

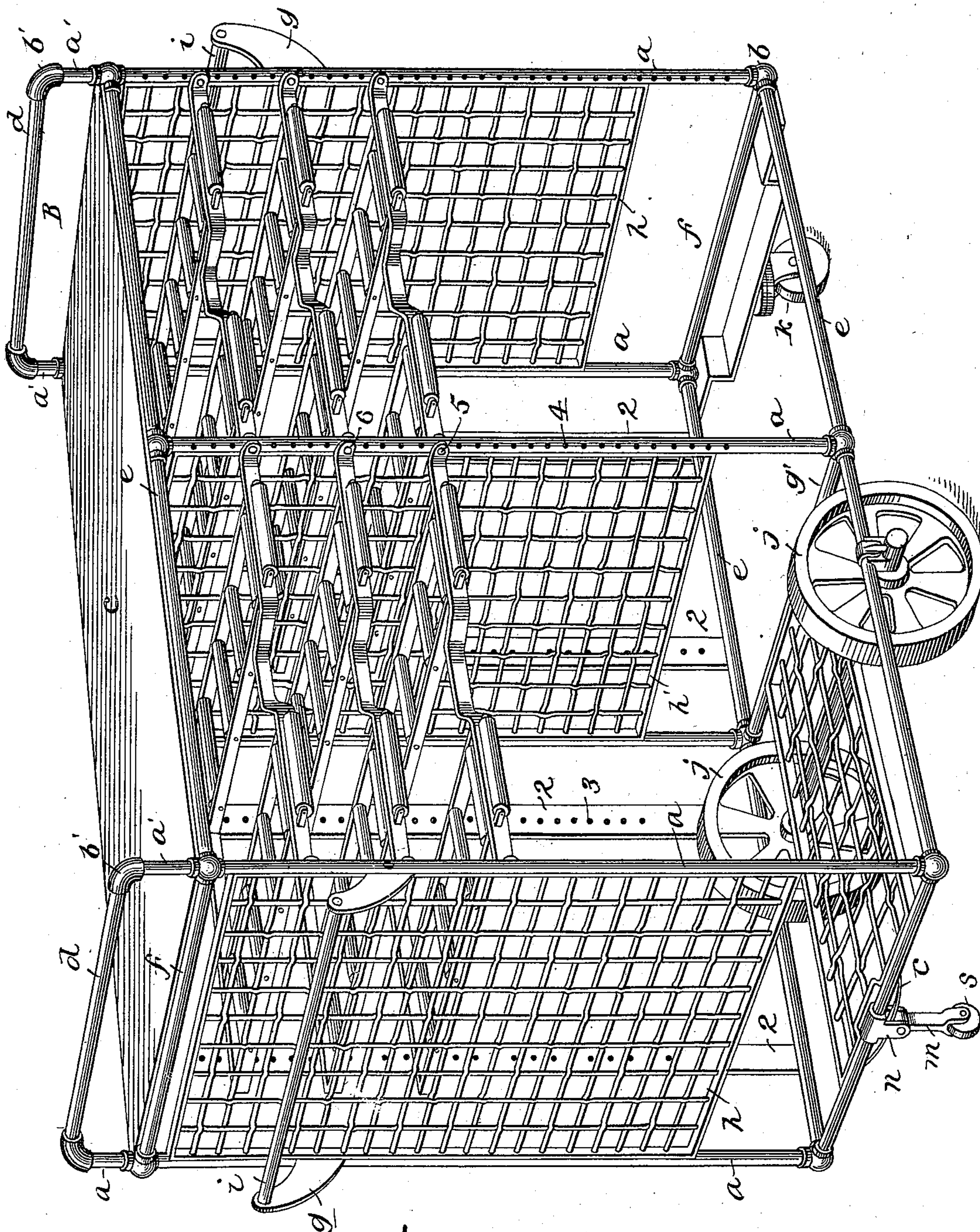
(No Model.)

2 Sheets—Sheet 1.

M. S. KELLEY.
TRUCK.

No. 504,476.

Patented Sept. 5, 1893.



707

Witnesses
Jno. G. Hunkel
and H. Dobson

Inventor
 Manly S. Kelley
 By *[Signature]*
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 Attorneys

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Fig. 2.

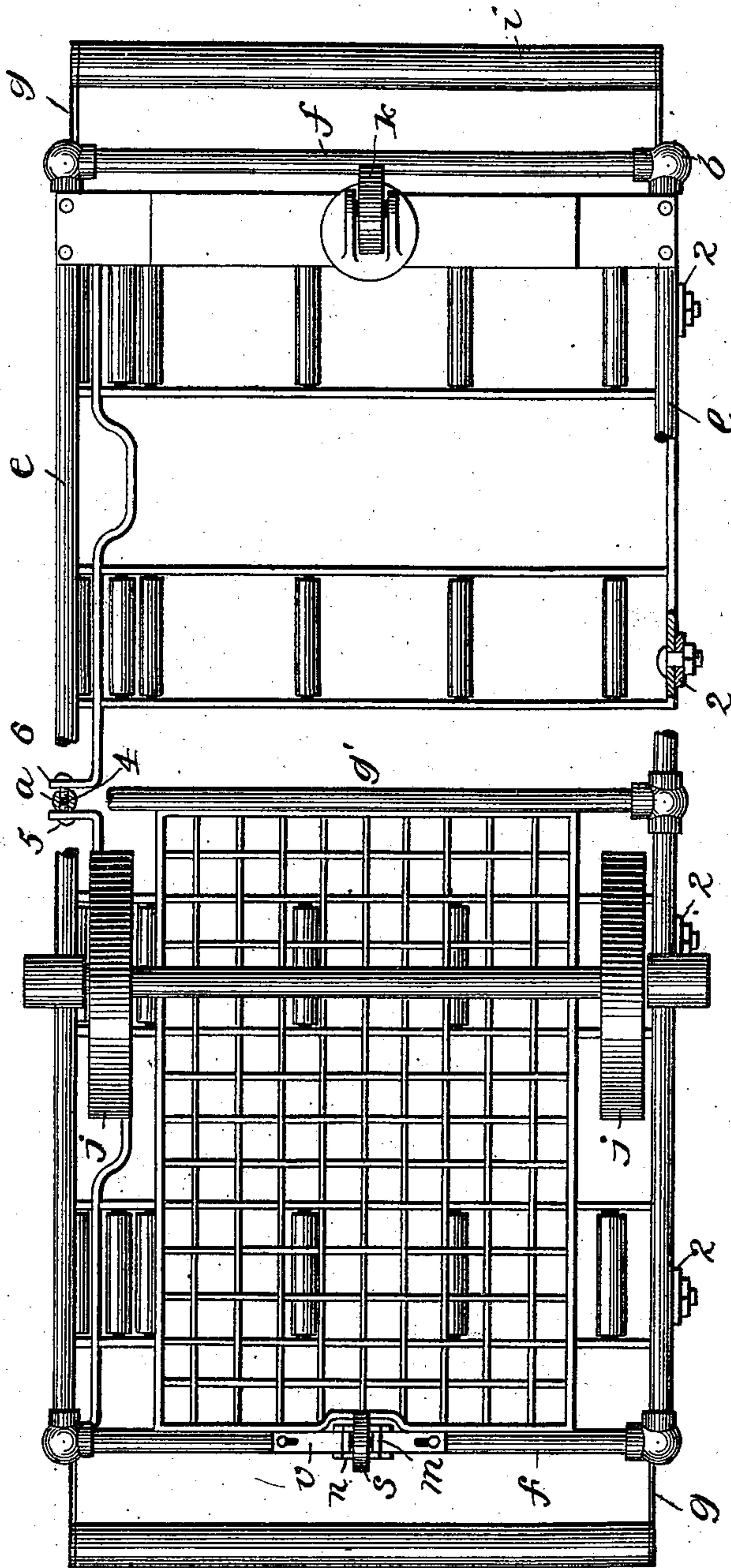
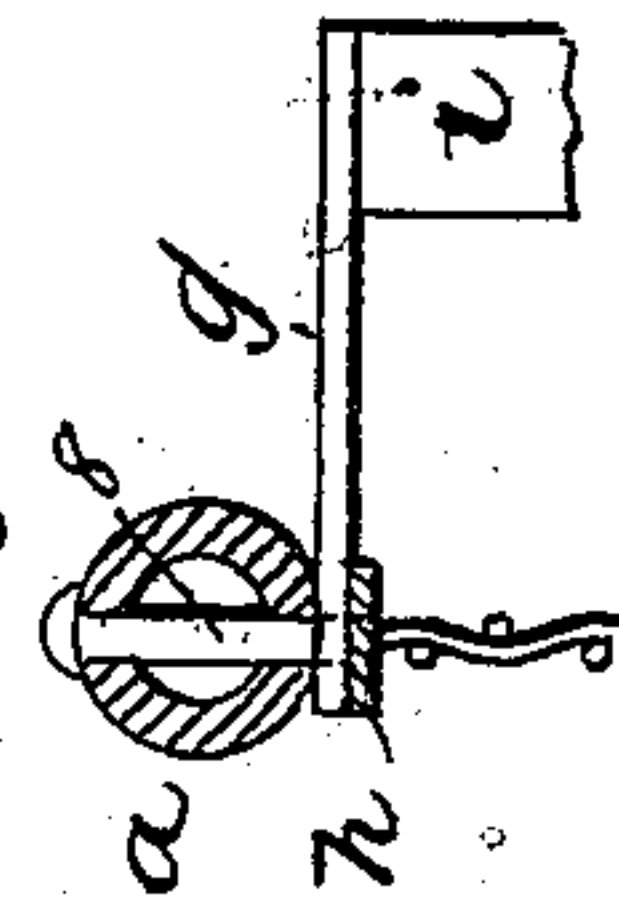


Fig. 3.



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UNITED STATES PATENT OFFICE.

MANLY S. KELLEY, OF PROVIDENCE, RHODE ISLAND, ASSIGNOR TO THE
FENTON METALLIC MANUFACTURING COMPANY, OF JAMESTOWN,
NEW YORK.

TRUCK.

SPECIFICATION forming part of Letters Patent No. 504,476, dated September 5, 1893.

Application filed June 3, 1892. Serial No. 435,443. (No model.)

To all whom it may concern:

Be it known that I, MANLY S. KELLEY, a citizen of the United States, residing at Providence, in the county of Providence, State of Rhode Island, have invented certain new and useful Improvements in a Truck or Bus for Books or Papers, of which the following is a specification.

My invention relates to an improvement in the construction and use of a truck or bus designed to carry masses of books or papers from room to room, or from rooms into vaults at night. Where the trucks are for books solely, provision is made for proper compartments in the lower part of the truck for special volumes, rendering them easy of access, and an upper part upon which masses of books may be piled. Provision is also made for an arrangement of wheels, suited to sustain the truck in a rigid and level position while stationary, which will at the same time permit of its being readily moved from place to place, or up and down an incline, as is often necessary in moving trucks into vaults.

Heretofore trucks upon which masses of books could be piled have been constructed without divisions, such as roller book shelves, book stalls, &c., while on the other hand, trucks having such subdivisions for special volumes have had their capacity limited to such subdivisions and unprovided with compartments suited to carry books in bulk.

It is often necessary to move these trucks not only from room to room, but also from offices into adjoining vaults, for safe storage. Frequently, the thresholds to these vaults are high, necessitating the use of an inclined plane or bridge, by means of which the truck is run over the threshold into the vault. Trucks provided with four wheels in any form, are with great difficulty moved over any form of threshold or inclined plane—particularly in case of vaults, as it is generally necessary that the truck should be pushed into the vaults from the rear. In order to overcome the objections incident to this method of handling books, I have devised an improved truck or bus of the construction illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view sufficient to

illustrate my improved truck, and Fig. 2 is an inverted plan view. Fig. 3, is an enlarged sectional detail view illustrating the manner of attaching the handles to the sides of the body between the corner uprights.

The frame of the truck is made of metal of any suitable form, dimensions and character, but for book trucks I prefer to make use of sections of gas pipe *a*, with coupling pieces *b*, of such a character that the side *e*, and the ends *f*, may be connected to each other at the corners and to the vertical portions *a*. Any suitable number of cross pieces *g'*, may be used as is necessary to impart the requisite strength.

I divide the truck into two parts, an upper and lower part, by means of a shelf, cap or cover *c*, of sheet metal or other material; this, together with side guards *h*, and partitions *h'* of open wire work or other suitable material, serves to protect the special volumes carried in the lower part of the frame, while by a proper extension upward of corner bars *a'*, *a'*, with the curved unions *b'*, connecting them to transverse pieces *d*, I form suitable handles *d*, *d*. The handles *d*, *d*, with the corner bars *a'*, *a'*, curved unions *b'*, and shelf *c*, form a capacious rack capable of receiving a large number of books and fully doubling the ordinary capacity of such trucks. Additional handles may be secured by connecting horns *g*, *g*, to the uprights *a*, and extending across the bar, rod, or tube *i*, between each pair of horns. Where it is necessary to make the horns *g*, *g*, of unusual length, or where the space where the truck is stored is limited, I hinge horns *g*, *g*, in a suitable manner as by pivots 8 near the uprights *a*, in such manner as will permit bar *i*, being turned forward and upward against the end of truck where it is retained by suitable clip and spring.

On reference to Fig. 3, it will be seen that the horns *g*, *g*, which support the handles *i*, are pivoted to the inner sides of the corner uprights in such manner as to be permitted to fall downward against the frame of the truck whenever such handles are not to be used, and if desired the connection between the horns and uprights could be such as to cause the handles to stand out in the position

shown in Fig. 1, by simple frictional contact. Preferably however, the handles are so supported as to fall of their own weight into a downward position. Whenever it is desired
 5 to use the handles it is simply necessary to elevate the same as will be apparent. By thus making the frame out of gas pipe and couplings as set forth, together with the partitions and side guards of reticulated material such as open wire work I secure a truck
 10 having the maximum of strength with the minimum of weight.

Any suitable support for the articles to be carried in lower part of truck may be provided: For light books I prefer a series of upright book stalls, but where the books are heavy I prefer to provide a series of shelves having rollers—such for instance as those set forth in Letters Patent No. 437,833. Such
 20 shelves permit the heavy books to be placed upon and taken from the truck readily and permit any book to be inspected at any time without disturbance to other books in the truck.

The lower part of the truck fitted as described may be readily used as a rack for special books frequently used in offices during the day, while the upper part or rack is suited to receive the miscellaneous volumes. These
 25 may be heaped upon shelf C, while the truck is moved about the office, and all the books of a department can thus be readily moved from one place to another or wheeled into a vault for safe keeping at night.

The shelves may be stationary, but I prefer to connect them adjustably to the frame constituting the truck. Thus, there may be vertical strips 2, 2, having openings 3, and there may be other openings 4, in the standard *a* of
 35 the frame, and the shelves are provided with perforated ears 6, extending into position to receive bolts 5, by which the shelves are secured in any desired position by pressing the bolts through one or the other series of openings that may be necessary to hold the shelf
 40 in its proper place. Ordinarily, the shelves are horizontal, but where the truck is liable to receive hard usage or heavy jars, as for instance when transported from story to story by means of lifts or elevators, I prefer to join
 50 the shelves to standards in such manner as will cause the rear part of shelf nearest the vertical strips 2, to be slightly lower than the front part. The books resting upon the shelves having this slight incline will be stopped by the vertical strips 2, and cannot be easily displaced by any sudden jarring or tilting of the truck.

The frame of the truck is supported upon
 60 a single pair of large wheels, *j, j*. These may be placed either in center of the truck or slightly to the rear of center—preferably in the latter position when the books are not unusually heavy.

At the front of truck I provide a swiveled wheel *k*, which with large wheels *j, j*, insures

a support at three points for the truck and permits it to be wheeled upon the three wheels *j, j, k* but as the wheels *j, j*, are on or near the center of truck it can be run upon these
 70 two wheels to reduce friction, tilted or moved readily from side to side to prevent the rear ends of the truck from tilting downward under excessive weight at that end. When it is stationary I provide a support one end of which is
 75 attached to the truck while the other end is upon the floor serving to retain the truck in a rigid horizontal position. This support is so arranged as to be readily displaced when it is desired to move or tilt the truck and any suitably
 80 hinged arm or bracket may be used for this purpose, or a rod or tube fastened vertically to lower, rear end of frame in such a manner as to permit of its being moved vertically up
 85 or down as is necessary and retained in either position by suitable clip or spring. When the truck is to be frequently moved, however, I prefer a support that can be readily displaced by the foot, as is shown in the form
 90 of the arm *m*, pivoted to a clip *n*, and having a spring *v*, pressing against its flat end which tends to keep the arm in a vertical position, but permits the said arm to be swung to one side or the other and then held in that position. Preferably the lower end of arm *m*, is
 95 provided with a roller *s*, and the arm is of such length that the roller will rest upon the ground when the other wheels are upon the ground thereby securing a very steady support, but when it is desirable to move the
 100 truck the arm *m*, may be turned upward to one side or the other by pressure with the foot when the truck may be readily moved from place to place.

It is obvious that a variety of compartments for books, drawers for papers, &c., may be introduced into the truck without departing from the spirit of the invention.

Without limiting myself, therefore, to the precise construction and arrangement of
 110 parts described, I claim—

1. The combination with the frame of the bus and its supporting wheels *j, j* and wheel *k*, of a support at the opposite end from the wheel *k* adapted to be displaced, substantially
 115 as set forth.

2. A truck for books and papers having its body constructed of vertical standards, a cap or cover, upper and lower horizontal side and cross pieces, and couplers uniting the ends of
 120 the side and cross pieces to each other and to the standards, substantially as described.

3. In a truck for books and papers, the body thereof constructed with the uprights having openings therein and the horizontal side
 125 and cross pieces, in combination with roller shelves having partitions adapted to receive bolts for adjustably securing the shelves in position upon said uprights, substantially as described.

4. The combination with the frame of the bus consisting of uprights and cross pieces,

of roller shelves and means for adjusting and securing the shelves in different positions, substantially as set forth.

5 5. The combination with the frame of the bus of the roller shelves and vertical strips in rear of shelves, and means for securing said shelves in slightly inclined positions, substantially as described.

10 6. The combination of the frame of the bus and the handles *g-i*, arranged to be

folded up against said frame, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

MANLY S. KELLEY.

Witnesses:

M. F. BLIGH,

J. A. MILLER, Jr.