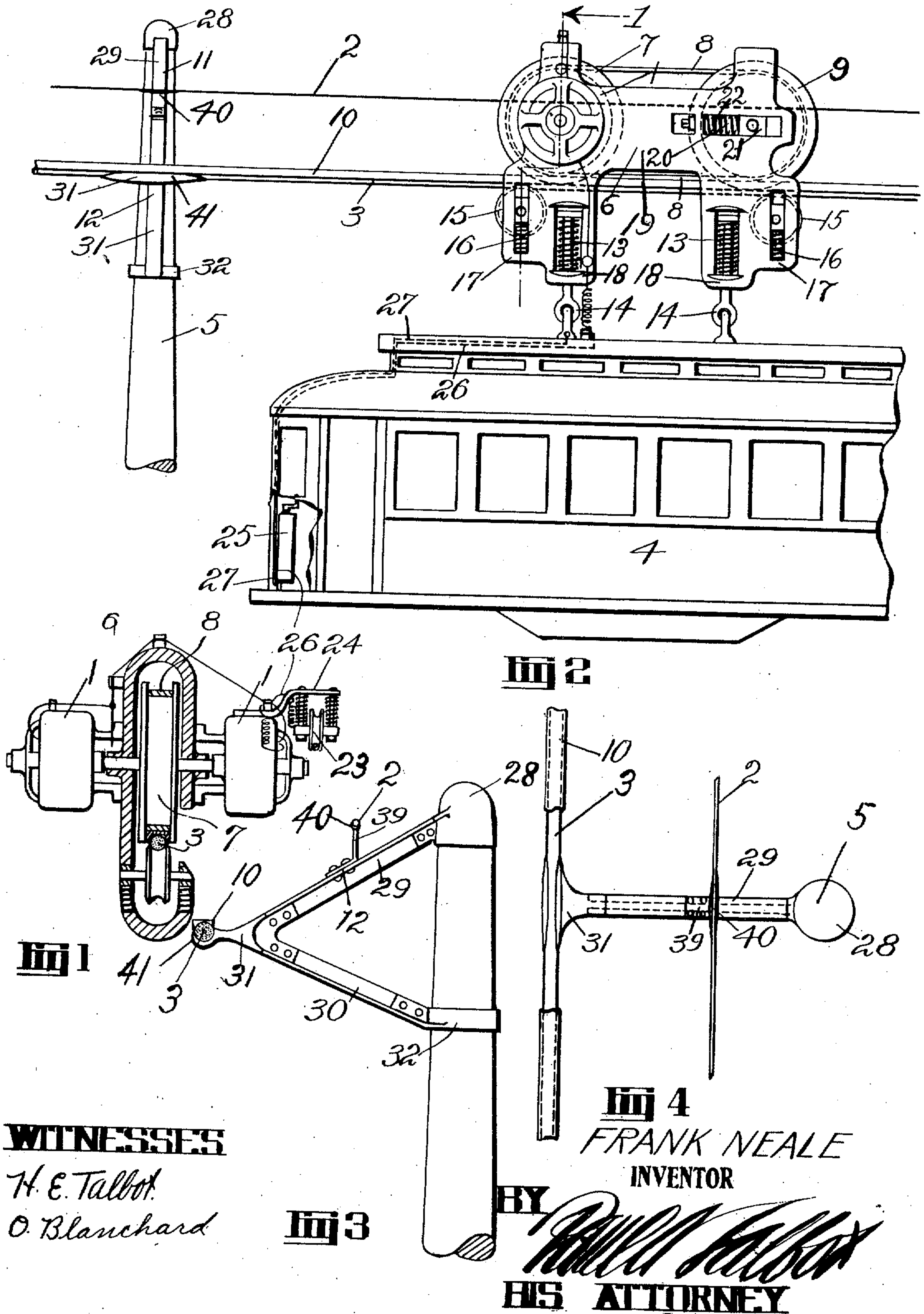


F. NEALE.
CABLE TRANSPORTATION SYSTEM.
APPLICATION FILED AUG. 30, 1909.

987,253.

Patented Mar. 21, 1911.

2 SHEETS—SHEET 1.



WITNESSES
H. E. Talbot
O. Blanchard

FIG 3

FIG 4
FRANK NEALE
INVENTOR
BY *[Signature]*
HIS ATTORNEY

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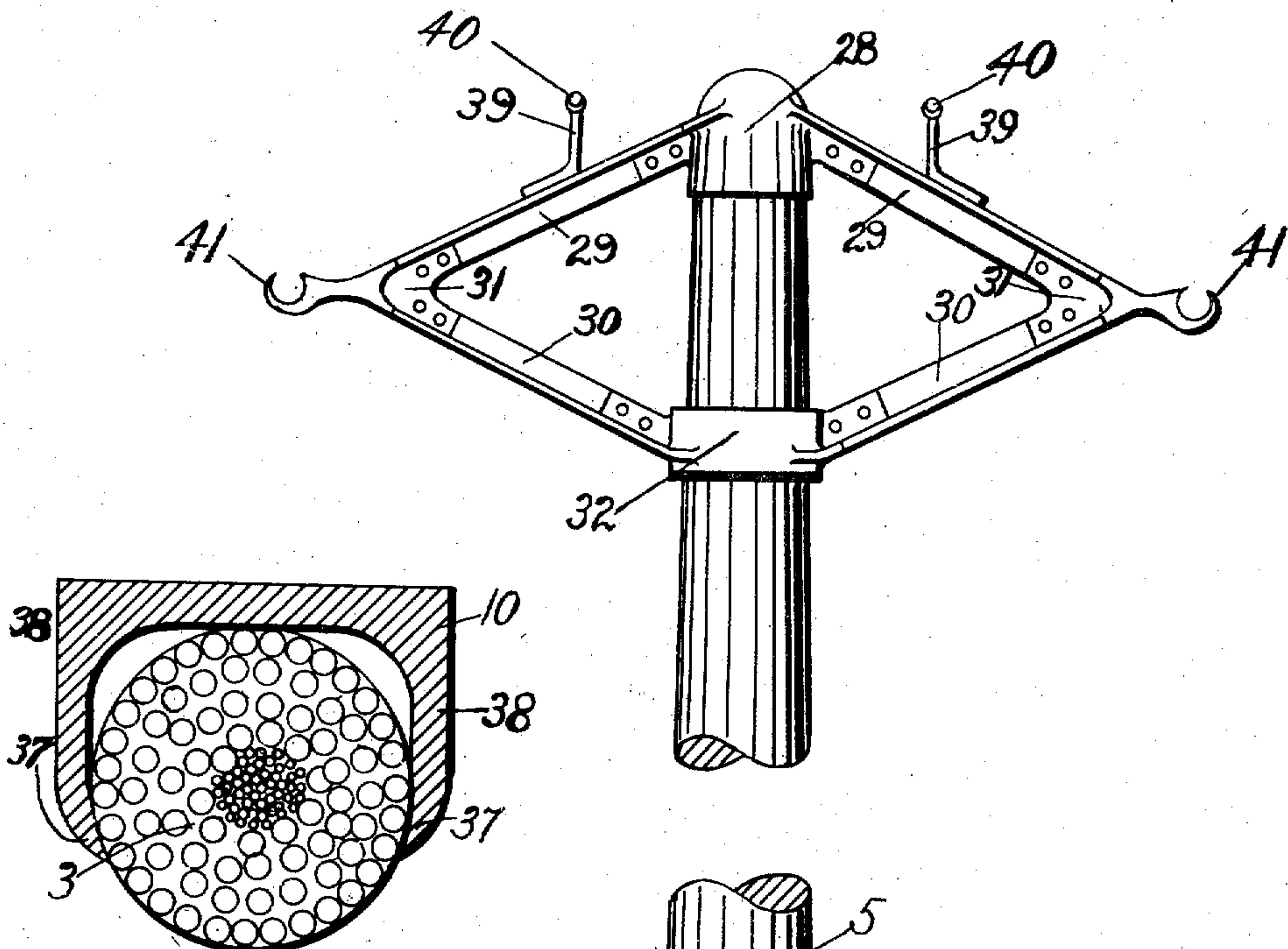


FIG 5

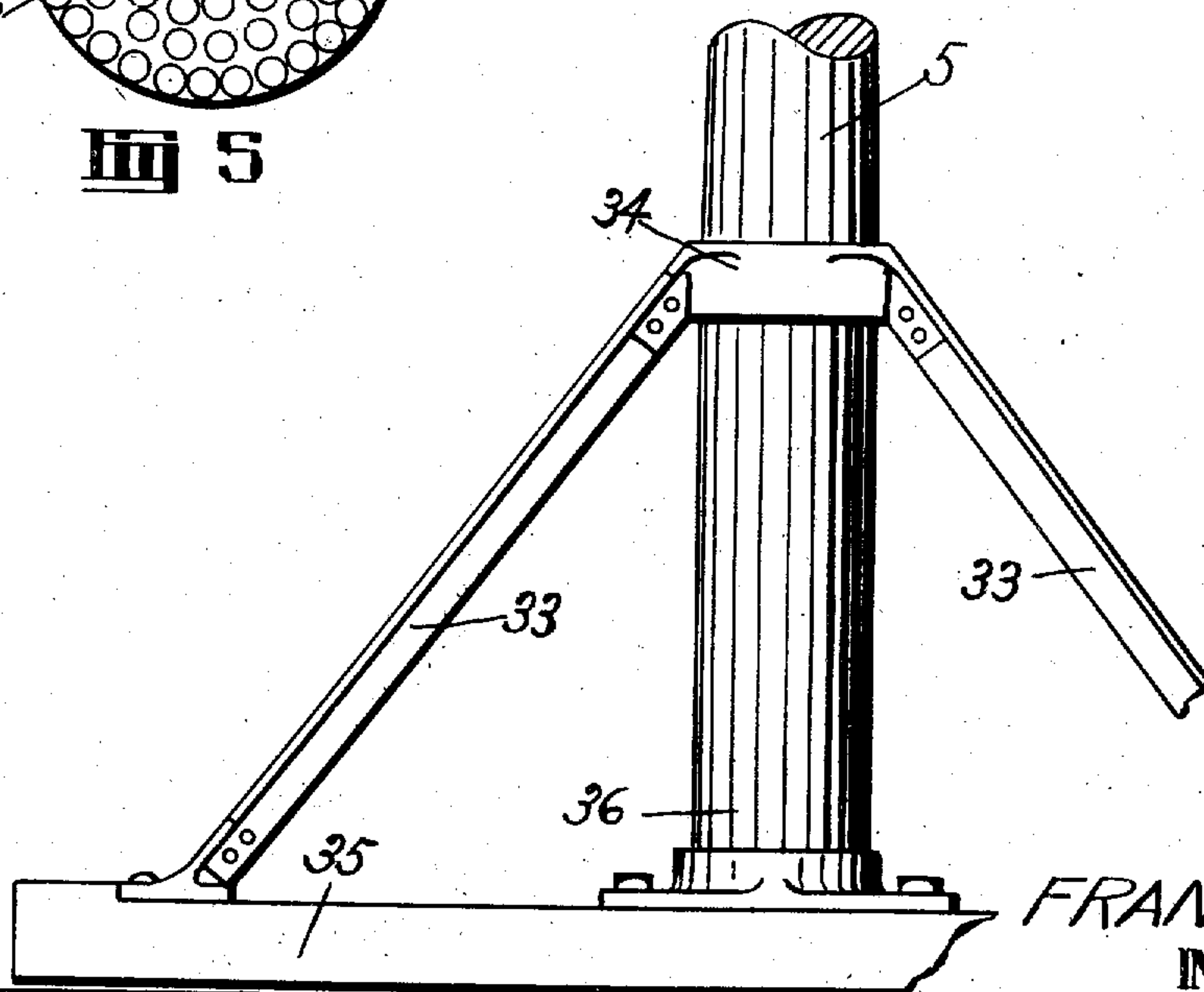


FIG 6

FRANK NEALE
INVENTOR

WITNESSES

H. E. Talbot.
O. Blanchard

BY

HIS

ATTORNEY

[Handwritten signature of H. E. Talbot]

UNITED STATES PATENT OFFICE.

FRANK NEALE, OF HOOD RIVER, OREGON.

CABLE TRANSPORTATION SYSTEM.

987,253.

Specification of Letters Patent.

Patented Mar. 21, 1911.

Application filed August 30, 1909. Serial No. 517,318.

To all whom it may concern:

Be it known that I, FRANK NEALE, a subject of the King of England, residing at Hood River, in the county of Hood River and State of Oregon, have invented a new and useful Cable Transportation System, of which the following is a clear and concise specification.

My invention relates to an aerial tramway driven by electricity and having a protected cable as the rail and the carriage sheaves are provided with a flexible traction increasing device preventing slipping on grades and increasing the life of the wearing parts.

The objects of my invention are to provide a protection for an aerial tramway cable; to provide a cable supporting bracket and to provide a balanced carriage having a traction increasing device; and to provide a flexible traction increasing device whereby the wear of the cable is minimized. I accomplish these objects by the construction now preferred by me and illustrated in the accompanying drawings, in which:—

Figure 1 is a section at 1 Fig. 2; Fig. 2 is an elevation of my entire device; Fig. 3 is an elevation of one of the bracket posts of my device; Fig. 4 is a plan view of one of the brackets of my device; Fig. 5 is a transverse section of the rail and cable of my device; Fig. 6 is an elevation showing the double cable-way and also showing the manner of bracing the lower end of the posts.

Similar reference numerals refer to similar parts hereinafter set forth and illustrated in the accompanying drawings.

I have provided a cable-way comprising motors 1 supplied with electric current from the trolley wire 2. I have also provided a cable 3 which supports the car 4, said cable 3 being mounted on posts 5. The car 4 is preferably suspended on the framework 6 which carries said motors 1 which are directly connected to a sheave 7 having a comparatively soft flexible belt 8 traveling thereon, said belt 8 passing around said sheave 7 and an idler sheave 9 which is also supported by said framework 6. The flexible belt 8 prevents wear on the surface of the sheaves and on a channel iron rail 10 which is secured to the cable 3 thus the rail 10 is prevented from excess wear and the flexible belt 8 also increases the tractive efficiency between the sheaves 7 and 9 and the rail 10.

The upper end 11 of the post 5 is provided with a bracket 12 which is constructed to carry the weight of the car and also of said cable 3 and trolley wire 2. The car is preferably yieldingly supported on the springs 13 by means of the eye bolts 14 which are carried in said framework 6. Said framework 6 is prevented from "jumping" the rail 10 by means of the lower idlers 15 which travel on the underside of the cable 3 and are yieldingly held in contact therewith by means of the springs 16 which are held in the extensions 17 of said framework 6. The springs 13 being held in the extensions 18, both of said extensions 17 and 18 project downwardly and are formed integral with the body portion 19 of said framework 6. The idler 9 is preferably yieldingly mounted in said body portion 19 by means of the springs 20 which rest against the bearing box 21 which travel in slots 22. By this construction the flexible belt 8 may be kept tight on said sheaves 7 and 9.

The trolley wire 2 supplies electricity to the trolley wheel 23 which is yieldingly supported on an arm 24 secured to the upper part of one of the motors 1. The current is conveyed to the controller 25 which is supported by the car 4 through the wire 26 which is connected to said trolley wheel 23 and also through the wire 27 which is connected to the cable 3 which acts as the ground wire. The connection is made through the idlers 15 and framework 6 as well as one of the eye bolts 14. The bracket 12 is preferably secured to the cap 28 and comprises the top bars 29 and lower bars 30, said top bars and lower bars being secured to the cable supporting pieces 31, said lower bars 30 being also secured to the post collar 32 which is disposed at a substantial distance below said cap piece 28. The lower end of the post 5 is braced by the bars 33 which is secured at their upper ends to a collar 34 and at their lower ends to the cross beam 35 which is secured to the bottom end 36 of the post 5. The channel rail 10 is preferably secured to the cable 3 by clenching the edges 37 of the flanges 38 of said channel rail 10 as may be readily seen by referring to the cross section in Fig. 5 of the accompanying drawings. The trolley wire 2 is secured to the top bars 29 through the brackets 39 by means of the tapered fasteners 40. The cable is prevented from

becoming disengaged from the cable supporting pieces 31 by clenching the end 41 against the side of the cable.

I do not wish to be limited to the specific construction as herein set forth and illustrated in the accompanying drawings but wish to depart from such details as are within the scope of the appended claims.

Having thus described my invention what I claim as new and desire to secure by Letters Patent of the United States is:

1. In an aerial tram-way, a framework, sheaves journaled therein, one of said sheaves being held in yielding relation to another of said sheaves, a cable supporting said sheaves in said framework and a flexible belt traveling on said cable and disposed between the sheaves and said cable.

2. In an aerial tram-way, a framework, sheaves journaled therein, one of said sheaves being held in yielding relation to another of said sheaves, a cable supporting said sheaves in said framework, a flexible belt traveling on said cable, electric motors directly connected to one of said sheaves and supported by said framework, a car suspended on said framework and a controller provided on said car for regulating the current supplied to the motors.

3. In an aerial tram-way, a cable, a channel rail supported thereon and rigidly se-

cured thereto, a framework supporting said car and sheaves provided in said framework, a flexible belt carried around said sheaves and disposed between the sheaves and the channel rail.

4. In an aerial tram-way, a cable, a channel rail supported thereon and rigidly secured thereto, a framework supporting said car and sheaves provided in said framework, a flexible belt carried around said sheaves and disposed between the sheaves and the channel rail and means for taking up the slack in said flexible belt.

5. In an aerial tram-way, a cable, a channel rail supported thereon and rigidly secured thereto, a framework supporting said car and sheaves provided in said framework, a flexible belt carried around said sheaves and disposed between the sheaves and the channel rail, means for taking up the slack in said flexible belt and motors connected to one of said sheaves and a controlling means provided in said car for said motor.

In testimony whereof I sign my name in the presence of two subscribing witnesses this 10th day of July, 1909.

FRANK NEALE.

Witnesses:

P. C. YOUNG,

A. W. ONTHANK.