

(No Model.)

H. M. BRADLEY.  
LOAD BINDER.

No. 578,855.

Patented Mar. 16, 1897.

Fig. 1.

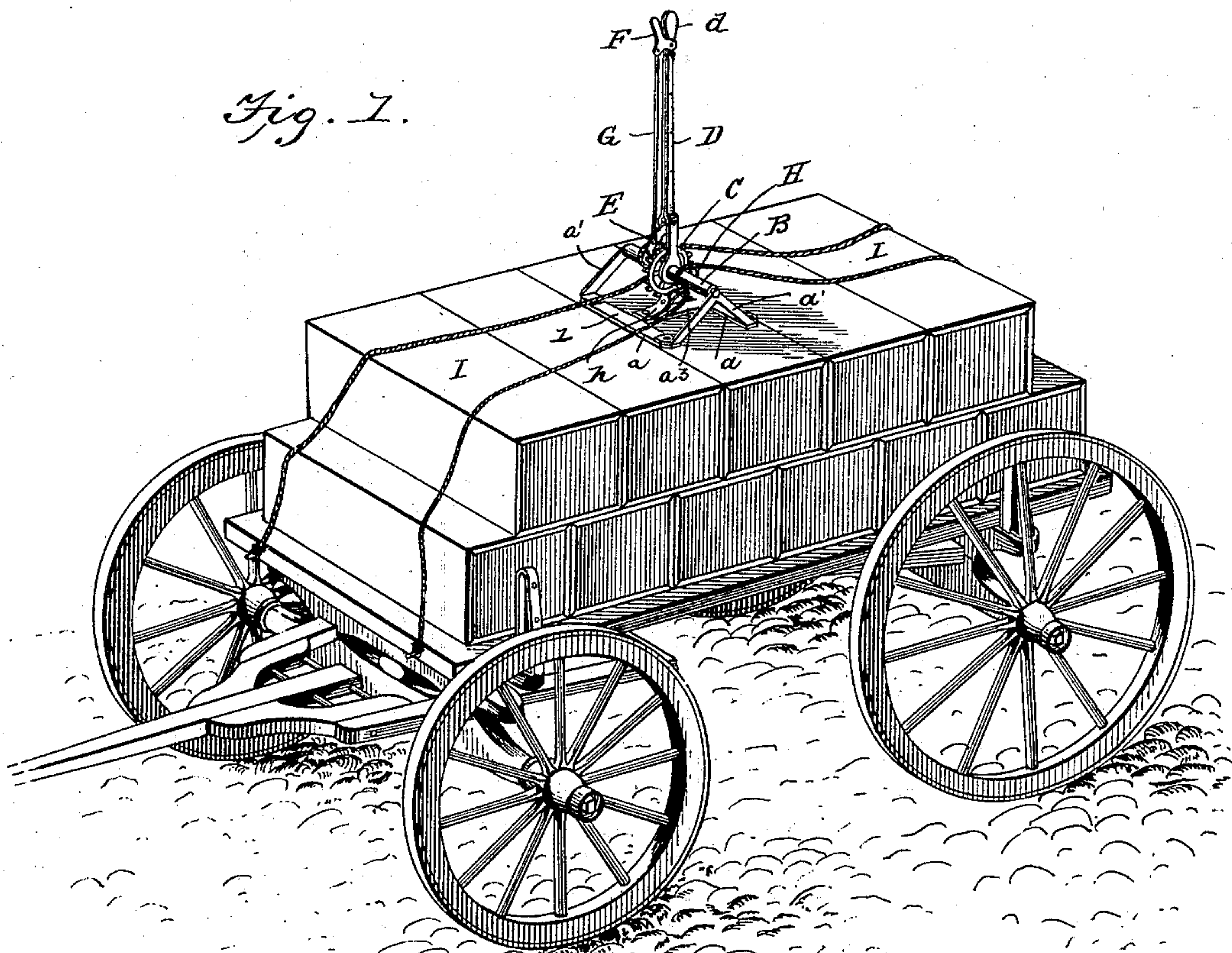


Fig. 3.

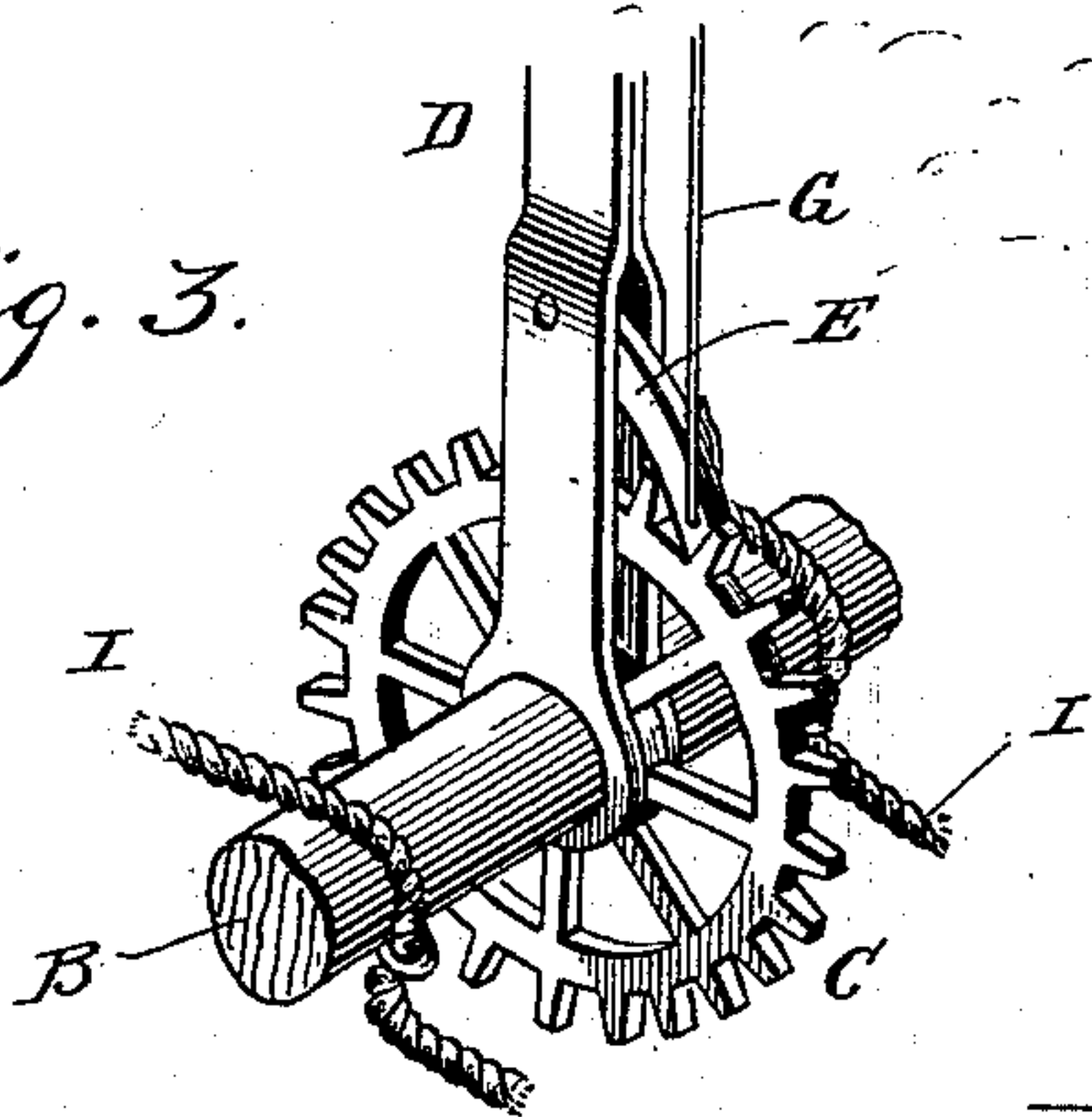
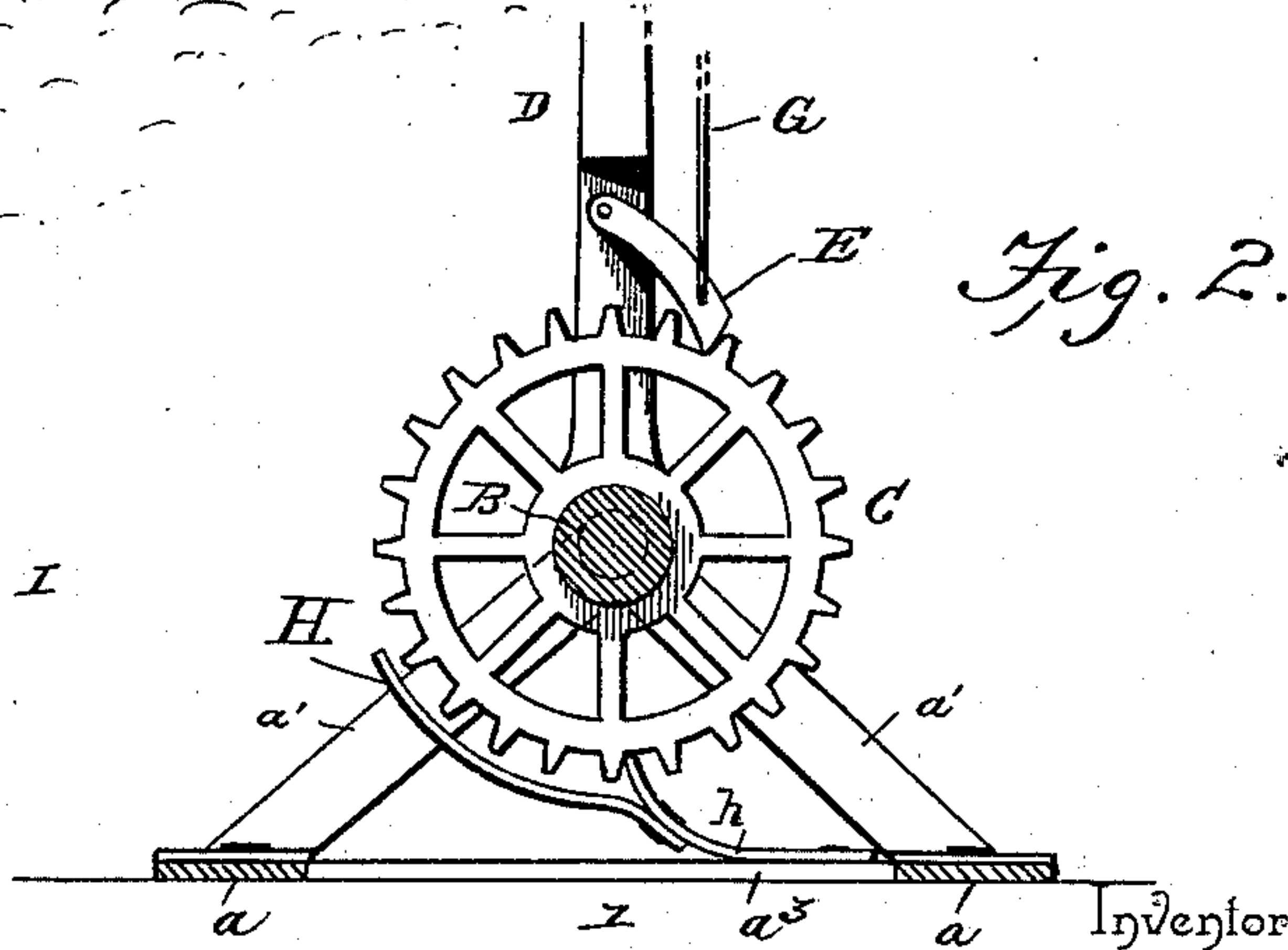


Fig. 2.



Witnesses

*E. A. Monroe*  
*J. J. Riley*

By *his* Attorneys.

*Harry M. Bradley*

*C. A. Snow & Co.*



# UNITED STATES PATENT OFFICE.

HARRY M. BRADLEY, OF CAÑON, COLORADO.

## LOAD-BINDER.

SPECIFICATION forming part of Letters Patent No. 578,855, dated March 16, 1897.

Application filed March 12, 1895. Serial No. 541,449. (No model.)

*To all whom it may concern:*

Be it known that I, HARRY M. BRADLEY, a citizen of the United States, residing at Cañon City, in the county of Fremont and State of Colorado, have invented certain new and useful Improvements in Load-Binders; 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 ap-  
10 pertains to make and use the same.

The invention relates to improvements in load-binders.

The object of the present invention is to improve the construction of load-binders and to provide a simple, inexpensive, and efficient  
15 device designed to be applied to an ordinary vehicle, such as a wagon or the like, adapted to be readily placed on a load of boxes or similar packages and the like and capable of firmly  
20 confining a load to a vehicle and of ready adjustment to accommodate itself to the size of the load to be bound.

The invention consists in the construction and novel combination and arrangement of  
25 parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claim hereto appended.

In the drawings, Figure 1 is a perspective view of a load-binder constructed in accordance with this invention and shown applied  
30 to a vehicle. Fig. 2 is a vertical sectional view of the load-binder. Fig. 3 is a detail perspective view of the ratchet mechanism.

Like letters of reference designate corresponding parts in all the figures of the drawings.

A designates a rectangular portable frame adapted to be readily mounted on the top of any load, such as boxes and the like, as illustrated in Fig. 1 of the accompanying drawings, and it comprises a flat base *a* and inverted-V-shaped sides *a'*. The flat base *a* is composed of parallel end bars and a central longitudinally-disposed connecting-bar *a*<sup>3</sup>,  
40 and the terminals of the inverted-V-shaped sides are secured to the upper faces of the end bars of the base of the frame.

The V-shaped sides of the portable frame are provided at their apexes with bearings  
50 receiving a transverse windlass-shaft B, and a centrally-arranged ratchet-wheel C is splined or otherwise fixed to the windlass-

shaft and is located directly above the connecting-bar *a*<sup>3</sup>. The windlass-shaft B, upon which a pair of oppositely-disposed binding-ropes I are designed to be wound, is rotated  
55 by an operating-lever D, which is provided with a forked lower portion, and this forked lower portion straddles the ratchet-wheel, and the lever is fulcrumed at the lower terminals of the sides of the forked portion on  
60 the windlass-shaft B.

The ratchet-wheel is engaged by an actuating-pawl E, which is pivotally mounted in the upper portion of the fork of the operating-lever and which engages the ratchet-wheel at  
65 the top thereof. It is connected by a rod G with an L-shaped latch-lever F, and the latter is fulcrumed at its angle on the operating-lever adjacent to the handle portion *d* thereof,  
70 so that the operator may conveniently grasp and operate both levers with one hand.

The ratchet-wheel is held against retrograde rotation by a resilient check-pawl *h*, located directly below the ratchet-wheel and  
75 secured to the upper face of the connecting-bar *a*<sup>3</sup>, and the check-pawl is provided with a curved extension or arm H, arranged substantially concentric with the ratchet-wheel and adapted to be engaged and depressed by  
80 the foot of the operator to carry the check-pawl out of engagement with the ratchet-wheel to permit the binding-ropes I to unwind when it is desired to release a load.

The binding-ropes I are secured intermediate of their ends to the windlass by means  
85 of staples. They extend from the windlass-shaft in opposite directions and are adapted to have their outer or free ends secured to the front and back of the vehicle, and they  
90 extend longitudinally of the load and are adapted to be wound around the windlass-shaft to bind a load tightly and firmly on the vehicle. The portable windlass-frame is centrally mounted on the load, and the binding-ropes are reversely wound on the windlass-shaft, so that by vibrating the operating-lever they are simultaneously wound around  
95 the shaft to increase their tension. This arrangement also permits the binding-ropes to be simultaneously unwound from the windlass-shaft.  
100

When the operating-lever is thrust forward and drawn backward, to obtain a new hold on



the ratchet-wheel, the check-pawl, with which the foot-piece is connected, prevents a reverse movement of the ratchet-wheel, and when it is desired to release the load the curved arm or foot-piece is depressed, freeing the check-pawl from the teeth of the ratchet-wheel.

It will be seen that the load-binder is simple and comparatively inexpensive in construction, that it is readily applied to and may be entirely removed from a load, that the portable windlass-frame is arranged centrally of the load, and that the latter may be firmly secured on any kind of a vehicle.

What I claim is—

15 A load-binder comprising a portable windlass-frame, adapted to be arranged on top of a load centrally thereof and composed of a flat base having parallel end bars and provided with a central longitudinally connecting-bar and inverted-V-shaped sides secured to the terminals of the end bars, a windlass-shaft journaled in suitable bearings of the sides of the portable frame, a ratchet-wheel centrally fixed to the windlass-shaft, a pair of  
25 binding-ropes secured intermediate of their

ends to and wound on the windlass-shaft at opposite sides of the ratchet-wheel and extending forward and rearward from the portable frame and designed to be secured to the front and back of a vehicle, an operating-lever fulcrumed on the windlass-shaft adjacent to the ratchet-wheel, an actuating-pawl pivoted to the operating-lever and engaging the ratchet-wheel at the top thereof, a latch-lever mounted on the operating-lever, adjacent to the handle thereof, and connected with the actuating-pawl, a resilient check-pawl located below the ratchet-wheel, secured to the connecting-bar of the base and engaging the ratchet-wheel at the bottom thereof, and a curved arm extending from the check-pawl, arranged substantially concentric with the ratchet-wheel and forming a foot piece, substantially as and for the purpose described.

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

HARRY M. BRADLEY.

Witnesses:

HUGH CONNOR,  
JOSEPH ESSER.