

C. E. THOMPSON.  
STORE SERVICE WIREWAY.  
APPLICATION FILED NOV. 2, 1908.

958,782.

Patented May 24, 1910.

2 SHEETS—SHEET 1.

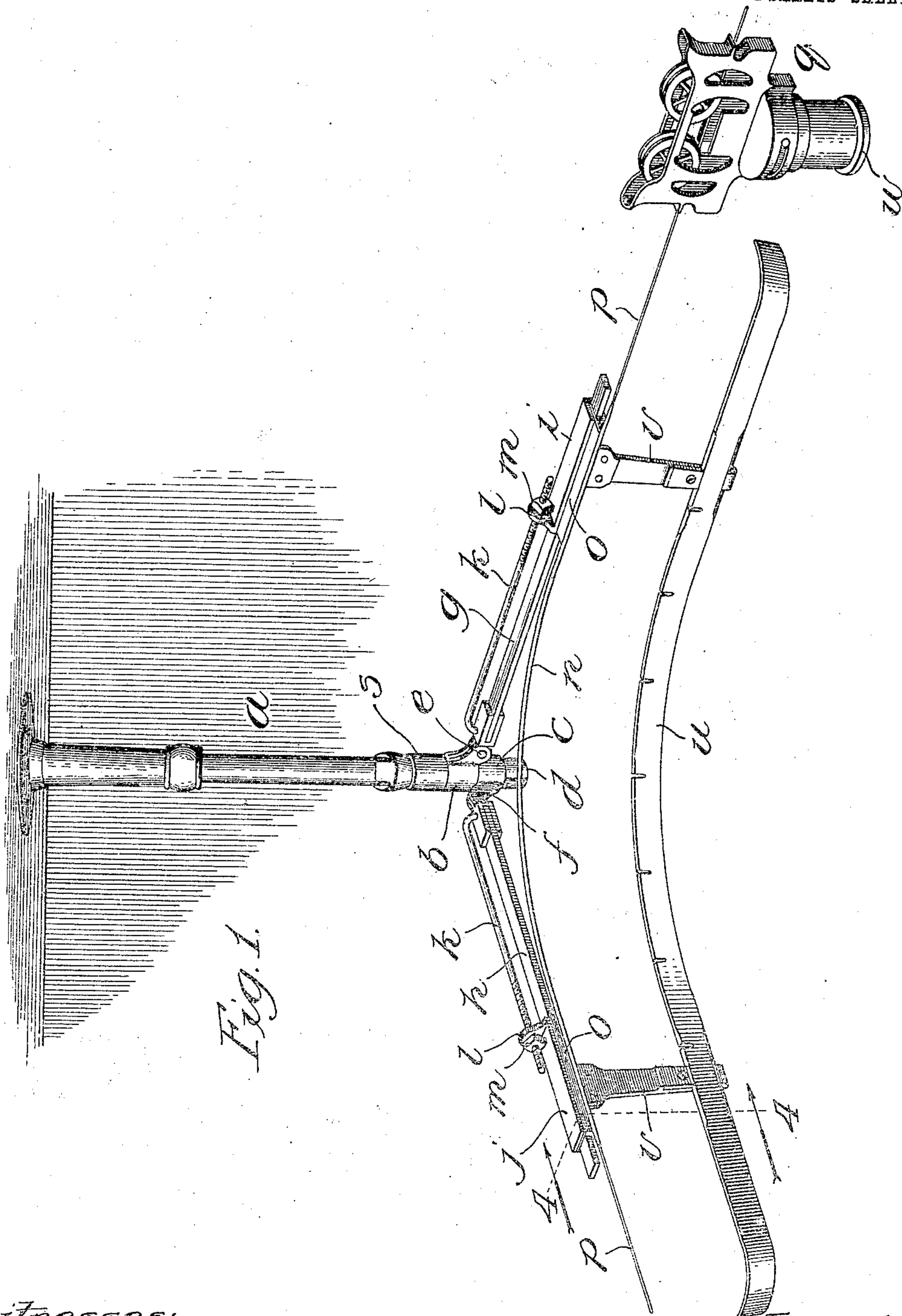


Fig. 1.

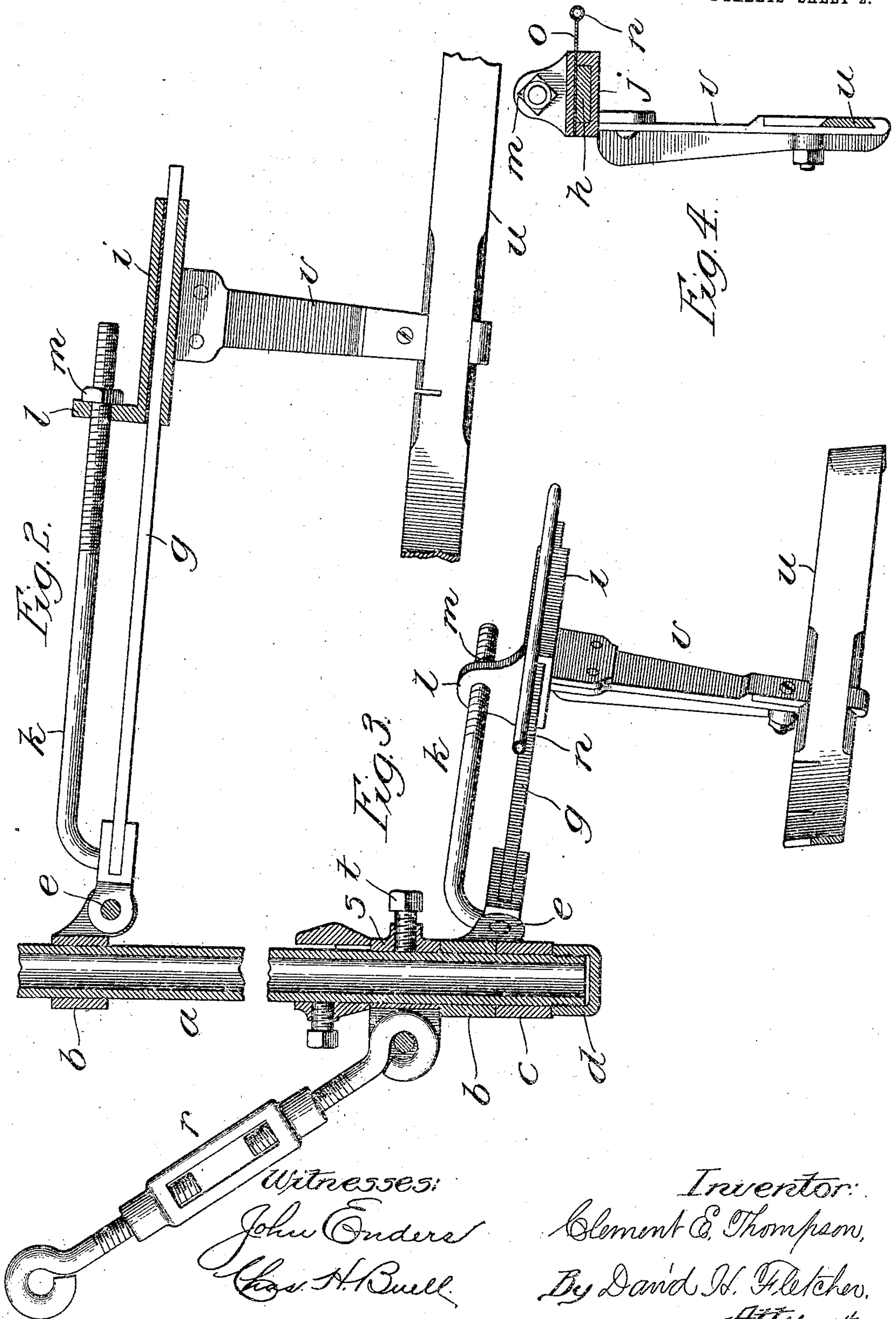
Witnesses:  
John Enders  
Chas. A. Buell

Inventor:  
Clement E. Thompson,  
By David N. Fletcher,  
Atty.

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# UNITED STATES PATENT OFFICE.

CLEMENT E. THOMPSON, OF CHICAGO, ILLINOIS, ASSIGNOR TO AIR-LINE CARRIER, COMPANY, A CORPORATION OF ILLINOIS.

STORE-SERVICE WIREWAY.

958,782.

Specification of Letters Patent.

Patented May 24, 1910.

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*To all whom it may concern:*

Be it known that I, CLEMENT E. THOMPSON, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Store-Service Wireways, of which the following is a description, reference being had to the accompanying drawings, forming a part of this specification, in which corresponding letters of reference in the different figures indicate like parts.

In constructing elevated wire-ways for store service apparatus, it is frequently necessary, in order to enable the carrier to avoid obstructions or for other reasons, to provide curves for turning corners or for varying the course of the way. Inasmuch as it is essential that the track wires should be kept under tension, it is obvious that any variation from a straight line must consist of an interposed portion or section of special construction. This has in some cases heretofore consisted of a rigidly formed curved element specifically constructed in each instance to conform to the angle of divergence of the track-wires or of a number of small curved sections arbitrarily placed. When it is considered that the angles of divergence of the track wires may vary indefinitely, the expense and impracticability of such methods become readily apparent. Moreover, they cannot be satisfactorily adapted to variations in grades at points where such variations occur.

The object of my invention is to overcome these objections by providing a device which, from its very nature, may be adapted to varying angles of divergence of the track wires, as well as to varying grades; so that in case it should become necessary to interpose a curve between up and down grades, the curved portion may be so arched as to form a proper approach to both grades, thereby avoiding abrupt transitions,—all of which is hereinafter more particularly described and definitely pointed out in the claims.

In the drawings, Figure 1 is a front elevation in perspective, of a device embodying the features of my invention, showing a carrier upon the way, Fig. 2 is an enlarged view in which a portion of the hanger, one of the supporting arms, the adjustable slide and a portion of the inner face of the guard is

shown, the hanger, connecting ring and slide being represented in vertical section, Fig. 3 is a vertical sectional view taken through a portion of the hanger on a line midway between the diverging arms, showing the curved track element and guard in transverse section, and Fig. 4 is a sectional view taken upon the line 4—4, Fig. 1, viewed in the direction of the arrow there shown.

Referring to the drawings, *a* represents a hanger of well known construction adapted to be rigidly attached to a ceiling. Mounted loosely upon said hanger so as to swing thereon are fittings or rings *b c*, the latter of which bears upon a shoulder formed by a screw cap *d* secured upon the lower end of the hanger. Jointedly connected at *e f*, respectively, to lugs upon the rings *b c*, are arms *g h*, which are adapted to be moved vertically by reason of said joints and laterally by reason of their connection with said rings. Mounted upon the arms *g h*, respectively, at or near their outer ends, are fittings or members *i j*, through which said arms are loosely projected so that the fittings may slide thereon for the purpose hereinafter stated. I prefer to make the arms flat or polygonal so that only a longitudinal movement of the fittings may be permitted. A screw-threaded rod *k* is rigidly attached to each of the arms *g h* near its inner end and arranged parallel thereto. Said rods are passed loosely through lugs *l l* upon the slides *i j* and each is provided with a nut *m*, by means of which said slides may be adjusted and securely held in position upon said arms.

A curved track element *n*, preferably tubular in cross-section, is rigidly attached near its respective ends to laterally extended flanges *o*, which consist of sheet-metal plates riveted beneath the upper cap and projecting laterally from the inner edges of the slides *i j*, so as to cause said track elements to stand far enough away from the slides to permit a car to pass over said track element without obstruction.

A wire *p* intended to form a way for a cash or other carrier *q*, is projected through the curved tube and its respective ends attached to such divergent points as may be found necessary. The wire is then placed under tension. An anchor wire, not shown, is connected by means of a turn-buckle *r* to a ring *s*, upon the hanger and adjusted in the



proper direction to resist the stress of the diverging wire *p*, a set-screw *t* serving to lock said ring in place. When the diverging parts of the wire are placed under tension, it is obvious that the arms *g h* will, as a result thereof, be caused to swing independently upon the hanger so as to conform to the angle described by the diverging portions of the wire. The slides *i j* may be readily adjusted so that the curve of the interposed track element *n*, may conform properly to the angle formed by the diverging arms. This construction enables a curve of any desired degree to be obtained merely as a result of stretching the track wire and adjusting the slides, which may be maintained in any desired position when adjusted, by means of the nuts *m*. An obvious advantage of this construction is that the wire way is always tangential to the arc described by the interposed curved element, so that an abrupt approach to the curve is avoided.

Another important advantage of my invention is that by reason of the joints *e f*, which permit a vertical movement of the outer ends of the arms, the device may be readily adapted to varying grades. For example, assuming that the point of attachment of the arms to the hanger is at a higher level than that of the divergent ends of the wire way, the arms will each be inclined to conform to the grade of that part of the wire leading therefrom and the curved track element will be tilted accordingly so as to form an arch, the crown of which will be midway between the arms. Should the curve be interposed in a continuous grade instead of between two descending grades, the curved element will assume more or less of a spiral form, the pitch of which would vary according to that of the grade. It will thus be seen that my improved device is adapted to conform automatically to all of the varying conditions to which it may be subjected.

In order to prevent the car from swinging while rounding the curve, I provide a guard *u*, which is arranged to conform to the curve of the part *n*, and is supported by means of hangers *v*, which are rigidly attached to the slides *i j*. A wheel *w*, upon the lower end of the car, serves to engage said guard. Inasmuch as the guard is connected to the slides, it is obvious that in adjusting the latter, the proper relation between the guard and curved track section will be maintained.

While I prefer, as stated, to use a tube for the curved track element, I do not wish to be confined thereto, inasmuch as it is obvious

that said element may be formed from sheet-metal to represent a segment of a circle in cross section, so that the wire may lie in the groove behind it, or the parts of the wire may be attached to the ends of a curved rod without departing from the principle involved. It is obvious that the diverging arms may be hinged to separate supports so long as they are free to conform to the angle described by the track wires.

Having thus described my invention, I claim:

1. In a store-service apparatus, the combination with a diverging wire-way, of a hanger, arms jointedly mounted thereon to permit them to swing laterally, said arms having joints therein near to said hanger to permit a vertical movement of their free ends, slides loosely mounted upon said arms, screw-threaded rods attached to each of said arms near said hanger and connected with said slides by means of nuts, and a metallic tube connected near its ends with said slides by means of lateral extensions to hold the same away from said slides, said tube being bent to form a reëntrant curve between said jointed arms and serving as a support for said wire-way, which latter is projected through the passage therein.

2. In a store-service apparatus the combination with a diverging wire-way of a hanger, arms jointedly mounted thereon to permit them to swing laterally, said arms having joints therein near to said hanger to permit a vertical movement of their free ends, slides loosely mounted upon said arms, screw-threaded rods attached to each of said arms near said hanger and connected with said slides by means of nuts, a metallic tube to receive said wire-way and support the same, said tube being connected near its ends with said slides by means of lateral extensions to hold the same away from said slides, said tube forming a reëntrant curve between said jointed arms, arms extending downwardly from said slides and a curved guard supported upon said arms beneath the level of said wire-way whereby an adjustment of the slides to vary the curve of the tube may produce a corresponding variation in said guard.

In testimony whereof, I have signed this specification in the presence of two subscribing witnesses, this 31st day of October 1908.

CLEMENT E. THOMPSON.

Witnesses:

D. H. FLETCHER,  
J. R. HOLLISTER.