C. D. SEEBERGER.

TRAVELING SIDEWALK.

APPLICATION FILED JAN. 3, 1911.

1,096,960.

Patented May 19, 1914.

2 SHEETS—SHEET 1.

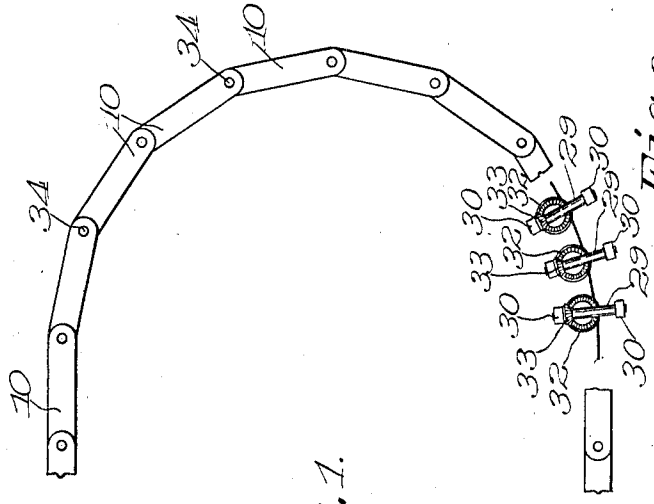
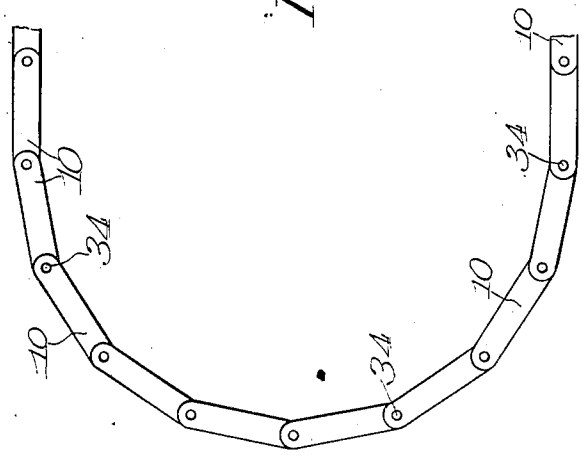


Fig. 1.



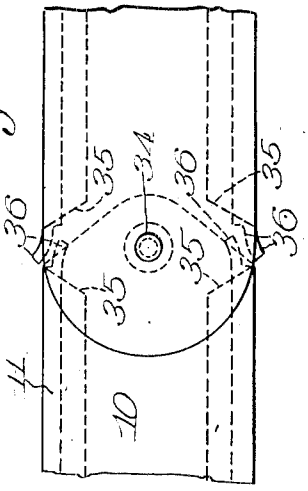


Fig. 3.

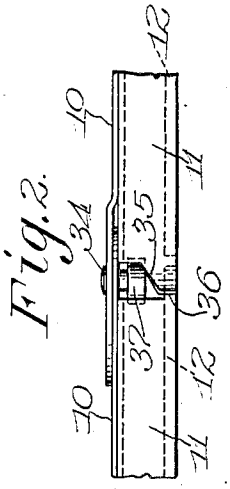


Fig. 2.

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2 SHEETS—SHEET 2.

Fig. 5

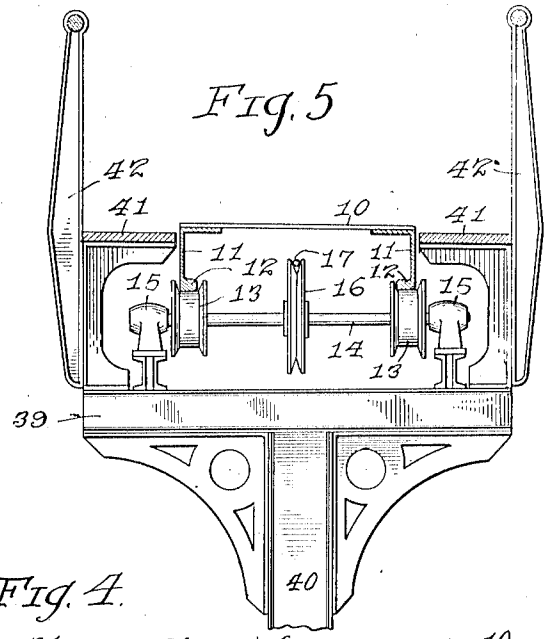


Fig. 4.

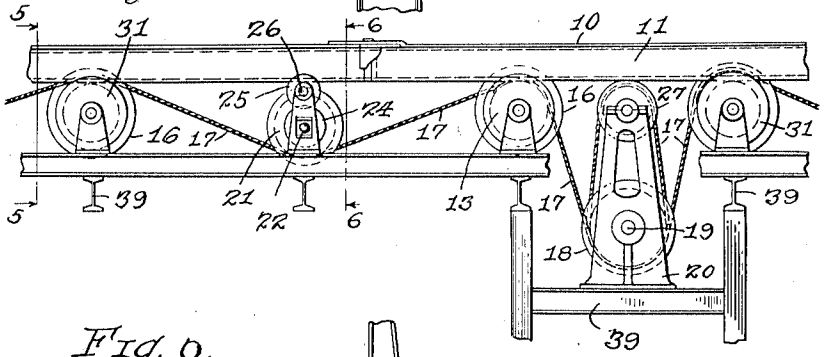


Fig. 6.

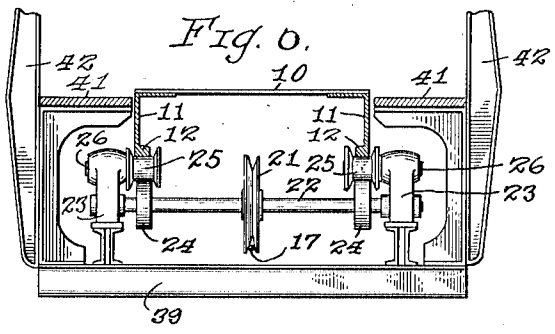
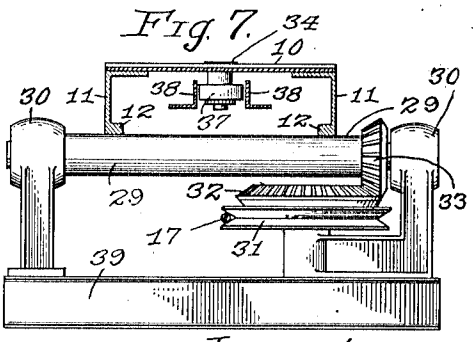


Fig. 7.



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UNITED STATES PATENT OFFICE.

CHARLES D. SEEBERGER, OF NEW YORK, N. Y.

TRAVELING SIDEWALK.

1,096,960. Specification of Letters Patent. Patented May 19, 1914.

Application filed January 3, 1911. Serial No. 600,612.

To all whom it may concern:

Be it known that I, CHARLES D. SEEBERGER, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Traveling Sidewalks, of which the following is a specification, reference being had therein to the accompanying drawing.

My invention relates to moving sidewalks, and consists in the matters hereinafter described and pointed out in the appended claims.

In the accompanying drawings which illustrate an embodiment of my invention, Figure 1 is a broken plan view showing a series of articulated transporting sections and means for driving the same at curves; Fig. 2 is a view in side elevation showing two jointed carrying sections or surfaces; Fig. 3 is a plan view of the parts of Fig. 2; Fig. 4 is a view in side elevation showing the carrying surface and driving mechanism; Fig. 5 is a detail view partly in elevation and partly in cross-section on the line 5—5 of Fig. 4 showing the parts on an elevated structure; Fig. 6 is a view similar to Fig. 5 on the line 6—6 of Fig. 4, and Fig. 7 is view partly in elevation and partly in cross-section showing one of the drives at the curve shown in Fig. 1.

In the drawings the numeral 10 designates a series of articulated sections or surfaces, preferably checkered metallic plates, secured to depending brackets or skirts 11 having runners or bearings 12 of suitable form and size forming the tracking surface on rollers 13 secured to shafts 14 each mounted in suitable bearings 15 on a suitable base or frame and carrying a sheave 16 engaging a driving cable or chain 17. It is obvious the driving chain or cable may be operated by any suitable means, and I prefer to employ a drive pulley 18 mounted on a shaft 19 journaled in bearings in a frame 20 below the moving carrier, the shaft 19 being connected to any suitable motor. In practice the sheaves 16 will provide sufficient adhesive contact or traction for the cable 17 for ordinary loads, but when the carrier is located where it may be required to transport unusual loads I provide additional adhesive contact for the cable by means of a series of auxiliary devices such as the sheaves 21 mounted on shafts 22 journaled in bearings 23 on the frame or base, and each having on its shaft a pair of rollers 24 having frictional driving engagement with rollers 25 on stub-shafts 26 also mounted in the bearings 23, the rollers 25 thereby rotating in the same direction as the rollers 13 and being in frictional driving engagement with the tracks 12. This provides additional adhesion or contact for the cables, and also additional traction contact on the moving carrier. Under conditions of long runs or circuits I may also increase the cable driving contact by means of idlers 27 journaled in bearings on the frame 20 to afford wraps of cable 17 around the drive 18, it being understood that when a plurality of drive shafts are used this arrangement may be employed at intervals to increase the drive contact for correspondingly long runs. At curves I prefer to employ bearing-rollers 29 which are longer than the width of the carrier and are journaled in bearings 30 on the frame to frictionally engage the tracks 12 as shown in Figs. 1 and 7, one or more such rollers being employed as desired. Each roller 29 is actuated by the cable 17 by means of a horizontally disposed sheave 31 to which is fixed a bevel-gear 32 meshing with a gear 33 on the shaft of the roller 29. The rollers 29 may be conical to correspond with the curved path of the carrier and secure proper speed ratios.

The transporting or carrying sections are articulated or jointed together to form an endless carrier, and for this purpose I unite their adjacent overlapping ends by pivot pins 34, the ends of the skirts or brackets being cut away as shown at 35 in Figs. 2 and 3 and the projecting ends 36 of adjacent tracks or runners being oppositely bent to form continuous lap joints. The pivots are preferably provided with guide rollers 37 which engage stationary guides or channels 38 at the curves, it being of course understood that these guides may be used throughout the run or circuit if desired.

The parts may be mounted on any suitable frame or base 39, and when the carrier is to be used as an elevated sidewalk it may be carried upon suitable pillars 40 and run contiguous to suitable stationary platforms 21 having balustrades or guard rails 42.

The pendent track-rails of the platform are carried and driven by the rotating roll-

ers which are mounted in fixed bearings at intervals along the run to provide a way for the platform, and the sections of the platform are so arranged that there are no openings or gaps when traveling around curves, a continuous, flat transporting surface being provided. The overlapping portions of the tracks provide a continuous trackage on both straight and curved portions of the run, and the elongated rollers at the curves insure effective driving and supporting contact under varying conditions of the platform.

While I have described the features of my present invention as exemplifying a moving sidewalk, it is obvious that they may be employed for a moving carrier or conveyer for freight, etc., and that my invention comprehends their use for all such analogous purposes.

Having described my invention, I claim:

1. In a device of the class described, the combination of a sectional endless carrier, a plurality of rotating driving members therefor constituting a way thereof, and a drive cable frictionally engaging the driving members.

2. In a device of the class described, the combination of a sectional endless carrier, a plurality of rotating driving members therefor constituting a way thereof and arranged in pairs, a drive sheave for each pair, and a driving cable operating the sheaves.

3. In a device of the class described, a series of carrying sections, rotating members supporting and constituting the drive for the sections and providing a way therefor having straight and curved portions, the supporting portions of the driving members at the curved portion extending across the way, and means to operate the driving members.

4. In a device of the class described, a series of pivoted carrying sections, rotating members supporting and constituting the drive for the sections and providing a way therefor having curved and straight portions, the members at the curve extending across the way, drive sheaves for the members, and a driving cable operating the sheaves.

5. In a device of the class described, a series of pivoted carrying sections, rotating members supporting and constituting the drive for the sections and providing a way therefor having curved and straight portions, the driving members at the curve having bearing surfaces extending across the way, drive sheaves for the members, the drive sheaves for the extended members being geared thereto, and a drive cable operating the sheaves.

6. In a device of the class described, a series of pivoted carrying sections, rotating members located at intervals for driving and supporting the sections and arranged to make a complete circuit, certain of the rotating members being in the form of elongated rollers, drive sheaves for the members, gears between the elongated rollers and their sheaves, and a driving cable engaging the sheaves.

7. In a device of the class described, a series of pivoted carrying sections, rotating members supporting and constituting the drive for the sections and providing a way therefor having curved and straight portions, the driving members at the curve having bearing surfaces extending across the way, drive sheaves for the members, drive sheaves for the extended members being horizontal, gears between the horizontal sheaves and their driving members, and a drive cable operating the sheaves.

8. In a device of the class described, a chain of connected carriers, rotating driving wheels upon which said carriers are mounted, means for driving said wheels comprising rollers engaging the wheels, and means to drive the rollers.

9. In a device of the class described, a chain of connected carriers, rotating driving wheels arranged in pairs upon which said carriers are mounted, rollers engaging the wheels and mounted in pairs upon suitable axles, a sheave on each axle, and a driving cable engaging the sheaves.

10. In a device of the class described, a chain of connected carriers, driving wheels arranged in pairs upon which said carriers are mounted, friction rollers rotating said wheels to drive the carriers, an axle for each pair of rollers, sheaves on the axles, and a driving cable engaging the sheaves.

11. In a device of the class described, a chain of connected carriers, rotating driving wheels arranged in pairs upon which said carriers are mounted, a drive shaft, an idle wheel driven from the shaft, and a cable driven by the shaft and driving the pairs of driving wheels.

12. In a device of the class described, a series of pivoted carriers, driving wheels upon which said carriers are mounted, said wheels being arranged at different angles so that the carriers travel in straight and curved runs, guides for said carriers at the curves, gears secured to said wheels at the curves, shafts provided with gears meshing with said first gears and having sheaves, and a cable engaging said sheaves and driving said wheels.

13. In a device of the class described, a series of pivoted carriers, driving wheels upon which said carriers are mounted, said wheels being arranged at different angles so that the carriers travel in straight and curved runs, gears secured to said wheels at the curves, shafts provided with gears meshing with said first gears and having hori-

zontal sheaves, sheaves for the wheels on the straight runs, and a cable extending in a circuit below the carriers to drive the sheaves.

14. In a device of the class described, an endless carrier, a way composed of rotating members for driving and supporting the carrier, a cable to drive the said members, a drive pulley for said cable, and an idler to afford a wrap of the cable about the pulley.

In testimony whereof I affix my signature in presence of two witnesses.

CHARLES D. SEEBERGER.

Witnesses:

E. L. ANSTETT,

R. H. PEPPER.