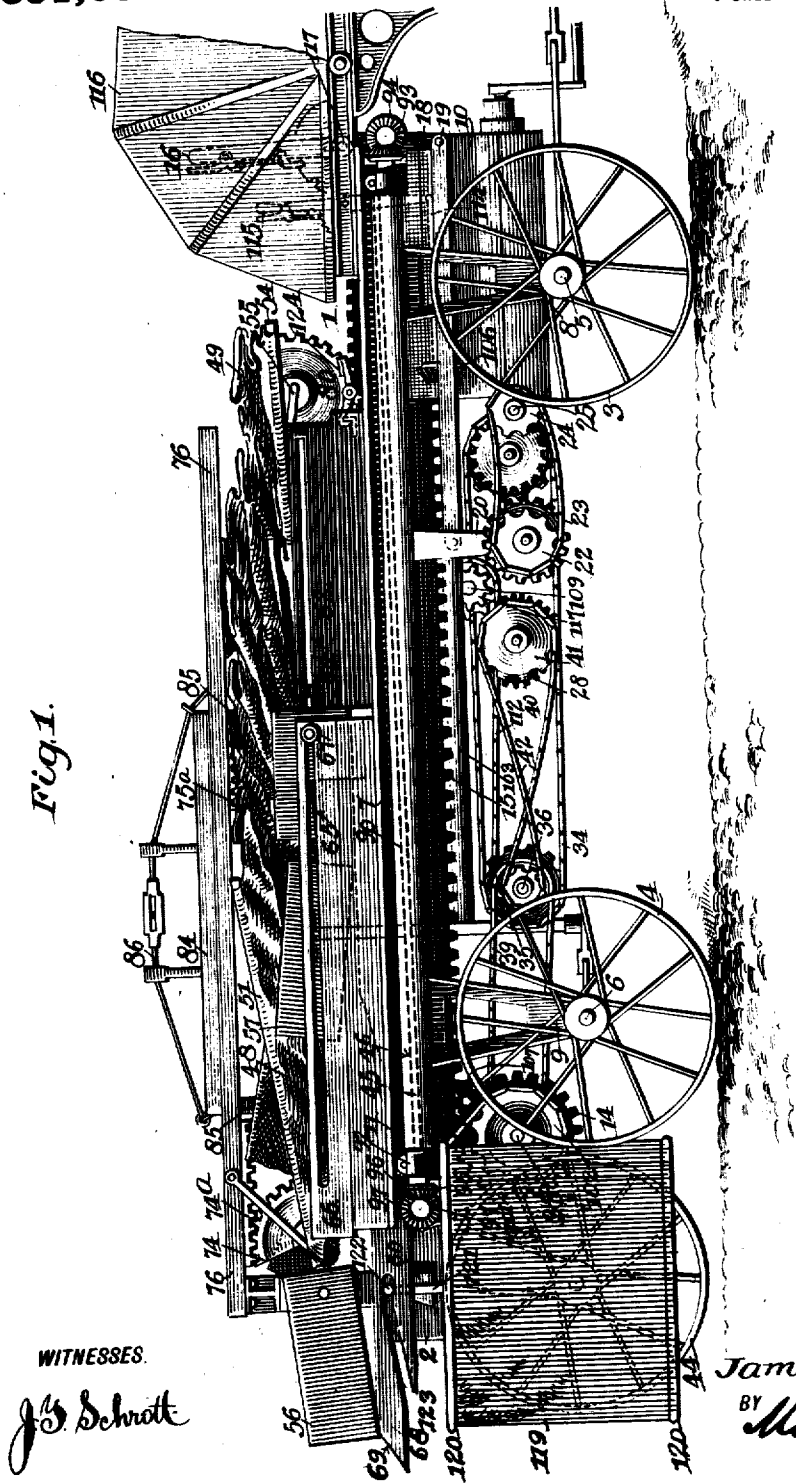


J. C. WITT.
 FIRE FIGHTING APPARATUS.
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Patented Aug. 31, 1920.
 9 SHEETS—SHEET 1.

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Fig. 1.



WITNESSES.

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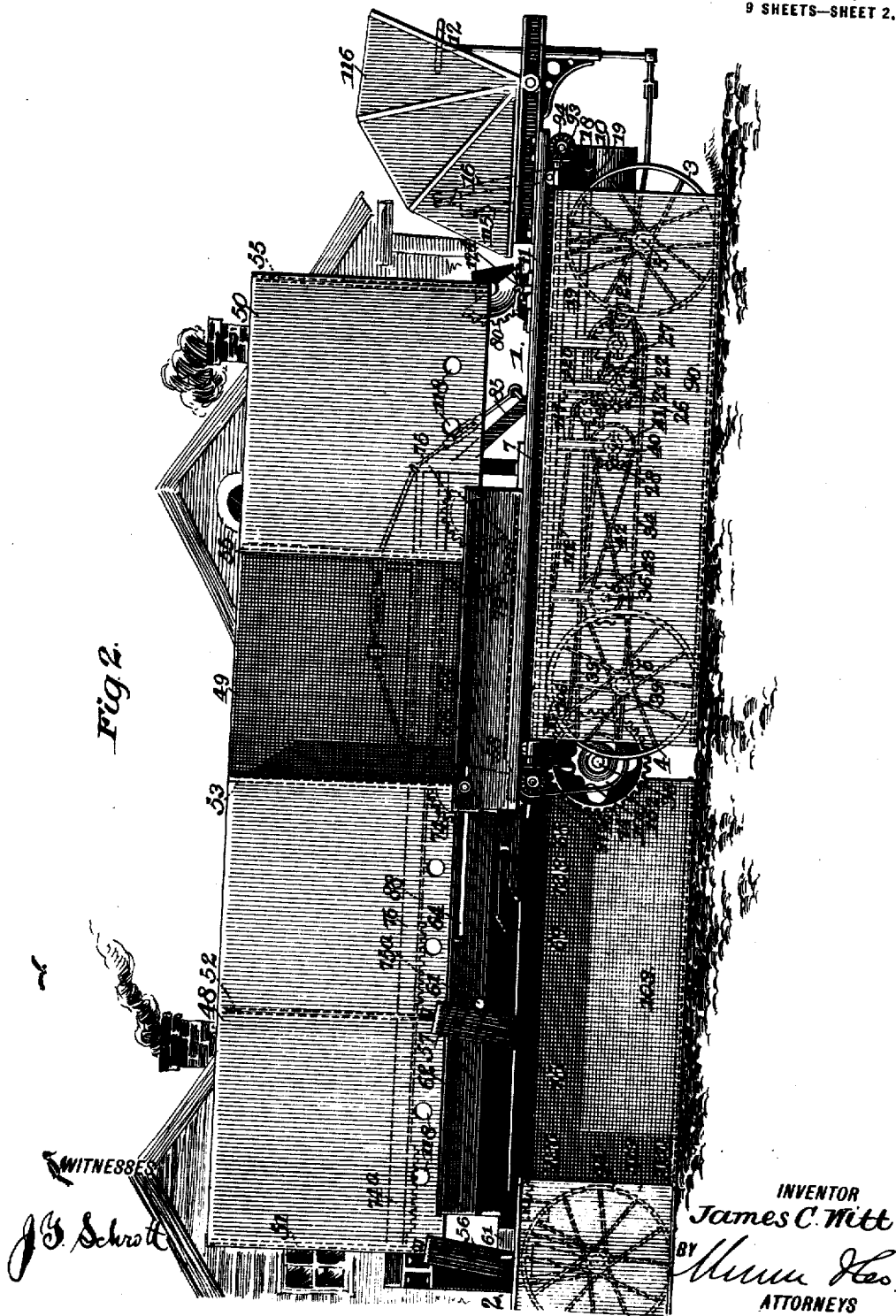
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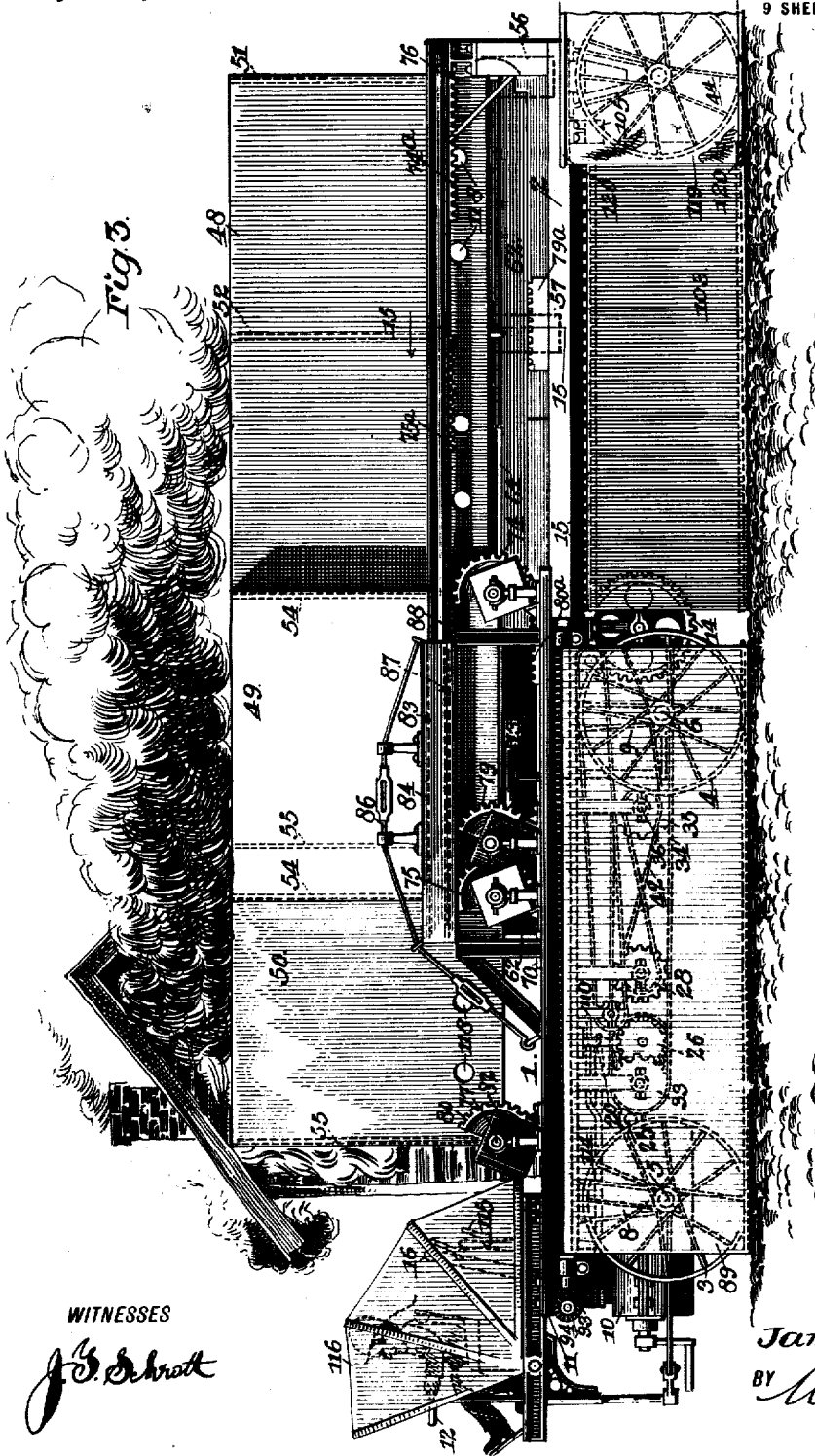


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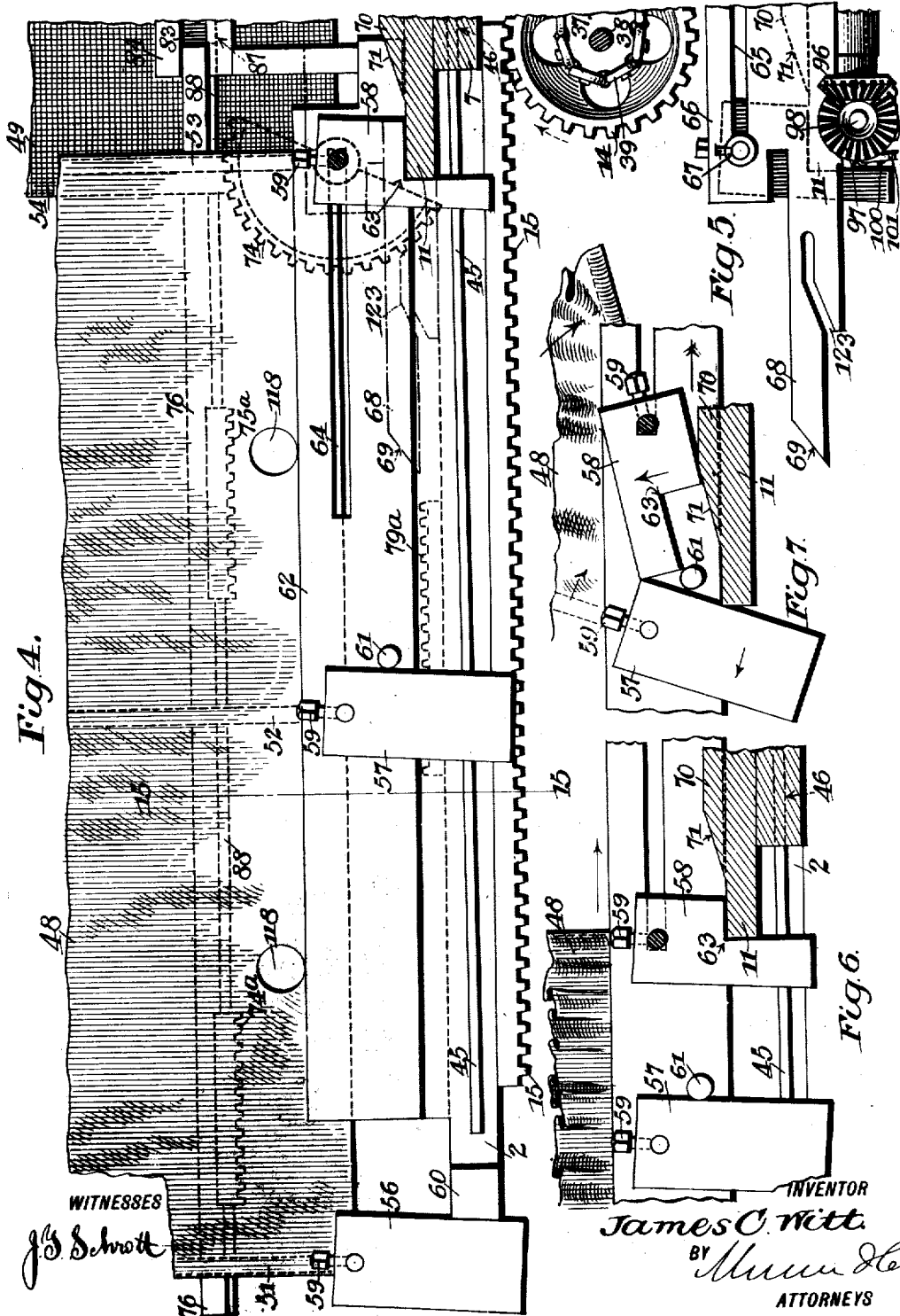


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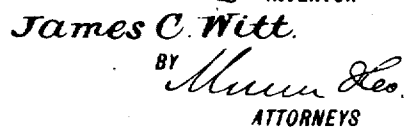
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Fig. 16.

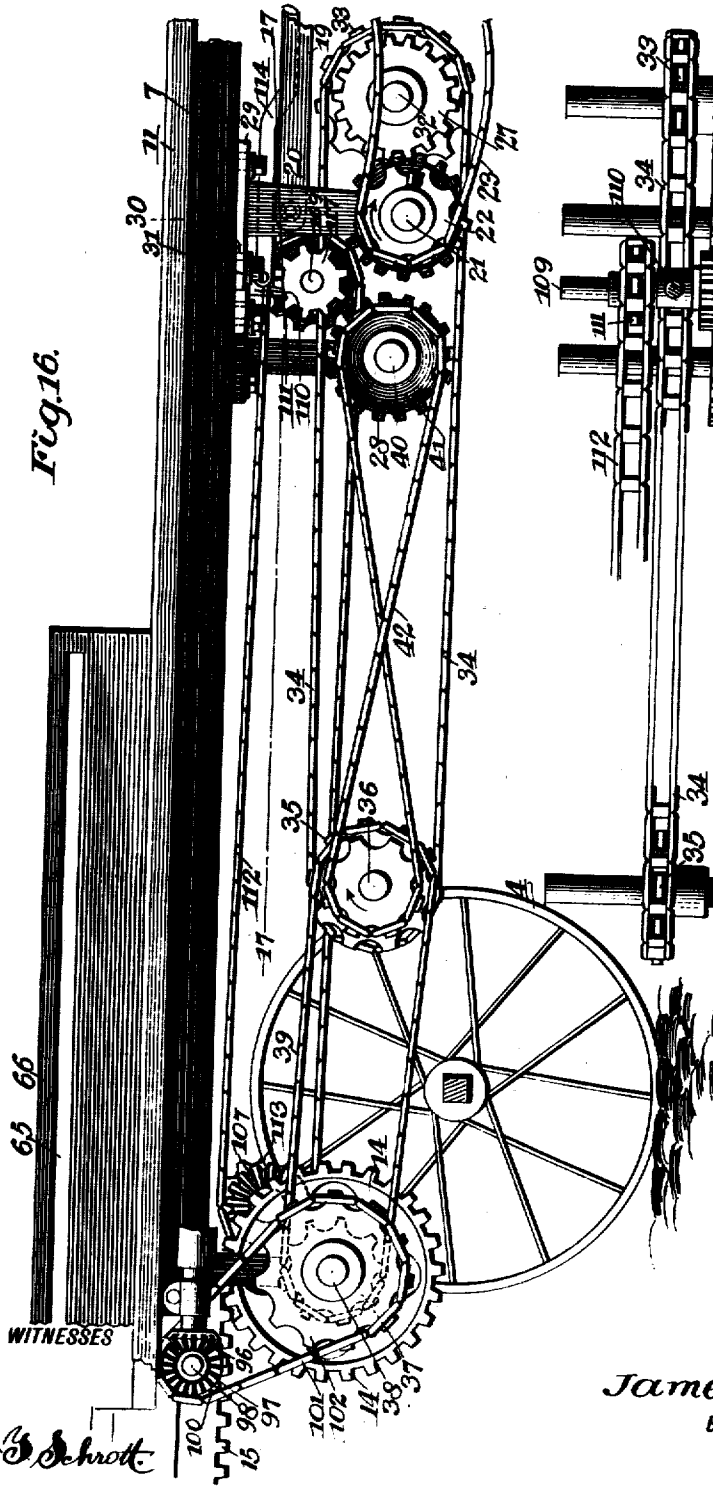
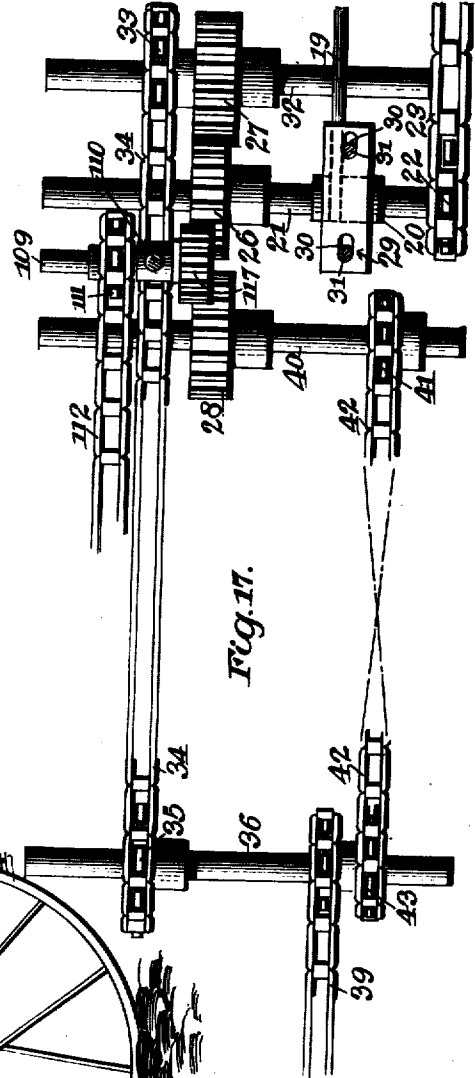


Fig. 17.



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Fig. 18.

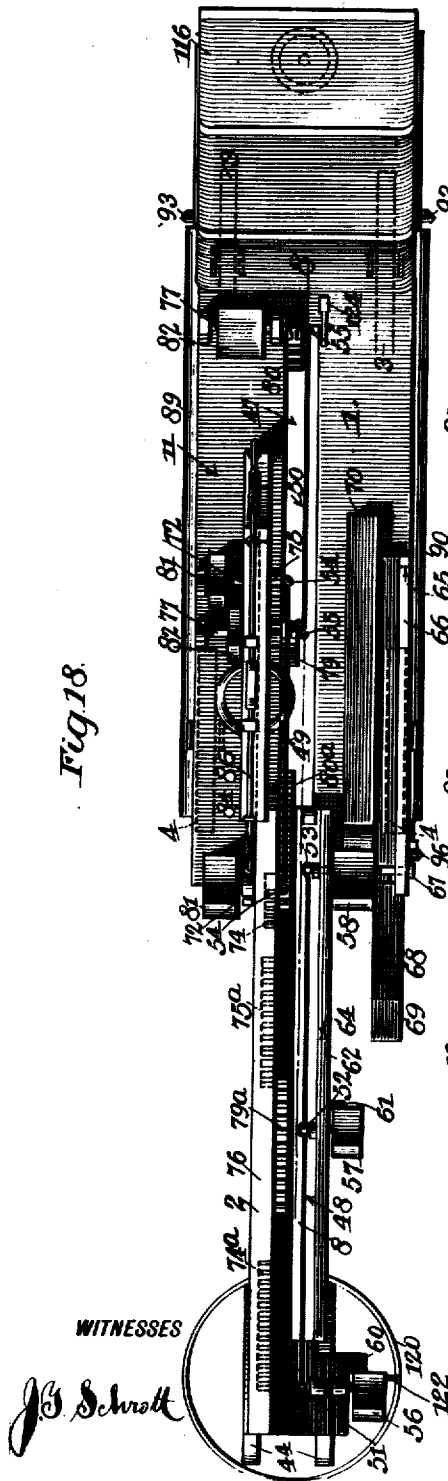
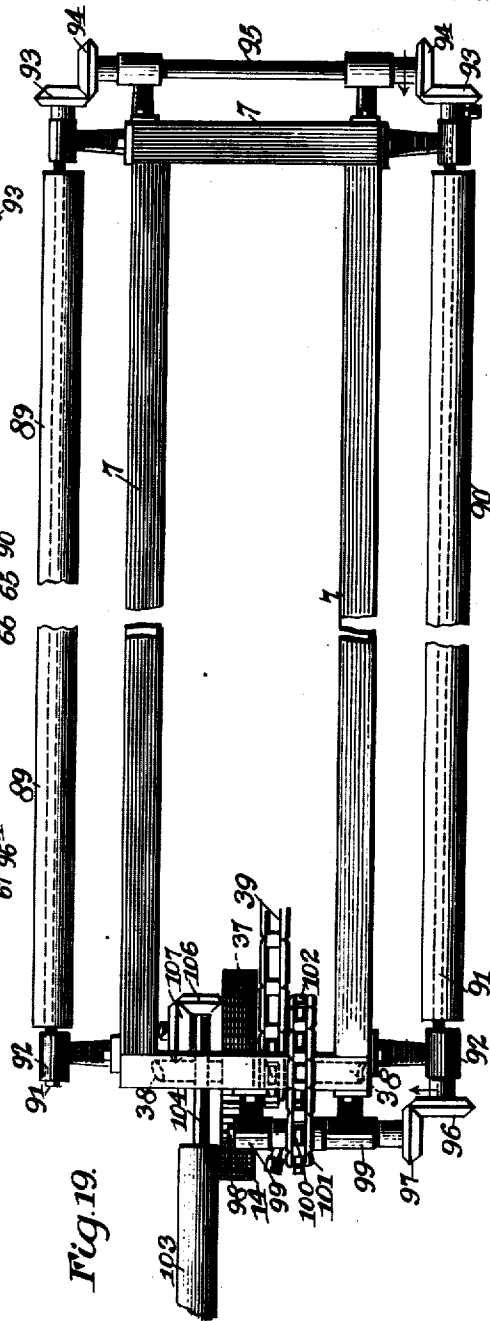


Fig. 19.

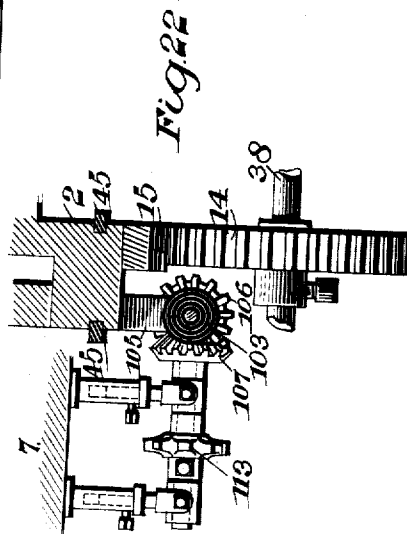
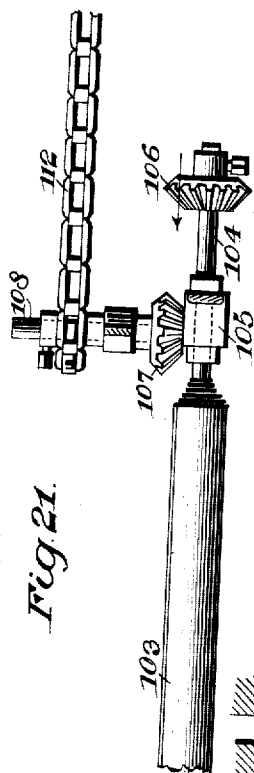
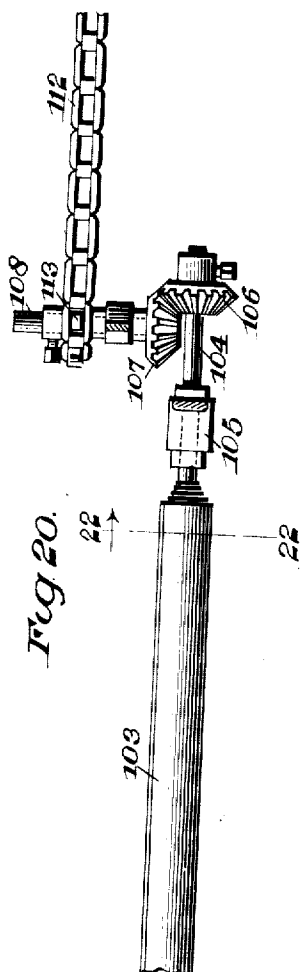


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9 SHEETS—SHEET 9.



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UNITED STATES PATENT OFFICE.

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FIRE-FIGHTING APPARATUS.

1,351,085.

Specification of Letters Patent. Patented Aug. 31, 1920.

Application filed March 11, 1918. Serial No. 221,744.

To all whom it may concern:

Be it known that I, JAMES C. WITT, a citizen of the United States, and a resident of Cairo, in the county of Alexander and State of Illinois, have invented a new and useful Improvement in Fire-Fighting Apparatus, of which the following is a specification.

My invention relates to improvements in fire fighting apparatus, relating more particularly to fire shields, and it consists in the constructions, combinations and arrangements herein described and claimed.

An object of the invention is to provide a portable and collapsible fire shield to be used adjunctively with the usual fire fighting apparatus, the said shield being controlled in its erection and collapse, by the telescopic action of the truck upon which it is mounted.

Another object of the invention is to provide a supporting truck having a second truck telescopically mounted thereupon, the second truck being arranged to erect a plurality of fire shields by the extension of said truck with respect to the supporting truck.

Another object of the invention is to provide a supporting truck and an extensible truck with wheels resting on the ground when said truck is extended, and lifted from the ground when said truck is telescoped on the supporting truck.

Another object of the invention is to provide a supporting and a telescopic truck, the two having a spline and groove connection with each other, at an angle, to elevate the telescopic truck as it is telescoped upon said supporting truck.

Another object of the invention is to provide a novel arrangement in the counter-weights of certain of the shield standards, which coact with suitably formed portions of the supporting truck to tilt said standards and cause the shield carried thereby, to collapse, upon the operation of moving the telescopic truck into the supporting truck.

Another object of the invention is to provide quadrants on the shield standards of the supporting truck, arranged to be engaged by racks on the extensible truck, upon the telescoping of said trucks upon each other and thus turn the quadrants and collapse the shields.

Another object of the invention is to provide the quadrants and racks for the purpose described, the coacting racks and quad-

rants being located in different planes, by which arrangement, the proper quadrants are operated.

Another object of the invention is to provide fire curtains at the sides of the supporting truck, with engine driven gear connections controlled by the operator, for raising and lowering said curtains to protect the working parts beneath said truck, upon reaching the scene of a fire.

Another object of the invention is to provide a fire curtain on the extensible truck, gears arranged to intermesh upon the complete extension of said frame, being provided and arranged for mechanical operation to raise and lower said curtain at the will of the operator.

Other objects and advantages will appear in the following specification, reference being had to the accompanying drawings, in which:

Figure 1 is a side elevation of the device, showing it telescoped and the shields collapsed.

Fig. 2 is a side elevation showing the truck extended and the shields erected.

Fig. 3 is a side elevation showing the parts on the other side.

Fig. 4 is a detail side elevation of the parts at the left of Fig. 2, showing the extensible truck member and the coacting parts.

Fig. 5 is a detail side elevation showing the arrangement of the weight-arm illustrated in dot and dash lines in Fig. 4.

Figs. 6 and 7 are detail views illustrating the manner in which the shield carried by the extensible member, is collapsed by the counter-weights upon telescoping the extensible frame member.

Fig. 8 is a longitudinal section taken substantially on the line 8—8 of Fig. 18.

Figs. 9 and 10 are detail views showing how the shields on the relatively stationary truck member are collapsed by the telescopic action of the extensible truck member.

Fig. 11 is a detail view showing one of the adjustable bearings.

Figs. 12 and 13 are cross sections on the lines 12—12, and 13—13, respectively of Fig. 8.

Fig. 14 is a detail plan view illustrating the arrangement of the quadrants illustrated in Fig. 12.

Fig. 15 is a cross section on the line 15—15 of Fig. 3.

Fig. 16 is a detail side elevation of the relatively stationary truck member illustrated in Fig. 2, parts being omitted.

Fig. 17 is a horizontal section on the line 5 17—17 of Fig. 16.

Fig. 18 is a plan view of the parts illustrated in Fig. 2.

Fig. 19 is a detail plan view showing the gear connections for operating the various 10 curtains.

Figs. 20 and 21 are detail views illustrating the gear connections for the curtain on the extensible truck member, and

Fig. 22 is a cross section taken substantially on the line 22—22 of Fig. 20.

This device is a portable fire shield which is adapted to be used in connection with the usual fire fighting apparatus. The device carries fire shields which are normally collapsed when the extensible truck member is telescoped in the main truck member, as illustrated in Fig. 1. The fire shields are erected simultaneously with the extension of the extensible member, upon reaching the 20 scene of a fire, the erectible shields carried by the device, forming screens behind which the firemen stand and direct the water upon the fire.

The main truck member 1 which is termed 30 relatively fixed, for purposes of distinction between the extensible truck member 2 in portions of the description to follow, is mounted upon the front and rear wheels 3 and 4. The wheels 3 and 4 rotate upon the 35 ends of axles 5 and 6 which are supported from the frame 7 of the truck member 1, by the brackets 8 and 9.

An engine 10 is supported on the truck frame 7 and beneath the floor 11 of the 40 truck 1, in any suitable manner. The engine 10 is arranged to drive the rear wheels 4 in any suitable manner. The essence of the invention, however, lies in the manner of extending and telescoping the extensible 45 truck member 2, and erecting and collapsing the fire shields, and therefore, in the interest of simplicity, the driving connections for the said rear wheels 4 from the engine 10, are omitted.

The front and rear wheels 3 and 4 are 50 also capable of being steered by the steering wheels 12 and 13, shown more clearly in Fig. 3. These steering wheels have the proper connections with the axles of the respective wheels, so that both sets of wheels 55 may be operated in turning a corner, in the manner well known in fire fighting apparatus.

The engine 10 is adapted to drive a rack 60 gear 14 journaled upon the rear end of the truck 1. The rack gear 14 may be rotated in either direction by the employment of the gear and chain mechanism illustrated in Fig. 16. The rack gear 14 is normally idle, 65 that is to say, it is not operated until the

fire fighting device reaches the scene of a fire. The gear 14 engages a rack 15 secured beneath the extensible truck member 2, as clearly illustrated in Fig. 4.

The truck member 2 is extended from the 70 telescoped position indicated in Fig. 1 to the extended position illustrated in Figs. 2 and 3, by moving a lever 16 pivoted on the front of the truck 1, rearwardly. The lever 16 has an extension 18 beyond the pivotal 75 point 17, to which a shifting rod 19 is connected. The other end of the shifting rod 19 is connected to a shifting post 20. A gear shaft 21 is journaled in the shifting post 20 in any suitable manner, the arrange- 80 ment of the gear devices for extending the truck member 2, which will presently be explained, being best shown in Fig. 16.

The gear shaft 21 has a sprocket 22 on the end, to which a chain 23 is applied. The 85 chain 23 is also applied to a sprocket 24 on a counter-shaft 25 driven from the engine 10 by any suitable connection. The gear shaft 21 may or may not be constantly driven, it being obvious that a clutch mechanism may 90 be arranged in the counter-shaft 25 so that the gear shaft 21 may be rotated or stopped, at will.

A gear 26 is also mounted upon the gear shaft 21. The gear 26 may be moved into 95 engagement with an extending gear 27 located at one side of the gear 26, or with a telescoping gear 28 at the other side of said gear. The post 20 is shiftably or slidably 100 mounted on the truck frame 7 beneath the floor 11 so that the gear 26 may be shifted as described, upon operating the lever 16.

The shifting post 20 has a base 29 provided with slots 30 through which bolts 31 105 pass. The base 29 is slidable upon these bolts which move in the slots 30 when the post 20 is acted upon. The gear shaft 21 normally rotates in a clockwise direction and when moved toward the extending gear 27 which is mounted upon a shaft 32, the 110 gear 26 engages the extending gear 27 and rotates it in a contra-clockwise direction.

The contra-clockwise rotation of the gear 27 is transmitted through a sprocket 33 on the shaft 32, and a chain 34 applied to said 115 sprocket, to a sprocket 35 on a counter-shaft 36 located beneath the frame 7 near the rear wheel 4. The contra-clockwise rotation of the shaft 36 is transmitted to a sprocket 37 on the rack gear shaft 38 upon which the 120 rack gear 14 is mounted, through the sprocket chain 39. The rack gear shaft 38 as well as the rack gear 14, now rotates in a contra-clockwise direction with the result that the truck member 2 is extended from 125 the position shown in Fig. 1 to that shown in Fig. 2.

The reverse movement of the parts just described is obtained by shifting the gear 26 from engagement with the extending 130

gear 27, to the telescoping gear 28. The gear 28 is mounted upon a shaft 40 suitably supported beneath the frame 7. A sprocket 41 is mounted upon the shaft 40, and a chain 42 is applied at one side to the sprocket 41 and at the other side to a sprocket 43 on the counter-shaft 36. The chain 42 is crossed as indicated in Fig. 16, so that the motion of the counter-shaft 36 is properly reversed to telescope the truck member 2 when the shifting gear 26 is moved into engagement with the gear 28, as just explained.

When the gear 26 is thus shifted, which of course, is done by pulling the lever 16 on the front of the truck 1 in a forward direction, the clockwise rotation of the shifting gear shaft 21 is transmitted in a counterclockwise direction to the telescoping gear shaft 40, whereupon the counter-shaft 36 is rotated in a clockwise direction, due to the crossed chain 42. The clockwise rotation of the shaft 36 causes the clockwise rotation of the rack gear shaft 38 so that the rack gear 14 acts upon the rack 15 to telescope the truck member 2 in the main truck 1.

The extensible truck member 2 has a pair of wheels 44 on the rear end, which engage the ground when the truck member is extended, and are raised from the ground when the truck member is telescoped in the main truck 1. The function of raising the wheels 44 from the ground when the truck member 2 is telescoped, is obtained by the engagement of a pair of splines 45 disposed at a slight angle on the truck member 2, with splined grooves 46 formed in the sides of a slot 47 in portions of the truck frame 7. The angular disposition of the splines 45 with respect to the horizontal truck frame 7, is best illustrated in Figs. 1 and 4. The truck member 2 is supported by the angled splines 45 in the grooves 46, and when the truck member 2 is either extended or telescoped, the splines 45 ride in these grooves and lower or elevate the truck member accordingly. Therefore, as before stated, when the truck member 2 is telescoped as shown in Fig. 1, the wheels 44 are clear of the ground, while when the truck member 2 is extended, the wheels 44 engage the ground and support the rear end of said truck member.

A plurality of fire shields 48, 49, and 50 are erected almost simultaneously with the extension of the truck member 2. That is to say, the erection of the fire shields begins as soon as the extension of the truck member 2 begins. The fire shield 48 is carried by standards 51, 52, and 53, on the extensible truck member 2. The fire shields 49 and 50 are carried by standards 54 and 55, respectively, on the main truck member 1.

Each of the standards of the extensible shield 48, has a counter-weight 56, 57, and 58, respectively. The respective counter-

weights are mounted upon outwardly bent portions of the standards and secured in place thereon by set screws 59. The counter-weights may be adjusted either radially or laterally, as may be found necessary to obtain the proper action of the weights and the proper engagement with stops arranged to limit the movements of the standards by contacting the counter-weights.

The counter-weight 56 engages a stop 60 on the extremity of the truck member 2 in the position shown in Fig. 4, and the counter-weight 57 engages a stop 61 on a slot board 62, at the same time. The counter-weight 58 is cut away at 63 to form a shoulder for engaging the end of the floor 11 of the truck frame 7.

The slot board 62 which is substantially an integral part of the extensible truck member 2, has a slot 64 in which the bent end of the standard 53 rides. The bent end of the middle standard 52 is journaled in a solid part of the slot board 62. The extremity of the bent portion of the standard 53 rides in a complementary slot 65 in a relatively fixed slot board 66, fixed upon the main truck frame 7. A collar 67 is clamped upon said extreme end of the standard 53, as shown in Fig. 5.

The bent end of the standard 53 occupies the right and left extremities of the slots in the slot boards 66 and 62, respectively, when the parts are telescoped, as in Fig. 1. Upon extending the extensible truck member 2, the counter-weight 58 remains stationarily in the position indicated in Fig. 1, while the counter-weights 56 and 57 being positively connected to the truck member 2, begin to act upon the standards 51 and 52 to elevate or erect the fire shield 48. The counter-weights 56 and 57 act in succession, and to this end, a weight-arm 68 with a beveled end 69 is provided, over which the weights 56 and 57 slide in succession and assume the substantially vertical position illustrated in Figs. 2 and 4 of the drawings.

The weight 56 is controlled to collapse and erect the standard 51, solely by the weight-arm 68. The weight 57 is also controlled to collapse and erect the standard 52 by the weight-arm 68, but is adapted to engage a weight board 70 with a beveled approach 71, fixed upon the floor 11. The weight board 70 is so arranged that the weight 57 may slide thereupon. When the truck member 2 is extended as just explained, the weight 57 begins to slide off of the weight board 70 almost as soon as the weight 56 slides off of the beveled end 69 of the weight-arm 68. Thus it will be understood, that the weight 56 acts first to erect the standard 51, and the weight 57 acts next to erect the standard 52.

The third weight 58 also slides upon the

weight board 70, but is adapted to act last of all so that not until the standards 51 and 52 are nearly erect, does the weight 58 act to erect the standard 53 and draw the fire shield 48 taut.

It has been stated that the weight 58 remains stationary at the beginning of the extension of the truck member 2. This is accomplished by the movement of the slot 65 of the relatively fixed slot board 66, over the inner portion of the bent member of the standard 53. The slot 65 is of such a length that the right extremity of said slot will engage the bent portion of the standard 53 at just the right time to begin moving the weight 58 when the functions of the weights 56 and 57 are about completed. The right extremity of the slot 65 having engaged the bent end of the standard 53, the weight 58 is slid or moved upon the weight board 70 from the position indicated in Fig. 1 to the position indicated in Fig. 4. As the weight 58 moves down the beveled approach 71, it will begin to turn so that at the completion of the turning movement of the weight 58, the shoulder 63 will engage the end of the floor 11. The turning movement of the weight 58 is also partly assisted by the erection of the standard 52 which exerts some tension upon the fire shield 48 and accordingly assists in pulling the standard 53 to the erect position.

The fire shields 49 and 50 are operated by quadrant and rack devices as distinguished from the fire shield 48 which is operated by the counter-weights just described. It should be understood that the adjacent portions of the various fire screens overlap somewhat as indicated more particularly in Figs. 8 and 18 of the drawings, so that there may be no breach in the screen. Reference is now directed to Fig. 8. The standards 54 carrying the fire shield 49, are bent outwardly to form axles 72 which are journaled in adjustable bearings 73. Quadrants 74 and 75 are fixed upon the respective axles 72 of the standards 54, and are disposed in the same angular positions as indicated in Fig. 8.

An upper rack bar 76 carries a pair of racks 74^a and 75^a. The rack 74^a coöperates with a quadrant 74, and the rack 75^a coöperates with the quadrant 75. The foremost rack 75^a is made to avoid the rear quadrant 74, by properly lowering the bearing members of the rearmost quadrant 74. The quadrant 74 therefore occupies a slightly lower plane than the quadrant 75, the obvious purpose being the simultaneous operation of the quadrants 74 and 75 by the racks 74^a and 75^a. When the truck member 2 is telescoped, the racks 74^a and 75^a will have moved into engagement with their respective quadrants 74 and 75 and rotated

them in a clockwise direction as indicated by the dotted arrows in Fig. 8, and have moved the standards 54 in a similar direction to collapse the fire shield 49. The engagement of the respective racks with their quadrants, also forms a key as it were, for holding the standards 54 in the collapsed position.

The standards 55 of the fire screen 50 have outwardly bent portions forming axles 77 which are journaled in adjustable bearings 78. The axles 77 have quadrants 79 and 80 which are fixed upon the axles in the same angular positions as indicated in Fig. 8. Racks 79^a and 80^a mounted upon the truck member 2, are adapted to engage and coast with the respective quadrants 79 and 80. When the truck member 2 is telescoped, the racks 79^a and 80^a will have moved into engagement with the quadrants 79 and 80 and rotated them in a counterclockwise direction as indicated by the dotted arrows in Fig. 8, to have moved the standards 55 in a similar direction and collapsed the fire screen 50 upon the fire screen 49. The distances between the respective racks and quadrants just described, is substantially the same so that the collapse of the fire screens 49 and 50 is accomplished almost at once.

The foremost rack 80^a avoids the quadrant 79 by the previous elevation of the axle 77 in the adjustable bearings 78. The foremost rack 80^a is also illustrated as being a little lower than the rack 79^a. The same is true of the racks 75^a and 74^a on the upper rack bar 76. It is, however, immaterial whether one or the other of the racks is made lower or certain ones of the quadrants are adjusted higher to avoid the foremost racks, the proper positioning of the respective racks and quadrants being readily done by either method.

It will be observed in Fig. 18 that the quadrants 79 and 80 and the coasting racks 79^a and 80^a are situated in one longitudinal plane, while the quadrants 74 and 75 and the coasting racks 74^a and 75^a are situated in another longitudinal plane. It will thus be understood that the sets of racks and quadrants for operating the separate fire shields 49 and 50, work independently of each other and do not interfere in their operations. Each of the pairs of axles 72 and 77 is provided with a counter-weight 81 and 82, respectively. The middle set of counter-weights 81 and 82 in Fig. 8, is but half the size of the end counter-weights. These counter-weights may thus pass each other as indicated in Fig. 18.

The upper rack bar 76 is movable in a groove 83 of a guide frame 84 which includes the supports 85 and the truss members 86. The guide groove 83 is rabbeted at 87 to receive a spline 88 fixed upon the rack bar 76.

The spline 88 moves in the rabbet 87 and prevents the displacement of the upper rack bar 76 from the guide groove 83.

The machinery beneath the extensible truck member 2 as well as beneath the main truck member 1, is protected by an arrangement of curtains which are adapted to be lowered after the truck member 2 is extended. Side curtains 89 and 90 are rolled upon shafts 91 supported in bearings 92 on the truck frame 7 of the main truck 1. Each shaft 91 has a bevel gear 93 at the front end, with which, similar bevel gears 94 on a shaft 95 mesh. One of the curtain shafts 91 is provided with a second bevel pinion 96, this pinion being located on the rear end as shown in Fig. 19.

The bevel pinion 96 meshes with a bevel pinion 97 on a counter-shaft 98 mounted on bearings 99 on the rear end of the truck frame 7. The counter-shaft 98 has a sprocket 100 to which a chain 101 is applied. The chain 101 passes over a larger sprocket 102 on the rack gear shaft 38.

The counter-shaft 98 is rotated at the same time that the truck member 2 is being extended through the operation of the rack gear 14. Thus, when the shifting gear 26 is moved into engagement with the extending gear 27 and the rack gear shaft 38 is rotated in a contra-clockwise direction to extend the truck member 2, the shaft 91 of the side curtains 89 and 90, are also rotated to lower the side curtains.

The extensible truck member 2 has a single curtain 103 which is wound upon a shaft 104 supported in bearings 105 beneath the extensible truck. The curtain 103 is, however, adapted not to be unwound until the extensible truck member 2 is completely extended. The shaft 104 carries a bevel pinion 106 which is arranged to inter-mesh with a bevel pinion 107 on a stud shaft 108 mounted beneath the truck frame 7. The stud shaft 108 is adapted to be driven from a shifting stud shaft 109.

The shifting stud shaft 109 is mounted on a shifting post 110 similar in all respects to the shifting post 20 of the shifting gear 26 illustrated in Fig. 16. The shaft 109 has a sprocket 111 to which a sprocket chain 112 is applied. The other end of the chain 112 is applied to a sprocket 113 on the stud shaft 108. The shifting stud shaft 109 is adapted to be shifted by a shifting rod 114 which is pivoted to the extension of a shifting lever 115 mounted on the front end of the truck 1 and beneath the hood 116.

The shifting post 110 may be shifted by operating the hand lever 115, to move a gear 117 on the shifting stud shaft 109, into engagement with either the telescoping gear 28 or the shifting gear 26, according to the motion it is desired to impart to the curtain shaft 104. By reference to Figs. 20 and 21,

it will be understood that the curtain shaft 104 cannot be operated until the truck member 2 is completely extended. The curtain shaft 104 is carried by the truck member 2, and when said truck member is completely extended, the bevel gears 106 and 107 come into engagement, whereupon they may be rotated to operate the shaft 104 to unwind or wind the curtain 103.

The curtains 90 and 103 in conjunction with the fire shields 48, 49 and 50, form a complete wall or screen from behind which the firemen may combat the fire. To this end, the upper fire shields may be provided with portholes 118 through which streams of water may be directed upon the fire. It is also desirable to protect the set of wheels 44 of the extensible truck member 2.

A curtain 119 which normally assumes the position indicated in Fig. 1 when the truck member 2 is telescoped, is adapted to be dropped completely around the rear wheels 44 when the truck member 2 is extended.

The curtain 119 is mounted upon frame members 120 at the top and bottom. The top frame member 120 has an arm 121 with a bent end 122 which is adapted to ride into a slot 123 in the weight-arm 68. It will be understood that the bent end 122 rides on the incline of the slot 123, to the base of the slot when the truck member 2 is telescoped. Similarly, when the truck member 2 is extended, the bent end 122 will ride out of the slot 123 and permit the curtain 119 to lower to the position indicated in Fig. 2.

Ordinarily the friction between the rack gear 14 and the rack 15, and the other contacting parts between the extensible truck member 2 and the main truck member 1, would be sufficient to prevent the extension of the truck member 2 when the device is propelled over a roadway. To overcome any accidental extension of the truck member 2, a latch 124 is provided on the front end of the truck 1, as shown in Fig. 1. The latch 124 is spring pressed in one direction, and has a treadle portion on which the operator may step to release the latch from a suitably arranged keeper on the extensible truck 2.

The operation of the device is as follows. The extensible truck member 2 is telescoped in the main truck member 1 as shown in Fig. 1, when the portable fire shield is in readiness to be called out. The fire shields 48, 49, and 50, which are preferably made of asbestos fabric, are collapsed upon the main truck, and the curtain for the rear wheels 44 is elevated. The curtain 103 of the extensible truck member 2 is rolled upon the shaft 104 and telescoped beneath the main truck 1 with the extensible truck member 2 by which it is carried. The side curtains 89 and 90 are also rolled up as shown in Fig. 1.

The counter-weights 56, 57, and 58, which

act to erect the standards 51, 52, and 53 which support the fire shield 48, rest upon the weight-arm 68 and the weight board 70, respectively. The quadrants 74, 75 and 79, 80, which obtain the erection of the standards 54 and 55 on which the fire shields 49 and 50 are mounted, are engaged by the coacting racks 74^a, 75^a, and 79^a and 80^a, of the upper rack bar 76 and the extensible truck member 2, respectively, being thus held and locked in the position wherein the shields 49 and 50 are collapsed.

The splines 45 of the extensible truck member 2 are inclined and rest upon the lower surface of grooves 46 in a slot 47 in the main truck 1. The inclination of the splines and the grooves attains the elevation of the wheels 44 of the extensible truck member 2 from the ground, when the member 2 is telescoped. When the member 2 is extended, the splines 45 slide upon the lower surfaces of the grooves 46, and when the member 2 is fully extended, the wheels 44 rest upon the ground and support said member, as illustrated in Figs. 2 and 3.

The truck member 2 is extended by shifting the lever 16 beneath the hood 116 on the front of the main truck 1, rearwardly. This causes the rod 19 to pull the shifting post 20 forwardly so that the shifting gear 26 engages the extending gear 27 and imparts a contra-clockwise motion thereto. The shifting gear 26 rotates in a clockwise direction and is driven from the sprocket 24 on the engine counter-shaft 25. The contra-clockwise rotation of the extending gear 27 is transmitted through the chain 34 to the counter-shaft 36 near the rear wheels 4 of the truck 1. The rack gear 14 on the rack gear shaft 38 is accordingly driven in a contra-clockwise direction by reason of the chain connection 39, and thus the rack 15 which is fixed to the extensible truck member 2 and which is in engagement with the rack gear 14, is operated to extend said truck member 2 from the position shown in Fig. 1 to that shown in Fig. 2.

When this action takes place, the standards of the fire shield 48 move to erection in succession. Each standard has a lower bent portion or an axle which has a pivotal mounting on a portion of the extensible truck member 2. The weight 56 is first to slide off and move to the erect position. The weight slides off of the beveled end 69 of the weight-arm 68, and under the action of gravity, assumes the position illustrated in Fig. 4 when the standard 51 carried thereby, assumes the vertical position.

The weight 57 follows. The bent ends or axles of the weights 56 and 57 have positive mountings in solid portions of the truck member 2. The bent end of the middle standard 52 is journaled in the slot board 62. The positive mountings just referred to

of the weights 56 and 57, cause these weights to move with the truck member 2 as soon as the truck member begins its extension. The weight 57 slides upon the inclined approach 71 of the weight board 70 and presently slides off of the floor 11 of the main truck 1, so that the standard 52 is moved to erection almost as soon as the standard 51 assumes its vertical position.

It should be understood that the weight 56 coacts with the weight-arm 68. The weight 57 simply slides off of the floor 11 and does not engage the weight-arm. To facilitate the sliding off of the weight 57, the adjacent edge of the floor 11 may be beveled. The weight 58 follows last of all. The bent end or axle of the standard 53 carried by the weight 58, has no positive connection with either the main truck member or the extensible truck member. This axle passes through the slots 64 and 65 of the slot board 62 carried by the extensible truck 2, and the slot board 66 carried by the main truck member 1, respectively.

As soon as the truck 2 commences its extension, the slot board 62, of course, moves with respect to the axle of the standard 53, the slot 64 of the slot board 62, simply moving over the adjacent portion of said axle. This continues, until the right end of the slot 64 engages the axle. The axle together with the weight 58, is then carried rearwardly, the outer part of said axle then sliding in the slot 65 of the relatively fixed slot board 66. The outer end of the axle of the standard 53 will ultimately engage the left end of the slot 65.

The weight 58 in the meantime passes through various stages oppositely to those depicted in Figs. 4 to 7, inclusive, and finally assumes the position indicated in Fig. 4, where the cut-out portion 63 rests upon the edge of the floor 11. The fire shield 48 is now completely erected and stretched between the standards 51, 52, and 53.

During the progress of the extension of the truck member 2 and the erection of the fire shield 48 as just described, the fire shields 49 and 50 are also being operated and moved to erection. This action may be best understood from Fig. 8. Here the fire shields 49 and 50 are, of course, shown erected, but it will be understood that when the truck member 2 is yet in the telescoped position, the various racks carried by the upper rack bar 76 and the truck member 2, are in engagement with their coacting quadrants, so that the fire shields 49 are in collapsed position upon each other. The racks 74^a and 75^a of the bar 76 will then be in engagement with the quadrants 74 and 75, as may be best understood from Fig. 9. Similarly, the racks 79^a and 80^a will be in engagement with the quadrants

79 and 80, as may be best understood from Fig. 10. Now, obviously, upon the extension of the truck member 2, the various racks will be moved toward the left or rearwardly, and the quadrants of the shields 49 and 50 will be rotated in contra-clockwise and clockwise directions, respectively, until they assume the vertical or erect positions indicated in Figs. 8 and 2.

During the operation of extending the truck member 2, the side curtains 89 and 90 are unrolled from their shafts 91, until the weighted edges of the curtains reach the ground. The speed ratios of the shafts 91 and the rack gear shaft 38, are so proportioned that the side curtains 89 and 90 will be fully unwound when the truck member 2 is fully extended. The shafts 91 of the curtains are rotated from the rack gear shaft 38 through the chain and sprocket connections 101, 100, which drive the counter-shaft 98 from which the curtain shafts 91 are driven.

The curtain 103 of the extensible truck member 2, is not unwound, however, until the truck member 2 is fully extended and the pinion 106 on the shaft 104 of said curtain 103, engages the bevel pinion 107 on the stud shaft 108. The stud shaft 108 is rotated by the gear connections from the shifting stud shaft 109 shown in Fig. 16. The stud shaft 109 is mounted upon the shifting post 110 which is operated by the lever 115 beneath the hood 116 at the front of the truck 1. The shaft 109 is shifted either toward the right or toward the left, and the gear 117 carried thereby, will engage either the telescoping gear 28 or the shifting gear 26, when the counter-shaft 108 will be properly rotated to unwind the curtain 103 from the shaft 104.

The bent end 122 of the arm 121 of the curtain 119, also moves out of the slot 123 in the weight-arm 68 at the proper time, to permit the curtain 119 to drop in position about the wheels 44. It will be understood that the weights 56, 57 and 58 are limited in their movements to erect the various standards, by engaging the stops located adjacent thereto. The various weights are susceptible to adjustment, as previously explained.

The use of the portable fire screen is not limited to any particular field. It may be used to equal advantage in cities as well as rural communities. When the fire shield is used in rural communities, it is drawn up between the house which is afire and the adjoining house which is not. The houses in rural communities are usually detached, and the spreading of a fire from a burning house to another by the leaping across of the flames and scattering of sparks, is not an infrequent occurrence. In actual practice, the portable fire screen will be in the neighborhood of seventy-five (75) feet long when extended, and in the neighborhood of thirty (30) feet high when erected. The erectible fire shields and the side curtains are made of asbestos fabric. The parts of the truck itself are all made of metal, so that there is nothing about the device which may burn. It may thus be easily understood that by drawing the device between two buildings under the conditions described, the fire will not only be prevented from spreading, but may be combatted by directing streams of water upon the flames through the portholes 118.

The fire shield protects the firemen who stand behind the shield and direct the streams of water. The device may, of course, not be drawn up between houses in the case where it is used in cities, because houses in cities are usually built in rows. But the device may be drawn up in the street in front of the house and the firemen may direct their work from behind the shield, similarly as in the former instance. It is also conceivable that the various standards of the fire shields may be reinforced and braced in such a manner that the various fire shields will support ladders when placed thereagainst. If this can be done, the firemen may climb up to near the top of the fire shields and thus direct the streams of water into the upper stories of the building, to better advantage than when they stand upon the ground and use the porthole 18 exclusively.

While the construction and arrangement of the device as illustrated in the accompanying drawings is that of a generally preferred form, obviously modifications and changes may be made without departing from the spirit of the invention or the scope of the claims

I claim:

1. A fire fighting device, consisting of a collapsed shield section, a telescopic truck including a fixed truck member, and an extensible truck member carrying said shield section, and rockable standards pivoted on the extensible truck member and adapted to engage the fixed truck member upon telescoping the truck, to rock said standards.

2. A fire fighting device, consisting of a telescopic truck including a fixed member, and an extensible member, a shield section carried by and collapsed upon the extensible member when the truck members are telescoped, shield supporting standards pivoted on the extensible member and swung over thereupon when said extensible member is telescoped, and means arranged on said standards and engaging the fixed member, adapted to erect the standards and shield section automatically upon relative extension of the extensible member to said fixed member.

3. A fire fighting device, consisting of a relatively fixed truck member and an extensible truck member, shield standards pivoted upon the extensible member, a flexible shield section attached to said standards, and a counter-poising means on the standards, engageable with the relatively fixed truck member, for rocking the pivoted standards.
- 10 4. A fire fighting device, consisting of a relatively fixed truck member and an extensible truck member, erectible shield standards pivoted upon the extensible member, and counter-weights carried by said standards slidably engaging the relatively fixed truck member to lower said standards upon telescoping the truck members.
- 15 5. A fire fighting device, consisting of a relatively fixed truck member and an extensible truck member, shield standards lowered when the truck members are telescoped, and counter-weights on the standards engaging the relatively fixed truck member, said counter-weights erecting the standards on disengagement of the weights with said truck member, upon extending the extensible member.
- 20 6. A fire fighting device, consisting of an extensible truck member and a relatively fixed truck member having an inclined portion, shield supporting standards pivotally mounted upon the extensible truck member, and counter-weights on the standards, slidable upon the inclined portion when the truck members are telescoped.
- 25 7. A fire fighting device, consisting of an extensible truck member and a relatively fixed truck member, shield bearing standards carried by the extensible truck member, counter-weights carried by said standards engaging the relatively fixed truck member when telescoped, said counter-weights sliding off upon extension of the extensible truck member and erecting the shield bearing standards, and stops on the extensible member limiting the movement of the counter-weights.
- 30 8. A fire fighting device, including an extensible truck member, a shield bearing standard pivotally mounted for erection on said member, and a counter-weight adjustable on a portion of said standard for varying the position of said weight and changing the perpendicularity of said standard.
- 35 9. A fire fighting device, including an extensible truck member, a plurality of shield bearing standards pivoted on said member, counter-weights adapted to erect said standards, a relatively fixed truck member, a weight board with an inclined portion on said truck member, engageable by a pair of said counter-weights, and a separate weight-arm having an inclined portion engageable by another of said counter-weights.
- 40 10. A fire fighting device, including an extended truck member and a relatively fixed truck member, a plurality of shield carrying standards pivoted on the extended truck member, a flexible shield stretched between said standards, counter-weights carried by said standards holding them erect and the shield taut, and conjunctively operating means for telescoping the extended truck member and turning said standards down one after the other, to collapse the shield.
- 45 11. A fire fighting device, including an extended truck member and a relatively fixed truck member, a plurality of shield carrying standards pivoted on the extended truck member, a flexible shield stretched between said standards, counter-weights carried by said standards holding them erect and the shield taut, mechanically operated means for telescoping the extended truck member, and means acting conjunctively to fold the standards down in succession, to collapse the shield, as said truck member is telescoped.
- 50 12. A fire fighting device, including an extended truck member and a relatively fixed truck member, said member having a partly projecting bed, a shield supporting standard carried by the extended truck member, and a counter-weight carried by said standard, said counter-weight having a portion cut away to receive the partial projection.
- 55 13. A fire fighting device, including a relatively fixed truck member and an extensible truck member telescoped thereupon, shield supporting standards pivoted on the extensible member, counter-weights on the said standards, engaging the relatively fixed member, a rack on the extensible member, and gear and driving connections with said rack for extending the extensible member, permitting the counter-weights to act and erect said standards.
- 60 14. A fire fighting device, including a relatively fixed truck member and an extensible truck member telescoped thereupon, shield supporting standards pivoted on the extensible member engaging the relatively fixed member on the said standards, a rack on the extensible member, gear and driving connections with said rack for extending the extensible member, causing the erection of said standards through the action of the counter-weights, and a reversing mechanism combined in the driving connections, operative to re-telescope the extended truck member.
- 65 15. In a fire fighting device, a relatively fixed truck member, an extensible truck member, a fire shield carried by the extensible member, including supporting standards having portions engaging the relatively fixed member and holding said standards and shield collapsed, and means for extending the extensible truck member whereupon said engaging portions disengage the rela-

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tively fixed truck member and move said standards to erection in succession.

16. In a fire fighting device, a relatively fixed truck member, an extensible truck member slidable upon the relatively fixed truck member, wheels carried by the extensible truck member for contacting the ground when said truck member is extended, and inter-engaging means arranged upon the relatively fixed and extensible members for elevating the wheels from the ground as the extensible member is moved inwardly upon the relatively fixed member.

17. In a fire fighting device, a relatively fixed truck member, an extensible truck member telescoped in the relatively fixed truck member, and means inter-connecting said members arranged to lower the extensible truck member upon extension.

18. In a fire fighting device, a relatively fixed truck member having a floor with a slot and inclined grooves formed in the sides of the slot, an extensible truck member telescoped on the relatively fixed truck member and having splines engaging said grooves, wheels carried by the extensible member out of contact with the ground when the extensible member is telescoped on the relatively fixed member, and mechanical operating means for extending the extensible member, whereupon the splines ride upon the inclined grooves and gradually lower the wheels into contact with the ground when the extensible member is fully extended.

19. In a fire fighting device, a relatively fixed truck member, a weight-arm projecting from said truck member, an extensible truck member normally telescoped in the relatively fixed truck member, a plurality of shield standards carried by the extensible member, and counter-weights carried by said standards, one of said counter-weights engaging the weight-arm when the extensible truck member is telescoped, to collapse the standard carried by the weight.

20. In a fire fighting device, a relatively fixed truck member having a floor, a weight board secured to the floor and forming a track, an extensible truck member telescoped in said relatively fixed truck member, and shield standard operating weights carried by the extensible truck member and riding upon the track provided by the weight board.

21. In a fire fighting device, a relatively fixed truck member, an extensible truck member telescoped in the relatively fixed member, and a plurality of shield standard operating weights carried by the extensible member, certain of the weights moving with the extensible member upon extension, and one of said weights remaining stationary until a pre-determined time.

22. In a fire fighting device, a relatively

fixed truck member, an extensible truck member telescoped in the relatively fixed truck member, a plurality of weights carried by the extensible member and movable upon extension of said member, one of said weights remaining stationary until a pre-determined time, and an engaging portion on the extensible member arranged to contact the stationary weight at the end of said pre-determined time.

23. In a fire fighting device, a relatively fixed truck member, an extensible truck member adapted to be extended from the relatively fixed truck member, a plurality of weights carried by the extensible truck member, certain of the weights moving with said member, and one of the weights remaining stationary with the relatively fixed truck member, and a slot board mounted on the extensible member, said board having a slot, one extremity of the slot being adapted to engage a portion of the stationary weight after a pre-determined extension of the extensible member, to carry said weight therewith through the remainder of the movement of the extensible member.

24. In a fire fighting device, a relatively fixed truck member and an extensible truck member, slot boards having slots, each being mounted upon one of said members, an erectible standard having a bent portion forming an axle disposed in the slots, and a weight mounted upon the axle between the slot boards.

25. In a fire fighting device, a relatively fixed truck member having a slot board with a slot, an extensible truck member having a slot board spaced from the relatively fixed slot board and having a slot, and a pair of weights located between the slot boards when the extensible member is telescoped in the relatively fixed member, one of said weights being carried by the extensible member, and the other weight being adapted to be acted on by a portion of said extensible member.

26. In a fire fighting device, a relatively fixed truck member having a slot board with a slot, an extensible truck member telescoped in the relatively fixed truck member and having a slot board with a slot, said slot boards being spaced apart and forming walls, and a pair of weights disposed between the walls when the extensible member is telescoped, one of the weights having a positive connection with the extensible member, the other weight having a loose connection with both slot boards in the slot.

27. In a fire fighting device, a relatively fixed truck member, a slot board with a slot, mounted on said truck member, an extensible truck member telescoped in the relatively fixed truck member and having a slot board with a slot mounted thereon, the slot boards being spaced apart to provide a

weight passage, a weight board secured to the relatively fixed truck member between the slot boards, and a pair of weights resting on the weight board when the extensible member is telescoped, said weights being movable upon the weight board by the extension of the extensible member.

28. In a fire fighting device, a relatively fixed truck member including a floor, a slot board with a slot, mounted upon the floor, an extensible truck member telescoped in the relatively fixed truck member and having a slot board with a slot, said slot boards being spaced apart to provide a weight channel, a weight board secured to the floor in the channel, and a pair of weights controlled by, and arranged to be drawn over, the weight board upon the extension of the extensible member.

29. In a fire fighting device, a relatively fixed slot board and an extensible slot board, said boards having coinciding slots, a standard having a bent portion forming an axle disposed in the coinciding slots, and a weight mounted upon the axle between the slot boards.

30. In a fire fighting device, a relatively fixed truck member having a weight board, a slot board with a slot, fixed on one side of the weight board, an extensible truck member telescoped in the relatively fixed member, having a slot board with a slot, said slot board being disposed on the other side of the weight board and extending in an opposite direction to the relatively fixed slot board, a weight resting upon the weight board between the slot boards, and an axial portion passing through the weight and the slots, the extreme end of the extensible slot board being engageable with the associated portion of the axle upon the extension of the extensible truck member.

31. In a fire fighting device, a relatively fixed truck member having a slot board with a slot, an extensible truck member having a slot board with a slot, normally telescoped in the fixed truck member, a weight located between the slot boards, and a standard having a bent end forming an axle fixed in the weight and passing through the slots of the slot boards, said axle normally reclining in the extremities of said slots.

32. In a fire fighting device, a relatively fixed truck member having a slot board with a slot, a weight, an axle passing through the weight at both sides, one end of the axle normally reclining in one extremity of the relatively fixed slot board slot, and an extensible truck member having a slot board with a slot, the other end of said axle reclining in the extremity of said slot opposite to that of the relatively fixed slot board slot.

33. In a fire fighting device, a relatively fixed and an extensible truck member, a slot board on each truck member, each having a slot, said slots extending in opposite direc-

tions when the truck members are telescoped, a weight located between the slot boards, and a supporting axle for the weight extending at each side of the weight and located in engagement with the adjacent bases of the oppositely extending slots when the truck members are telescoped.

34. In a fire fighting device, a relatively fixed truck member having a slot board with a slot, a weight having an axle with portions projecting on each side, one of the projections reclining in one extremity of said slot, and an extensible truck member having a slot board with a slot, the other axle projection reclining in the extremity of said slot opposite to that of the relatively fixed slot board slot holding the other axle projection, and means for extending the extensible truck member whereupon the slot board carried thereby rides over the axle projection until the associated slot base engages the axle projection and moves the weight upon continued motion of the extensible member.

35. In a fire fighting device, a relatively fixed slot board having a slot, a weight having an axle projecting at the sides of the weight, one axle projection normally resting in the base of said slot, and an extensible slot board having a slot, the other projection normally resting at the head of said slot, said extensible slot board being movable with respect to the weight until the base of the extensible slot board slot engages the axle projection, whereupon the weight is moved and the other axle projection is advanced in the relatively fixed slot board slot.

36. In a fire fighting device, a relatively fixed slot board having a slot, an extensible slot board having a slot, a weight disposed between the slot boards and having an axle with projections at each side of the weight, one axle projection normally resting at the base of the relatively fixed slot board slot, the other axle projection normally resting at the head of the extensible slot board slot, and a second weight carried by the extensible slot board, adapted to move independently of the other weight, upon the extension of the extensible slot board, said other weight being movable upon the engagement of the base of the extensible slot board slot with the companion axle projection.

37. In a fire fighting device, a relatively fixed truck member having a slot board with a slot, an extensible truck member telescoped in the relatively fixed truck member, a weight slidable beside the slot board, an axle in the weight having projections on each side, one projection being movable in said slot, and means carried by the extensible truck member engaging the other axle projection after a pre-determined extent of movement of the extensible member, for moving the weight longitudinally of said slot board.

38. In a fire fighting device, a relatively fixed truck member having a floor, a slot board having a slot, a weight movable beside the slot board and having a cut-out portion, an axle in the weight with a projection normally resting in the base of said slot, an extensible truck member, and means carried by said truck member engageable with a portion of the weight for sliding the weight beside the slot board, said weight revolving upon the engagement of the axle projection with the other end of said slot, whereupon the cut-out portion of said weight engages the edge of the truck floor.
39. In a fire fighting device, a relatively fixed truck member, an extensible truck member normally telescoped in the relatively fixed truck member, standards pivoted upon the extensible member, a fire shield carried by said standards, and means for turning the standards to an erect position to stretch the shield upon the extension of the extensible member.
40. In a fire fighting device, a relatively fixed truck member, an extensible truck member telescoped in the relatively fixed truck member, standards pivoted upon the extensible member, a fire shield carried by the standards, said standards and shield being in a collapsed position when the extensible truck member is telescoped in the relatively fixed truck member, and means for raising the standards and stretching the shield upon the extension of the extensible truck member.
41. In a fire fighting device, a relatively fixed truck member, an extensible truck member, a pair of fire shields carried by the relatively fixed truck member, and means carried by the extensible member arranged to act upon and raise the fire shield upon the extension of the extensible member.
42. In a fire fighting device, a relatively fixed truck member, an extensible truck member normally telescoped in said relatively fixed truck member, a plurality of fire shields mounted upon the relatively fixed truck member and collapsed when the extensible member is telescoped, and means carried by the extensible member for raising said fire shields simultaneously with the extension of the extensible member.
43. In a fire fighting device, a relatively fixed truck member, an extensible truck member normally telescoped in said relatively fixed truck member, a plurality of fire shields having supports pivoted upon the relatively fixed truck member, and means coacting with said supports and carried by the extensible member, to raise said supports and the fire shields upon the extension of the extensible member.
44. In a fire fighting device, a relatively fixed truck member, an extensible truck member normally telescoped in said relatively fixed truck member, a plurality of fire shields carried by the relatively fixed truck member, supports for said fire shields pivoted upon said relatively fixed truck member, and means carried by the extensible member engageable with portions of said supports for acting upon said supports to collapse and erect the fire shields during portions of the movements of the extensible member.
45. In a fire fighting device, a relatively fixed truck member, an extensible and retractable truck member, a plurality of fire shields having pivoted supports with engageable portions carried by the relatively fixed truck member, and means carried by the extensible member for engaging said engageable portions during portions of the extending and retracting movements of said extensible member, to act upon the fire shields.
46. In a fire fighting device, a relatively fixed truck member, an extensible and retractable truck member, fire shields carried by standards mounted upon the relatively fixed truck member, quadrants carried by the standards, and racks carried by the extensible member engageable with the quadrants upon the retraction of said member, to collapse the standards and fire shields.
47. In a fire fighting device, a relatively fixed truck member, an extensible and telescopic truck member, fire shields carried by standards pivoted upon the relatively fixed truck member, quadrants mounted on the standards, and racks carried by the extensible truck member, engageable with the quadrants upon telescoping said extensible member, to revolve and lock the standard to the collapsed position.
48. In a fire fighting device, a relatively fixed truck member, an extensible truck member normally telescoped in said relatively fixed truck member, a plurality of standards having bent portions forming axles journaled upon the relatively fixed truck member, quadrants mounted upon the axles, fire shields carried by the standards, and racks carried by the extensible truck member engageable with the quadrants at the end of the telescoping movement of the extensible member to turn the axles in their journals.
49. In a fire fighting device, a relatively fixed truck member, an extensible truck member normally telescoped in said relatively fixed truck member, standards journaled on the relatively fixed truck member, fire shields carried by the standards, quadrants mounted upon the lower portions of said standards, and racks carried by the extensible member engageable with the quadrants when the extensible member is telescoped, certain of said racks cooperating with certain of the quadrants, and acting

upon the quadrants to move the standards during the initial extending movement of the extensible member.

50. In a fire fighting device, a relatively fixed truck member, an extensible truck member, standards journaled on the relatively fixed truck member, fire shields carried by the standards, quadrants mounted upon the standards, and racks carried by the extensible member, for engaging and acting upon the quadrants, said racks being disposed above and below the quadrants.

51. In a fire fighting device, a relatively fixed truck member, an extensible truck member having pairs of racks arranged in opposition, fire shield supporting standards journaled on the relatively fixed truck member, and quadrants carried by the standards disposed in a plane between the pairs of racks, to be acted upon by certain ones of the racks at the end of the telescoping movement of the extensible member.

52. In a fire fighting device, a relatively fixed truck member, an extensible truck member normally telescoped in the relatively fixed truck member, racks carried by the extensible member, fire shield bearing standards journaled upon the relatively fixed truck member, and a quadrant carried by each of the standards, said quadrants being engageable by the racks at the end of the telescoping movement of the extensible member, to move the standards and collapse the fire shield.

53. In a fire fighting device, a relatively fixed truck member, an extensible truck member normally telescoped in said relatively fixed truck member, a pair of standards journaled in different planes on the relatively fixed truck member, quadrants carried by the standards at the journals, and racks carried by the extensible truck member arranged to engage companion quadrants.

54. In a fire fighting device, a relatively fixed truck member, an extensible truck member, standards journaled in different horizontal planes on the relatively fixed truck member, a quadrant carried by each standard, and companion racks carried by the extensible member, the racks being disposed in different horizontal planes, each adapted to operate on the companion quadrant without interfering with the other quadrants.

55. In a fire fighting device, a relatively fixed truck member, an extensible truck member adapted to be telescoped into the relatively fixed truck member, standards carrying fire shields, journaled upon the relatively fixed truck member, a quadrant carried by each standard, and racks carried by the extensible member, adapted to engage the quadrants and turn certain of the standards in opposite directions, upon the tele-

scoping of the extensible member into the relatively fixed truck member.

56. In a fire fighting device, a relatively fixed truck member, a plurality of pairs of standards journaled upon said truck member, fire shields carried by said pairs of standards, a quadrant mounted upon each standard, an extensible truck member adapted to be telescoped in the relatively fixed truck member, and racks carried by said extensible member, engageable with certain of the quadrants at the end of the telescoping movement of said extensible member, to turn the pairs of standards in opposite directions and collapse the fire shields upon each other.

57. In a fire fighting device, a relatively fixed truck member, an extensible truck member adapted to be telescoped in the relatively fixed truck member, a plurality of pairs of standards journaled upon the relatively fixed truck member, fire shields carried by the pairs of standards, a quadrant carried by each standard, and racks carried by the extensible member, arranged to engage certain of the quadrants to rotate said pairs of standards in opposite directions during the telescoping movement of the extensible member.

58. In a fire fighting device, a relatively fixed truck member, an extensible truck member telescopic in the relatively fixed truck member, a pair of standards journaled on the relatively fixed truck member, a fire shield mounted between the standards, a quadrant carried by each standard, and racks carried by the extensible member, each arranged to engage one of the quadrants below the center upon a portion of the telescoping movement of the extensible member, to turn the standards and collapse the fire shield.

59. In a fire fighting device, a relatively fixed truck member, an extensible truck member telescopic in the relatively fixed truck member, a plurality of pairs of standards carrying fire shields, journaled on the relatively fixed truck member, a quadrant carried by each standard, and a plurality of pairs of racks carried by the extensible member, arranged to engage independent and certain ones of the quadrants above and below the centers respectively, simultaneously during a portion of the telescoping movement of the extensible member.

60. In a fire fighting device, a relatively fixed truck member, an extensible truck member telescopic in the relatively fixed truck member, a pair of standards journaled in different horizontal planes on the relatively fixed truck member, a fire shield supported between the standards, a quadrant carried by each standard at the journal, and a pair of racks mounted in different horizontal planes on the extensible truck mem-

ber, engageable with the quadrants simultaneously, one of the racks being lower than the other, to avoid the first quadrant during the telescoping movement of the extensible member.

61. In a fire fighting device, a relatively fixed truck member, an extensible truck member telescopic in the relatively fixed truck member, fire shield supporting standards journaled upon the relatively fixed truck member, a quadrant carried by each standard, a rack bar carried by the extensible member, racks mounted beneath said bar engageable with the quadrants, a retaining tongue fixed upon the rack bar, and a guide mounted upon the relatively fixed truck member, having a guide groove for the rack bar, and a tongue slot for the tongue.

62. In a fire fighting device, a truck including a relatively fixed member and an extensible member normally telescoped in the relatively fixed member, mechanism beneath the relatively fixed truck member for operating the extensible member, fire shields upon the truck members erectable upon extension of the extensible member, and fire curtains carried by the relatively fixed truck member, adapted to be lowered simultaneously with the erection of the fire shields and extension of the extensible truck member.

63. In a fire fighting device, a truck including a relatively fixed truck member and an extensible truck member, fire shields normally collapsed upon the relatively fixed truck member, mechanism beneath the relatively fixed truck member, arranged to extend the extensible member and erect the collapsed fire shields, and fire curtains carried by the relatively fixed truck member, in normally rolled position, arranged to be lowered to protect the operating mechanism.

64. In a fire fighting device, a relatively fixed truck member, an extensible truck member normally telescoped in said fixed truck member, operating mechanism mounted beneath the relatively fixed truck member, for extending the extensible member, and fire curtains carried by the relatively fixed truck member in normally rolled position, arranged to be lowered simultaneously with the extension of the extensible member, to cover the operating mechanism on both sides.

65. In a fire fighting device, a relatively fixed truck member, an extensible truck member normally telescoped in said relatively fixed truck member, operating mechanism mounted beneath the relatively fixed truck member for extending the extensible member, and fire curtains carried by the relatively fixed truck member in normally rolled position, and having connection with said operating mechanism, whereby the curtains are lowered simultaneously with the extension of the extensible member.

66. In a fire fighting device, a relatively fixed truck member, an extensible truck member normally telescoped in said relatively fixed truck member, operating mechanism for extending the extensible member, fire curtains normally rolled and carried by the relatively fixed truck member, and manually shifted actuating means engageable with the operating mechanism to extend and telescope, and lower and raise the extensible member and curtains, respectively, simultaneously.

67. In a fire fighting device, a relatively fixed truck member, an extensible truck member normally telescoped in said relatively fixed truck member, rack and gear devices operative to extend the extensible truck member, mechanism for operating the rack and gear devices, and fire curtains carried by the relatively fixed truck member in normally rolled position, having connection with said operating mechanism to lower said curtains simultaneously with the extension of the extensible member, to cover said operating mechanism on both sides.

68. In a fire fighting device, a relatively fixed truck member, an extensible truck member normally telescoped in said relatively fixed truck member, a rack carried by the extensible member, a rack gear carried by the relatively fixed truck member and meshing with the rack, mechanism carried by the relatively fixed truck member for operating the rack gear, curtain shafts mounted at the sides of the relatively fixed truck member, operating connections between said shafts and the rack gear operating mechanism, and fire curtains normally rolled upon said shafts, adapted to be lowered simultaneously with the extension of the extensible member.

69. In a fire fighting device, a relatively fixed truck member, an extensible truck member normally telescoped in the relatively fixed truck member, an engine mounted upon the relatively fixed truck member, operating mechanism mounted beneath said truck and arranged to extend the extensible member, and a shifting gear having a driving connection with said engine, and arranged to actuate said operating mechanism in forward and reverse direction to extend and telescope the extensible truck member.

70. In a fire fighting device, a relatively fixed truck member, an extensible truck member normally telescoped in the relatively fixed truck member, an engine carried by the relatively fixed truck member, operating mechanism arranged to extend the extensible truck member, a shifting gear having a driving connection with the engine, normally occupying a neutral position, and manually operated means in connection with the shifting gear, for moving said gear in two directions for imparting a forward and

reverse movement to the operating mechanism and extending and telescoping the extensible member accordingly.

71. In a fire fighting device, a relatively fixed truck member, an extensible truck member, operating mechanism for extending the extensible member, including an extending and a telescoping gear, an engine mounted upon the relatively fixed truck member, and a shifting gear driven by the engine and movable between the extending and telescoping gears.

72. In a fire fighting device, a relatively fixed truck member, an extensible truck member, operating mechanism for extending the extensible truck member, including an extending and a telescoping gear, an engine mounted upon the relatively fixed truck member, a shifting gear movable between the extending and telescoping gears and having a driving connection with the engine, and a shifting post supporting the shifting gear, slidably mounted upon the relatively fixed truck member.

73. In a fire fighting device, a relatively fixed truck member, an extensible truck member, operating mechanism for extending the extensible truck member, including an extending gear and a telescoping gear, an engine mounted upon the relatively fixed truck member, a reversing gear driven by the engine, a shifting post slidable upon the relatively fixed truck member, and supporting the shifting gear for engagement either with the extending gear or the telescoping gear, and shifting means connected with the shifting post, comprising a shifting lever and a connecting rod.

74. In a fire fighting device, a relatively fixed truck member, an extensible truck member; operating mechanism for extending the extensible truck member, including a rack gear mounted upon a rack gear shaft, a counter-shaft having a driving connection with the rack gear shaft, an extending gear and a telescoping gear, each having a driving connection with the counter-shaft, the driving connection of the telescoping gear being crossed, a shifting gear, a shifting post slidably mounted upon the relatively fixed truck member and arranged to move the shifting gear into engagement with either the extending gear or the telescoping gear, and an engine having a driving connection with the shifting gear.

75. In a fire fighting device, a relatively fixed truck member, an extensible truck member, a rack mounted on the extensible truck member, a rack gear meshing with the rack, a rack gear shaft supported on the relatively fixed truck member, a counter-shaft having a driving connection with the rack gear shaft, driving mechanism for the counter-shaft including a reversing device, and an engine operated shifting gear man-

ually operative to engage said driving connections with the counter-shaft.

76. In a fire fighting device, a relatively fixed truck member, a pair of fire curtain shafts arranged to rotate together, a rack gear shaft adapted to be driven, and a stub shaft having driving connections with the rack gear shaft and one of the fire curtain shafts.

77. In a fire fighting device, a relatively fixed truck member, an extensible truck member, means for extending the extensible truck member with respect to the relatively fixed truck member, fire curtains carried by the relatively fixed truck member, and arranged to be lowered simultaneously with the extension of the extensible member, and a fire curtain carried by the extensible member, arranged to be lowered subsequently to the extension of said extensible member.

78. In a fire fighting device, a relatively fixed truck member, an extensible truck member, operating mechanism for extending the extensible truck member, fire curtains carried by the fixed truck member having connection with the operating mechanism whereby said curtains are lowered simultaneously with the extension of the extensible truck member, and a fire curtain carried by said extensible member, adapted to be lowered subsequently to the extension of said member, the lowering operation of said curtain being under manual control.

79. In a fire fighting device, a relatively fixed truck member, an extensible truck member, operating mechanism for extending the extensible member, a fire curtain carried by the extensible member in normally rolled position, and engageable means arranged to be moved in operative position upon the arrival of the extensible truck member at the limit of its extending movement.

80. In a fire fighting device, a relatively fixed truck member, an extensible truck member, operating mechanism for extending the extensible truck member, and a fire curtain carried by the extensible truck member in normally rolled position, engageable with a portion of the operating mechanism upon the arrival of the extensible member at the limit of its outer movement.

81. In a fire fighting device, a relatively fixed truck member, an extensible truck member, operating mechanism for extending the extensible truck member, a fire curtain carried by the extensible truck member in normally rolled position, engageable with a portion of the operating mechanism upon the arrival of the extensible member at the limit of its outer movement, and manually controlled means for unrolling said curtain subsequently to such engagement.

82. In a fire fighting device, a relatively

fixed truck member, an extensible truck member, operating mechanism for extending the extensible truck member, a stub shaft, manually controlled means engageable with said driving connections for rotating the stub shaft, a pinion carried on the stub shaft, a curtain shaft mounted on the extensible truck member, said shaft having a fire curtain in normally rolled position, and a pinion on said shaft engageable with the stub shaft pinion upon the arrival of the extensible member at the limit of its outward movement.

83. In a fire fighting device, a wheeled truck including an extensible member having wheels, a plurality of fire shields mounted upon said truck members in normally collapsed position, operating mechanism for extending the extensible truck member and erecting the fire shields, fire curtains carried by the main truck member having connection with the operating mechanism to lower said curtains simultaneously with the extension of the extensible member and the erection of the fire shields, a fire curtain carried by the extensible member adapted to be subsequently lowered to form a complete barrier, and curtain members in normally raised position, adapted to be

dropped about the wheels of the extensible member during the extending movement of said member.

84. In a fire fighting device, a relatively fixed truck member, an extensible truck member normally telescoped in the relatively fixed truck member, wheels mounted on the extensible truck member, curtains partly surrounding said wheels and elevated when the extensible member is in the telescoped position, and supporting means for the curtains, including a connection engaging a portion of the relatively fixed truck member when the parts are telescoped, said connection moving into disengagement during the extending movement of the extensible member to permit said curtain to lower and cover the wheels.

85. In a fire fighting device, the combination with the weight arm having a cam slot, of an extensible truck member having ground wheels, a curtain having a supporting frame, the curtain partly surrounding the wheels, and an arm having an extension engaging the cam slot when the extensible member is in a telescoped position, to hold the curtain in an elevated position.

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