To all whom it may concern:

Be it known that I, JACKSON H. CLARK, a citizen of the United States, residing at Sunburst, in the county of Haywood and State of North Carolina, have invented new and useful Improvements in Cleats for Chain Conveyers, of which the following is a specification.

This invention relates to cleats for use upon the link chains of chain conveyers, such as are commonly used by logging mills for the transportation of log slabs and the like, the object of the invention being to provide a cleat which is light, strong and durable, simple of construction and comparatively inexpensive of production, and which is composed of sections adapted to be easily assembled and firmly secured to a chain link and to present a broad abutment surface for engagement with the slab or other object.

With this and other objects in view, the invention consists of the features of construction, combination and arrangement of parts, hereinafter fully described and claimed, reference being had to the accompanying drawings in which—

Figure 1 is a rear perspective view of a cleat embodying my invention as applied to a link of a conveyor chain.

Fig. 2 is a front elevation of the same.

Fig. 3 is a vertical longitudinal section through the applied cleat.

Figs. 4 and 5 are vertical transverse sections.

Fig. 6 is a view showing the sections of the cleat disassembled and disposed to expose the construction thereof.

In the practical embodiment of my invention I provide a cleat comprising a pair of outer cleat sections 1 and 2 and an intermediate or central cleat section 3. These cleat sections are united in the manner hereinafter described to engage one of the links 4 of a conveyor chain, the cleat being extended through the link and in engagement therewith at its center, and projecting to equal degrees beyond opposite sides of the link. For convenience of description the outer cleat section 1 may be termed the top cleat section, and the outer cleat section 2 the bottom cleat section.

The cleat sections are preferably of the form shown, each comprising a metallic plate having a straight longitudinal front edge, and having its rear edge inclined on diverging lines from the center of the cleat toward the ends thereof, the cleat thus being made of maximum width at the center, but this form of cleat is not absolutely essential and may be departed from if desired. In practice, the cleats may be arranged any desired distance apart along the conveyor chain, and each cleat engages a vertically disposed link of the chain, as shown.

The top and bottom cleat sections 1 and 2 are alike in construction, and hence a description of one will suffice for both. As shown, the cleat section 1 is provided in its outer face with a transverse central groove 5 which receives and engages one of the sides of the link 4, while the inner or reverse face of said cleat section is formed with a rib or boss 6, which thickens and increases the depth of the cleat section in the vertical plane of the groove and plane of engagement of the cleat with the chain link, to increase the strength and durability of the cleat at the center, to adapt it to effectually withstand the pressures and strains falling thereon. The inner face of the cleat section 1 is further provided with lugs 7 arranged adjacent to and on opposite sides of the boss 6, and lugs 8 arranged adjacent to the ends of said cleat section, the said cleat section being formed with openings 9 and 10 respectively passing through the inner and outer sets of lugs. The lugs 7 and 8 correspond in depth or thickness with the boss 6. Formed upon the straight longitudinal edge of the cleat section is an abutment flange or web 11, depending to a degree equal to the thickness of the boss and lugs. The abutment flange 11 of the cleat section 1 projects downwardly, while the corresponding abutment section 11 of the cleat section 2 projects upwardly in line therewith.

The intermediate or central cleat section 3 serves as a filler and wedging medium to hold the cleat sections 1 and 2 in engagement with the side bars of the link 4, and to form therewith a cleat of the requisite depth and having an abutment surface of proper area to fully and squarely engage the log slab or other object which is to be transported.
This intermediate cleat section is provided upon its upper face with a central boss 12, inner lugs 13 and outer lugs 14, and is provided along its straight abutment edge with an upwardly extending abutment flange 15, said cleat section being provided with openings 16 and 17 extending respectively through the sets of lugs 13 and 14. The intermediate cleat section differs from the top and bottom cleat sections in that it is devoid of the groove 5, its lower face being flat or plane-surfaced throughout. When the intermediate section is fitted in position between the top and bottom sections 1 and 2, the boss 12 and lugs 13 and 14 thereof lie in contact with the boss 6 and lugs 7 and 8 of the upper cleat section 1, while the flat lower face of said cleat section 3 lies in contact with the boss 12 and lugs of the lower cleat section 2, the openings in the abutting faces of the several cleat sections aligning for the passage of suitable fastenings, such as countersunk rivets 18 or connecting bolts, whereby the cleat sections are firmly and securely bound together and held in properly assembled relation against any possibility of displacement or disconnection. When the cleat sections are thus combined to form the complete cleat, the flanges 15 of the intermediate cleat section are disposed in alignment with and abut against the downwardly and upwardly extending flanges at the top and bottom cleat sections, thus forming at the front of the cleat a straight abutment surface, of the full depth of the cleat, to engage the log or other object. By the construction of the cleat sections in the manner described, a form of cleat is produced which, while exceedingly strong and durable, is light in weight and much less expensive than a construction employing solid cleat blocks or sections.

In applying the cleat to the chain link 4, the bottom cleat section 2 is first inserted in position through the link, after which the top cleat section is arranged in place, and then the intermediate cleat section is inserted from one end between the top and bottom cleat sections, thus spreading the same apart, and binding them into engagement with the side bars of the link 4 which are received into the grooves 5, the rivets or bolts then being applied, whereby the cleat sections will be held united and against relative displacement. The outer cleat sections will, thus be spread and braced by the intermediate cleat section, and the grooved faces thereof held in engagement with the side bars of the chain link 4, whereby the cleat sections will be held locked to the chain link against any possibility of disconnection or displacement. It will, of course, be understood that the outer faces of the top and bottom cleat sections may be, with the exception of the grooves 5, flat or of any desired form.

From the foregoing description, taken in connection with the drawing, the construction and mode of application and use of my improved sectional cleat will be readily understood, and it will be seen that a cleat is provided which is simple of construction, capable of being easily and conveniently manufactured, and which may be readily applied for use and as easily removed for repairs, the substitution of a new cleat or cleat section, or for other purposes. It will also be seen that the construction described is of material advantage from the standpoint of economy and lightness in weight, without sacrifice of strength and durability.

Having thus fully described my invention, I claim:

1. A cleat of the character described embodying outer cleat sections having grooves in their outer faces to receive and engage the sides of a chain link, and an inner cleat section arranged to hold said outer cleat sections in engagement with the link, the opposing faces of said cleat sections being formed with spaced contact surfaces holding them spread apart, cooperating abutment flanges upon the front edges of the cleat sections, and means for holding the cleat sections assembled.

2. A cleat of the character described embodying outer cleat sections comprising plates having grooves in the outer faces to receive and engage the sides of a chain link, an inner cleat section arranged to hold said outer cleat sections in engagement with the link, the said cleat sections being provided with flanges forming an abutment surface at the front of the cleat, and means for holding the cleat sections assembled.

3. A cleat of the character described embodying outer cleat sections comprising plates having grooves in their outer faces to engage the side bars of a chain link, an intermediate cleat section, arranged to hold said outer cleat sections in engagement with the link, said cleat sections having spacing members and provided with flanges along their front edges to form an abutment surface, and fastening members, passing through certain of the spacing members of the cleat sections and holding said cleat sections assembled.

4. A cleat of the character described embodying a pair of outer cleat sections comprising plates having central transverse grooves in their outer faces to receive the side bars of a chain link, and provided upon their inner faces with a central spacing boss, inner spacing lugs on opposite sides of the central boss and outer spacing lugs adjacent to the ends of the cleat section, a central cleat section arranged to hold said outer cleat sections in engagement with the chain link, said central cleat section being provided upon one of its faces with bosses and lugs.
arranged to engage the opposed bosses and lugs upon one of the outer cleat sections, the outer cleat sections being provided at their front edges with inwardly extending flanges and the central cleat section being provided at its front edges with a flange alining with the first named flanges to form a continuous abutment surface at the front of the cleat, and fastening members passing through the body portions and lugs of the cleat sections, and holding said cleat sections assembled.

In testimony whereof I affix my signature.

JACKSON H. CLARK.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."