Aug. 14, 1923. 1,465,182

C. SAGO

PORTABLE FIRE ESCAPE

Filed Feb. 11, 1921 2 Sheets-Sheet 1

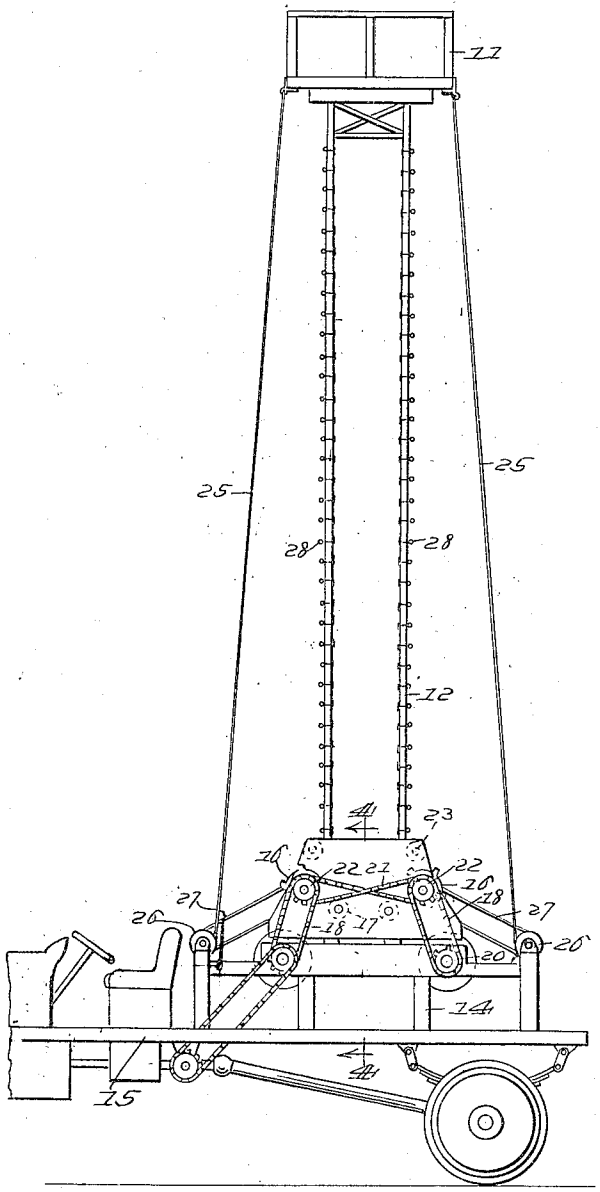


Fig. 1.

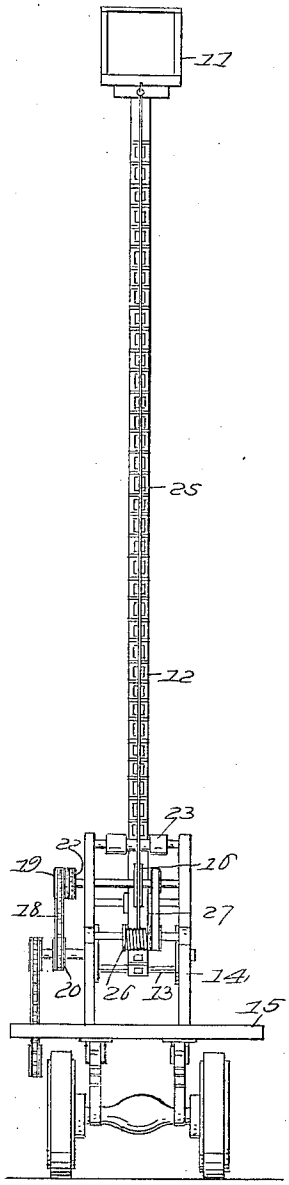


Fig. 3.

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Filed Feb. 11, 1921 2 Sheets-Sheet 2

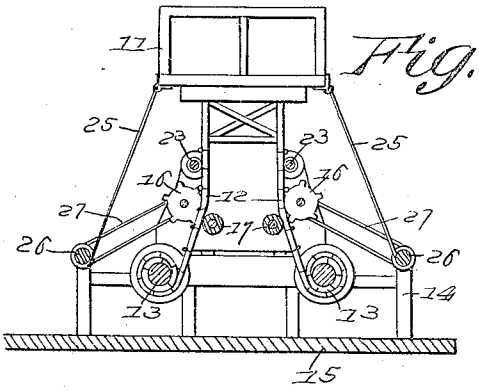


Fig. 2.

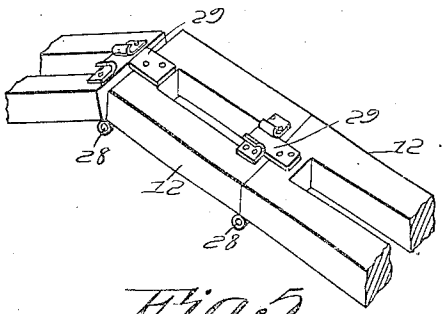


Fig. 5.

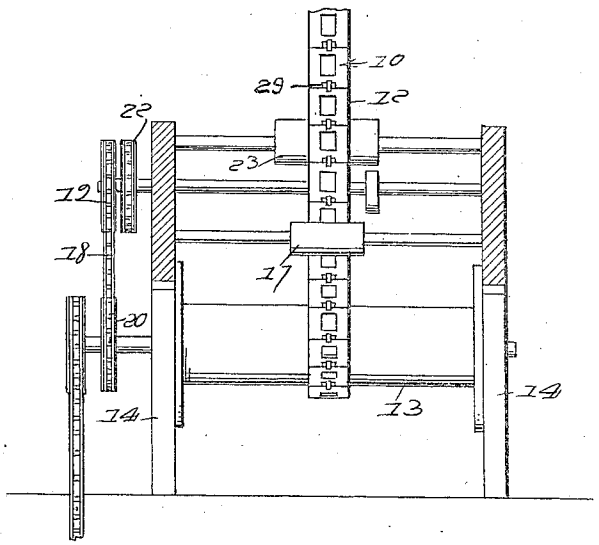


Fig. 4.

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Patented Aug. 14, 1923. 1,465,182

UNITED STATES PATENT OFFICE.

CHARLES SAGO, OF OLD FORGE, PENNSYLVANIA.

PORTABLE FIRE ESCAPE.

Application filed February 11, 1921. Serial No. 444,105.

To all whom it may concern:

Be it known that I, CHARLES SAGO, a citizen of the United States of America, residing at Old Forge, in the county of Lackawanna and State of Pennsylvania, have invented new and useful Improvements in Portable Fire Escapes, of which the following is a specification.

The object of the invention is to provide a relatively simple and efficient portable means for effecting rescue in case of fire from buildings in which the ordinary means of egress are rendered inaccessible and to provide a device for this purpose which can be quickly extended to any desired height outside of the building and close to the wall thereof so as to permit of transfer of the occupants of the building from the windows thereof to the cage or car of the apparatus by which they may be lowered to safety; and more especially to provide a fire escape suitable for transportation by means of a fire apparatus truck, which is not open to the objection in the matter of the space required for the operation thereof, of the conventional forms of extension ladders or towers, which, owing to overhead trolley, telephone and telegraph wires, are frequently rendered impractical and ineffective; and with these objects in view the invention consists in a construction and combination of parts of which a preferred embodiment is shown in the accompanying drawings, wherein:—

Figure 1 is a side view of the apparatus in its extended or operative position.

Figure 2 is a longitudinal sectional view of the same in its folded or collapsed position.

Figure 3 is an end view.

Figure 4 is a transverse section on the plane indicated by the line 4—4 of Figure 1.

Figure 5 is a perspective detail view of the locking means by which the elements of the sectional standards are held in their aligned relation.

The illustrated embodiment of the invention contemplates a plurality of flexible standards 10 carrying a cage or car 11 and each consisting of a plurality of jointed sections 12, corresponding in general features with a sprocket chain and adapted to be respectively reeled upon drums 13 carried by a suitable frame work 14 for transportation to and from the point of use by a truck 15 or any equivalent thereof. The standards respectively pass between operating rolls 16 and 17 of which the former are of the sprocket type, being provided with peripheral spurs or teeth for engagement with the sections or links of the standards, and synchronous movement of the operating or extension rolls 16 of the drums is secured by endless chain connections 18 traversing sprocket wheels 19 and 20 on the spindles respectively of said operating rolls and drums. Correspondence of movement in the proper direction of the spindles of the operating rolls is secured by an endless chain 21 traversing sprocket wheels 22 on said spindles, and guide rollers 23 are disposed at the side edges of the standards adjacent to the operating rolls to prevent lateral displacement and insure the proper and effective communication of motion from the operating rolls to the standards in the extension and retraction thereof. Obviously motion may be communicated to the spindles of the operating rolls for the extension and folding of the standards through a pulley 24 actuated from the motor of the truck or any equivalent source of energy.

Also guy ropes or cables 25 connected with the cage or car are reeled upon drums 26 receiving motion through belts 27 from the spindles of the operating rolls 16 to insure a maintenance of tension upon said cables which will serve to properly brace the structure when in its extended or operative position.

Rule joints 28 are preferably employed between the sections of the standards and suitable locking means consisting for example of spring latches 29 may be employed to stiffen the joints when the sections are extended in their aligned relation, it being obvious that these locking means are disengaged by the breaking of the joints between the sections as they approach the storage drums upon which the standards are reeled when not in use.

The advantage of the structure described, in addition to the fact that it may be extended and lowered quickly in conveying loads of the occupants of a building from an upper floor to the street resides in the fact that the standards or extension members by which the cage or car is supported and positioned to receive the occupants of the building are located both in their extended and folded positions within the area of the supporting frame or truck, so that for the operation of

the apparatus it is only necessary to occupy a space represented by the area of the truck, and the extension of the standards and the movement of the cage or car are vertical and occur within an area which is sufficient to receive the truck, so that the cage or car may be manipulated to readily avoid overhead wires and like obstructions which ordinarily interfere with the operation of an extension ladder, or a fire escape apparatus embodying the principles of an extension ladder or tower.

Having described the invention what is claimed as new and useful is:—

A portable fire escape apparatus having a transportable framework, spaced drums mounted in said framework, flexible standards terminally connected to said drums and reeled upon the same, a platform surmounting the standards at their upper ends, the standards consisting of sections connected by rule joints of which those of one standard break in the direction of the other standard, operating rolls rotatably mounted in said framework above said drums and provided with peripheral teeth engaging openings in the sections of said standards, supplemental operating rolls disposed on opposite sides of the standards from said first mentioned operating rolls and holding the standards in contact with the latter, guide rollers rotatably mounted in the framework above said first mentioned operating rolls and formed with peripheral grooves guiding said standards to maintain them properly aligned, power operating means, and operative connections between the guide rolls, said first mentioned operating rolls and the drums and power operating means.

In testimony whereof he affixes his signature.

CHARLES SAGO.