nal, slat and apron conveyors usually are installed flush with the floor to facilitate loading and unloading When so located, conveyors should be guarded by handrails (except at loading stations) so that workmen will not step onto the moving conveyor Openings in the floor at the loading platforms should be guarded or covered

Flight conveyors

The flight conveyor (Fig 20–27) is similar to the slat conveyor except that the metal flights are attached at right angles to the chain

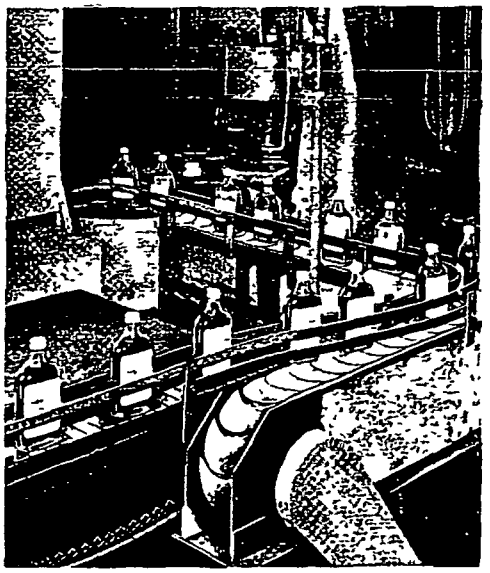


FIG 20–28 —Two small apron conveyors used in conjunction with a bottling machine

rather than parallel to it These equally spaced flights act as scrapers as they are pulled through a trough containing stone, coal, or other bulk material

The flight conveyor uses one or two chains and may be operated at an incline Shearing and pinching hazards are similar to those on the slat conveyor and should be guarded

Chain conveyors

Chain conveyors take many forms, but they all carry, pull, push, haul, or tow the load either directly by the chain or by means of attachments, pushers, cars, or similar devices

Types in which the chain itself directly moves the load are *drag, rolling,* and *sliding chain conveyors*

Those consisting of an endless chain that is supported by trolleys from an overhead track or runs in a track above, flush with, or under the floor, with means for towing trucks, dollies, or cars, are known as *tow conveyors* (Fig 20–30)

Trolley conveyors Where an endless chain propels a series of trolleys (Fig 20–29) supported from or within an overhead track, with

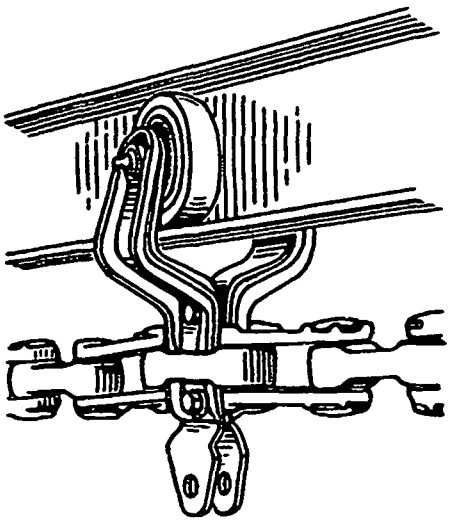


FIG 20–29 —Trolley can be used in trolley conveyors, overhead two conveyors, overhead chain conveyors, and on jibs and monorails to support hoists

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loads suspended from the trolleys, the assembly is known as a trolley conveyor

In modern manufacturing plants, various devices are used on chain conveyors operated on overhead tracks equally spaced hooks suspended directly from the endless chain or from trolleys carry in automobile plants, for example, gears, fenders or other parts Smaller parts are carried in suspended wire baskets Suspended tongs often are used to carry boxes and similar objects

If the parts are to be washed in a solvent or immersed in paint, the track is bent downward as required immediately above the tank