

(No Model.)

G. C. TWYMAN.
CONVERTIBLE APPARATUS.

No. 540,342.

Patented June 4, 1895.

Fig. 1.

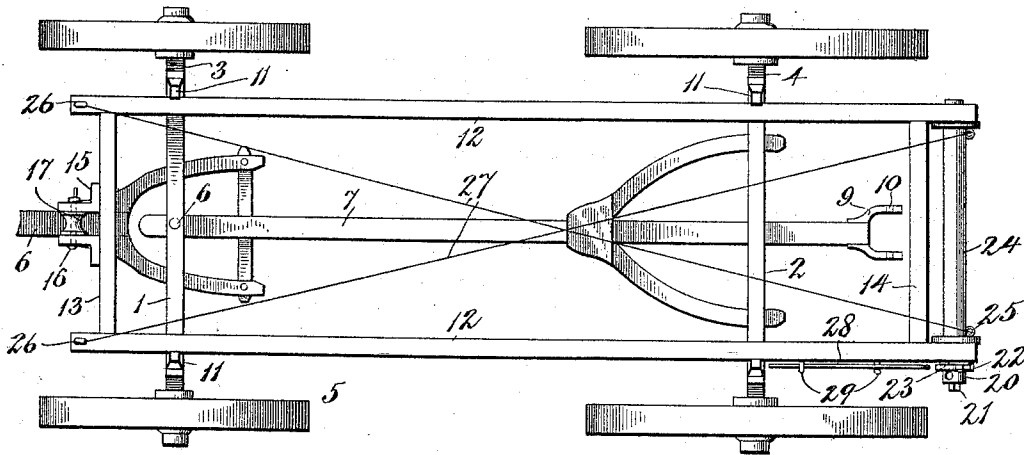
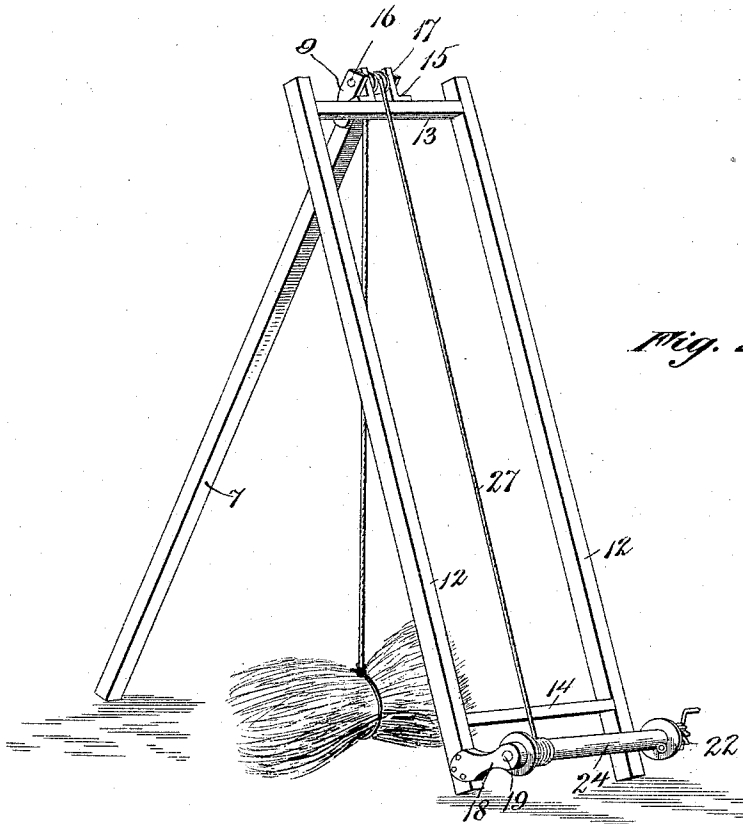


Fig. 2.



Attest.
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UNITED STATES PATENT OFFICE.

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CONVERTIBLE APPARATUS.

SPECIFICATION forming part of Letters Patent No. 540,842, dated June 4, 1895.

Application filed February 20, 1895. Serial No. 539,133. (No model.)

To all whom it may concern:

Be it known that I, GOODLOE C. TWYMAN, a citizen of the United States, residing at Bowling Green, in the county of Warren and State of Kentucky, have invented certain new and useful Improvements in Convertible Apparatus; and I do hereby 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.

My invention relates to improvements in convertible apparatuses, the objects in view being to produce a simply and cheaply constructed apparatus adapted to be attached to any of the ordinary wagon-frames and to be readily operated so as to secure in an efficient manner the load thereon; and furthermore, to so construct the wagon-frame and the reach-bar forming a part thereof as to adapt it to coact with the binding-device so as to produce an efficient derrick for raising and lowering loads into and out of excavations, such as cellars, holds of vessels, &c.

With these general objects in view, the invention consists in certain features of construction hereinafter described and particularly pointed out in the claim.

Referring to the drawings, Figure 1 is a plan view of a wagon provided with my improvements. Fig. 2 is a perspective view of the parts of the wagon detached from the main portion and arranged to produce a derrick.

Like numerals of reference indicate like parts in both figures of the drawings.

The front and rear bolsters 1 and 2, respectively, are supported by the usual front and rear axles 3 and 4, respectively, the same carrying the ground-wheels 5.

6 designates the hounds and draft-pole; and 7, the reach, that connects the front and rear trucks of the wagon.

The reach 7, is, as usual, passed removably through the opening provided in the rear truck, whereby the latter may be adjusted toward and away from the front truck; and at its front end the reach is pivoted to the front truck by the removable pin or bolt 8. The rear end of the reach is provided with a pair of oppositely situated curved ears 9, the same having transversely aligning perforations 10.

Arranged removably between the pairs of opposite standards 11, that rise vertically from the ends of the bolsters 1 and 2, is the oblong wagon-frame, the same consisting of the opposite longitudinal side-bars 12, and the front and rear connecting end-bars 13 and 14, respectively. The front connecting-bar 13 is provided at opposite sides of its center with a pair of aligning L-shaped ears 15, which extend forwardly and have journaled upon a removable transverse connecting bearing-pin 16, a pulley 17.

Depending from and bolted to the rear ends of the bars 12 of the wagon-frame, is a pair of opposite bearing-castings 18, in whose lower ends is journaled a winding-shaft 19, one end of which projects beyond the adjacent bearing, is provided with a rounded perforated portion 20, and beyond the same with a squared portion 21. Upon this extended end of the shaft there is also located a ratchet-wheel 22, above which there is pivoted either a spring-pressed or gravity-pawl 23. The shaft is provided between the bars 12 with a flanged drum 24, the same having adjacent to its ends eyes 25, similar to eyes 26 with which the front ends of the bars 12 are provided. Binding-ropes 27 are connected at their front ends to the eyes 26, and from there extend diagonally to the eyes 25, said ropes crossing each other in the middle of the frame.

When the frame has received a load, as for instance, hay, the ropes are brought rearwardly over the same from the front eyes 26 and their ends secured to the rear eyes 25 of the drum, after which by applying the lever 28, habitually carried in a hook and eye 29, at the side of the frame, to the openings 20, the winding-shaft and drum may be rotated and thus the ropes tightened to a desired degree over the load and the latter retained in position upon the frame. It will thus be seen that a most efficient load-binder is produced. Of course it will be understood that as the ropes are placed under tension by the winding of the drum the latter becomes secured against retrogression by the pawl 23 engaging with the teeth of the ratchet-wheel. To loosen the load it is simply necessary to lift the pawl from engagement with the teeth, the drum thereupon revolving and the ropes becoming slack.

It is often desirable that a derrick be employed to lift loads from excavations, such, for instance, as cellars, &c., and also lift loaded wagons from ruts and such contingencies I also meet with my improved arrangement. Where a derrick is desired, it is simply necessary, in order to produce one, to remove the king-bolt 8 and withdraw the reach from the two trucks, after which the wagon-frame is withdrawn, and the bolt 16 from its position in the ears and pulley 15 and 17. The ears of the reach and those of the frame are now aligned, the pulley placed in position, after which the pin 16 is passed through the aligning ears and pulley, whereby the reach and frame, it will be seen, are pivoted together, and the structure stood upon end forms a derrick, it only remaining to pass a rope over the pulley and secure one end thereof to the winding-drum, all as clearly shown in Fig. 2 of the drawings. When used as a derrick I prefer to apply a crank 30 to the squared end of the winding-shaft.

It is obvious that this simple yet efficient construction of derrick can be most readily set up and taken apart, and that all of the pieces composing the same serve some other useful function in the construction of the wagon.

From the foregoing description in connection with the accompanying drawings, it will be seen that I have produced an efficient binder for loads and have so combined the elements composing the same with others and the parts of the wagon as also to produce an easily and conveniently set up derrick.

Having described my invention, what I claim is—

The convertible apparatus consisting of the front and rear trucks, the connecting reach removably secured to the trucks and provided at one end with one member of a joint, the superimposed frame supported by the trucks in a removable manner, a windlass at one end of the frame adapted to receive and wind a rope, a second member of a joint located at the opposite end of the frame to which the windlass is located and adapted to be removably joined to the reach and the pulley adapted to receive a rope located on that end of the frame which is adapted to be connected to the reach, substantially as specified.

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

GOODLOE C. TWYMAN.

Witnesses:

JOS. G. COVINGTON,
J. M. WARD.