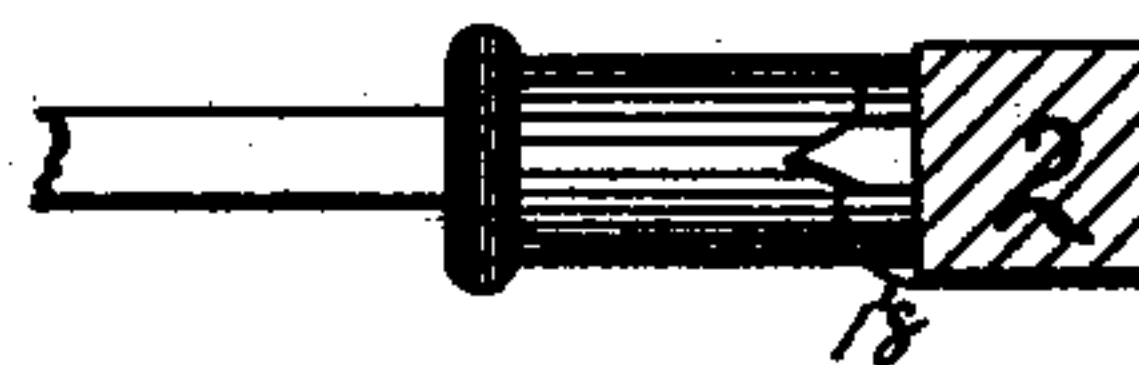
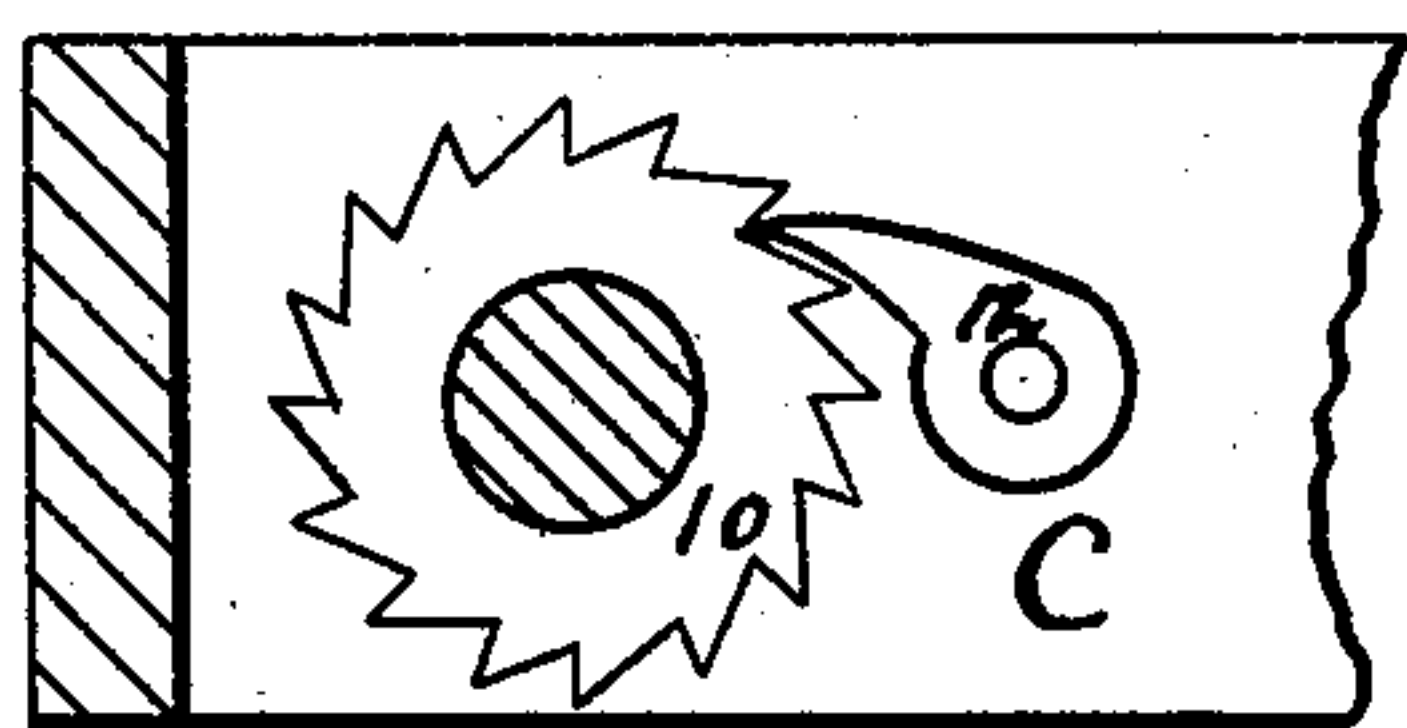
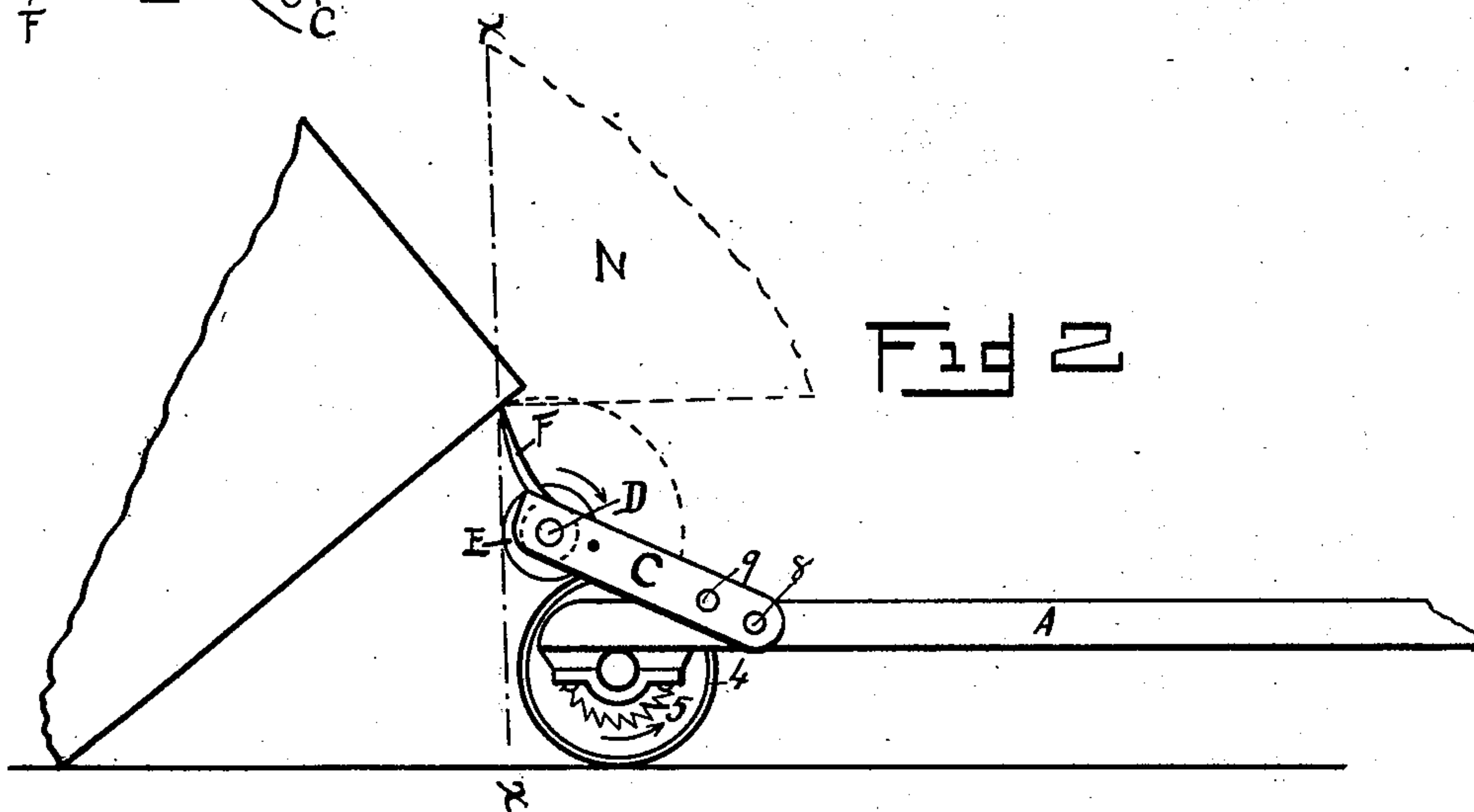
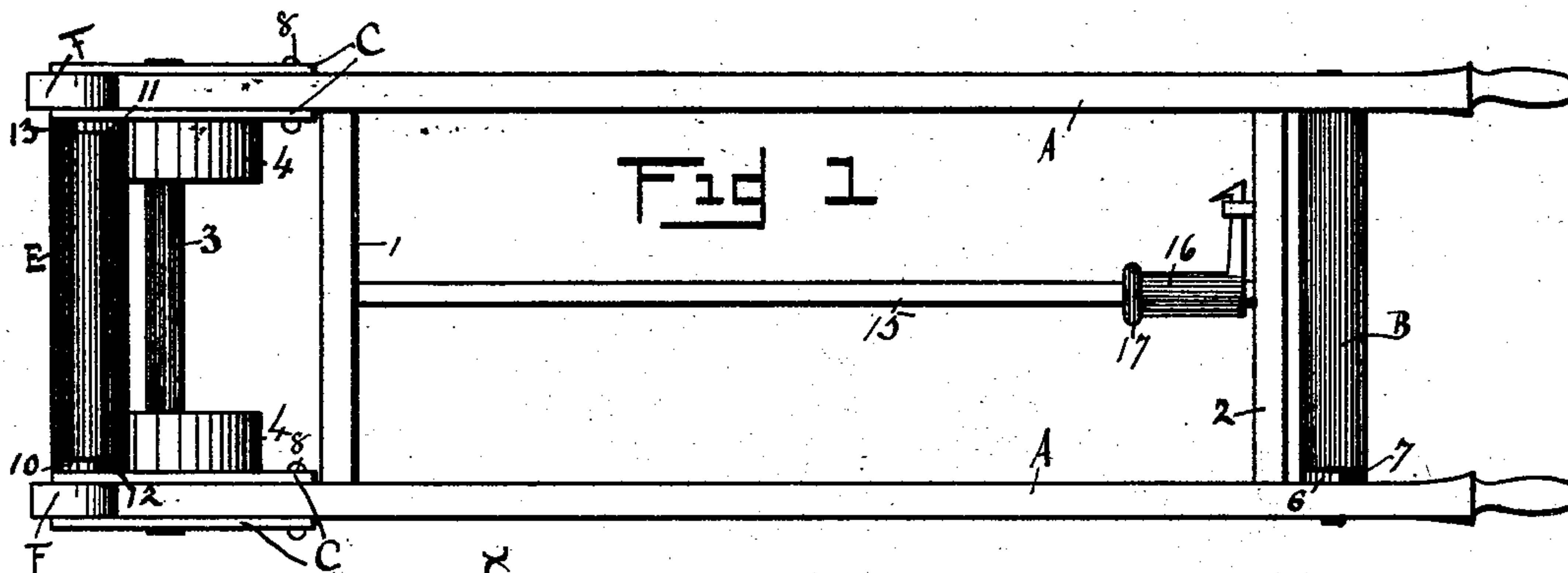


(No Model.)

H. O. THOMAS.
HAND TRUCK.

No. 509,054.

Patented Nov. 21, 1893.



Henry O. Thomas

INVENTOR

BY

W. M. Lusk

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WITNESSES:

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UNITED STATES PATENT OFFICE.

HENRY O. THOMAS, OF KIMBALL, NEBRASKA, ASSIGNOR OF SEVEN-TENTHS
TO LEOPOLD MOSS, OF CHICAGO, ILLINOIS.

HAND-TRUCK.

SPECIFICATION forming part of Letters Patent No. 509,054, dated November 21, 1893.

Application filed April 20, 1893. Serial No. 471,233. (No model.)

To all whom it may concern:

Be it known that I, HENRY O. THOMAS, of Kimball, in the county of Kimball and State of Nebraska, have invented certain useful
5 Improvements in Trucks; and I do hereby declare that the following is 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 draw-
10 ings, which form a part of this specification.

This invention has relation to a new and novel improvement in hand trucks, the object being to provide a truck by means of which
15 heavy loads can be readily brought upon the truck, as will be described more fully herein-after.

In the accompanying drawings, Figure 1 shows a top view of a hand truck, embodying
20 my invention. Fig. 2 is a side elevation of my truck, with parts broken away showing it in the position of lifting a load. Fig. 3 shows a broken portion of one of the lever arms, showing the arrangement of the pawl and
25 ratchet; while Fig. 4 shows the spring catch as used in my device for holding the drop spur.

A. A. represent the main bars or braces of my improved truck which are connected by
30 means of the transverse bars 1 and 2, as usual in devices of this class; figure 3 represents an ordinary main supporting shaft which is provided with the usual supporting wheels 4, 4, which are mounted upon the shaft 3 and are
35 adapted to work within the frames A. Each of these wheels 4 is provided with a ratchet 5 which is secured to the wheel and is adapted to be engaged by a pawl secured to the frames A.

40 At the upper or handle end of the truck, I further provide the transverse roll B of any suitable material and size, which is, also, provided with a ratchet-wheel 6 at one end adapted to be engaged by the pawl 7; this
45 pawl and ratchet are so arranged that the load sliding upon this roll B may be carried toward the handles, but do not permit the roll revolving in the opposite direction while the pawl is within the ratchet. Secured to
50 the braces A, near the lower end, are the two angular supporting brackets C, which are

preferably of strap iron and encompass the two sides of these bars A and are rigidly secured thereto by means of the bolts 8 and 9. Working within each of the arms C, at the
55 upper end thereof is a transverse shaft D passing through each of the brackets and giving support to an auxiliary roll E, which is movably held between these arms C C. This roll E is provided at each end with a ratchet
60 10 and 11, one being a right-handed and the other a left-handed ratchet adapted to be engaged by the pawls 12 and 13, so that said roll E can be either secured in a fixed position or
65 permitted to revolve either forward or backward. Mounted upon the shaft D and between the brackets C are the two curved shoes F, of any suitable material which are pivotly mounted upon this shaft D and normally rest against the forward portion of the
70 brackets C so that the said shoes are held in their open positions as is shown in Fig. 2. Lengthwise within the frames 1 and 2 is a rod 15 upon which is movably held a drop spur 16, provided with a suitable collar 17 by means
75 of which said drop spur is operated. Secured to the brace 2 is an ordinary recurved spring 18, by means of which said drop spur can be secured to the frame 2, as shown in Fig. 4. This spur is adapted to slide upon the rod 15
80 from end to end.

This truck can be made in any suitable length and of any suitable width and the roller E, if necessary, can be divided into several sections and the main shaft 3 can, also,
85 be provided with two or more supporting wheels; also, any number of extra shoes could be provided.

The device is further susceptible to modification in that one of the frame pieces A could
90 be made sufficiently large and strong and provided at the bottom with one supporting wheel, roll and shoe so that the device could be used as a tool in lifting heavy loads. In this modification, the wheel 4 could be given
95 any suitable support and, if necessary, could be mounted directly below the bar A.

When the device has been properly arranged and constructed, the operation of my device will be as follows: In raising a heavy
100 box, for instance, the braces A would be preferably held in a perpendicular position dur-

ing which the truck would be supported by means of the roll E, as will be understood by referring to Fig. 2, where the line X X would represent the ground line and showing the truck at the instant the shoes were being forced below the load Z to raise the same. As soon as these shoes had been forced under the load the handles would be carried downward, which would permit the roll E to ride toward and under the load until the larger wheels 4 were engaged when the load would be carried by these wheels, the handles being depressed until the load is held in position, as shown in Fig. 2. This could be readily accomplished as the wheels 4 are only permitted to revolve in one direction and so would feed forward by means of their respective ratchets. As soon as the load had been raised a sufficient height, as shown in Fig. 2, for instance, the truck could be suddenly forced forward, which would carry the shoes F into their closed positions, as indicated by the dotted lines in Fig. 2. These shoes would fall in and rest between the brackets C, the load then, of course, being carried by the roll E. Now, in their arrangement, the wheels 4 would be permitted to go in one direction, as indicated by the arrow, while the roll E is permitted to revolve in the opposite direction, as shown by the arrow indicating the proper directions. Now, as the load would rest upon the roll E, it would simply be necessary to alternately raise and lower the braces A, by means of which the roll E and wheels 4 would be alternately fed forward, locked and so ride under the load until the same were overbalanced and would ride upon the truck handles A. In feeding forward, for instance, in carrying the bars A. upward, the roll E would feed forward at the instant that the handles were carried downward; this roll E would be locked and the wheels 4 would feed forward and, in this way, work itself by a feed movement under the load. After the load has been carried up a suitable distance upon the truck proper, the drop spur is released and in falling would impinge itself upon the box and so aid in holding the load. If desired, the rolls E and B, as well as the main wheels 4, may be slightly corrugated.

The device is noticeable because of its extreme simplicity.

Having thus described my said invention, what I claim as new, and desire to secure by United States Letters Patent, is—

1. The combination with a suitable supporting frame of a main supporting shaft and

wheels, said wheels being provided with pawls and ratchets of an auxiliary frame secured to the main frame proper and provided with a transverse roll, said roll having pawls and ratchets adapted to feed in a direction opposite to that of the main wheels, all substantially as and for the purpose set forth.

2. The combination with a main supporting frame provided with suitable wheels, said wheels having pawls and ratchets of an auxiliary frame fixed to said main frame and provided with a shaft, giving support to a roll, said roll being provided with a right and left-handed pawl and ratchet and two shoes pivotally secured to said main shaft, all substantially as and for the purpose set forth.

3. The combination with a suitable frame, provided with two supporting wheels, having pawls and ratchets fixed brackets secured to said frame, provided with a transverse roller having right and left handed ratchets, shoes pivotally secured to a shaft supporting said transverse roll, and a transverse roll within the upper end of said frame provided with a pawl and ratchet and a rod secured within said frame provided with a drop spur, all arranged substantially as and for the purpose set forth.

4. The combination with a suitable frame provided with main supporting wheels, said wheels having pawls and ratchets permitting rotation in one direction and an auxiliary frame secured to said main frame provided with a roll having pawls and ratchets permitting rotary motion in a direction opposite to that of the main wheels and pivotal shoes secured within said auxiliary frame and the drop spur 17 and the secondary roll B provided with suitable ratchets, all substantially as and for the purpose set forth.

5. In a hand truck, the combination of the main frame A, having braces 1, 2, the main supporting shaft 3, provided with the wheels 4, having pawls and ratchets, the fixed arms C secured to said frame A, provided with the shaft D, the roll E mounted upon said shaft and provided with the pawls and ratchets 10, 11, 12 and 13 and the shoes F pivoted upon the shaft D, and adapted to operate substantially as and for the purpose set forth.

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

HENRY O. THOMAS.

Witnesses:

F. B. RODEFER,
G. W. SUES.