

G. LEUE.
TRANSPORTER.
APPLICATION FILED MAR. 4, 1911.

1,053,305.

Patented Feb. 18, 1913.

Fig. 3.

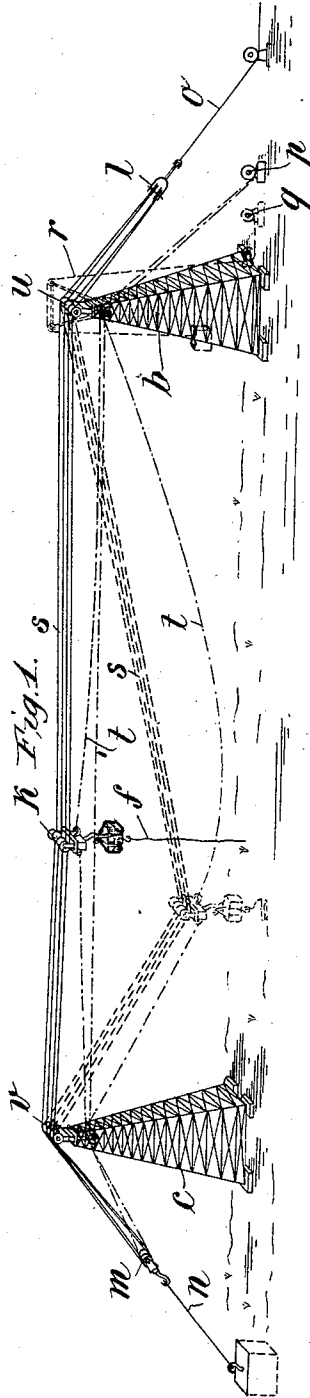
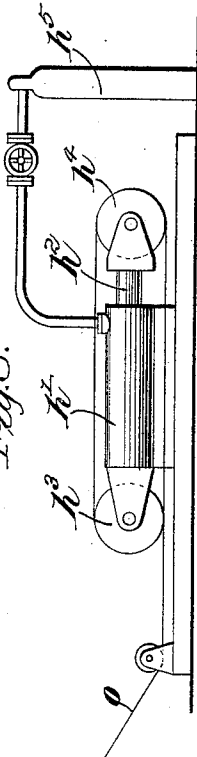
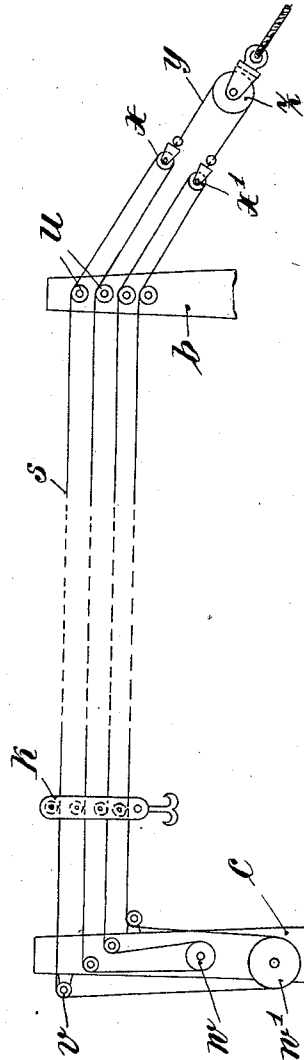


Fig. 2.



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UNITED STATES PATENT OFFICE.

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TRANSPORTER.

1,053,305.

Specification of Letters Patent.

Patented Feb. 18, 1913.

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To all whom it may concern:

Be it known that I, GEORG LEUE, engineer, a subject of the King of Prussia, residing at Wilmersdorf, near Berlin, Germany, have
5 invented certain new and useful Improvements in Transporters; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which
10 it appertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

15 My invention relates to transporters and has for its object to provide an improved transporter for conveying loads to and from a varying point of loading or unloading, for example, to and from a ship lying off shore
20 with a high sea between the ship and the shore.

The object of the invention is to provide a multiple cable way arranged to insure a quite uniform distribution of the load on
25 the different lines of the cable way.

My invention therefore consists essentially of a transporter comprising in combination a non-traveling endless supporting cable arranged in a number of substantially parallel lines and reeved through supporting
30 pulleys, a traveler supported on the different lines of said cable way, and a separate rope to draw said traveler along said multiple cable way.

35 Two constructions of my improved transporter are illustrated by way of example in the accompanying drawings.

Figure 1 illustrates a transporter having a cable arranged in four lines in horizontal series, Fig. 2 shows diagrammatically a further constructional form of the transporter, the lines of the supporting cable being vertically superposed, Fig. 3 shows a stretching
40 device.

45 Referring to Fig. 1, s is a multiple supporting cable way supported on towers b and c , and t a rope or cable for drawing the load along the cable s . The supporting cable s is shown as having four lines for the conveyance of heavy loads. On this quadruple cable way runs a traveler k . In order that the load may be always uniformly distributed over the four lines, the latter constitute sections of a single endless cable
50 which passes around two pairs of pulleys l

and m and the single lines pass over four separate pulleys u and v on the towers b and c respectively. By this arrangement there is always equal tension in all the lines of the cable way so that each line supports the
60 same load.

The pair of pulleys m are held fast by an anchored rope n while the other pair of pulleys l is connected to a rope o leading to a stretching device H (Fig. 3) in order to
65 permit the lowering of the load by drawing down the cable way thus yieldingly held stretched, by means of a down-draw rope f .

The yielding stretching device H (Fig. 3) has preferably the form of a pulley tackle
70 around whose groups of pulleys h^3 , h^4 the cable is passed, one group h^3 of said pulleys being mounted on a cylinder h^1 and the other group h^4 at the free end of a piston h^2
75 arranged in said cylinder and exposed to the pressure of an elastic fluid such as compressed air or carbonic acid contained in a bottle h^5 which communicates with the cylinder. A stretching device of this type is
80 also shown in my former Patent No. 775,981.

The draw-rope t is actuated by means of a crab p . The placing of the load onto or removing it from the traveler at the end of the cable way may be effected by means of
85 a hoist r with windlass q as shown in Fig. 1 in dotted lines.

The construction shown in Fig. 2 is the same in principle as that shown in Fig. 1. But the four lines of the supporting cable way are arranged one above the other. Further the pulleys w and w^1 around which the cable passes at the left hand end are mounted on the tower c , while the corresponding pulleys x and x^1 on the right hand end are separately arranged and are attached to a
90 cable y passing around a pulley z which takes up the pull of the stretching device. This arrangement insures a still more uniform distribution of the load over the four lines, the pulleys x and x^1 equalizing the
95 tension of the upper and lower pair of lines respectively while the pulley z insures an equal total tension of the two pairs of lines.

In the drawings my improved transporter is shown as being arranged with two towers
105 on land, but of course if used on a shore for loading and unloading ships, one of the towers at least will be built out in the sea, in order to permit the ship being anchored
110 between the towers.

I claim:

1. In a conveyer of the kind described, a plurality of pulleys, a multiple supporting cable way comprising an endless non-traveling cable arranged in a number of parallel lines reeved through said pulleys, a traveler and traveling pulleys supported on the different lines of said multiple cable way, and a separate rope to draw said traveler along said multiple cable way.

2. In a conveyer of the kind described, the combination of a multiple supporting cable way, comprising an endless non-traveling cable arranged in a number of parallel lines, pulleys supporting said cable, pulleys around which the cable passes at the return points, a traveler and traveling pulleys thereon supported on the different lines of said multiple cable way, and a separate rope to draw said traveler along said multiple cable way.

3. In a conveyer, the combination with independent stationary supports and pulleys mounted therein, of a multiple supporting cable way, comprising an endless non-traveling cable arranged in a number of parallel lines reeved through said pulleys, a yielding stretching device acting on one end of said cable way, means for drawing down the cable way at a point between the supporting points against the pull of said stretching device, a traveler and traveling pulleys thereon, supported on the different lines of said multiple cable way, and a separate rope to draw said traveler along said multiple cable way.

4. In a conveyer, the combination of two independent towers, a plurality of pulleys, a multiple supporting cable way, supported by said towers and comprising an endless non-traveling cable arranged in a number

of parallel lines reeved through said pulleys, a traveler and traveling pulleys thereon, supported on the different lines of said multiple cable way, and a separate rope to draw said traveler along said multiple cable way.

5. In a conveyer, the combination of two independent towers, a plurality of pulleys, a multiple supporting cable way, supported by said towers and comprising an endless non-traveling cable arranged in a number of parallel lines, around said pulleys, pulleys around which the cable passes at its return points, a traveler and traveling pulleys thereon, supported on the different lines of said multiple cable way, and a separate rope to draw said traveler along said multiple cable way.

6. In a conveyer, the combination of two independent towers, a plurality of pulleys, a multiple supporting cable way, supported by said towers, comprising an endless non-traveling cable arranged in a number of parallel lines reeved through said pulleys, a yielding stretching device acting on one end of said cable way, means for drawing down the cable way at a point between the supporting points against the pull of said stretching device, a traveler and traveling pulleys thereon, supported on the different lines of said multiple cable way, and a separate rope to draw said traveler along said multiple cable way.

In testimony that I claim the foregoing as my invention, I have signed my name in presence of two subscribing witnesses.

GEORG LEUE.

Witnesses:

AUGUST TRAUTMANN,
HENRY HASPER.