April 19, 1966 J. P. SCHOMMER 3,246,464

CONNECTING LINK ASSEMBLY FOR CONVEYOR CHAINS

Original Filed Sept. 3, 1959

Fig. 1.

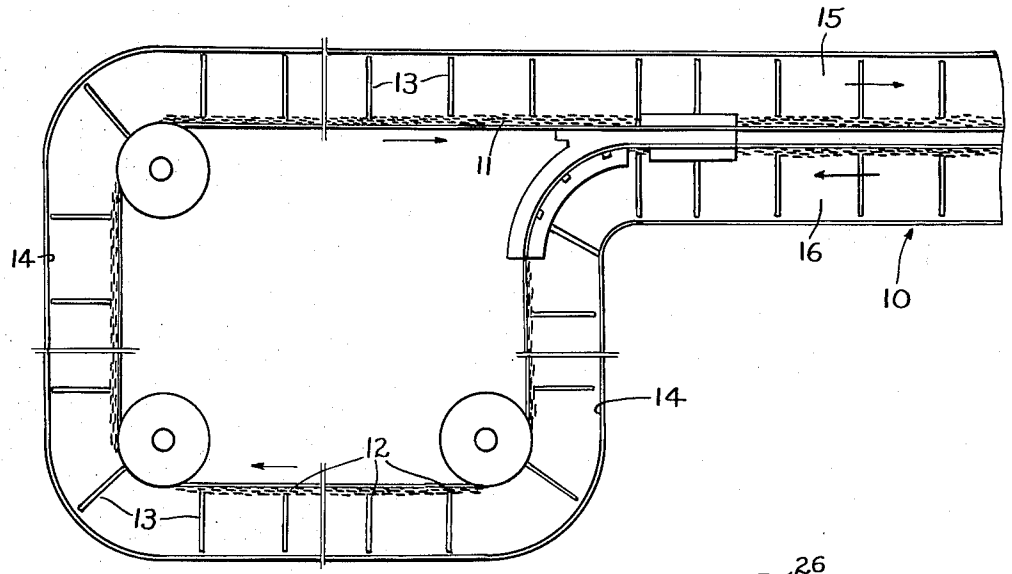



Fig. 2.

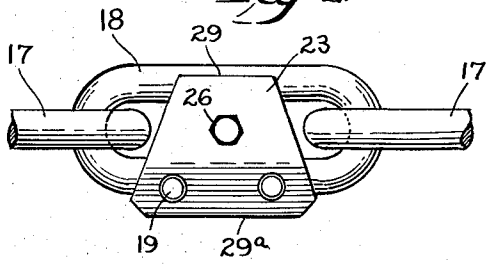
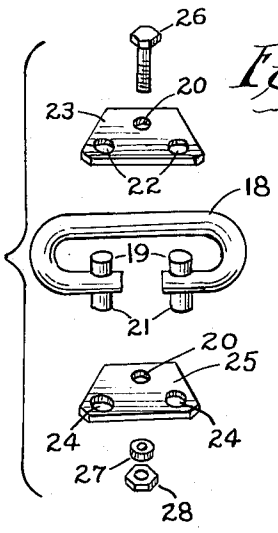



Fig. 3.




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United States Patent Office 3,246,464 Patented Apr. 19, 1966



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# CONNECTING LINK ASSEMBLY FOR CONVEYOR CHAINS

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Original application Sept. 3, 1959, Ser. No. 837,888, now Patent No. 3,124,237, dated Mar. 10, 1964. Divided and this application Nov. 6, 1963, Ser. No. 321,787

4 Claims. (Cl. 59—85)

This application is a division of my copending application Serial No. 837,888, filed September 3, 1959, now Patent No. 3,124,237, and entitled "Gutter Cleaner for Barns." The present invention relates to a novel connecting link assembly for a conveyor chain such as utilized in a gutter cleaner for barns.

Among the objects of the present invention is the provision in a gutter cleaning assembly including an elevator and a power-actuated chain carrying spaced flights for removing the matter collected in a gutter and delivering this matter onto the elevator from which the collected matter is conveyed and discharged at the exterior of the enclosure, of a novel connecting link assembly for joining links or chain sections, or for the addition of a take-up chain.

It is, therefore, an important object of the present invention to provide a chain including a conveyor chain with novel means for connecting and adjusting the length of the chain, for readily attaching or detaching links or lengths of chain and for conveniently adding or removing elongated or worn chain links, lengths or sections.

Further objects are to provide a construction of maximum simplicity, efficiency, economy and ease of assembly and operation, and such further objects, advantages and capabilities as will later more fully appear and are inherently possessed thereby.

In the drawing:

FIGURE 1 is a fragmentary plan view of a gutter cleaner having a conveyor chain and spaced flights for automatically removing and cleaning the gutter of manure or refuse collected therein in a barn or other enclosure, the upper end of the elevator which carries the collected material to the exterior having been omitted.

FIG. 2 is an enlarged top plan view of the connecting link assembly for connecting adjoining links of the chain and for the addition of a take-up chain.

FIG. 3 is a perspective view of the disassembled parts of the connecting link assembly.

Referring more particularly to the disclosure in the drawing and to the illustrative embodiment of a mechanical barn gutter cleaner therein shown, FIG. 1 discloses a gutter cleaner comprising an elevator **10** for discharge of the collected material having an inclined supporting bed or floor over which is moved a continuous length of conveyor chain **11** to which is attached at **12** one end of each of a plurality of suitably spaced flights **13** each preferably formed of an angle member of suitable metal.

As shown in FIG. 1, the power-operated chain **11** moves the attached flights **13** through the gutter **14** formed in the floor of a barn of other enclosure, the gutter being so arranged as to collect therein manure or refuse matter and which matter is carried therefrom by the movement of the flights **13** upon operation of the cleaner and movement of the continuous chain **11**. This refuse is carried from the gutter upwardly at one side



**15** of the inclined bed or floor of the elevator, is discharged from the top of the elevator over a drip chute (not shown) and then the unloaded flights **13** carried by the chain **11** return down the other side **16** of the inclined elevator bed to reenter the gutter **14** in continuous travel so long as the gutter cleaner is being operated.

The chain **11** comprises heavy connecting links **17** with the successive links arranged horizontally and vertically and with the chain provided with a novel and simplified link connecting means for connecting adjoining links and for the adidtion of a take-up chain, when required. This connecting means is shown in detail in FIGS. 2 and 3 and comprises a connecting link **18** open at its opposite ends with each end provided with two laterally projecting lugs **19** and **21**, the two lugs **19** shown projecting upwardly or in the same direction conformably received within spaced openings **22** in an upper steel plate **23** and the two other or depending lugs **21** projecting in the opposite direction conformably received within spaced openings **24** in a spaced lower steel plate **25**. These plates which are similar and provided with similarly spaced openings **22** and **24** including aligned bolt holes **20**, are then securely connected together by means of a bolt **26**, a lock washer **27** and a nut **28**.

This chain connecting assembly provides a novel and simple means permitting the convenient installation of additional links or added sections and replacement for elongated or worn chain. Also this novel assembly prevents the elongation of the connecting link **18** as all strains and stresses are against the heat-treated upper and lower steel plates **23** and **25**. The opposite sides or edges **29** and **29a** of these plates when assembled as shown in FIG. 2 provide a guide for smooth operation of the chain as it moves about corners, curves and gutter walls whereby the chain remains in its correct, operative position while conveying its flights.

While the improvement has been shown and described as being advantageously applicable to the conveyor chain for a barn gutter cleaner, it is not my desire or intent to unnecessarily limit the scope or the utility of the improved features by virtue of this illustrative embodiment.

Having thus disclosed the invention, I claim:

1. A connecting link assembly comprising a connecting link open at one side for the reception of adjoining links and having spaced ends defining the opening, lateral oppositely projecting lugs on each of said spaced ends, a pair of flat plates engaging said link on opposite sides thereof in parallel relationship, each plate having spaced openings adjacent one edge conformably receiving the spaced lugs on one side of said link and extending across said link with the surface of the plate adjacent the opposite edge of the plate engaging the portion of the link opposite the opening in the link, and attaching means for joining the plates together extending centrally through said plates and said connecting link to clamp the plates onto the link and close the opening in the link.

2. A connecting link assembly as set forth in claim **1**, in which each plate is provided with a centrally positioned and aligned opening, and said attaching means includes a bolt extending through the aligned openings and cooperating with a nut to bridge and lock the plates together on the connecting link.

3. A connecting link assembly as set forth in claim **1**,

in which said opposite edges of the plates provide guiding surfaces for smooth operation of a chain containing the connecting link in its operative position.

4. A connecting link asesmbly as set forth in claim 1, in which said link is an elongated member having parallel side portions and curved end portions, and said opening is formed in one of the parallel side portions.



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DON A. WAITE, *Primary Examiner.*