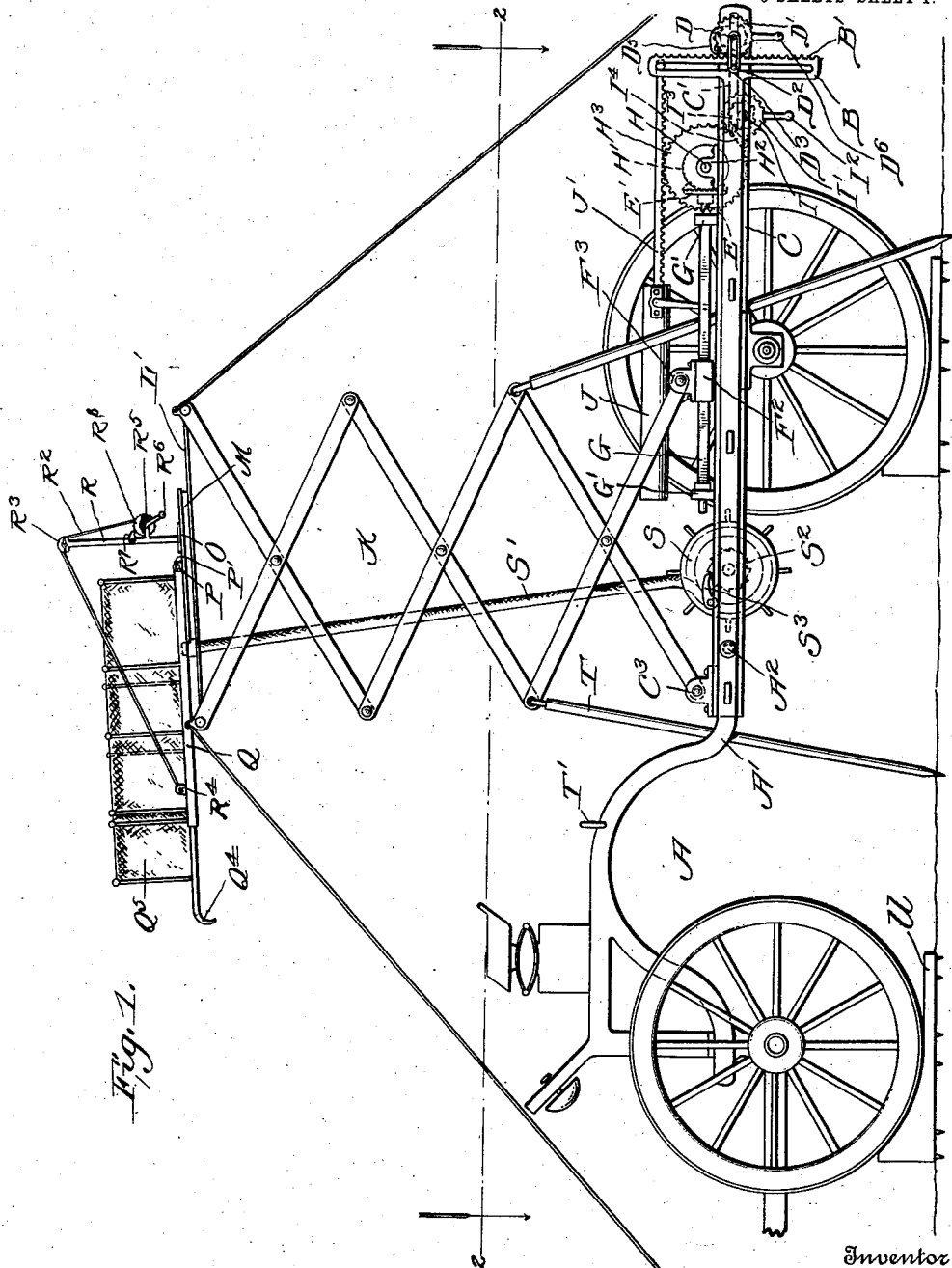


C. J. GEISEL.
 PORTABLE FIRE ESCAPE.
 APPLICATION FILED OCT. 25, 1909.

1,025,972.

Patented May 14, 1912.

3 SHEETS—SHEET 1.



Witnesses

Oliver M. Holmes
A. Albright.

C. J. Geisel

By

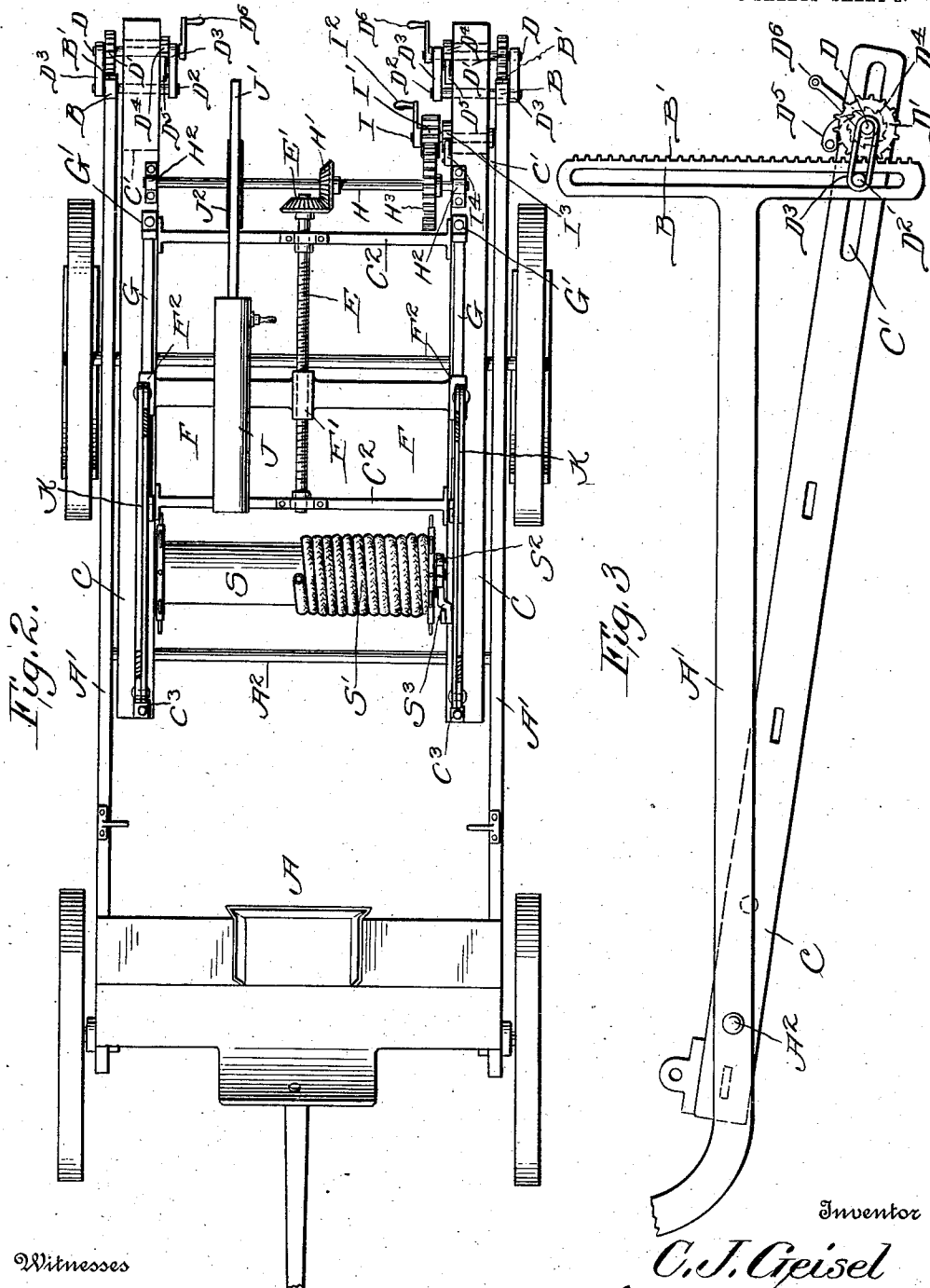
Orman Brock
 Attorney.

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Witnesses

Oliver H. Holmes
R. B. Wright

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C. J. Geisel

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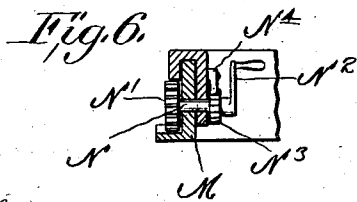
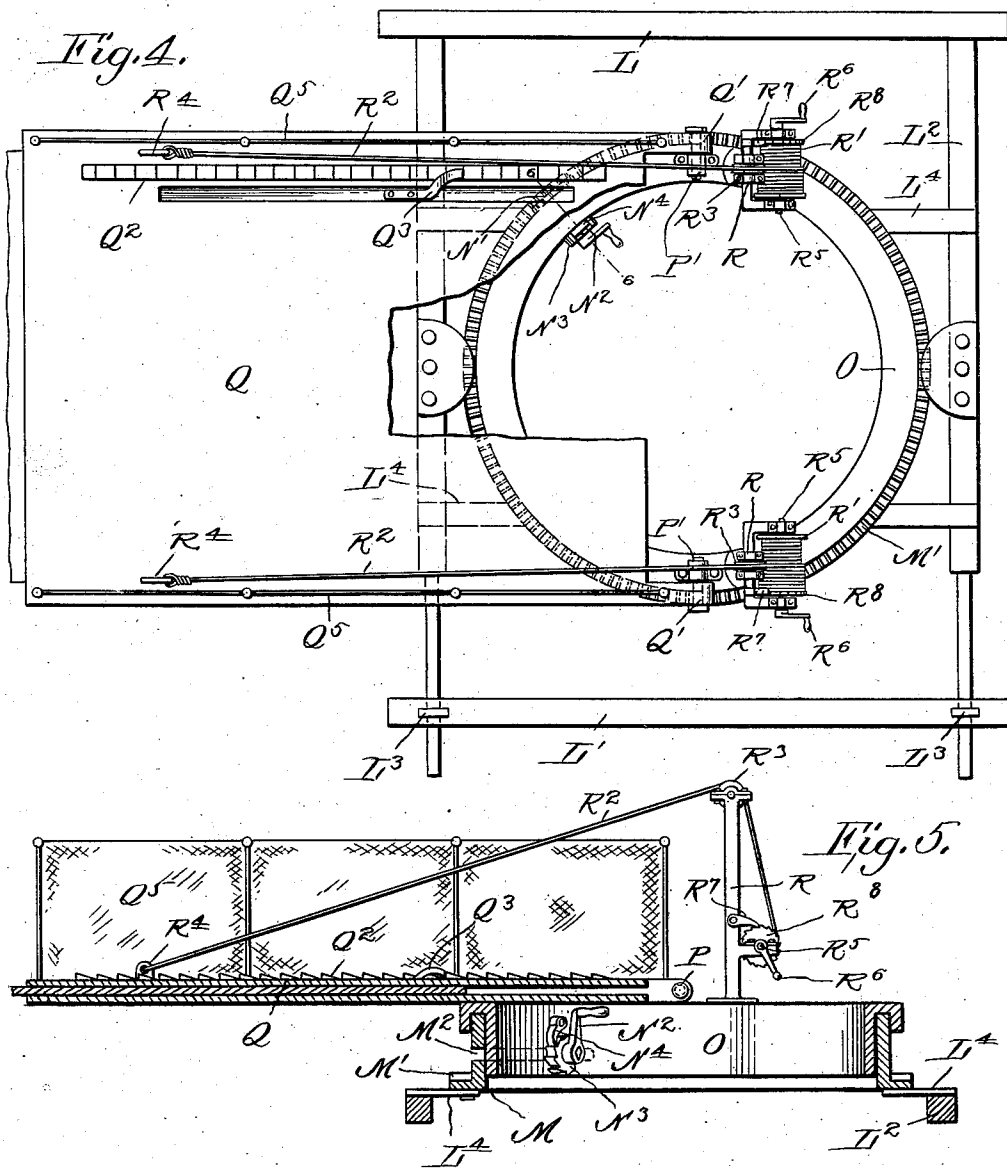
Charles Brock
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3 SHEETS—SHEET 3.



Witnesses

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UNITED STATES PATENT OFFICE.

CRISTOPH J. GEISEL, OF MANSFIELD, OHIO.

PORTABLE FIRE-ESCAPE.

1,025,972.

Specification of Letters Patent.

Patented May 14, 1912.

Application filed October 25, 1909. Serial No. 524,492.

To all whom it may concern:

Be it known that I, CRISTOPH J. GEISEL, a citizen of the United States, residing at Mansfield, in the county of Richland and State of Ohio, have invented a new and useful Improvement in Portable Fire-Escapes, of which the following is a specification.

This invention relates to portable fire escapes, the object being to provide a fire escape which is so constructed that the same can be readily extended into such a position that the bridge carried thereby can be readily moved over into a window so that the occupants of the building can readily pass out of the building on the same.

Another object of my invention is to provide a fire escape which is especially adapted to be used by fire departments and one which is provided with a reel carrying a hose so that the firemen will be able to use the hose from such a height that better results will be obtained.

Another object of my invention is to provide a fire escape which is carried by a truck or wagon whereby the same can be readily moved to any position desired so as to throw the bridge in such a position that the same can be extended into a window.

A further object of my invention is to provide an extensible support for the bridge which can be readily raised or lowered so that the bridge will be raised into horizontal alinement with a window which will enable the same to be readily extended into the window.

A still further object of my invention is to provide a bridge which is so mounted that the same can be readily swung into any angle desired by simply operating a crank.

Still another object of my invention is to provide novel means for adjusting the frame carrying the extensible support so that the same can be readily moved into a horizontal position when the wagon is on the side of a hill or in uneven ground.

A further object of the invention is to provide novel means for operating the extensible support whereby the bridge can be raised quickly or lowered as desired.

A still further object of my invention is to provide a fire escape which is exceedingly simple in construction and one in which the parts are so arranged that they are not likely to get out of order in operation and one which is formed of fire proof material so

that the same will not be affected by the heat from the burning building.

With these various objects in view, my invention consists in the novel features of construction, arrangement and combination of parts, all of which will be hereinafter fully described and pointed out in the claims.

In the accompanying drawings: Figure 1 is a side elevation of my improved fire escape showing the same in a raised position. Fig. 2 is a horizontal section taken on the line 2—2 of Fig. 1. Fig. 3 is a detail enlarged side elevation of a portion of the wagon body and the supporting frame, showing the manner of adjusting the same. Fig. 4 is a top plan view of the bridge showing the manner of operating the same. Fig. 5 is a longitudinal section through the bridge and supporting ring, and Fig. 6 is a detail transverse section through the ring and supporting member showing the manner of operating the same.

In carrying out my improved invention, I employ a wagon A provided with a skeleton body, the side bars A' of which are provided with a T-shaped slotted head B having teeth B' formed thereon for the purpose hereinafter fully described.

Extending transversely through the side bars A' of the body is a shaft A² on which is pivotally mounted a frame C provided with side bars having slotted end portions as clearly shown at C' through which extend shafts D carrying gears D' which mesh with the teeth B' formed on the T-shaped head B, said shafts being connected to shafts D² slidably mounted within the slots of the head B by links D³ so as to hold the gears D' in mesh with the racks of the head B at all times and the shafts D carry ratchet wheels D⁴ which are engaged by pawls D⁵ for locking the same from rotating and arranged on the inner ends of the shafts D are cranks D⁶ for operating the same and it will be seen that by this manner the frame C can be readily adjusted with respect to the body of the truck or wagon so that when the same is arranged on the side of a hill the frame can be raised or lowered so as to throw the same into a horizontal position.

Journaled in the cross bars C² of frames C is a screw E which extends through a threaded bore formed in the central enlarged portion F' of a bar F which is provided with square guide blocks F² at its ends which are

slidably mounted upon square guide rods G carried by suitable supporting brackets G' arranged upon the upper sides of the side bars of the frame C so as to allow the cross bar F to move freely thereon when the screw E is operated.

For operating the screw E I provide the same with a beveled gear E' at one end which meshes with a beveled gear H' carried by a shaft H journaled in bars H² in the side bars of the frame C, said shaft H being provided with a gear H³ which meshes with a gear I' carried by a shaft I journaled in one of the side bars of the frame C, said shaft being provided with a crank I² for operating the same and for preventing the shaft from turning backwardly, I provide the same with a ratchet wheel I³ which is engaged by a pawl I⁴. It will be seen that by this construction the bar F can be readily moved back and forth upon the guide rods G by operating the crank I².

For operating the screw E, I provide additional means which comprises a hydraulic jack J carried by the frame C provided with a piston J' having a rack formed thereon which is adapted to engage a gear J² secured upon the shaft H, and it will be seen that by this construction if the crank and gear mechanism for operating the shaft H should become out of order by operating the hydraulic jack J the screw E could be readily operated.

Mounted upon the frame C is an extensible support comprising spaced lazy tongs, the lower cross levers of which are connected respectively to ears C³ formed on the side bars of the frame C and to ears F³ formed on the guide blocks F², and it will be seen that by this construction the tongs can be readily raised and lowered by operating the screw E through the medium of the gearing as hereinbefore described. The upper levers of the lazy tongs K are pivotally mounted on the respective ends of bars L, L', the bar L being provided with cross bars L² which are provided with reduced ends which are slidably mounted in guide members L³ secured on the bar L' so as to allow the same to move as the lazy tongs open and close. In the drawing I have shown cables connected to the upper ends of the cross levers of the lazy tongs which are adapted to be connected to any suitable anchors, but it is of course understood that these cables are not necessary under favorable conditions but are employed in case of high winds or exceedingly rough ground upon which the wagon is placed.

Extending inwardly from the cross bars L² are brackets L⁴ which are connected to a ring M provided with a flanged lower end having a rack formed thereon as clearly shown at M' and said ring is provided with oppositely disposed slotted portions as

shown at M² through which is adapted to extend a shaft N carried by a concentric ring O which is provided with a guide groove at its upper edge formed of an outwardly and downwardly projecting annular flange which rests upon the upper edge of the ring M so that the same can move freely with respect to the ring. For moving the ring O upon the ring M, I provide the shaft N with a gear N' which meshes with a racked portion M' and said shaft N is provided with a crank arm M² for operating the same so that by operating the crank the ring O can be oscillated upon the ring M for the purpose hereinafter fully described. The shaft N carries a rack wheel N³ which is engaged by a pawl N⁴ for preventing the same from turning backwardly after the ring has been moved into the desired position.

Arranged on the upper edge of the ring O are oppositely disposed journal pins P which are mounted in suitable bearings P' and on which are pivotally mounted bearing portions Q' of the sectional bridge Q formed of two sections slidably connected together, one section being provided with a racked portion Q² which is engaged by a spring pawl Q³ carried by the other section for locking the same and the outer section of the bridge is provided with hooks Q⁴ adapted to catch on to the window sill so as to hold the bridge in its proper position after the same has been extended into a window. The sections of the bridge are provided with railings Q⁵ and for raising and lowering the bridge I provide the ring O with a pair of standards R which carry drums R' on which are round cables R² which pass over the pulleys R³ arranged on the upper ends of the standards R and have their free ends connected to eyes R⁴ secured on the top of the bridge Q and said drums are carried by shafts R⁵ which are provided with crank arms R⁶ for operating the same and for preventing the drums from unwinding I provide the shafts R⁵ with ratchet wheels R⁶ which are engaged by pawls R⁷. By this arrangement the bridge can be raised and lowered so as to enable the same to be extended into a window of a building without adjusting the lazy tongs in any way, thereby saving time.

In connection with the fire escape, I provide the frame C with a reel S carrying a hose S' which is normally connected to the bridge so that when the same is raised the hose will be carried up with the same in order to have the whole hose handy at all times and for preventing the reel turning backwardly I provide the same with a ratchet wheel S² which is engaged by a pawl S³.

For strengthening the tongs so as to relieve the same from as much strain as pos-

sible, I provide brace rods T which are connected to the joints of the tongs as clearly shown which are adapted to be brought down and embedded in the ground so as to prevent the tongs from yielding in any way and these braces T are carried by hooks T' when not in use.

For holding the wagon so as to prevent the same from moving, I provide shoes U upon which the wheels of the wagons are adapted to be placed, said shoes being provided with teeth for engaging the pavement or ground so as to hold the shoes in their placed position.

Having thus fully described my invention, what I claim as new and desire to secure by Letters Patent, is:

1. In a portable fire escape, the combination with a wagon provided with a skeleton body formed with side bars having T shaped slotted heads provided with teeth, of a shaft carried by the side bars of said body, a frame pivotally mounted on said

shaft provided with slotted ends, a shaft loosely mounted in said slotted ends, gears carried by said shaft meshing with the teeth of the T shaped heads, and a crank for rotating said shaft.

2. A portable fire escape comprising a truck having a skeleton body formed with side bars provided with T shaped slotted heads at their rear ends having teeth, of a shaft mounted in the forward ends of said side bars, a frame comprising side bars pivotally mounted on said shaft provided with rear slotted ends, a shaft extending through the slots of said frame, gears carried by said shaft meshing with the teeth of the T shaped heads, shafts slidably mounted within the slots of the T shaped heads, links connecting said shafts with the gears, and means for rotating said shafts.

C. J. GEISEL.

Witnesses:

H. H. DILLON,
M. SAUNDERS.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."