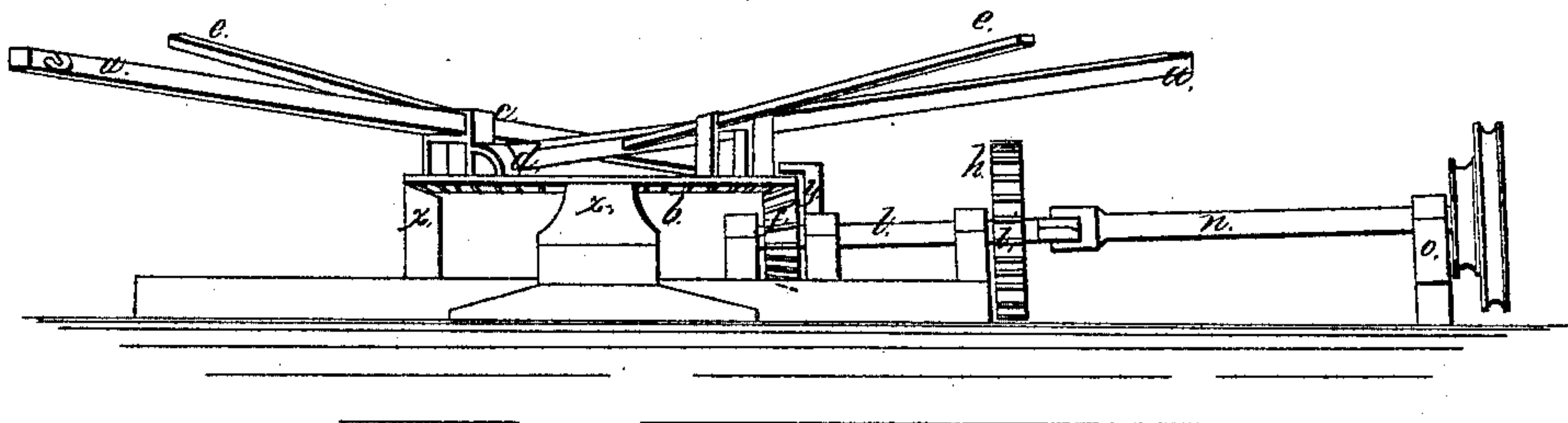


*A. Adams,  
Horse Power.*

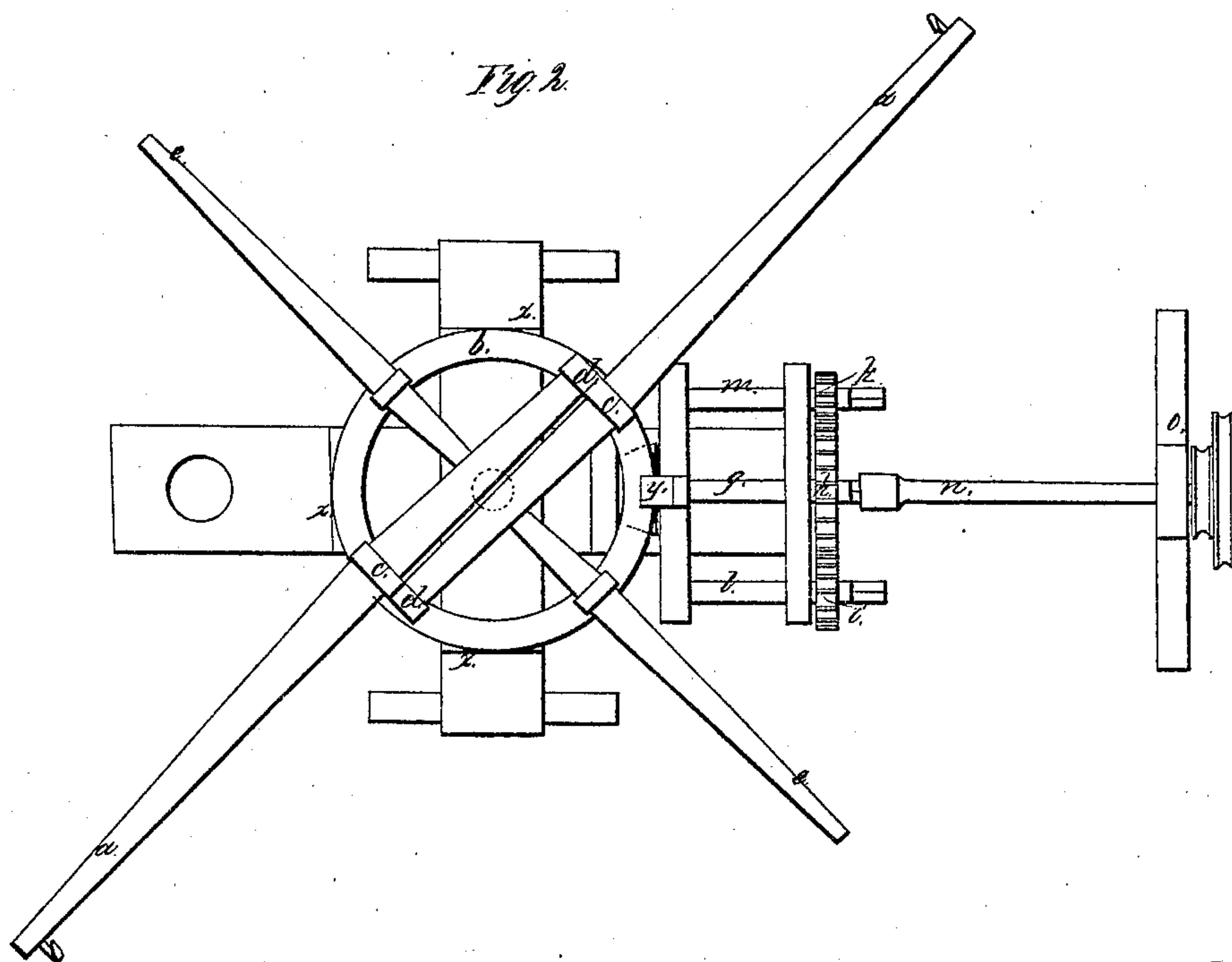
*N<sup>o</sup> 32,673.*

*Patented July 2, 1861.*

*Fig. 1.*



*Fig. 2.*



*Witnesses,  
J. H. Rogers  
Mustard Hall.*

*Inventor,  
Augustus Adams  
By his atty  
Amos Brown*

# UNITED STATES PATENT OFFICE.

AUGUSTUS ADAMS, OF SANDWICH, ILLINOIS.

## HORSE-POWER.

Specification of Letters Patent No. 32,673, dated July 2, 1861.

*To all whom it may concern:*

Be it known that I, AUGUSTUS ADAMS, of Sandwich, in the county of Cook and State of Illinois, have invented a new and useful  
5 Improvement in Horse-Powers; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawing, making a part of this specification, and to  
10 the letters of reference marked thereon.

The object of this invention is to develop the power of horses to be utilized on various machines, in such a manner that there will be a minimum loss by friction, and that the  
15 driving speeds may be readily changed; and it consists in attaching the levers for the teams so that there will be only a rotary strain communicated to the main shaft, which may be transferred to the driving  
20 pulleys by any one of three changes of gearing.

In the ordinary way of securing the lever for a team it is fitted into a socket at the center, and has a fulcrum more or less re-  
25 mote between the horses and the shaft; and the power not only rotates the shaft, but tends to displace it by the leverage from the fulcrum. The displacement of the shaft and the machine, is resisted by the  
30 fastenings, and occasions a large loss of power by friction. By extending the lever beyond the shaft the leverage at one side is in unison with that at the other, the displacement of both points of attachment is in  
35 a circular direction around the shaft, and a strain of torsion only is communicated to the shaft. As therefore, there need be no provision made for any other than a rotary strain on the shaft, the machine may be  
40 built much lighter than when it is necessary to resist the twisting of the driving wheel and shaft from their proper position.

To enable others skilled in the art to make and use my invention, I will proceed to de-  
45 scribe its construction and operation.

Figure 1 of the drawing is a side elevation of my improved horse power arranged for two teams, and Fig. 2 is a plan of the same.

The teams are attached to the levers *a*,  
50 which are secured to the driving wheel *b* by the sockets *c* and *d* placed on opposite sides

of the wheel. The leverage at *c* tends to rotate the shaft; and if the other end of the lever had been attached to the center, it would have exerted a corresponding power  
55 to displace the shaft; but by extending the lever to the socket *d* on the opposite side, the leverage there is also exerted simply to turn the shaft as desired. The small levers *e* are for the attachment of the horses' halters. The  
60 bevel driving wheel *b* is prevented from leaving its proper horizontal position by the blocks *x* and the hook *y*; and it is geared into the bevel pinion *f* on the shaft *g*, which also carries the wheel *h* that drives the two pin-  
65 ions *i* and *k* on the shafts *l* and *m*. These three shafts have appropriate bearings and journals; and are all caused to revolve together by the movement of the teams, at various speeds depending upon the size of  
70 the gearing. The shaft *g* may have a slow motion suitable for a corn sheller; the shaft *l* will then have a more rapid motion, such as would be used for a thresher; and the shaft *m* would be worked still faster, as  
75 would be required for a sewing machine.

The motion from either of the shafts *g*, *l*, or *m* may be transmitted by fitting its square end into the socket of the shifting, pulley-  
shaft *n*, which is represented in the drawing  
80 as connected to the shaft *g*. The shaft *n* has a pair of belt pulleys from which the power is taken to the machine it is desired to work; and it has a single bearing *o* that may be shifted when it becomes necessary to take  
85 the power from either of the faster working shafts *l* and *m*.

I claim as my invention and desire to secure by Letters Patent:

1. The attachment of each of the driving  
90 levers to the opposite sides of the crown of the driving wheel, in the manner described and for the purpose specified.

2. The shifting shaft *n*, when used for transmitting the motion of either of two or  
95 more revolving shafts, substantially as, and for the purpose described.

AUGUSTUS ADAMS.

Witnesses:

C. E. GRAY,  
JOHN ZENGELER.