

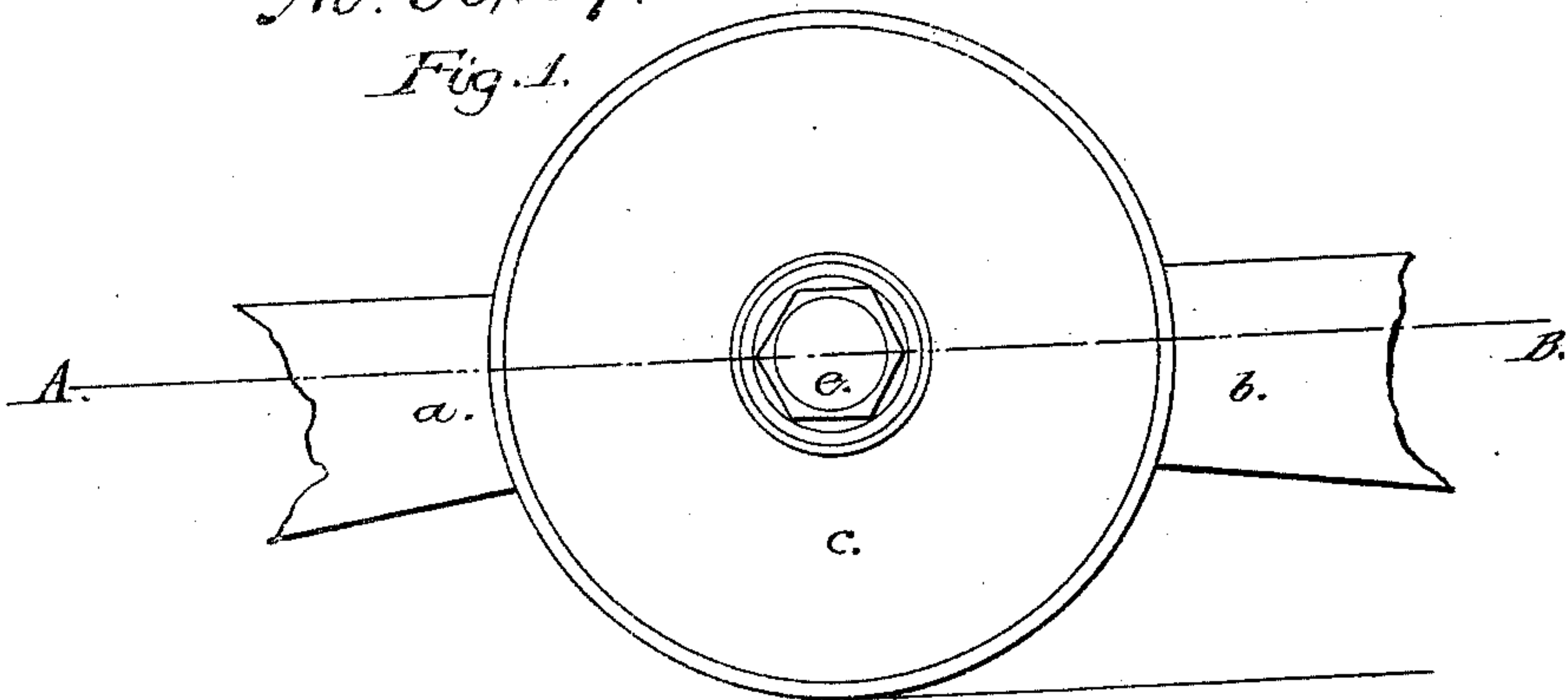
*A. & G. F. Wright,*

*Horse Power.*

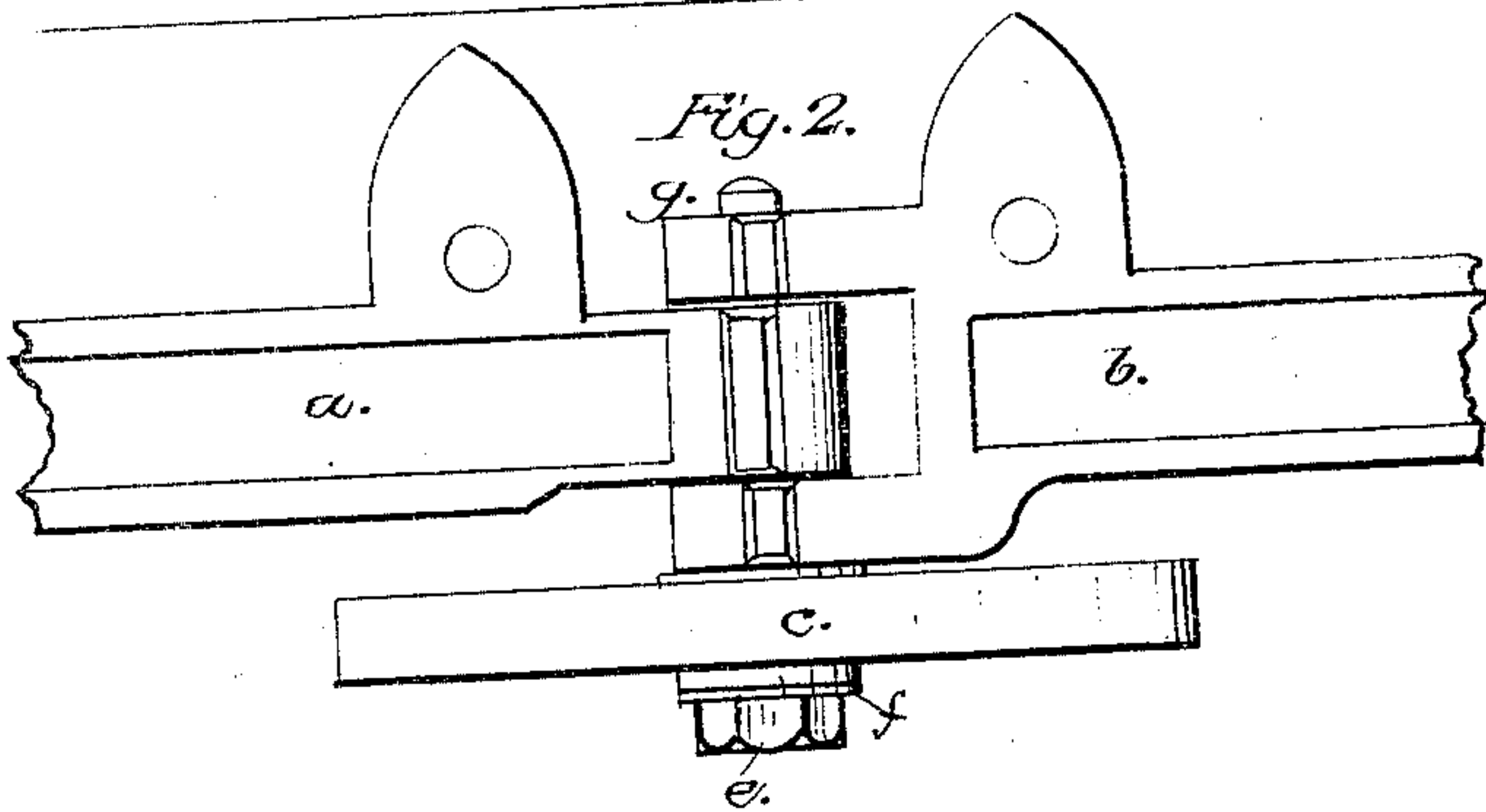
*No. 86,197.*

*Patented Jan. 26. 1869.*

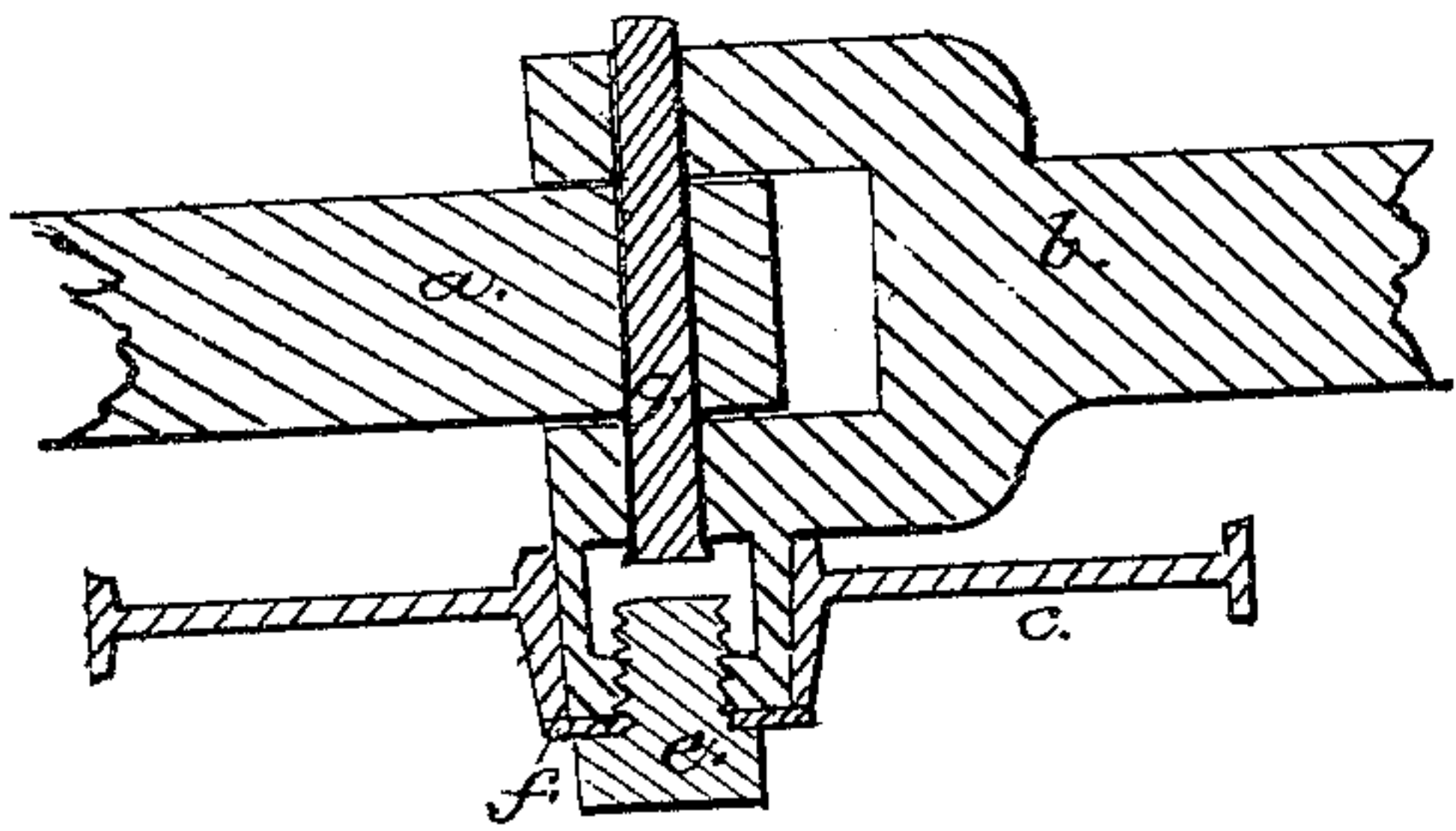
*Fig. 1.*



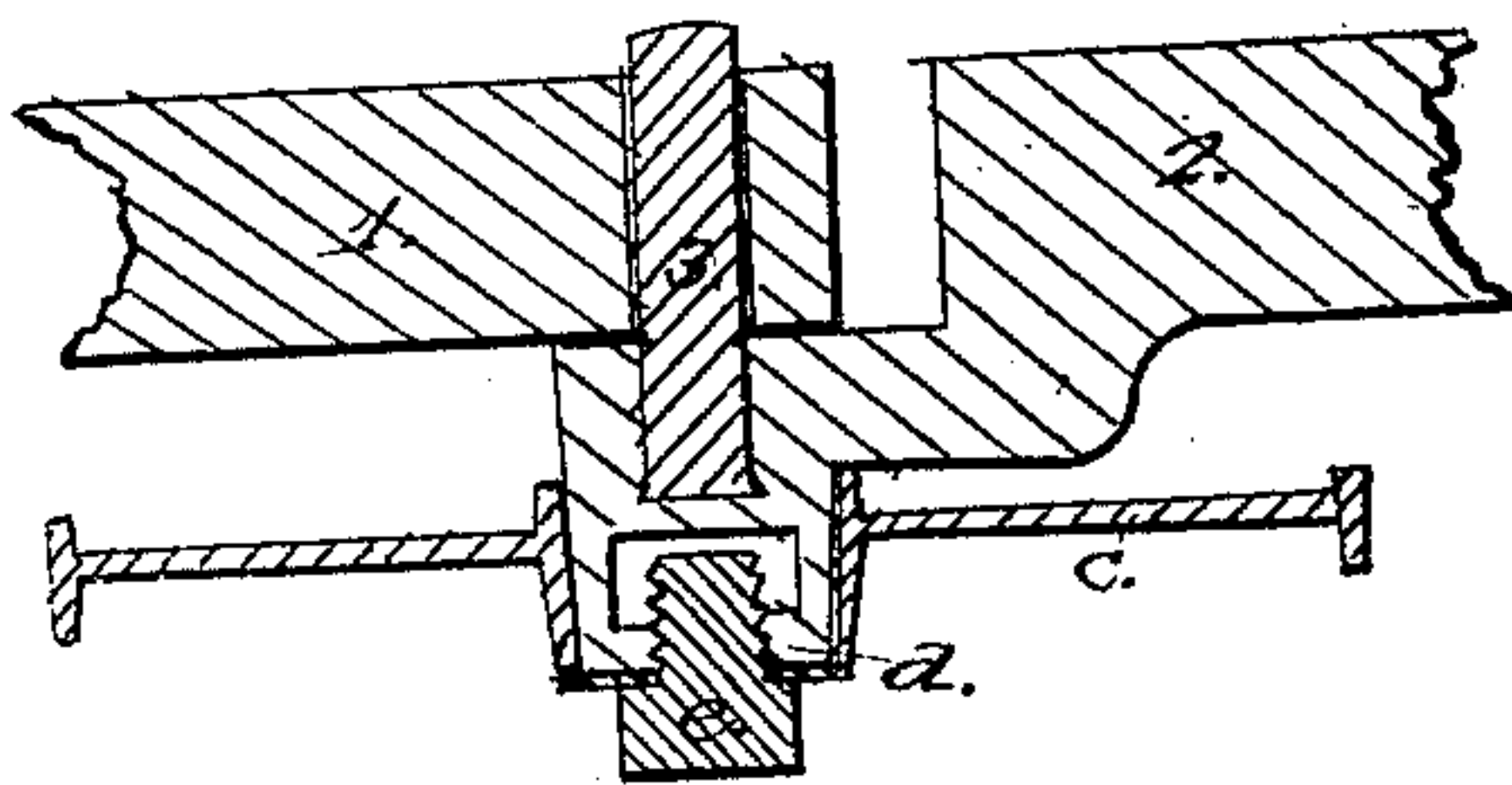
*Fig. 2.*



*Fig. 3.*



*Fig. 4.*



*Witnesses:*  
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*Abram Wright*  
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# United States Patent Office.

ABRAM WRIGHT AND GEORGE F. WRIGHT, OF CLINTON, MASSACHUSETTS.

Letters Patent No. 86,197, dated January 26, 1869; antedated January 8, 1869.

## IMPROVEMENT IN ENDLESS CHAINS FOR HORSE-POWERS.

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

To all whom it may concern:

Be it known that we, ABRAM WRIGHT and GEORGE F. WRIGHT, of Clinton, county of Worcester, State of Massachusetts, have invented a new and useful Method of Coupling the Links of Endless-Chain Horse-Powers, and attaching wheels to the same; and we do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to letters of reference marked thereon.

The present invention relates to certain new and useful improvements in coupling the links of endless-chain horse-powers, and attaching wheels to the same, and consists,

First, in casting a hollow shell upon the side of the link in such a manner as to allow the coupling-pin to pass through, and the head of it to remain in the said shell.

Second, in the use of said hollow shell as an axle for the wheel supporting the animal, and the method of holding it upon said axle.

In the accompanying drawings we have represented our improvements, reference being had to the same in the following description, of which—

Figure 1 is an upright side view of a wheel and fragments of two links.

Figure 2, a top or plan view of same.

Figure 3 is a horizontal sectional view of the same, through the red dotted line, from A to B, in fig. 1.

Figure 4 is a coupling, to be hereinafter mentioned and described.

*a* and *b* are fragments of links of an endless-chain horse-power.

*c* is a wheel upon the shell *d*, cast upon one arm of the fragment *b*, the wheel being retained in its proper place by the washer *f*, and the screw *e* being screwed into the shell *d*.

*g* is a steel coupling-pin, passing through the shell *d*, the arms of the link *b*, and the link *a*, constituting a joint of the horse-power chain, and having a head of a suitable size to pass through the hole in the shell, which receives the screw to secure it in its proper place.

Having described the manner in which the devices composing our improvements are arranged and constructed, we will now notice some of their advantages over the present ones in use.

Heretofore hollow thimbles or shells have been used, being secured to the link by a bolt passing through them, with a nut upon the outside, and the objection to this method is, the weight of the animal, and the

jar of the chain, when running, soon loosens these bolts, the nuts work off, and are very troublesome.

There is also a link constructed, with a projection cast on the side to receive the wheel, having a wrought-iron start cast in it, with a thread to receive a nut, for the purpose of keeping said wheel in its proper place, and the objection to this is very great, for it often occurs, with such machines, that a stick of wood, or other agent, is, by accident, allowed to come in contact with the chain, when in motion, breaking off said starts, and the iron being chilled around it, cannot be drilled; consequently the link is unfit for use, and must be replaced by new.

The advantages of our improvements are—

First, the hollow shell *d* gives great strength to the arm of the links *b*, upon which it is cast; especially when the link is constructed with one arm, and a steel coupling-pin cast in it, as shown in fig. 4. 1 and 2 are fragments of links; 3 a steel coupling-pin, one end being cast in the arm of the link 2, the link 1 being drilled to receive the free portion of said pin.

Second, being cast solid to the link, it affords a substantial support for the animal.

Third, it admits of the bolt *e*, which, by the aid of the collar *f*, performs a double office, retaining the wheel *c* upon the shell *d*, and the coupling-pin *g* in its proper place.

Fourth, the bolt *e*, being screwed into the shell *d*, which is of necessity larger than the head of the coupling-pin *g*, will not be easily broken off by such accidents as have been referred to in connection with another link now in use, and in case it should so happen, the threaded portion is easily worked out and replaced by another, the value of a screw being much less than a whole link.

Having thus described our invention,

We claim as new, and desire to secure by Letters Patent—

1 Casting a hollow shell upon the side of the link, substantially as described, and for the purpose herein set forth.

2. The said shell or axle for the wheel, the washer *f*, and the screw *e*, arranged substantially as described, for the purpose herein set forth.

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