bolt J passes through projection I on frame F, and is tapped into the projection I on journal-box E; and by tightening said bolt J from time to time, the journal-box E is drawn in the opposite direction from the motive power, and in this way I prevent the shaft B from wearing out of line; or, by reversing bolt J, it may be used as a set-screw and accomplish the same object.

The rod G may be attached direct to the journal-box E of the cylinder-shaft by providing suitable ears or projections, and, in a measure, accomplish the same object.

What I claim is—

1. The rod G, formed with screw-threaded end, and provided with adjusting-nuts H H, combined with frame F, substantially as described.

2. The combination of projections on journal-box E of the shaft of the thrashing-cylinder and the projections on frame F with bolt J, substantially as described, and all for the purposes set forth.

FRANCIS W. ROBINSON.

Witnesses:

HENRY E. ROBINSON,

HARRY M. YEO.