

J. R. Hedges,

Horse Power.

No. 105680.

Patented July 26. 1870.

Fig. I.

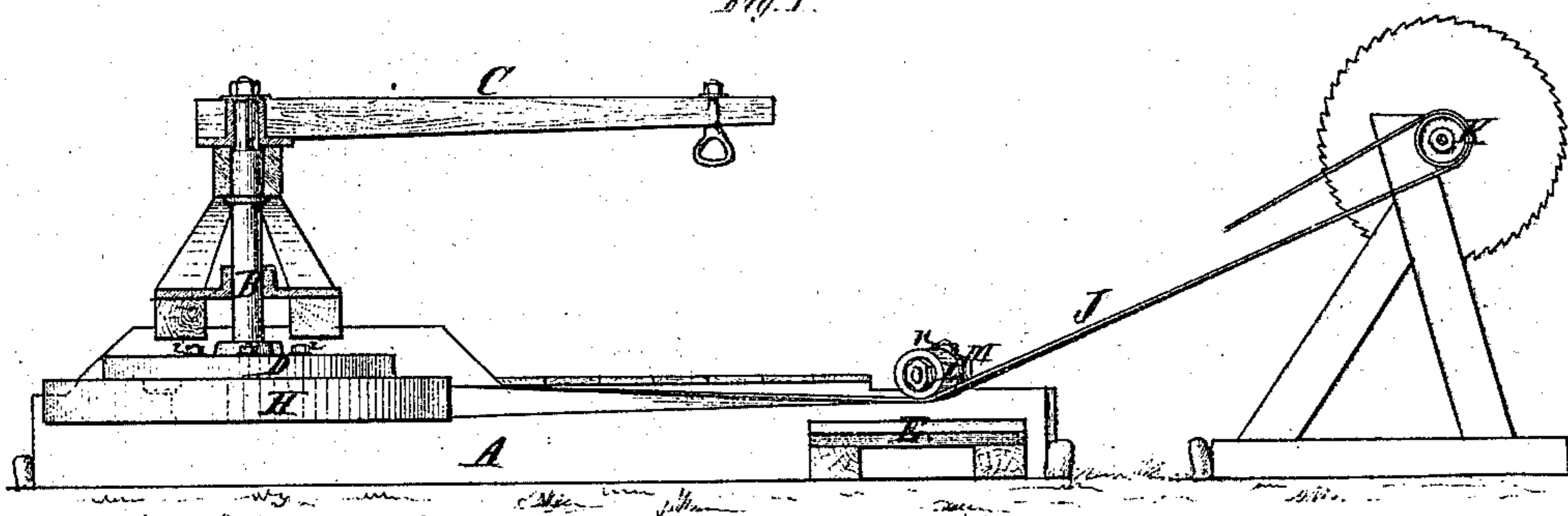


Fig. II.

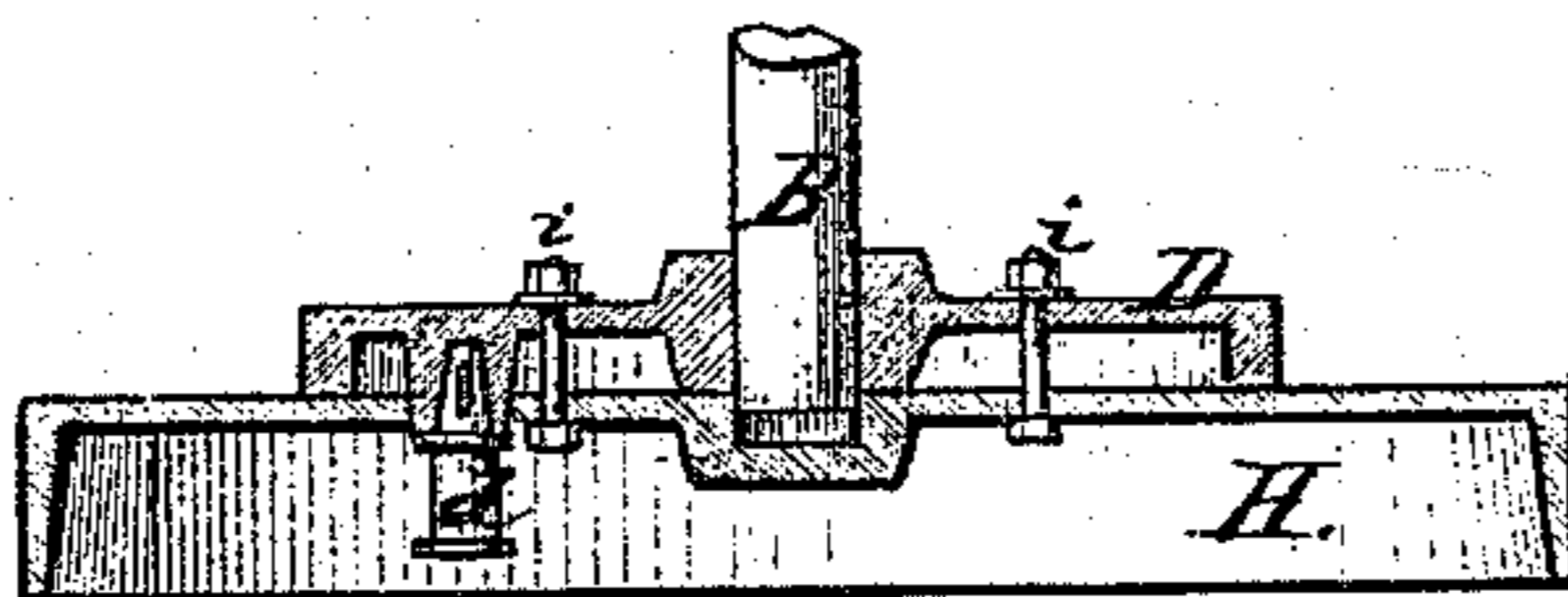
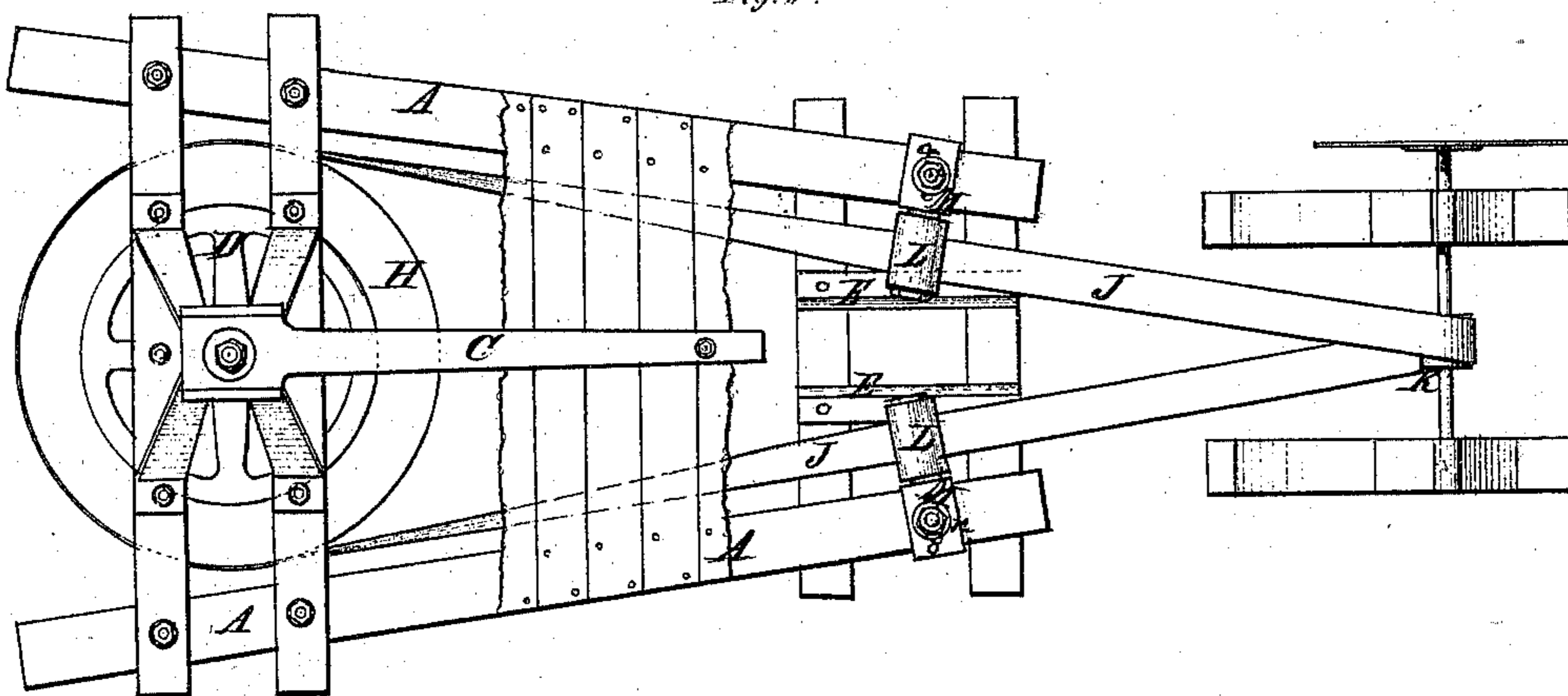


Fig. III.



Geo. J. Bonner
Victor H. Becker
Witnesses

John R. Hedges *Examiner*
by Torbush & Hyatt
Attys.

United States Patent Office.

JOHN R. HEDGES, OF GLENWOOD, ASSIGNOR TO HIMSELF AND VALENTINE & SPARKS, OF BUFFALO, N. Y.

Letters Patent No. 105,680, dated July 26, 1870.

IMPROVEMENT IN HORSE-POWERS.

The Schedule referred to in these Letters Patent and making part of the same.

I, JOHN R. HEDGES, of Glenwood, in the county of Erie and State of New York, have invented an Improvement in Horse-Powers, of which the following is a specification:

My invention relates to the providing of horse-powers with driving-belts for directly transmitting their motion to, and operating other machines, especially wood-sawing machines; and

It consists in the arrangement of adjustable guide-pulleys upon the bed-frame outside of the track, and in such position with reference to a driving-pulley upon the main central shaft as to conduct and guide the belt therefrom through the bed-frame and below the track, and thence to the pulley of the machine to be operated thereby.

In the accompanying drawing—

Figure I is a side elevation of my improvement;

Figure II is a plan; and

Figure III is a section of the fly-wheel of the horse-power, with the band-wheel attached thereto.

Like letters of reference designate like parts in each of the figures.

A A represent the frame or bed of the horse-power;

B, the central vertical driving-shaft, which receives motion from a sweep or sweeps, C, through any suitable intervening mechanism, (not shown in the drawing;)

D is a fly-wheel mounted on the lower end of the shaft B; and

d is a wrist-pin, which connects with the pitman when the power is used for cross-cut sawing.

E E are the ways, attached to cross-pieces of the bed-frame, between which plays the cross-head, to which the outer end of such pitman is attached.

In driving a circular saw, I attach to the fly-wheel, by bolts i i, so as to be easily removable, a band-

wheel, H, from which a band, J, connects directly with the pulley K on the saw-mandrel.

L L are two guide-pulleys, mounted on pendent arms M, secured to the ends of the bed by set-bolts n passing through slots o therein, so as to enable the pulleys to be adjusted as may be required. These pulleys guide the belt and keep it horizontal within the bed and under the treadway which covers the bed-frame, and also steady the belt as it leaves the pulleys to connect with the elevated pulley K on the horizontal saw-mandrel.

Heretofore, when employed in driving a circular saw, the motion from the horse-power has been communicated by means of a bevel wheel on the lower end of the central shaft A, which gears with a bevel pinion on the end of a horizontal shaft, from the outer end of which a band is connected with a pulley on the saw-mandrel.

This method involves the cost of the horizontal shaft and bevel-gear, and occasions an unnecessary amount of friction, which requires a consequent increase of power to overcome. It adds the weight of this shaft and gearing to the horse-power, which renders the latter laborious to handle and transport, beside requiring an extra amount of time and trouble to set and arrange it, all of which extra cost, weight, friction, power, time and labor, are saved and avoided by the use of my improved arrangement.

What I claim as my invention is—

The arrangement of the guide-pulleys L L, bed A, band J, pulley K, and band-wheel H on the main driving-shaft of a horse-power, substantially as and for the purpose hereinbefore set forth.

J. R. HEDGES.

Witnesses:

JAY HYATT,

JOHN J. BONNER.