

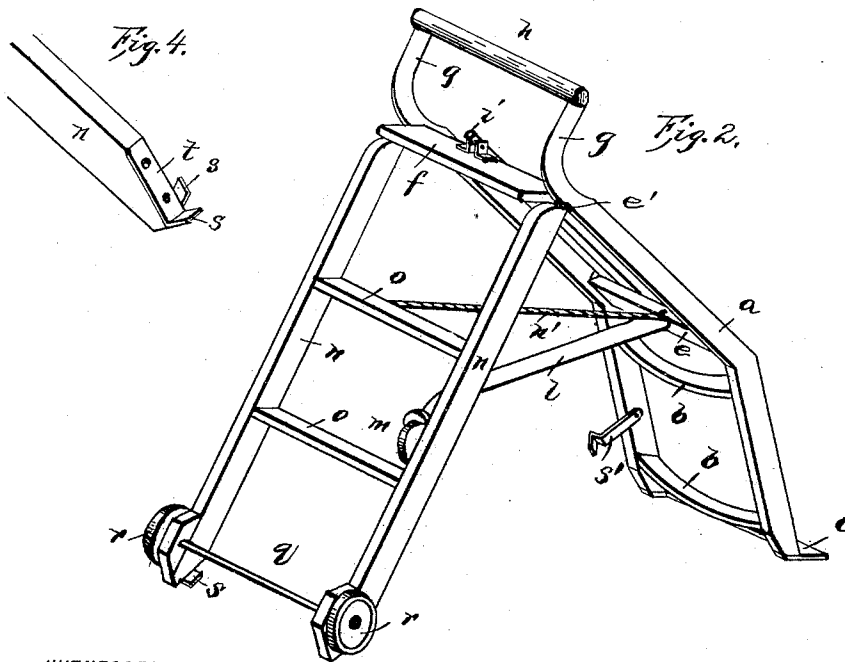
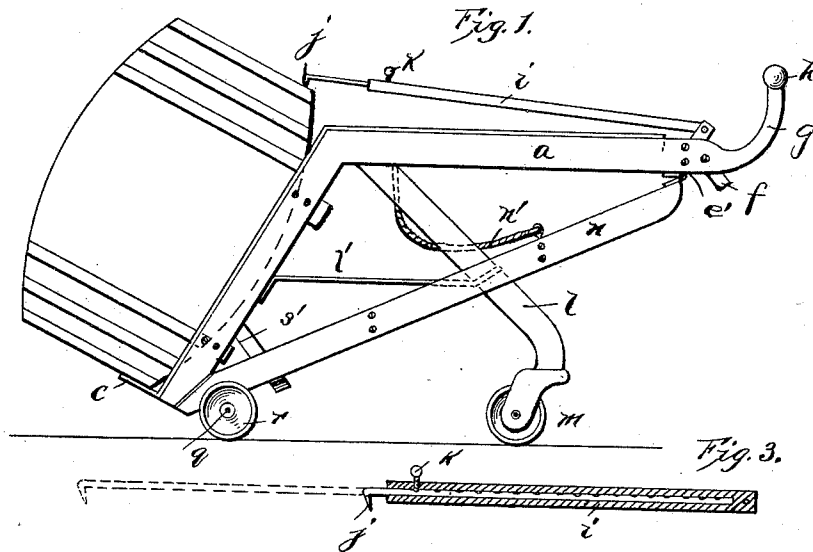
(No Model.)

2 Sheets—Sheet 1.

G. E. BOURELL.
TRUCK.

No. 466,899.

Patented Jan. 12. 1892.



WITNESSES:
E. C. Duff
H. E. Peck

INVENTOR
Geo. E. Bourell
BY *E. C. Duff*
ATTORNEY.

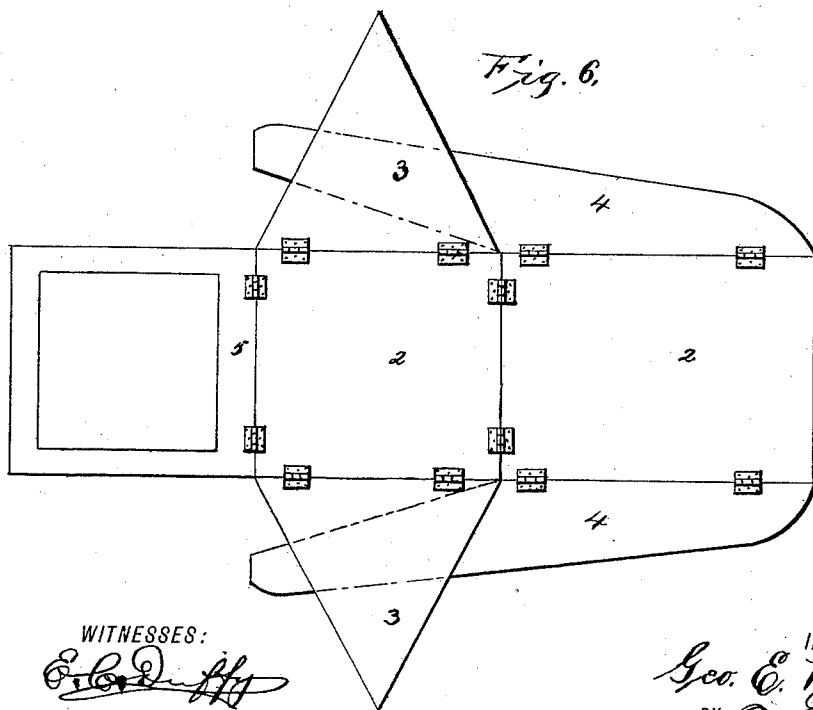
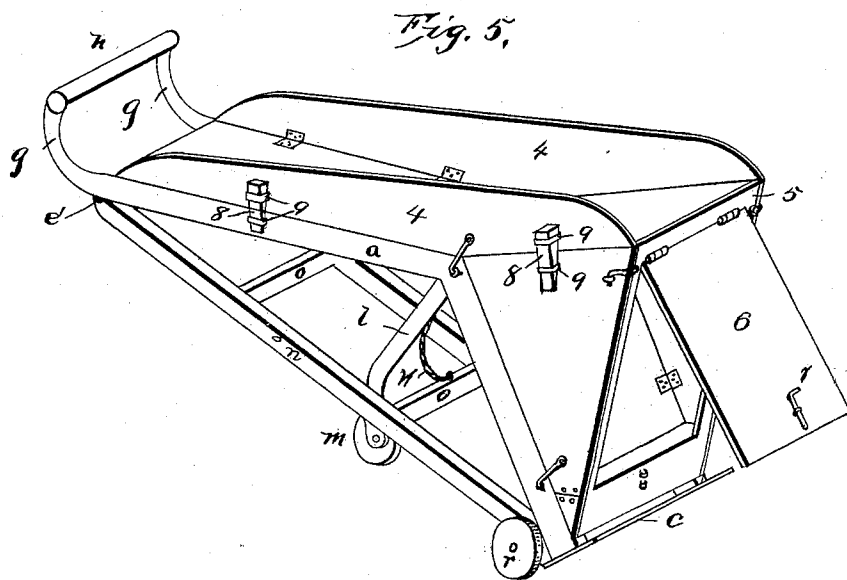
(No Model.)

2 Sheets—Sheet 2.

G. E. BOURELL.
TRUCK.

No. 466,899.

Patented Jan. 12, 1892.



WITNESSES:

E. E. Duff
H. E. Peck

INVENTOR

Geo. E. Bourrell
BY *E. E. Duff*
ATTORNEY.

UNITED STATES PATENT OFFICE.

GEORGE E. BOURELL, OF GRANT, NEBRASKA, ASSIGNOR TO MARY K. BOURELL, OF BLOOMINGTON, ILLINOIS.

TRUCK.

SPECIFICATION forming part of Letters Patent No. 466,899, dated January 12, 1892.

Application filed April 7, 1891. Serial No. 387,990. (No model.)

To all whom it may concern:

Be it known that I, GEORGE E. BOURELL, of Grant, in the county of Perkins and State of Nebraska, have invented certain new and useful Improvements in Trucks; and I do hereby declare that the following is a full, clear, and exact description of the invention, which 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 letters and figures of reference marked thereon, which form part of this specification.

This invention relates to certain improvements in trucks, and more particularly to an improved combined truck and step-ladder.

The object of the invention is to provide an improved truck exceedingly cheap, simple, and durable in construction, and whereby barrels, boxes, &c., can be easily and quickly picked up or dropped and conveyed to any place without requiring any great expenditure of strength and without requiring the operator to lift the load or necessarily require him to put his hands upon the article to be lifted, and whereby a number of articles can be carried at the same time.

A further object of this invention is to provide an improved combined truck and step-ladder exceedingly simple and cheap in construction, which can be readily converted from truck to step-ladder, and which will be of the utmost strength in either adjustment.

These and other objects are accomplished by and this invention consists in certain novel features of construction and in combinations of parts more fully described hereinafter, and particularly pointed out in the claims.

Referring to the accompanying drawings, Figure 1 is a side elevation of the truck carrying the barrel. Fig. 2 is a perspective showing truck adjusted for use as a step-ladder. Figs. 3 and 4 are sectional and detail views of parts. Fig. 5 is a perspective with box on truck. Fig. 6 is a detail plan of box infolded.

In the drawings, *aa* indicate the main side beams or sills of the truck, throughout their length connected rigidly and securely together by cross-bars *b*, at their lower end pro-

vided with the suitable shoe *c*. From the shoe these beams extend upwardly and rearwardly at a suitable angle, and at a joint about midway between their ends the beams extend rearwardly and horizontally, as clearly shown, so that the upper portion of the truck is horizontal and the front portion extends downwardly therefrom at an angle, say, of about forty-five degrees. The front inclined portion is arranged to carry heavy boxes or barrels. Hence the cross-bars *b* thereof are concave at their outer edges. Each side beam is suitably and strongly constructed at the angle formed by these horizontal and inclined portions of the truck, and a strong heavy cross-bar *e* is located at the angle. At the rear ends of the side beams another heavy and strong cross-bar *f* is located and arranged so as to form the top step or rest of the step-ladder. The rear ends of the side beams are provided with rearward and upward extensions *g*, connected at their upper ends by horizontal cross-bar, forming a handle *h*, whereby the truck is manipulated. When the truck is used as a ladder, this handle *h* forms a hand-hold or support above the step-ladder for a person upon the same, as is evident from Fig. 2.

A grab-hook is provided, whereby the barrels or boxes can be grasped and held upon the truck during the loading or discharging operation; and this hook consists of the long metal tube *i* at one end, hinged strongly to the cross-bar *f* to swing vertically and having the hook *j* extending through its open outer end and normally throughout its entire length. The shaft of this hook within the tube is notched at intervals, and the set-screw *k* extends through the tube to engage said notches, so that the length of the hook can be varied. The standard *l* extends down from the strong cross-bar connecting side beams *a* at the angle, and the lower end of this standard is provided with the caster *m*, provided with a wheel of suitable size. This standard extends downwardly and rearwardly, preferably at right angles to the front inclined portion of the truck, and is braced by suitable lateral braces *n*, and is of such length as to hold the upper rear portion of the truck in a horizontal position. If de-

sired, two of these standards and wheels can be employed instead of one. However, it is preferable to use one standard only, with its loosely-mounted caster-wheel, as the truck can be turned and guided more easily than where two are employed.

The step-ladder portion consists of the two parallel side beams *n*, located beneath the side beams of the truck and secured together by the steps *o* of the ladder. At their upper ends the step-ladder sides are secured by hinges *e'* to the under sides of the rear portion of the truck side beams, so that the truck and ladder beams can swing toward and from each other, and the lower ends of the truck-beams rest directly upon the upper sides of the lower ends, and the under sides of the lower ends of the ladder-beams are provided with boxes, in which the shaft *g*, carrying front truck-wheels *rr*, is mounted. A spring or other suitable catch *s'* is secured to one of the truck-beams and extends down and is adapted to engage a ladder-beam, so as to firmly hold the truck upon the ladder and prevent the same from springing or jumping up. The upper sides of the front ends of the ladder-beams are provided with the plates *t*, having stop or guide lugs *s*, the lower ends of the truck-beams resting on these plates and said lugs holding the truck against lateral play. A stop-chain or other connection *n'* is secured to the truck and ladder and limits the distance apart that the truck-beams and ladder-beams can swing.

The device can be constructed of any suitable material, such as wood, gas-pipe, &c.

To operate the invention as a truck, take hold of the handle and raise the truck thereby upwardly and forwardly until the shoe touches the floor and the inclined portion of the truck stands up parallel with the barrel or box; raise the hook-arm and let the hook catch the chine of the barrel and at the same time push forward on the handle, so as to tilt the box or barrel, and place the foot on the axle, which throws the shoe under the box or barrel; then pull backward and downward on the handle and the barrel or box is lifted and held upon the truck, the truck resting on all three wheels. This operation is quickly and easily performed. The operator does not have to lift the load at all, nor need he apply his hands to it. The truck can be easily and quickly wheeled in any direction, requiring a minimum amount of strength. The barrel or box lies against the front inclined portion of the truck in an inclined position and does not need the hook to hold it in position, so the hook can be thrown up and back against the handle, and boxes or packages or other articles can be placed on the rear horizontal portion of the truck. The truck is of great strength and great support and can be exceedingly heavily loaded by reason of the peculiar shape and construction and the equal distribution of the weight upon the supporting parts, the shape of the truck-beams being such that they are

trussed by the standard carrying the caster-wheel and the ladder-beams. The box or barrel can be easily discharged by raising the handle of the truck forwardly and upwardly and then, when the box or barrel is on the ground or floor in a tilted position, withdraw the truck. Very little exertion is required to thus raise the truck and its load, because the greater portion of the weight of the load is on the front shoe, which is forward of the front wheels. The truck can be converted into a ladder by raising the handle upwardly and forwardly until the shoe strikes the floor, then releasing the catch which holds the truck and ladder beams together, and swinging the ladder inward as far as the check-chain or connection will allow it to go, the shoe and lower ends of the ladder-beams resting on the floor. A step-ladder of the utmost strength and rigidity is thus produced.

When in position as a step-ladder, the easiest mode of restoring the truck to its normal position is to take hold of handle and shove forward until ladder swings clear of floor into place against truck-beams and is automatically locked by the spring-catch, and then draw handle inwardly and drop truck upon all of its wheels.

Fig. 5 shows the truck provided with a receptacle for carrying grain, or, in fact, almost anything—sand or earth, fertilizer, &c.—and is of great use around a farm, store, or other places, as the receptacle can be readily removed and leaving the combined truck and ladder. This receptacle consists of the bottom 2 2, formed in one or more sections hinged together so that it will lie on the inclined and horizontal portions of the truck-beams, and also so that the bottom can be folded when box or receptacle is removed. Triangular-shaped sides 3 3 are hinged to the sides of bottom section which lies on the inclined front, so that they will fold parallel, as shown in Fig. 5, against open front 5, hinged to the lower edge of the inclined bottom section 2 to swing up and be secured against outer edges of sides 3 by suitable means, such as hooks and eyes, as shown, thereby forming a V or hopper shaped receptacle, as shown, having open front provided with automatically-swinging door or dump end gate 6, having a suitable catch 7 at its lower edge, such as shown. By this means the contents can be easily and readily discharged. Sides 4 4 are provided for the upper portion of the receptacle and are hinged to rear section of bottom and extend along upper edge of sides 3 and secured thereto and to the sides of truck-beams by pins 8 and loops or staples 9, and, if desirable, by hooks and eyes. This box can be easily placed in operative position on the truck or can be quickly taken therefrom, knocked down, and packed in a small compass. If desirable, the receptacle can be rigid, so as not to fold.

It is evident that various changes might be made in the form, arrangement, and con-

struction of the parts herein described without departing from the spirit and scope of my invention. Hence I do not wish to limit myself to the particular constructions herein set forth.

What I claim, and desire to secure by Letters Patent of the United States, is—

1. In combination, the ladder-section carrying front truck-wheels and having the plates with lugs upon the upper sides of the lower ends of its beams and the truck-beams hinged to the ladder-section with their lower ends resting upon said plates, and means to normally hold the truck-beams upon the ladder-section.

2. The combination of a truck having front inclined and rear longitudinal portions with receptacle formed to fit on said inclined and horizontal portions of the truck and with the V-shaped receptacle having end gate, and securing devices for removably securing receptacle on truck.

3. The truck-beams formed angular to form the front inclined portion, having a shoe at its lower end, and the upper rear horizontal portion to receive the box, &c., the handle or handles at the rear of said horizontal portion, the straight beams beneath and forming a truss for said inclined beams, front truck-wheels, and an intermediate supporting-standard, substantially as set forth.

4. In combination, the angular truck-beams having their outer ends extended and provided with a cross-bar to form a handle and having their opposite ends provided with a shoe, the straight ladder-beams at their outer ends hinged to the outer ends of the truck-beams so that the opposite ends of the truck-beams rest on the opposite ends of the ladder-beams, the front truck-wheels, and the rigid inclined intermediate standard extending

from the central portion of the truck-beams and provided with one or more wheels.

5. The truck inclined upwardly and rearwardly at its forward portion to receive barrels and horizontally at its rear portion to receive boxes, &c., in combination with the straight beams upon which said truck rests, forming a truss therefor, and the truck-wheels, and intermediate supporting-standard, all combined and arranged substantially as set forth.

6. In combination, the angular truck-beams forming the front inclined portion and the rear horizontal portion, substantially as set forth, handles at the rear of said beams, the shoe at the lower ends of the truck-beams, the swinging grab-hook to hold the barrels on the front inclined portion, the intermediate rigid supporting-standard, and the straight ladder-beams hinged at their rear ends to the rear ends of the truck-beams and carrying the truck-wheels at the front ends, substantially as set forth.

7. The combination, with the inclined beams of the truck, of the V-shaped receptacle detachably secured thereon and provided with the front end gate.

8. The combination, with the angular beams of the truck, of the knockdown folding box formed to fit thereon, having the horizontal rear portion and the deep receptacle at the front portion having an end gate, and means for detachably securing said box and truck-beams.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

GEORGE E. BOURELL.

Witnesses:

E. M. HARRISON,
R. W. SAVAGE.