CTI SYSTEMS

Devoted to create. Committed to perform.

TARCA®

Patented Track

CTI Systems

The Luxembourg-based company CTI Systems with its 200 employees has over 60 years of experience in the fields of intralogistics, aviation and surface treatment.

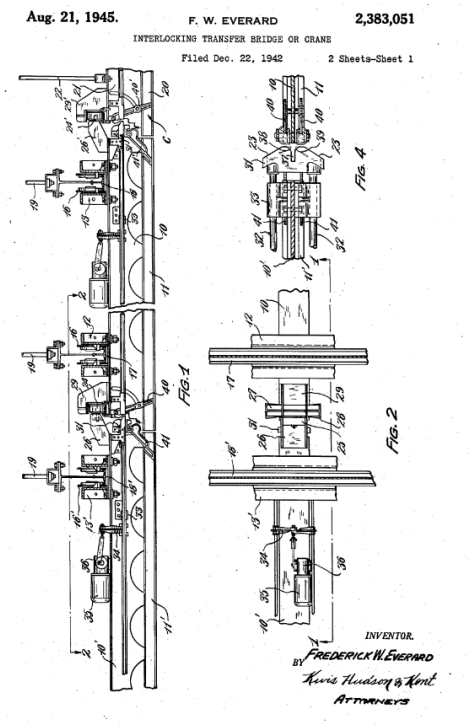
CTI Systems is a leading supplier of integrated automated handling and processing systems, with a focus on heavy and bulky loads. Our portfolio includes automated material handling solutions, aircraft servicing systems, storage systems, surface treatment plants, assembly lines, as well as software solutions for production control or for optimisation of storage & distribution systems (MES & WMS and MFC), including the integration of machinery from other suppliers.

CTI Systems - Patented Track With Welded Rail

The unique feature of CTI patented TARCA® track is its patented method of manufacturing which ingenuously welds a special designed rolled high-carbon alloy steel rail with raised treads to a mild steel flange and web.

CTI first patented the rail in 1926. In 1945, the company secured a patent for the first interlocking system that enabled load transfers between adjacent systems. By 1962, a fully automated rail welding method was also patented.

Literally years of research, testing and optimization went into the product design, structural testing, optimizations and rigidly controlled manufacturing process. The flange, web and rail are welded automatically and continuously to form a combined section. Special care is taken during manufacturing to maintain controlled tolerances.


Aug. 21, 1945. F. W. EVERARD 2,383,051

INTERLOCKING TRANSFER BRIDGE OR CRANE

Filed Dec. 22, 1942 2 Sheets-Sheet 1

FIG. 1

FIG. 2

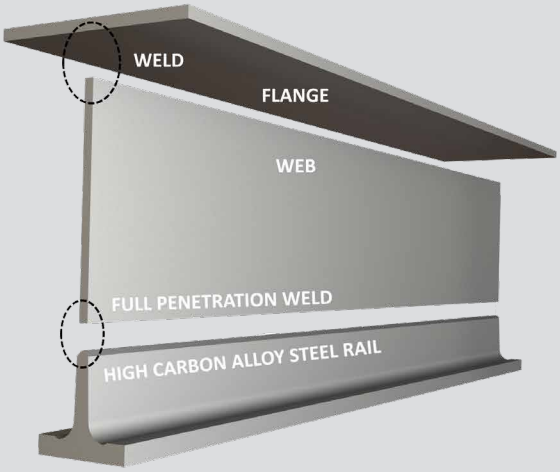
FIG. 4

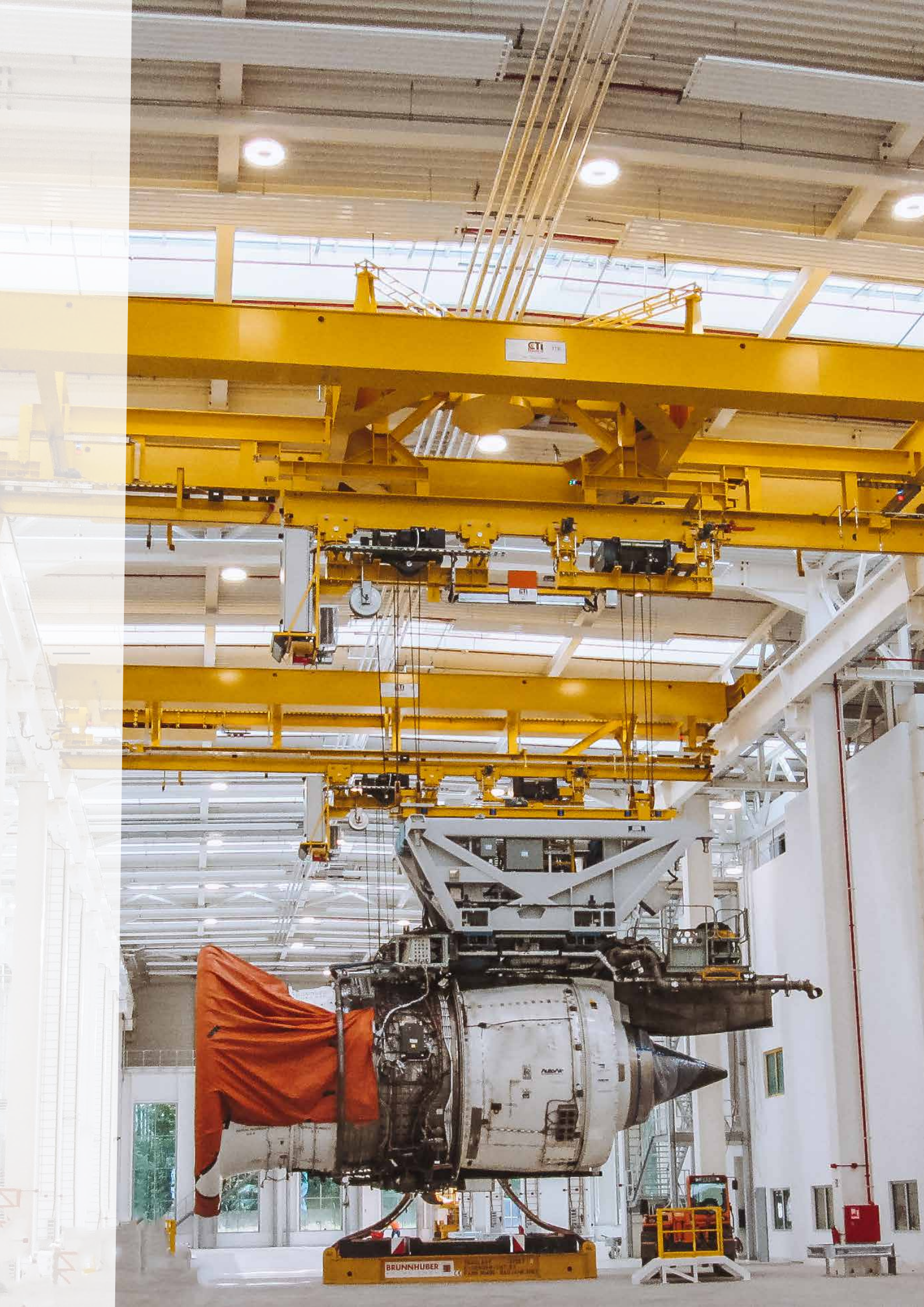
INVENTOR. FREDERICK W. EVERARD

BY Lewis Hudson & Kent

ATTORNEYS

From a strength standpoint, regular CTI patented track and CTI patented super track are both designed and produced to bridge spans with a minimum number of supports and minimum deflection. For example, CTI patented track has been used to make crane bridges for operation on runways with tracks spaced on 30m centers. The rail is also suitable to easily build multi-span cranes which bridge much longer distances distributing loads perfectly between the roof trusses.

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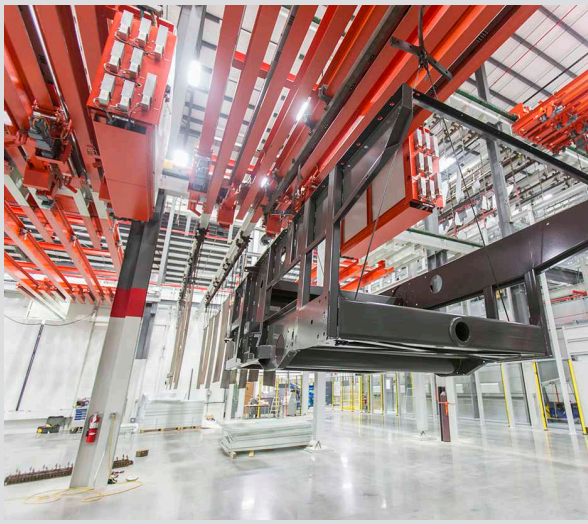
CTI Patented TARCA® Track Types

CTI patented TARCA® track exists in 84mm with as well as super tracks with 114mm wide rail which were developed to satisfy the demand for even higher loads and heavy-duty applications.

All CTI patented tracks have double raised-tread rail made of high-carbon alloy steel reduces peening and assures far longer operating life than ordinary track designs.

TARCA® rails are available in a wide range of sizes from 0,250m to 1,250m deep.



CTI Electrification Systems - Leading the Industry in Safety and Reliability

All CTI electrification components are designed to match the rugged service requirements encountered by typical crane and monorail systems. Mechanically, these components can withstand severe vibrations and impacts. Electrically, they can handle heavy surge currents, and the continual make and break of power flow during years of operation.

CTI electrification has been designed to outperform the standard general purpose of interlocking applications.

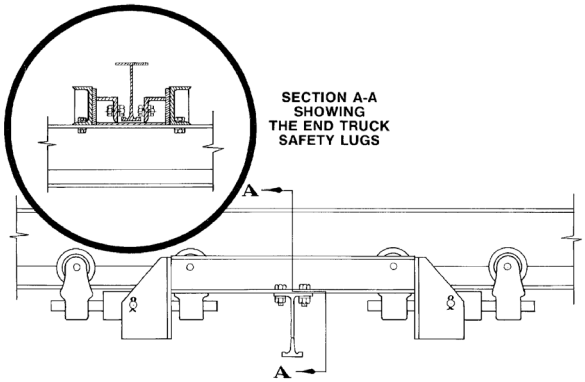
Underhung Crane End Trucks and wheels

Designed for long life and maximum safety

Ruggedly built CTI end trucks have long set the standards of engineering excellence in the industry. Constructed to assure smooth easy crane travel, the end trucks normally require little maintenance for years. All CTI end trucks are designed for minimum headroom which permits higher lifts and greater utilisation of total space in a building. Wheels in CTI end trucks and carriers are dropforged steel to minimise the possibility of shock fractures. All wheel treads and flanges are heat treated to an approximate depth of 5mm to avoid development of flat spots and reduce wear.

Another feature of CTI end trucks are safety lugs. They are completely independent of the idler heads and motor heads and are an integral part of the bridge girder end truck connection.

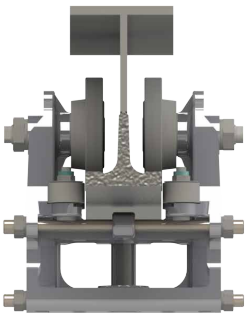
Welded steel frame on the end trucks is designed for maximum crane hook lift. Forged steel wheels feature heat-treated treads and flanges. Wheels and complete head assemblies can be easily removed and replaced at any point on crane track.

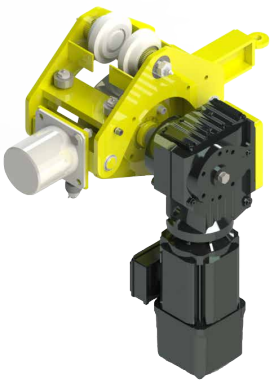


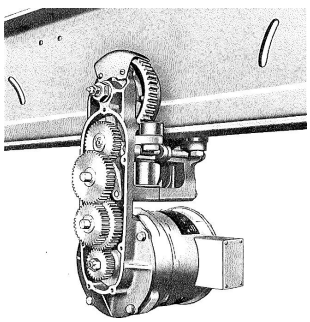
Independent Motor Drives

CTI was the first in Europe to make the squaring shaft method of driving cranes obsolete. For more than 30 years, the company has refined the design and manufacture of independent motor drives giving longer wheel life, lower power requirements, and smoother overall operation. CTI combines machine tool precision and ruggedness in its continuous geartrain drive units. Precision cut steel gear teeth, heavy-duty bearings and built-in lubrication assures long drive life and minimum maintenance.

Similar design and manufacturing expertise have been applied to CTI tractors and friction drives, both based on friction wheels. Also built for heavy-duty service, tractors and friction drives supply the added power to climb grades and pull extra heavy loads.







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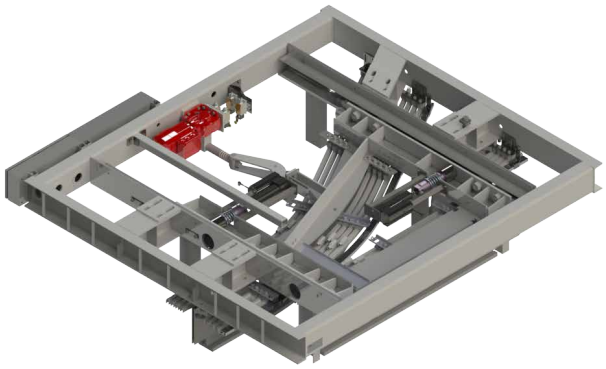
Track Switches, Interlocks, Discharge Points

Time tested for safety and ease of operation

Switches

Similar to rugged railroad switches, CTI monorail track switches are always produced of rolled steel to withstand severe shock loads, vibration and twisting forces. Assembled in fixtures to assure accurate and permanent alignment, the inner frame moves with little effort. A positive locking device holds the monorail switch firmly in the desired position and minimises accidental disengagement. Special safety guards are incorporated in the design to prevent carriers from running off open ends of rails. Switches are available for both manual and power operation.



Interlocks

Interlocks allow smooth crossover of loaded carriers between cranes, from crane to monorail with switches or from crane to suspended storage spurs making thy system very flexible in its use and allows customers to move their goods easily between building bays.

No other crane track interlocks and discharge points can match the CTI record of smooth and easy operation. Carriers cannot run off the ends of tracks because safety forks automatically drop to block carrier wheels.

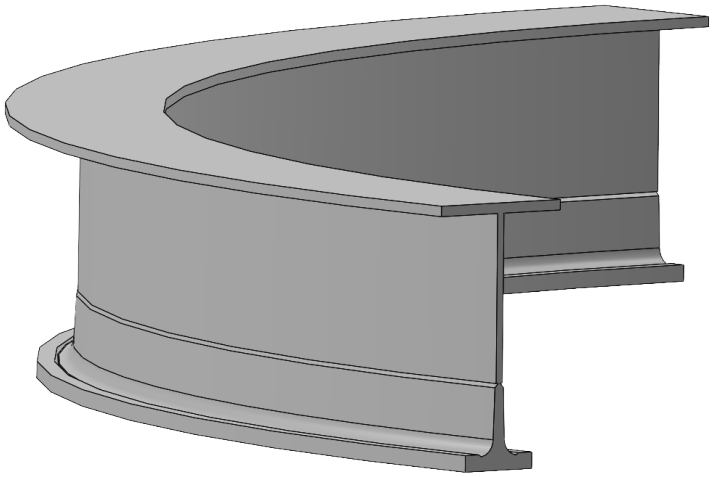
When equipped with an automatic latch, which is manually preset, the crane interlock immediately snaps in place when reaching another crane bridge beam or transfer track. This eliminates lost time in jockeying the crane back and forth to eventually make engagement. Interlocks are available for both manual and motor operation.

Monorail Track Curves

As production process isn´t always a straight line, CTI monorail track curves are designed in various sizes angles that allow entire customized layout drawings.

The curve shape fits perfectly with all other TARCA® components, because they are produced from the same basic straight rail and follow a specific bended process.

Electrical continuity for power supply and data communication, are also insured with adapted current rails curved, whether they are inside or outside of the track curve.



Lifting Stations

The combination of TARCA® tracks rails and curves assembled on a horizontal plan, CTI provides additional solution in vertical direction, in order to link multiple different levels with same technology.

By this way, the lifting station is incorporated in between a portion of TARCA® loop, that your products will follow another circuit in another level: storage for example.

Multiple rails might be fixed on the lifting station to allow higher products flow, between production and storage for example.

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