

No. 640,351.

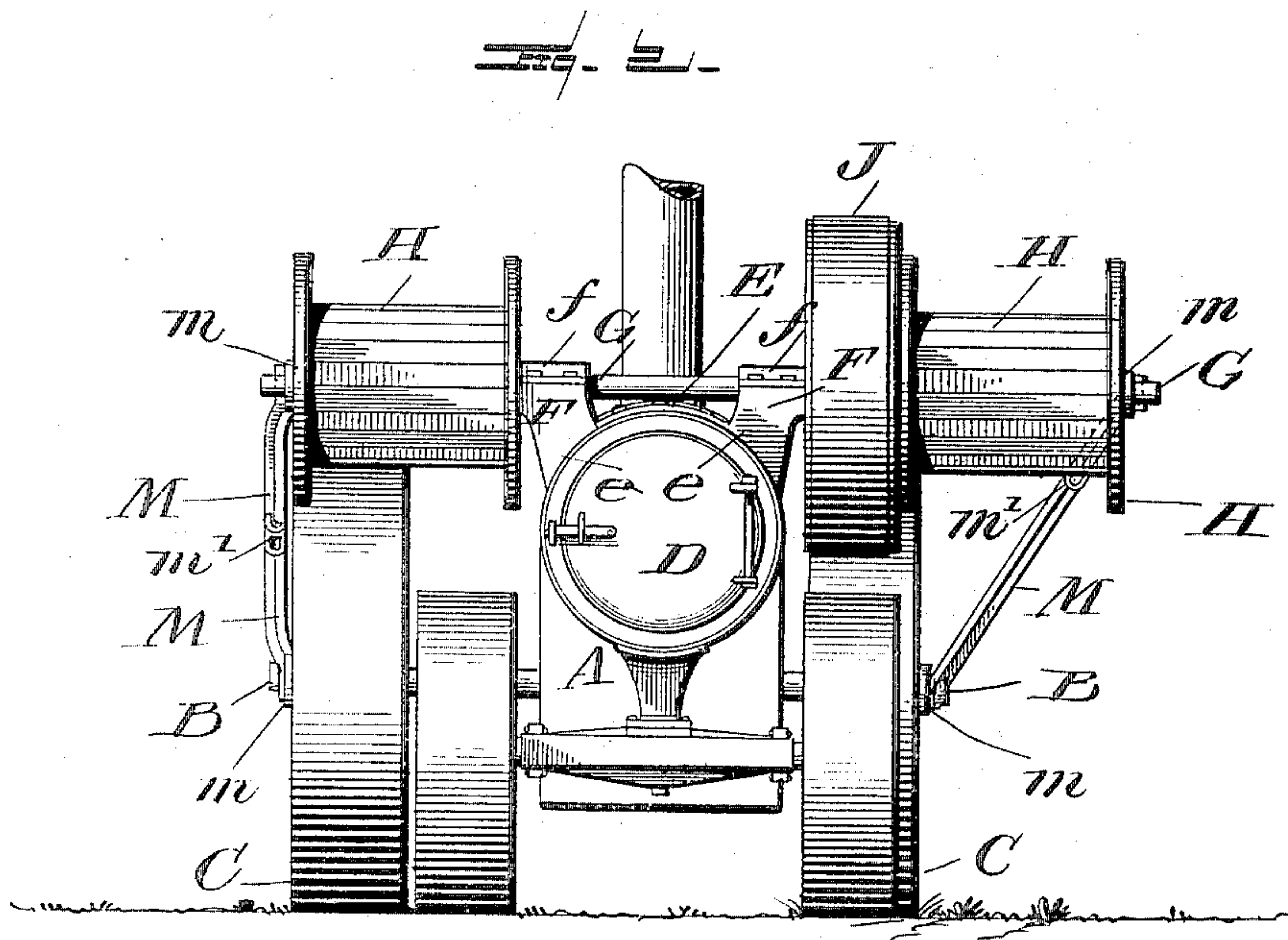
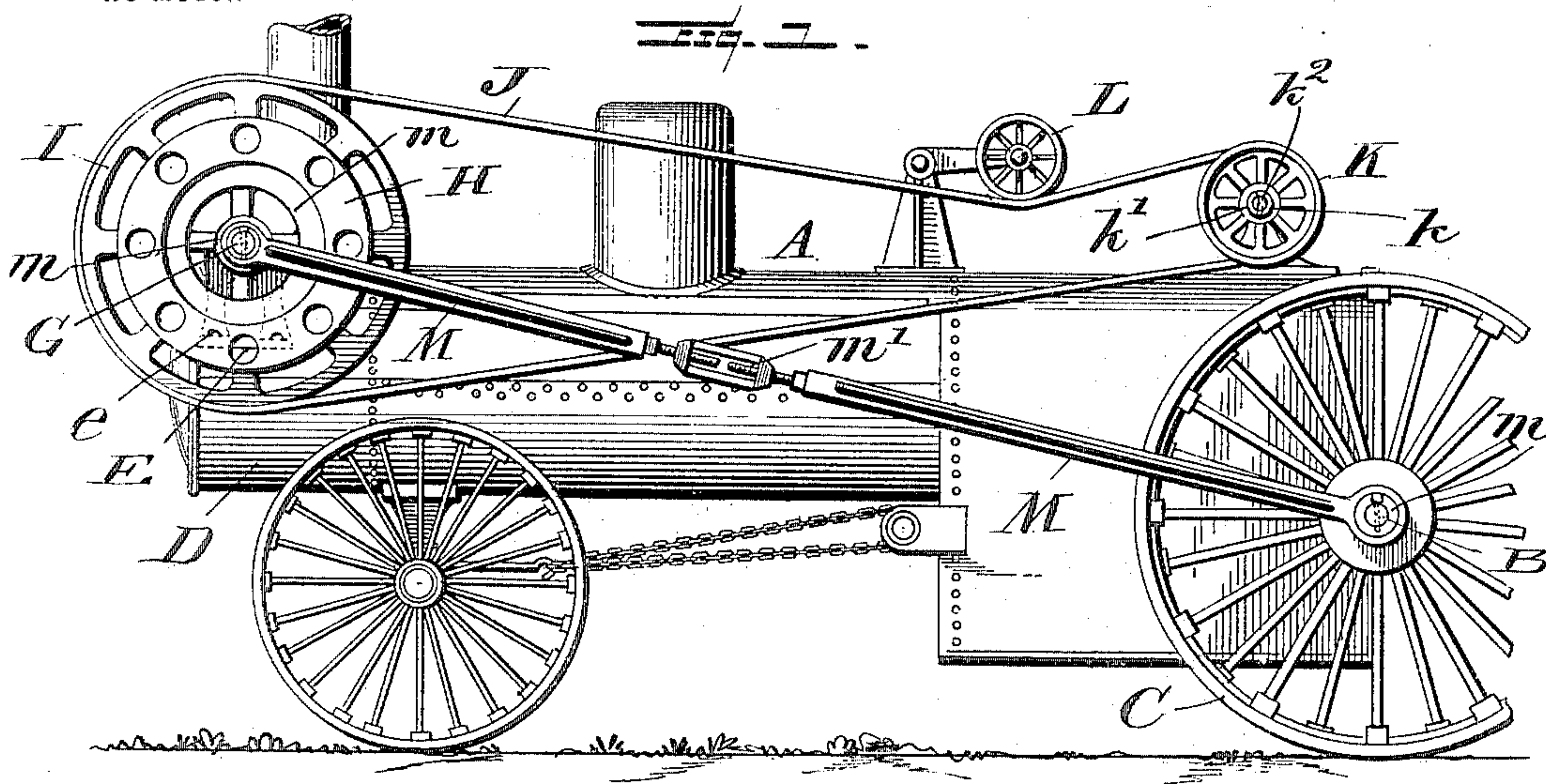
Patented Jan. 2, 1900.

A. L. ADAMS.

DRUM ATTACHMENT FOR TRACTION ENGINES.

(Application filed Oct. 20, 1899.)

(No Model.)



Witnesses:

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# UNITED STATES PATENT OFFICE.

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## DRUM ATTACHMENT FOR TRACTION-ENGINES.

SPECIFICATION forming part of Letters Patent No. 640,351, dated January 2, 1900.

Application filed October 20, 1899. Serial No. 734,231. (No model.)

*To all whom it may concern:*

Be it known that I, ABRAM L. ADAMS, a citizen of the United States, residing at Breakman, in the county of Lake and State of Ohio, have invented certain new and useful Improvements in Windlass or Winding-Drum Attachments for Traction-Engines; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to a windlass or winding-drum attachment for traction-engines, and has for its object to provide a windlass which can be quickly and easily attached to and detached from a common or ordinary type of traction-engines.

A further object of the invention is to so locate, secure, and brace the windlass that the strain on the engine when the windlass is in operation will be distributed throughout the engine and not localized on any particular or restricted part.

A further object is to secure the windlass on the forward portion of the boiler or smoke-box and brace the same from the rear or main part of the engine.

A further object is to generally improve and simplify a device for the purposes set forth.

With such and other objects in view the invention is embodied in the parts, arrangement, and combination of parts hereinafter described, and particularly set forth in the claims.

In the accompanying drawings I have shown a traction-engine of what is known as "Reeves double-cylinder" type provided with a windlass embodying my invention; but I desire it understood that I do not limit the invention to the construction which I have shown simply for the purpose of a proper understanding thereof.

Figure 1 is a side elevation of the traction-engine provided with a windlass embodying my invention. Fig. 2 is an end view thereof.

Referring to the drawings, A indicates generally a traction-engine, only sufficient thereof being shown to give an understanding of my invention and its application to a traction-

engine. The engine is provided with a main supporting and driving shaft B, on which are mounted, as shown, ground-wheels C C.

D indicates a smoke-box or forward end of the boiler-casing and which, it will be seen, is at the extreme forward end of the engine. Mounted on the smoke-box D and secured thereto by suitable means, such as bolts *e*, is a saddle or bracket plate E, made to conform in part to the contour of the smoke-box. The saddle E is provided with one or more upwardly-extending bearing-brackets F, two being shown in the drawings, which bearing-brackets have at their upper portions bearings *f* for a horizontal windlass-shaft G, which extends, as shown, on each side of the smoke-box and bearings F. Mounted on the windlass-shaft G is a drum or drums H.

In the drawings I have shown two drums, one on each side of the supporting-bearings. These drums are secured to the shaft G. Also secured to the shaft G, conveniently between one drum and the bearing-bracket, is a belt-pulley or sprocket-wheel I, having a driving-belt or sprocket-chain, (indicated at J.) This belt or chain runs on a driving pulley or sprocket K, loosely mounted on the crank-shaft of the engine or a shaft suitably geared thereto, the shaft being indicated at *k*. The pulley K is provided with suitable clutch or lock mechanism for locking it to or permitting its free rotation on the shaft *k*. For this purpose I have shown the shaft *k* provided with a collar *k'* on each side of the hub of the pulley or wheel K, which collars are detachably but rigidly secured to the shaft. The collars and hub of the pulley or wheel are provided with notches or holes, in which is located a removable locking pin or key *k*<sup>2</sup>. It is evident from this construction that by the removal of the pin or key the pulley or wheel is disconnected from the shaft *k*, permitting the operation of the engine without operating the windlass, whereas by the insertion of the key the pulley or wheel is locked to the shaft and the windlass is operated.

L indicates a tightener pulley or wheel for the usual and obvious purposes. In order to securely brace and rigidly hold the windlass and distribute the strain placed thereon to the strongest and heaviest parts of the traction-engine, I have shown the brace-rods M,



one at each side of the engine. These brace-  
rods are provided at or near their ends with  
suitable bearings or eyes *m*, adapted to en-  
gage over the ends of the windlass-shaft *G*  
5 and over the ends of the main axle *B* of the  
traction-engine. The brace-rods *M* are shown  
as provided with turnbuckles *m'* for the pur-  
pose of properly adjusting them to the wind-  
lass-shaft and axle after the former has been  
10 mounted in its bearings.

From the above description it will be evi-  
dent that the windlass so mounted and braced  
is capable of withstanding heavy strains or  
drafts and the draft cable or cables running  
15 from the windlass back past the engine the  
entire weight and rigidity of practically the  
entire engine is utilized to withstand the  
strain or draft. It will also be evident that  
the windlass is capable of being readily at-  
20 tached to the usual forms of traction-engines.

Having thus described the invention, what  
I claim as new, and desire to secure by Letters  
Patent, is—

1. The combination with a traction-engine  
25 having a horizontal boiler-casing or smoke-  
box, of a saddle-plate secured thereto and  
provided with a bearing-bracket, a windlass-  
shaft mounted in said bracket and extending  
to the sides thereof, and brace-rods connect-  
30 ing the ends of said windlass-shaft with a  
part of the traction-engine.

2. The combination with a traction-engine  
having a horizontal boiler-casing or smoke-  
box, of a saddle-plate secured thereto, a bear-  
35 ing-bracket on said saddle-plate, a windlass-

shaft journaled in said bearing-bracket and  
extending to each side thereof, a drum on  
said shaft, a driving means for said shaft, and  
brace-rods one on each side of the traction-  
engine and coupling the ends of said wind- 40  
lass-shaft to the ends of the axle of the trac-  
tion-engine, substantially as described.

3. The combination with a traction-engine  
having a horizontal boiler-casing or smoke-  
box, of a saddle-plate secured thereto, a bear- 45  
ing-bracket on said saddle-plate, a windlass-  
shaft journaled in said bearing-bracket and  
extending to each side thereof, a drum on  
said shaft, a driving means for said shaft, and  
brace-rods adjustable in length, one on each 50  
side of the traction-engine and coupling the  
ends of said windlass-shaft to the ends of the  
axle of the traction-engine, substantially as  
described.

4. The combination with a traction-engine 55  
having a crank-shaft, a bearing-bracket for  
the windlass-shaft, a windlass-shaft mounted  
in said bearing-bracket, a drum thereon, a  
drive pulley or wheel on said windlass-shaft,  
a drive connection from said pulley or wheel 60  
to a pulley or wheel on said crank-shaft, and  
means for locking said pulley or wheel to or  
releasing it from said crank-shaft, substan-  
tially as described.

In testimony whereof I affix my signature 65  
in presence of two witnesses.

ABRAM L. ADAMS.

Witnesses:

LLOYD WYMAN,  
E. F. BLAKELY.