

(No Model.)

W. Y. WATT.
THILL SUPPORT.

No. 436,510.

Patented Sept. 16, 1890.

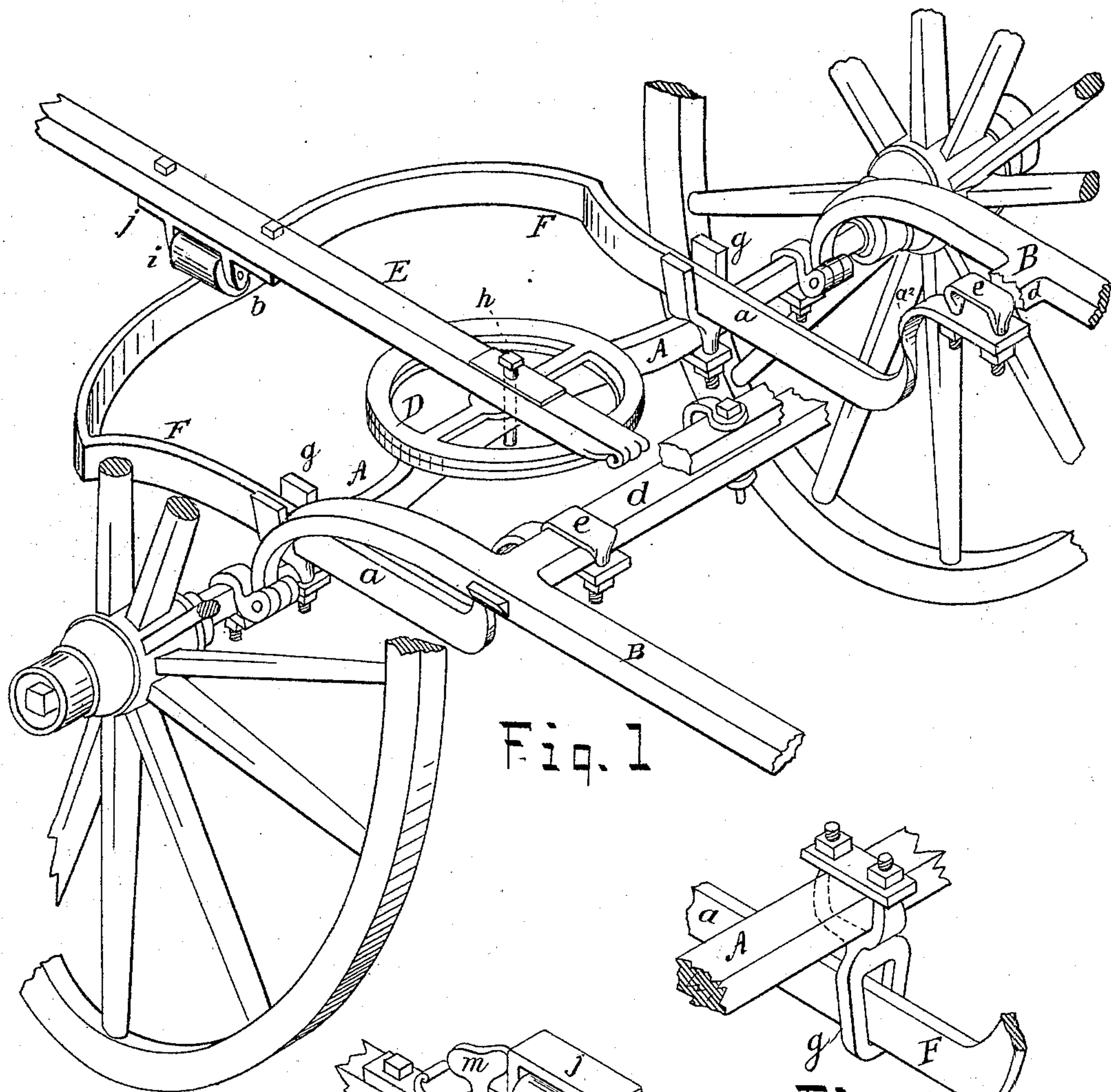


Fig. 1

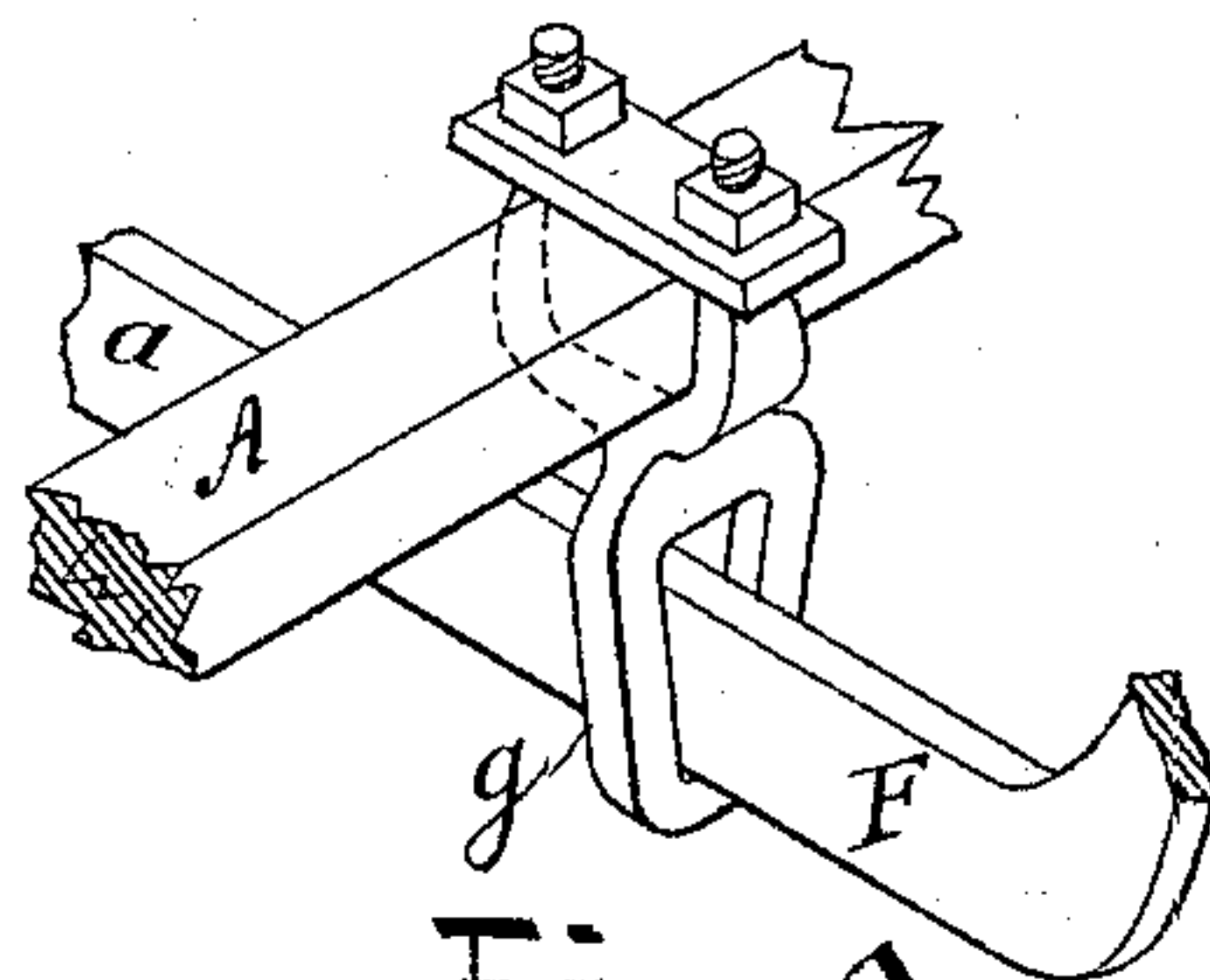


Fig. 2.

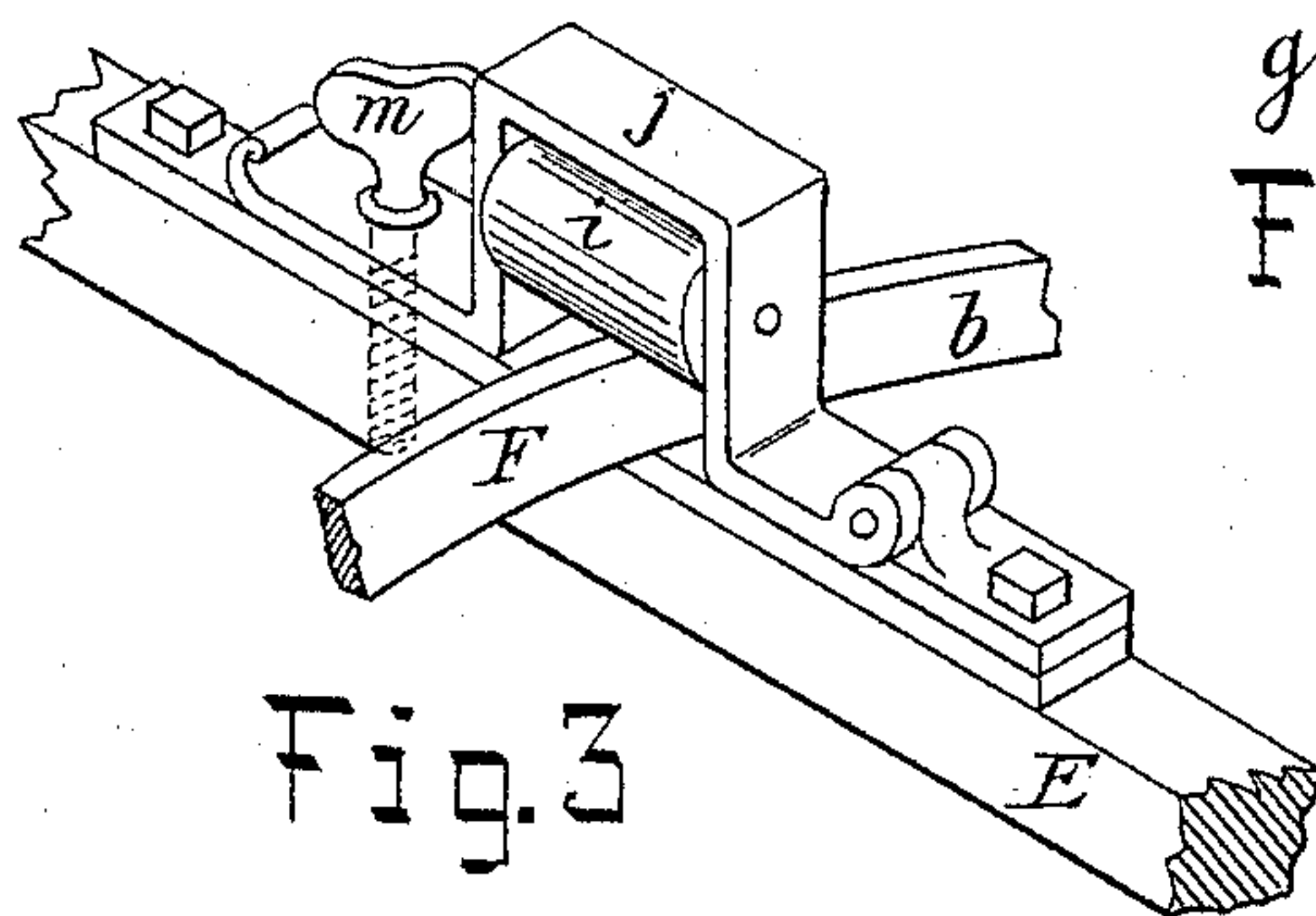


Fig. 3

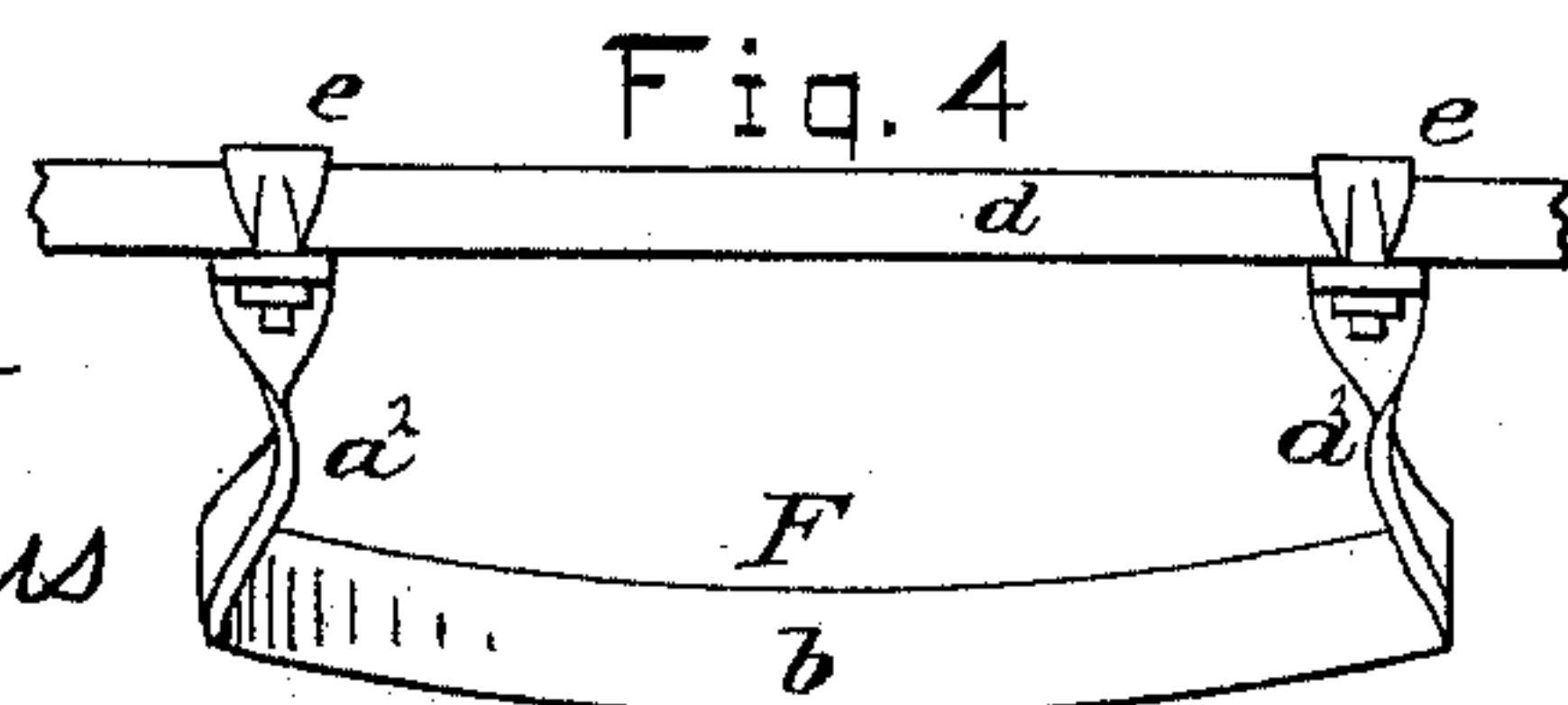


Fig. 4

WITNESSES.

Joseph Ireland
Francis J. Gibbons

INVENTOR.

William G. Watt
by
J. F. Bourne
his ATTORNEY.

UNITED STATES PATENT OFFICE.

WILLIAM Y. WATT, OF BROOKLYN, NEW YORK.

THILL-SUPPORT.

SPECIFICATION forming part of Letters Patent No. 436,510, dated September 16, 1890.

Application filed May 15, 1890. Serial No. 351,874. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM Y. WATT, a resident of Brooklyn, Kings county, New York, have invented certain new and useful
5 Improvements in Thill-Supports, of which the following is a specification.

The object of my invention is to provide means to support the thills or shafts of a wagon or carriage independently of the horse,
10 so that a saddle can be dispensed with, thereby giving the horse more comfort and preventing the horse from being injured through the rubbing of a saddle.

The invention consists in a support or bail carried by the thills or shafts, supported between its ends by the axle, and movably connected with the reach, whereby the thills are supported at the proper height and the axle
15 can be freely turned without interference from the thill-support.

The invention further consists in the novel details of improvement and the combinations of parts, that will be more fully hereinafter set forth, and then pointed out in the claims.

25 Reference is to be had to the accompanying drawings, forming part of this specification, wherein—

Figure 1 is a partly-broken perspective view of the forward part of a wagon having my
30 improvement applied; and Figs. 2, 3, and 4 are details more fully hereinafter described.

In the accompanying drawings, the letter A indicates the forward axle of a wagon. B are the thills or shafts, suitably connected thereto. D is the fifth-wheel, and E is the reach. The above parts are all well known,
35 and may be of suitable construction.

F is my improved thill-support, which is shown in the form of a bail having two substantially parallel rearwardly-projecting sides *a a*, that are joined by a cross bar or strip *b*, which comes under the reach E. (See Fig. 1.) The forward ends of the support F are secured to the thills B, being shown connected
40 to the cross-bar *d* of said thills by clips *e*. The support F, I prefer to make of metal—say steel—and turn it on edge, so that it will be supported by the axle on edge, and also connect with the reach on edge, whereby comparatively light metal can be used while giving the requisite strength. To firmly secure
50 the thill-support F to the cross-bar *d* of the

thills, even while it is turned on edge, as stated, I give said support F near its free ends a half-turn at *a*², so as to bring its flat side
55 against the cross-bar *d*, and pass the ends of the clip *e* through said support F and hold it in position by nuts *f*, as clearly shown in Fig. 1, or otherwise connect the support F to the thills.

Although the support F may rest freely on the axle A, I prefer to place it in sockets *g g*, one for each part *a*, which sockets are secured to the axle A, as shown. These sockets are shown open on top and are tapered down-
60 wardly and inwardly, so that the thill-support will firmly fit within them. The sockets *g* keep the support F in the proper position and from lateral movement on the axle. The axle A acts as the fulcrum for the thill-support F, and the reach E, which is over the part *b* of the support F, keeps the rear end of part *b* from being raised up by the weight of the thills or shafts B. When the axle turns on the king-pin, the part *b* of the thill-support F rides under and against the reach E,
65 whereby the thills are supported in all positions of the axle. The cross part *b* of the thill-support F is preferably curved to follow an arc described around the king-pin *h*, so
70 that it will travel in the proper line on the reach as the axle turns.

In order that the outer ends of the thills will always remain at a certain height in whatever position the axle is turned, I make
85 the upper edge of the cross part *b* of the thill-support F slant or slope slightly from its outer parts toward the center, as shown in Fig. 4.

Although the thill-support F may bear directly against the reach, I may place a roller *i*
90 between the reach and the support F, as in Fig. 1. Said roller is shown supported by and journaled in a bracket *j*, carried by the reach E.

With the arrangement of parts heretofore
95 described the outer ends of the thills or shafts B will be supported independently of the horse, and no saddle need be used to support the thills, as the support F, coming against the reach, cannot rise, and therefore the outer
100 ends of the thills cannot descend. By this means the horse's back is relieved from weight, and rubbing of the same is prevented; but this will not interfere with the attachment of

the horse to the thills for pulling and backing purposes. The thills can be lifted for convenience in storing the wagon, in which case the support F will swing down, turning on the axle A as a fulcrum.

Instead of resting the thill-support upon the axle, it can be suspended from the same. (See Fig. 2.) In this case the socket *g* depends from the axle, its lower part being closed to support the arm *a* of the support F.

Instead of the thill-support F coming under and against the reach E, it can be placed on top of the same, in which case it will preferably be connected to the reach by the frame *j*, (see Fig. 3,) which comes over the support F, and is shown hinged at one end to the reach E, while its other end is held by a screw or the like *m*. The roller *i* is shown carried by the frame *j* also in this arrangement. With this construction, to let the shafts or thills B down, it is only necessary to swing the frame *j* from over the thill-support F, when the latter can swing up, turning on the axle A as a fulcrum. Of course the thill-support F could be connected with the reach E for supporting the thills at the proper or desired height otherwise than by the particular means shown.

By securing the thill-support F to the thills and having it fulcrum on the axle and its free end connected with the reach a very simple and effective arrangement for supporting the thills independently of the horse is produced, and one that is not liable to get out of order.

Having now described my invention, what I claim is—

1. The combination, with the thills or shafts and the axle carrying the same, of a rigid support connected to said thills and carried by said axle, and the reach to which said support is movably connected, said support extending rearwardly from the thills to the reach, substantially as described.

2. The combination, with the thills or shafts and the axle carrying the same, of the rigid thill-support composed of two rearwardly-projecting arms *a a* and the cross-bar *b*, connecting said arms, said support being secured to said thills and fulcrumed on said axle, and the reach to which said support is connected and by which it is guided, substantially as described.

3. The thills and the axle, combined with a thill-support secured to said thills and supported by said axle and the reach connected

with said axle, the inner part of said support extending in the arc of a circle described around the king-pin, substantially as described.

4. The thills and the axle, combined with a thill-support consisting of a bar having substantially parallel arms *a a* and cross-bar *b*, said bar being turned on edge and supported by the axle, and with the reach to which the part *b* of the thill-support is movably connected, substantially as described.

5. The thills and the axle and the sockets *g* carried thereby, combined with the thill-support connected to said thills and resting in said sockets, and with the reach to which the thill-support is movably connected, substantially as described.

6. The axle and thills, combined with the thill-support consisting of a bar having parallel arms *a* and cross-bar *b*, said bar being turned on edge and having the twist or turn *a²* near the outer ends of said arms *a* to bring the flat side of said arms against the cross-bar *d* of the thills, and with the reach which supports the bar *b* of the thill-support, substantially as described.

7. The axle and the thills, combined with the thill-support F, the reach, and the roller *i*, carried by the reach against which the thill-support rests, whereby the thills are supported from the reach, substantially as described.

8. A thill-support consisting of two parallel arms *a a* and a curved cross-bar *b*, connecting said arms, combined with an axle to which said thill-support is fulcrumed, a reach against which said support abuts, and thills connected to said axle, to which thills said thill-support is secured, substantially as described.

9. A thill-support consisting of two substantially parallel arms *a a* and connecting cross-bar *b*, whose edge is depressed from its ends toward its center, combined with an axle, a reach, and thills, all arranged substantially as described.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of two witnesses, this 14th day of May, 1890.

WILLIAM Y. WATT.

Witnesses:

FRANCIS J. GIBBONS,
T. F. BOURNE.