

(No Model.)

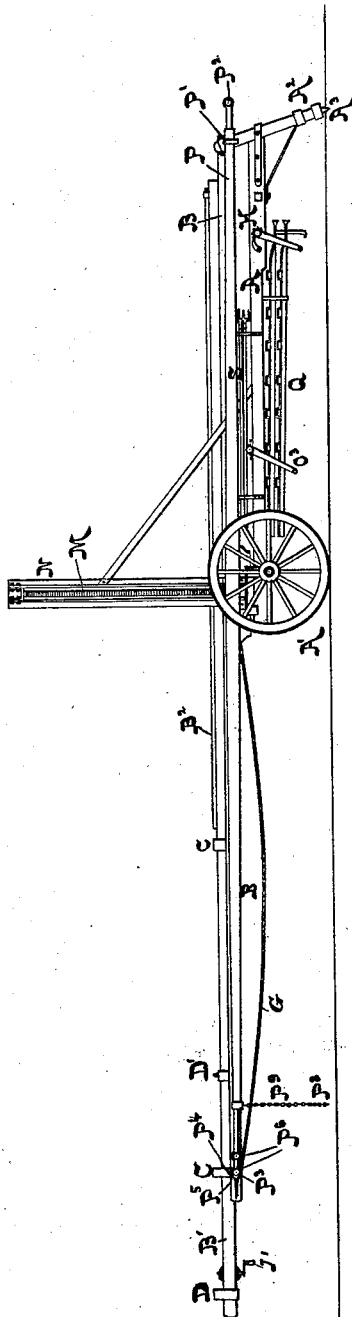
3 Sheets—Sheet 1.

F. AUGSBURGER.
COMBINED LADDER AND TRUCK.

No. 301,788.

Patented July 8, 1884.

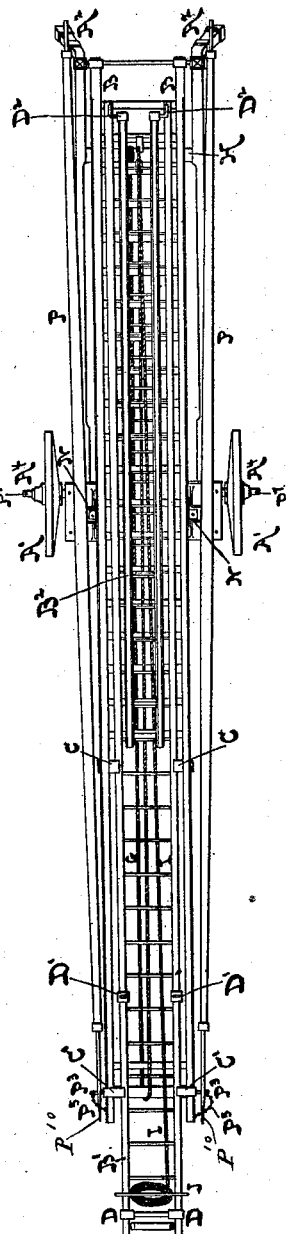
Fig. 1.



Attest:

H. S. Knight,
Goodspeed & Co.

Fig. 2.



Inventor:

F. Augsburg
By Knight Bros
Attys

(No Model.)

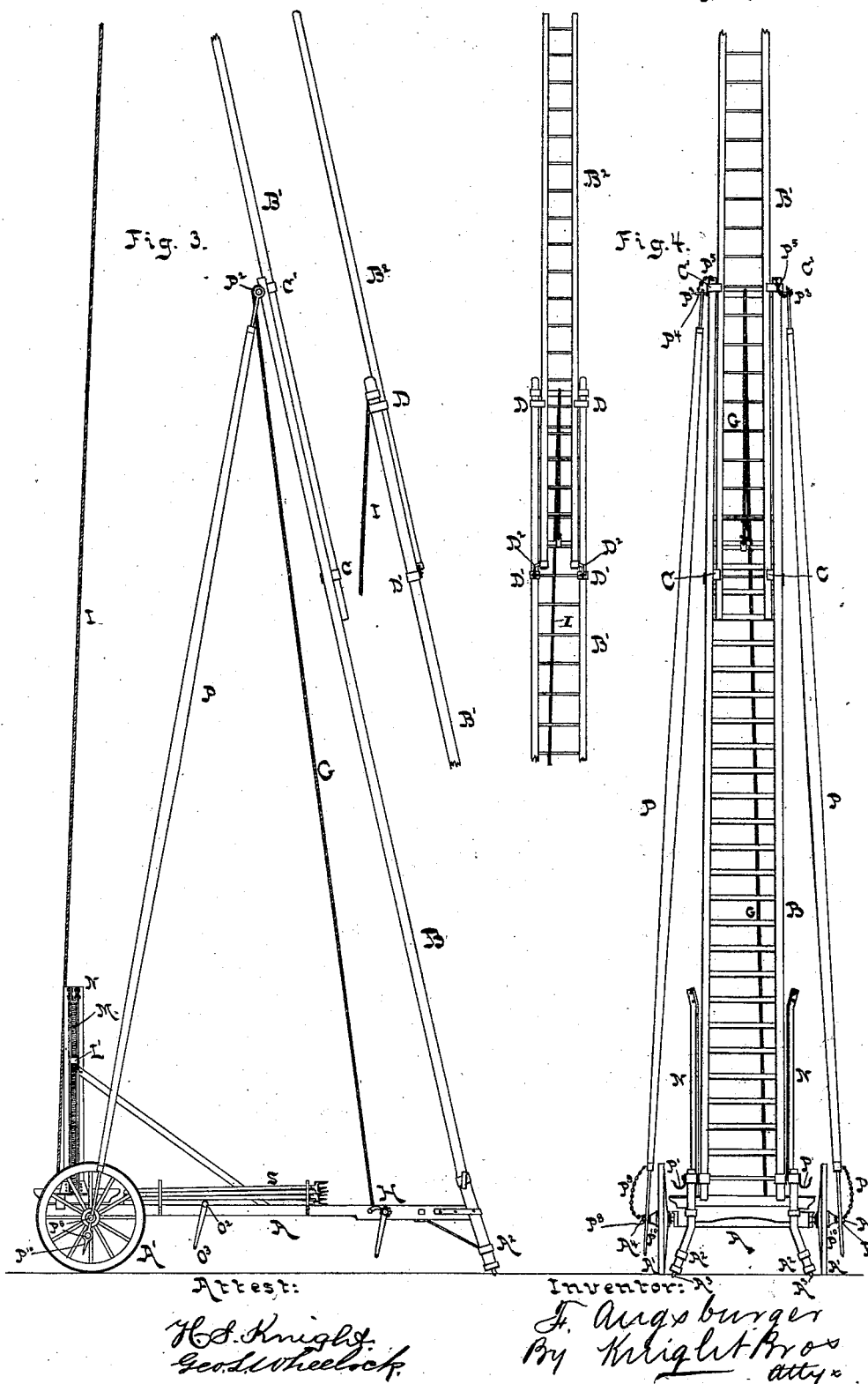
3 Sheets—Sheet 2.

F. AUGSBURGER.

COMBINED LADDER AND TRUCK.

No. 301,788.

Patented July 8, 1884.



Attest:

H. S. Knight
Geo. L. Wheelock

Inventor: F.

F. Augsburg
By Knight Bros
attys.

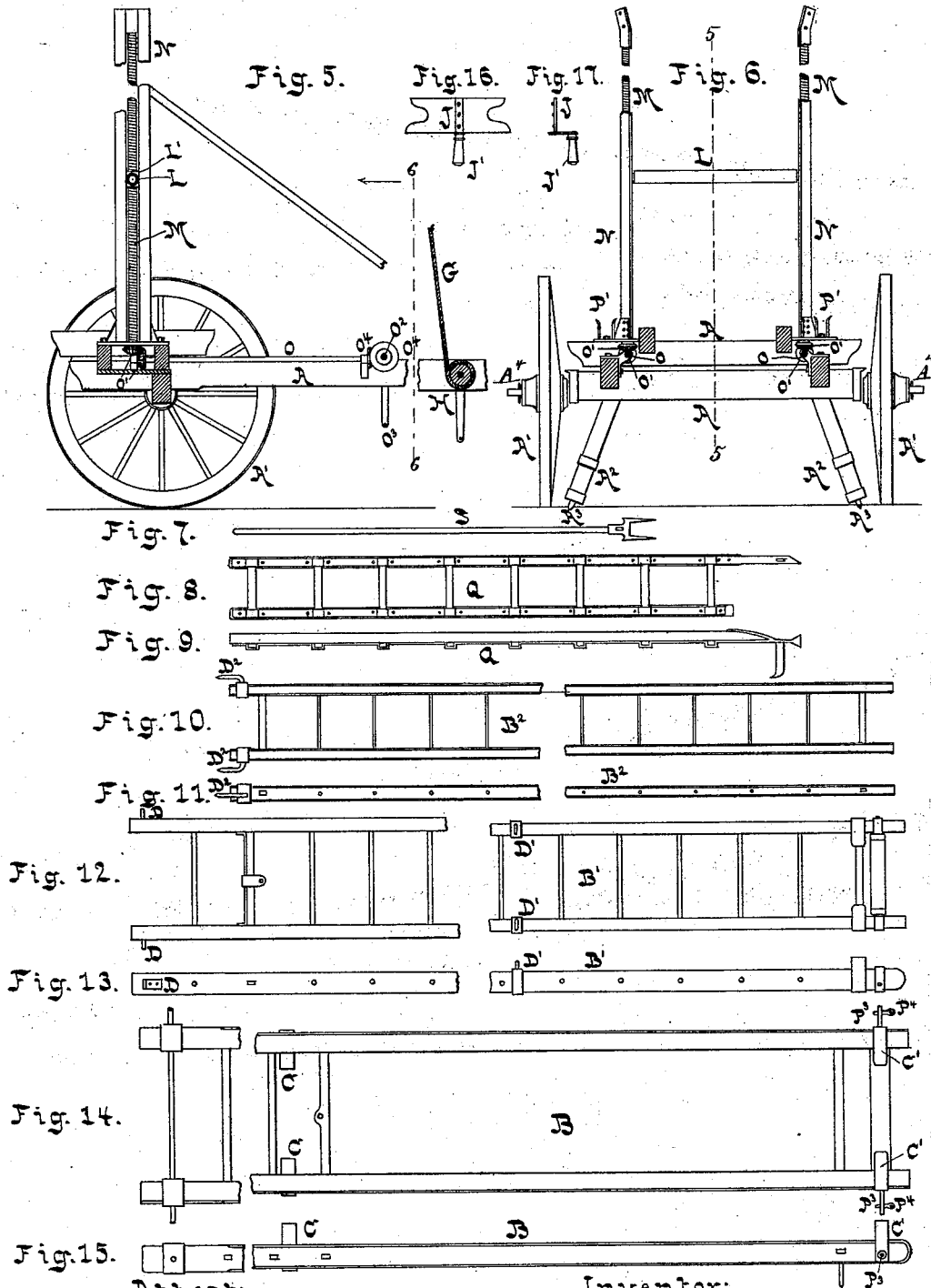
(No Model.)

3 Sheets—Sheet 3.

F. AUGSBURGER.
COMBINED LADDER AND TRUCK.

No. 301,788.

Patented July 8, 1884.



Attest:

H. D. Knight.
Geo. Wheelock.

Inventor:

F. Augsburger
By Knight Bros
Attys

UNITED STATES PATENT OFFICE.

FRED AUGSBURGER, OF BELLEVILLE, ILLINOIS.

COMBINED LADDER AND TRUCK.

SPECIFICATION forming part of Letters Patent No. 301,788, dated July 8, 1884.

Application filed April 9, 1884. (No model.)

To all whom it may concern:

Be it known that I, FRED AUGSBURGER, of Belleville, in the county of St. Clair and State of Illinois, have invented a certain new and useful Improvement in Combined Truck and Ladder, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, and in which—

Figure 1 is a side elevation showing the ladder in position for transit. Fig. 2 is a top view of same. Fig. 3 is a side elevation showing the ladder in using position. Fig. 4 is a front elevation of same. Fig. 5 is a section taken on line 5 5, Fig. 6. Fig. 6 is a section taken on line 6 6, Fig. 5. Both of these last two figures represent the truck alone, the ladder being removed. Fig. 7 is an enlarged view of one of the hoisting-forks. Figs. 8 and 9 are front and edge views, respectively, of the hand-ladder. Figs. 10 and 11 are front and edge views, respectively, of the upper or top section of the main ladder. Figs. 12 and 13 are similar views of the intermediate or middle section of the main ladder, and Figs. 14 and 15 are similar views of the lower or bottom section of the main ladder. Figs. 16 and 17 are side and edge views, respectively, of the reel located on the upper end of the top section of the main ladder.

My invention relates to a truck and extension-ladder, intended more especially for use by fire departments; and my invention consists in features of novelty hereinafter fully described, and pointed out in the claims.

Referring to the drawings, A represents the frame of the truck, having wheels A' at one end, and legs A² at the other end. The legs preferably stand at an angle to the frame, as shown in Fig. 6, and are provided with prongs or spikes A³ on their lower ends, to keep them from slipping when the ladder is in use.

Hinged to the front end of the truck the end having the legs is the lower end of the first or bottom section, B, of the ladder. The next or intermediate section, B', is connected to the section B by clips C, that allow this section B' to slide up and down on the first section, B.

B² represents the top or upper section, connected to the intermediate section, B', when the ladder is in use by clips D and D', the low-

er end of the extension B² having prongs D² secured to it, that enter perforations in the clips D', these clips D' like those D, embracing the sides of the section B', so as to slide up and down thereon as the ladder is raised and lowered by a rope, G, connected to the sections in the ordinary way, and wound upon a windlass, H, journaled in the frame of the truck, to raise the ladder.

When the ladder has been in use and lowered, it is shortened or contracted, which may be done by a rope, I, connected by one end to the rear end of the truck, and by the other end to a reel, J, (see Figs. 16 and 17,) journaled in the upper end of the section B', (see Figs. 1 and 2,) around which it is wound in contracting the ladder. The reel has a crank, J', by which it is turned to wind up the rope, and it will be seen that this reel and rope will not interfere with the free movement of the sections as the ladder is extended.

When the ladder is in transit position, it rests upon a roller, L, at the rear or wheel end of the truck. This roller has boxes L'—one at each end—through which pass vertical screws M, supported by posts N, secured to the wheel end of the truck. The screws are turned to raise and lower the roller by horizontal shafts O, to which they are connected by miter-wheels O', and a transverse shaft, O², having a crank, O³, and to which the shafts O are connected by miter-wheels O⁴. (See Figs. 5 and 6.)

When the device is in transit position, the roller is lowered so that the ladder will lie down flat upon the truck, as shown in Fig. 1, and when the ladder is to be used it is raised the first part of the distance, where it is the heaviest, by means of the roller, which is elevated or raised into the position shown in Figs. 5 and 6, or still higher, if desired. The posts and screws prevent the ladder from moving laterally on the truck during transportation.

Hinged to the upper end of the lower section, B, of the ladder are braces or props P, (see Figs. 3 and 4,) the free ends of which, when the ladder is not in use, rest in hooks P', secured to the lower end of said section. (See Figs. 1 and 4.) These braces are secured to the section by having eyes P², which

fit over pins P^3 on the upper end of the section, being held in place by keys P^4 , made fast to the section by chains or cords P^5 .

When the ladder is raised, it is sustained by the braces, which have eyes P^6 , that fit over the projecting ends A^4 of the axle of the truck, the axle having perforations P^7 , to receive keys P^8 , secured to the braces by chains or cords P^9 . The ends of the braces also have prongs P^{10} (as well as the eyes) to stick into the ground when the ladder is not altogether raised.

When the ladder is in position for transportation, the braces are turned end for end, so that the ends having the eyes P^2 rest in the hooks P' , and the eyes P^6 of the ends of the levers having the prongs fit over the pins P^3 , as shown in Fig. 1. During transportation, the hand-ladders Q , such as are shown in Figs. 8 and 9, may be supported beneath the truck, as shown in Fig. 1, by any suitable means, and the fork S (shown in Fig. 7) may be supported on suitable hooks at the side of the truck, as shown in Figs. 1 and 4. The rope I may also be used, when its outer end is unwound from the reel J , to raise the section B^2 by connecting it to one of the rungs, as shown in the top part of Fig. 4. This section B^2 , when the

device is in position for transportation, is disconnected from the section B' and laid on top of the sections, as shown in Figs. 1 and 2.

I claim as my invention—

1. In a combined extension-ladder and truck, the combination of the roller L , hoisting-screws, posts, and suitable gearing for turning the screws, all arranged and operating substantially as and for the purpose set forth.

2. In a combined extension-ladder and truck, the rope for contracting the ladder, connected by one end to the truck, and by the other to a reel secured to the upper or outer end of the top section, and having a suitable handle, by which it is turned, arranged and operating substantially as set forth.

3. In a combined extension-ladder and truck, the braces having eyes at both ends, in combination with pins secured to the ladder, and projections on the axle of the truck, arranged and operating substantially as and for the purpose set forth.

FRED AUGSBURGER.

In presence of—

GEO. H. KNIGHT,
SAM'L. KNIGHT.