

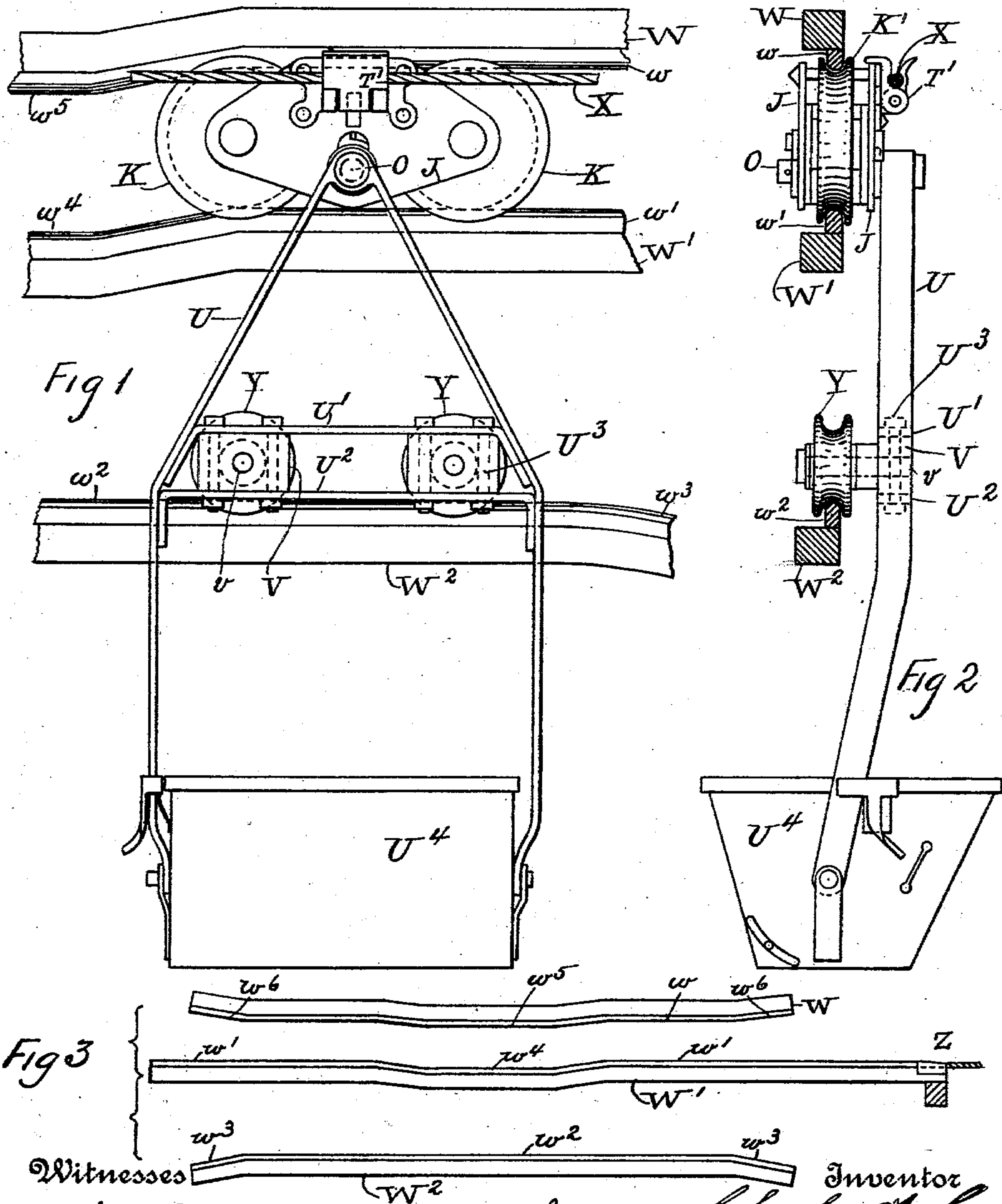
No. 720,781.

PATENTED FEB. 17, 1903.

C. A. CASE.
CARRIAGE FOR TRACK CABLES.
APPLICATION FILED JUNE 3, 1902.

NO MODEL.

3 SHEETS—SHEET 1.



Witnesses
Alpheus Beck.
William P. French

Inventor
Charles A. Case
By his Attorney
A. A. de Bonneville

No. 720,781.

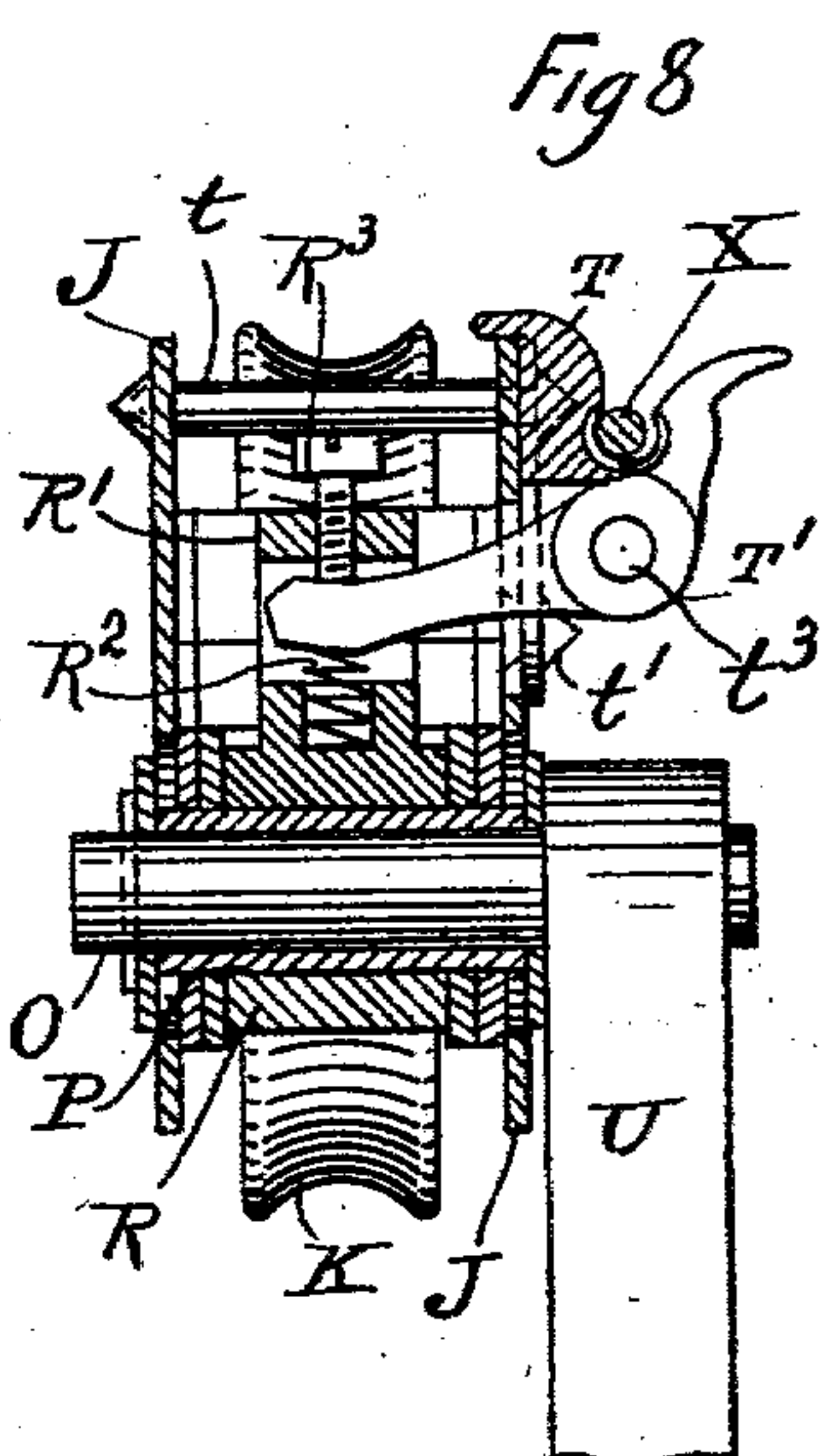
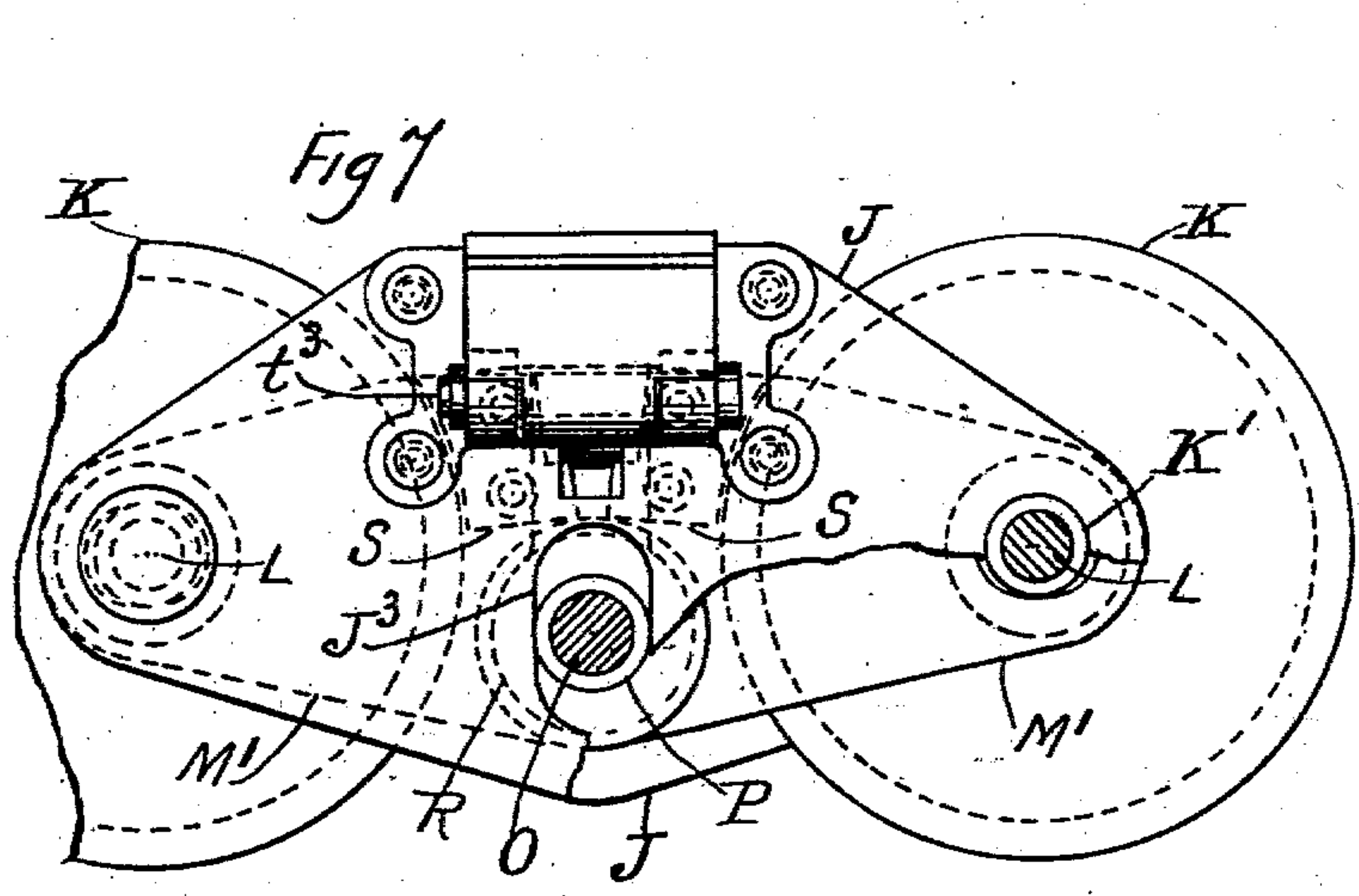
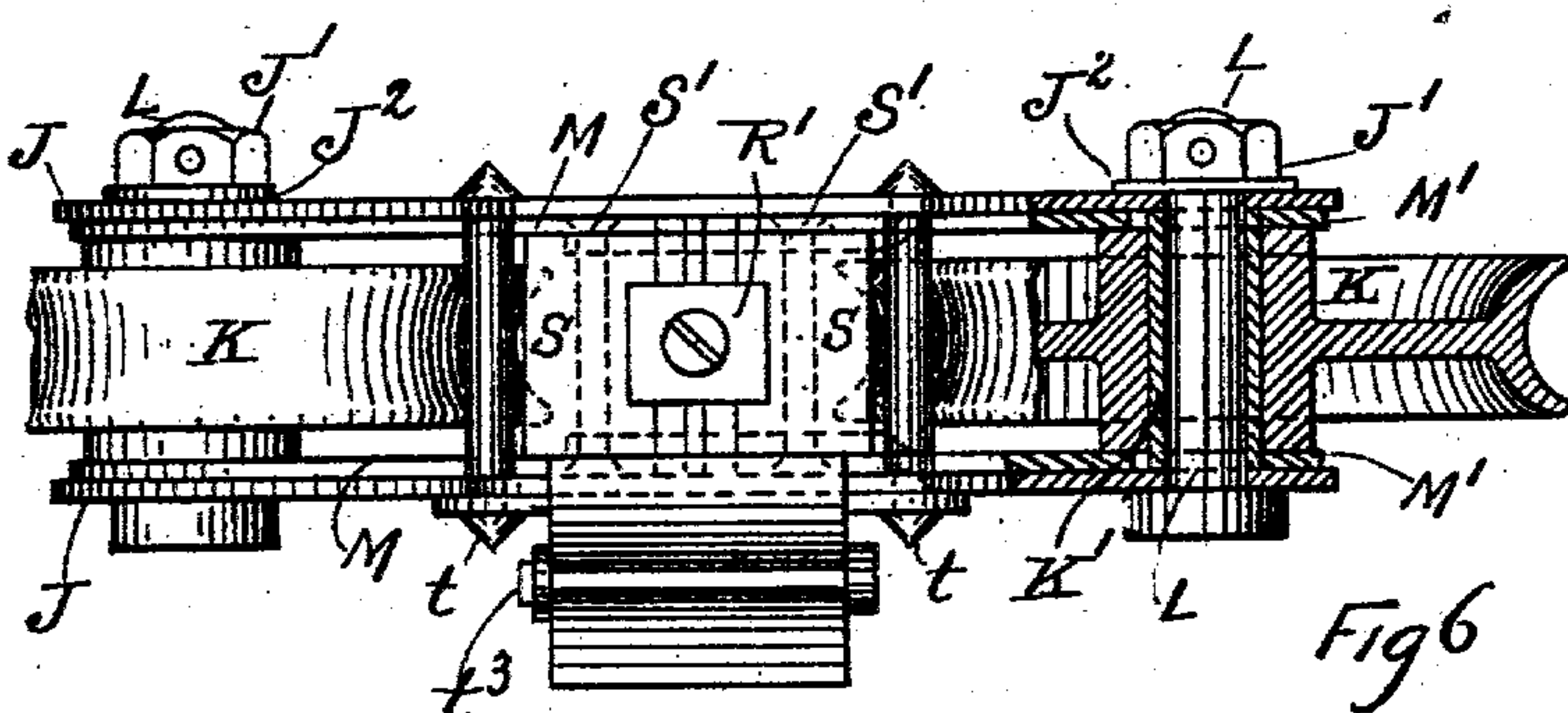
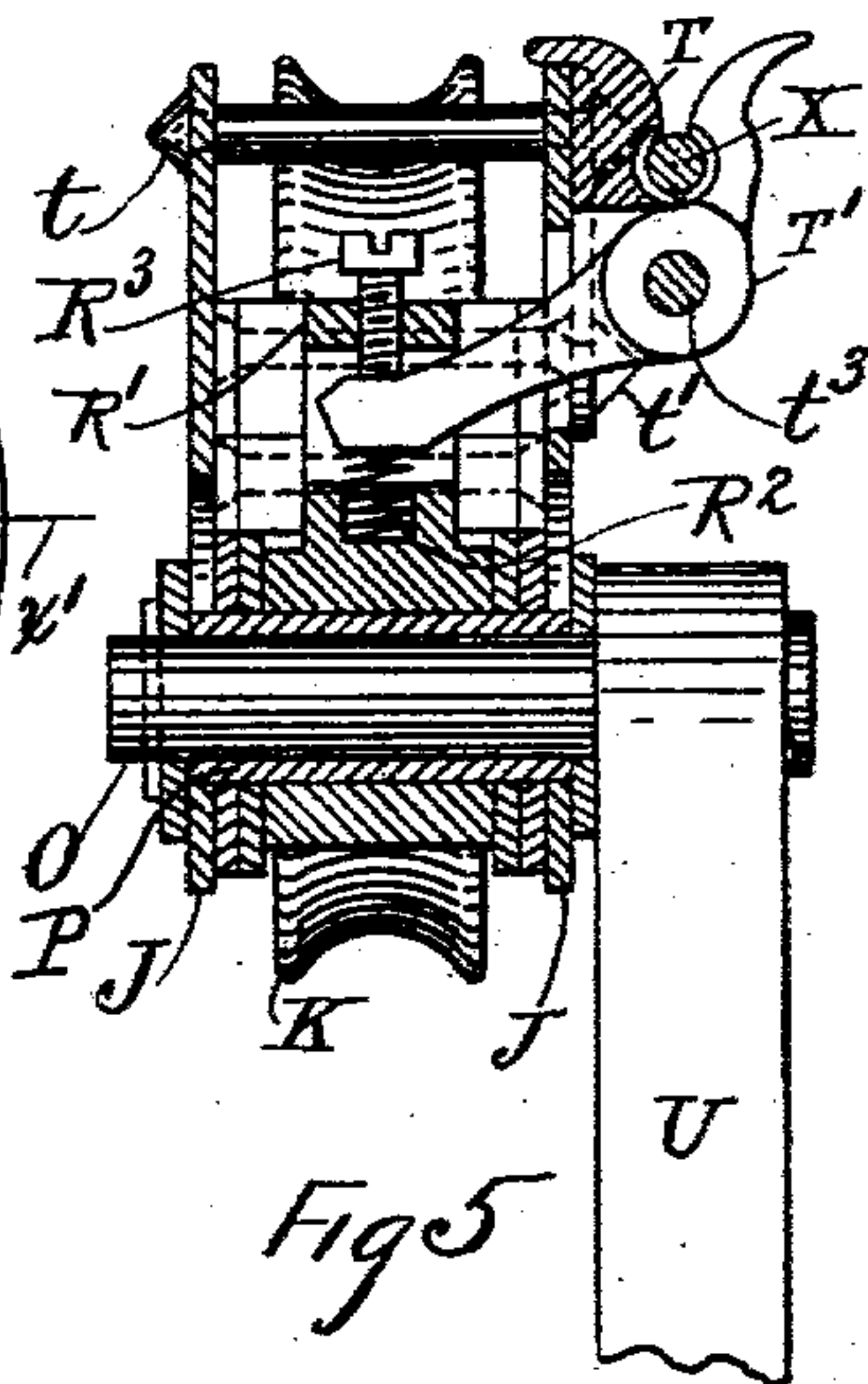
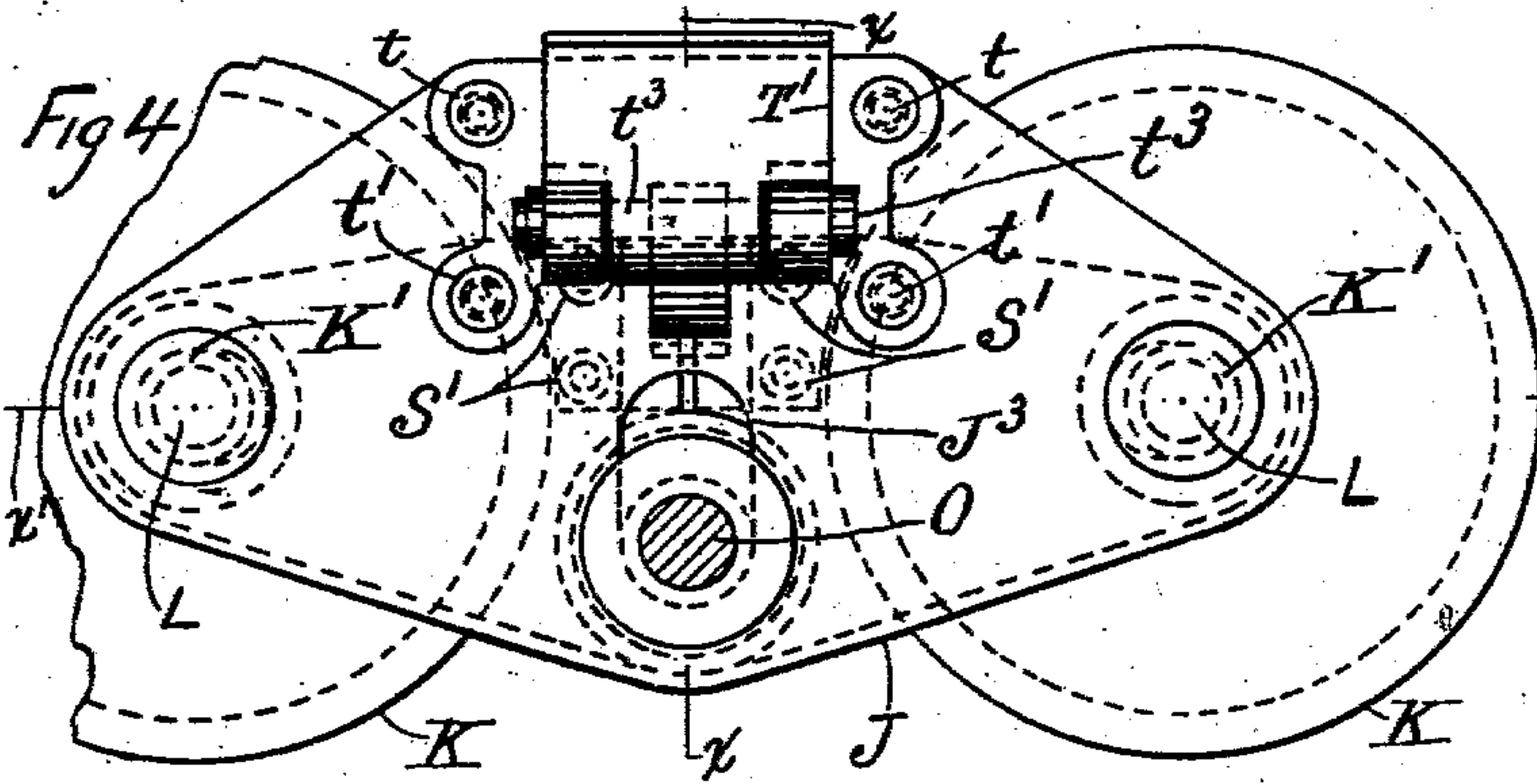
PATENTED FEB. 17, 1903.

C. A. CASE.
CARRIAGE FOR TRACK CABLES.

APPLICATION FILED JUNE 3, 1902.

NO MODEL.

3 SHEETS—SHEET 2.



Witnesses
Alpheus Peck
William P. Franch

Inventor
Charles A. Case
By his Attorney
A. A. de Borneville

No. 720,781.

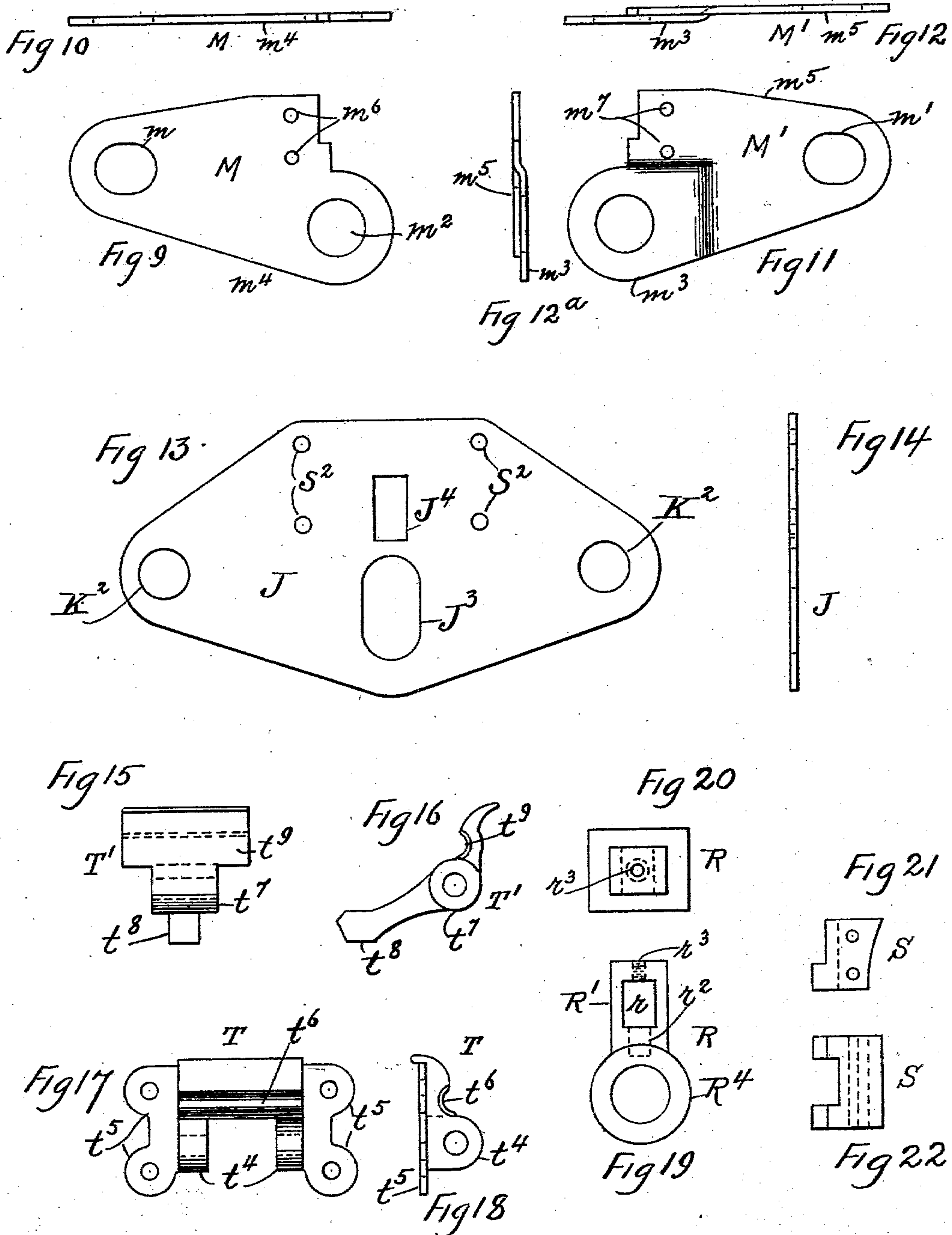
PATENTED FEB. 17, 1903.

C. A. CASE.
CARRIAGE FOR TRACK CABLES.

APPLICATION FILED JUNE 3, 1902.

NO MODEL.

3 SHEETS—SHEET 3.



Witnesses
Alpheus Pect
William P. Franel

By his *Charles A. Case* Inventor
Attorney *A. J. de Bonneville*

UNITED STATES PATENT OFFICE.

CHARLES A. CASE, OF TRENTON, NEW JERSEY.

CARRIAGE FOR TRACK-CABLES.

SPECIFICATION forming part of Letters Patent No. 720,781, dated February 17, 1903.

Application filed June 3, 1902. Serial No. 110,096. (No model.)

To all whom it may concern:

Be it known that I, CHARLES A. CASE, a citizen of the United States, and a resident of Trenton, in the county of Mercer and State of New Jersey, have invented certain new and useful Improvements in Carriages for Track-Cables, of which the following is a specification.

This invention relates to carriages for track-cables, tramways, and the like; and its object is the production of carriages which can be automatically locked and unlocked to traction-ropes.

In the accompanying drawings, Figure 1 represents an elevation of the carriage with a portion of its tramway and guide-rails in a station or terminal. Fig. 2 shows an end view of Fig. 1, with a vertical section through the tramway, guide-rails, and traction-rope. Fig. 3 is an elevation of the tramway and guide-rails. Fig. 4 represents a front view of the carriage on an enlarged scale. Fig. 5 shows a partial section of Fig. 4 on the line $x x$. Fig. 6 is a top view with a partial section on the line $x' x'$ of Fig. 4. Figs. 7 and 8 are respectively similar to Figs. 4 and 5 with their parts in different operative positions. Figs. 9 and 10 show, respectively, an elevation and top view of a link. Figs. 11, 12, and 12^a are respectively an elevation, top, and end view of a link that operates with the link shown in Figs. 9 and 10. Figs. 13 and 14 show an elevation and end view of one of the sides of the carriage. Figs. 15 and 16 represent a front, and an end view of the hinged portion of the grip. Figs. 17 and 18 are a front and an end view of the stationary portion of the grip. Figs. 19 and 20 represent an elevation and top view of an adjusting-link. Figs. 21 and 22 are respectively an elevation and top view of a guide for the adjusting-link.

Referring particularly to Figs. 1, 2, and 3, my invention is shown to consist of the carriage with wheels K, from which is suspended the hanger U, carrying the bucket U⁴. The tramway is represented at w' on a support W' and is connected at its ends with a track-cable, as shown at Z. It has a depression, as shown at w^4 . The hanger U is suspended from the pin O in the carriage and carries the rollers Y, that run on the supporting-rail w^2 ,

secured to the beam W², the said rail being bent down at its ends w^3 . A guide-rail w , with a depression at w^5 and ends bent up at w^6 , is located above the carriage and secured to the beam W. The combination of the tramway and its supporting and guide rails can be multiplied any number of times.

Referring to Figs. 4 to 22, the carriage is shown to consist of the sides J, which are carried on the wheels K, the latter turning on the sleeves K' between the sides J. Axles L are inside the sleeves K', and nuts J' secure the washers J² and sides J against the sleeves K' on the said axles. Links M and M' swing on the sleeves K' through oblong openings $m m'$, and a pin O joins the free ends thereof. A bushing P surrounds the pin O, and oblong openings J³ are made in the sides J for the pin O with its sleeve P. On the latter rides an adjusting-link R, which contains the opening r in its stem R' and carries a spring R² in a cavity provided therefor at r^2 , and it is tapped in its crown for a screw R³. Guides S for the adjusting-link are secured to the links M M' by means of the rivets S' through the holes $m^6 m^7$ in the said links M and M'. A grip for the traction-rope X is composed of the stationary member T, secured to one of the sides J of the carriage—in this instance with rivets $t t'$ —and a hinged member T' operates with the stationary member on the bolt t^3 . The member T contains the supports t^4 , flanges t^5 , and the traction-rope bearing t^6 , and the hinged member T' has formed therein the journal-bearing t^7 , the traction-rope bearing t^9 , and the horn t^8 , which is adjusted between the spring R² and screw R³ of the adjusting-link R when in operative position. The sides J of the carriage, Figs. 13 and 14, contain, besides the oblong openings J³, the openings J⁴ for the horn t^8 , holes S² to secure the stationary member T of the grip, and holes K² for the sleeve K', by which disposition the traction-rope and appurtenances can be located on either side of the carriage. The links M, the bodies of each of which are all in one plane, each contain, as already stated, one oblong opening m for the insertion of one of the sleeve-covered axles L of the carriage and the opening m^2 in the free end for the insertion of the bushed pin O of the carriage. Each of the links M' is

bulged out at the free end, as shown at m^3 , to allow the free end of the accompanying link M to ride on the pin O and at the same time also contains an oblong opening, as shown at m' . The main portions m^4 and m^5 of the links M and M', respectively, are in the same vertical plane when connected up on the carriage, although this particular form for the links is not essential.

It will be noted that the hanger U carries the load and has secured thereto the braces U' U², to which latter are fastened the supports V for the axles v of the rollers Y.

To operate and use my invention, the carriage is put on its tramway w' in a station or terminal and traction-rope X is placed in the grip just above the bearings t^6 t^9 . The carriage is then moved to the depression w^4 of the tramway, when the hanger U, with its rollers Y bearing on the lower guide-rail w^2 , and the guard-rail w above the carriage will maintain it in position, while the depressed portion w^4 of the tramway and depressed portion w^5 of the upper guide-rail will force the wheels K of the carriage with its sides to lower relatively to the pin O. The movements of the sides of the trolley are taken up by the links M' M', the adjusting-link R, and the horn t^8 of the grip, whereby the grip is opened to allow the traction-rope X to fall in place. As soon as the carriage is moved to the main level w' of the tramway and the rollers Y are not supported by the lower guide-rail w^2 the weight of the hanger U with its appurtenances pulls the pin O down, which motion is transmitted through the adjusting-link R and links M M' to the horn t^8 of the grip, whereby the traction-rope is secured in the said grip. It will be noted that the oblong openings m m' allow the links to swing on the sleeves K' of the axles L without pinching the link R, and the guides S maintain the said adjusting-link in proper positions.

Having described my invention, I claim—

1. In a carriage the combination, of a frame, links journaled to the frame, a pin carried by the free ends of the links, an adjusting-link carried by the pin, and a grip connected up with the adjusting-link.

2. In a carriage the combination, of a frame, links journaled to the frame, a pin connecting the free ends of the links, an adjusting-link supported on the pin, a stationary portion of a grip secured to the frame, a movable portion of the grip hinged to the stationary portion, and also connected to the adjustable link.

3. In a carriage the combination, of a frame, a grip extending from the frame, links journaled to the frame, a pin connecting the free ends of the links, an adjusting-link supported on the pin and connected with the grip, and rollers, a connection between the said rollers and said pin, means to maintain the rollers, and elements connected thereto at rest in relation to vertical movements of the frame of the carriage.

4. In a carriage the combination, of a frame, wheels journaled therein, a grip extending from the frame, links with oblong holes journaled in the frame, a pin connecting the free ends of the links, an adjusting-link supported on the pin and connected with the grip, a hanger suspended from the pin, rollers journaled on the hanger, a rail for the rollers, a tramway supporting the wheels, a guide-rail over the wheels, and a traction-rope for the grip.

5. In a carriage the combination of a frame, wheels journaled thereto, a stationary portion of a grip extending from the frame, links journaled to the frame, a pin connecting the free ends of the links, a movable portion of the grip hinged to the stationary portion thereof, means to connect the movable portion of the grip with the said pin, a hanger extending from the pin, rollers journaled in the hanger, a rail under the rollers, a tramway supporting the wheels, a depression in the said tramway, a guide-rail with a depression over the depression in the tramway, and distant therefrom to allow the carriage to pass.

Signed at New York, in the county of New York and State of New York, this 31st day of May, A. D. 1902.

CHARLES A. CASE.

Witnesses:

ALPHEUS PECK,
WILLIAM P. FRANCL.