

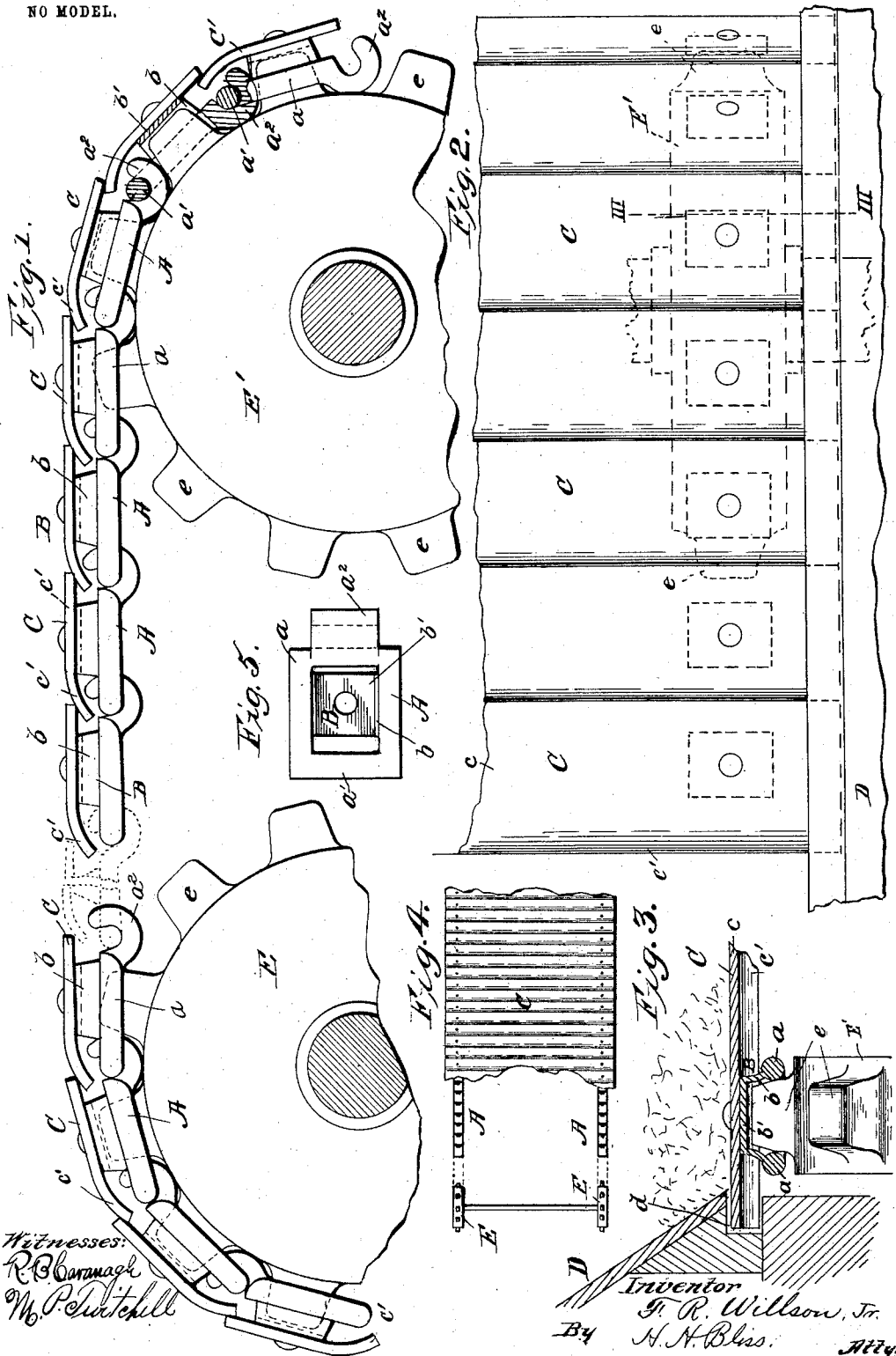
No. 736,901.

PATENTED AUG. 18, 1903.

F. R. WILLSON, JR.
CONVEYER.

APPLICATION FILED APR. 17, 1900.

NO MODEL.



UNITED STATES PATENT OFFICE.

FREEMAN R. WILLSON, JR., OF COLUMBUS, OHIO, ASSIGNOR TO JOSEPH A. JEFFREY, OF COLUMBUS, OHIO.

CONVEYER.

SPECIFICATION forming part of Letters Patent No. 736,901, dated August 18, 1903.

Application filed April 17, 1900. Serial No. 13,263. (No model.)

To all whom it may concern:

Be it known that I, FREEMAN R. WILLSON, Jr., a citizen of the United States, residing at Columbus, in the county of Franklin and State of Ohio, have invented certain new and useful Improvements in Conveyers, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to improvements in conveyers of the kind in which use is made of two parallel endless chains with cross slats, bars, or plates arranged to provide a floor for receiving and supporting the material that is being carried.

The objects of the invention and the character of the devices by which they are attained will be understood from the description below in connection with the drawings.

Figure 1 is a side view of sufficient portion of a conveyer to illustrate the manner of applying my improvements. Fig. 2 is a top plan view of parts of the same. Fig. 3 is a partial cross-section on the line III III of Fig. 2. Fig. 4 is a plan view on a smaller scale. Fig. 5 is a bottom plan view of a link.

The chain is composed of links A A, which are counterparts of each other. There are two chains, one at each side of the conveyer, and the links of both are similar throughout, the conveyer in this respect differing from those heretofore made, in which detachable links were used with curved slats secured to them, the earlier ones having the links formed with laterally-projecting lugs or ears, to which the slats were secured, the links themselves being in longitudinal planes outside of the ends of the slats, and therefore requiring two different sorts of links, one for the chain on the right and another for that on the left.

Each of the links in the present construction is detachable from either of its adjacent ones when it is turned to an unusual angular position not occupied by it when in normal working relations. Each is cast with the side bars a , the end bar a' , and the hook a^2 , these, considered by themselves, forming the now well-known detachable rectangular cast link. From the side bars a rise the standards b , which are joined at the top by a cross bar or plate b' , these parts b b' being all

cast integral with the side bars a . The cross bar or plate b' is parallel on its top surface with the central horizontal plane of the link that is parallel with the plane passing through the two axes of articulation of the link.

C C indicate the slats. Each of these is formed with a wider flat portion c and a downwardly-curved portion c' . Each is at each end riveted or firmly secured to one of the box-like supports B, formed of the bars b b' , cast with the chain-links. The slats extend beyond the chains, and the edges of the conveyer can be fitted to and moved snugly in a passage at d in the side of the trough D. The chains being inside of the ends of the slats, the width of the apparatus can be reduced. The sprocket-teeth e of the wheels at E E' enter successively into the chambers in the box-like supports B for the slats, and the chains and the articulating surfaces are protected from the entrance of foreign material, thus avoiding wear and interference with the movements of the parts. All of the links are similar, and therefore one can be replaced by another link at any part of either chain.

Heretofore in conveyers having slats, each formed with a flat portion and a curved portion, these slats have been arranged so that the planes of the flat parts corresponding to those at c' herein were inclined to the planes of the chain-links for the purpose of allowing clearance or spaces between the edges of the flat parts and the surfaces of the curved parts below, this construction and inclined arrangement being required because of the relatively great width of the slats or plates. I produce a conveyer whose carrying-floor is perfectly tight at all points, the flat parts of the slats being parallel to the planes of their respective links.

In the earlier conveyers having slats of this general character use has been made of chains, each link of which was connected to the next by a separate pintle, as shown, for instance, in the patent to Franklin, No. 516,702; but I believe myself to be the first to have devised a conveyer with slats of this character in combination with chains, each link of which is cast with all of its parts integral and with a slat-support also integral extending centrally upward and forming a

chamber for a sprocket-tooth, the slats being arranged with their flat portions parallel to the planes of their links, respectively.

What I claim is—

- 5 1. A conveyer having in combination two parallel chains, each formed of a series of links all similar to each other, and each being a centrally-open rectangular link with side bars, an end bar and a hook detachably
10 engaging with an adjacent end bar and an upwardly-extending centrally-arranged tooth-receiving slat-support, all the said parts of each link being cast integral with each other, and a series of slats, each slat having a flat
15 portion *c*, and a curved portion *c'*, the flat portion being fastened to the tops of two opposite tooth-receiving supports *B* and arranged parallel to the plane of its links and having a curved part under and contacting
20 with the edge of the flat part of the next adjacent slat, substantially as set forth.

2. A conveyer consisting of the combination with the slats, of carrying-chains for the same consisting of hooked links the slats be-

ing arranged with relation to the hooks to 25 prevent the detachment of the hooks from the links in usual positions of the links.

3. A conveyer consisting of the combination with the slats, of carrying-chains for the same consisting of hooked links having the 30 open part of the hook opposed by a portion of the slat carried by the hook to prevent the detachment of the hooks from the links in the usual position of the links.

4. A conveyer consisting of the combination 35 with the slats, of carrying-chains for the same consisting of hooked links having the open part of the hook opposed by overlapping portions of the slats to prevent the detachment of the hooks from the links in the 40 usual position of the links.

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

FREEMAN R. WILLSON, JR.

Witnesses:

F. E. COLTON,
R. H. HIBBARD.