Aug. 4, 1931. E. KESSLER ET AL 1,817,628

CHAIN CLAMP

Filed Sept. 19, 1928

Fig. 1

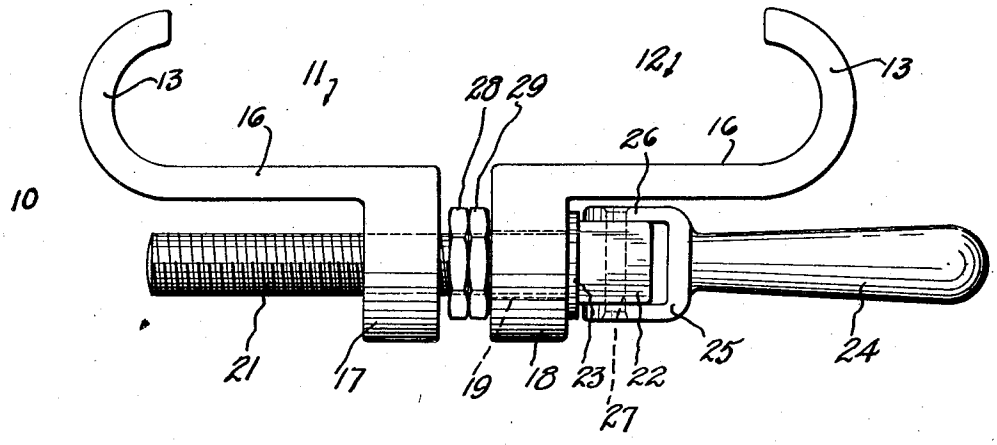


Fig. 2

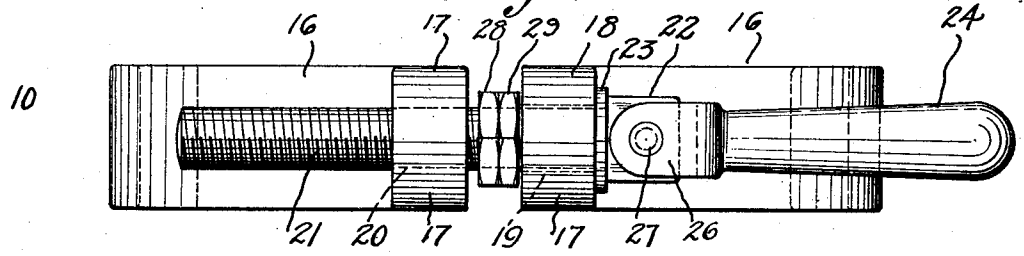
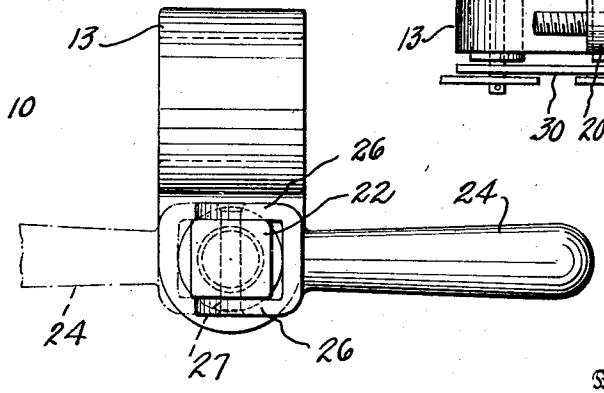


Fig. 3



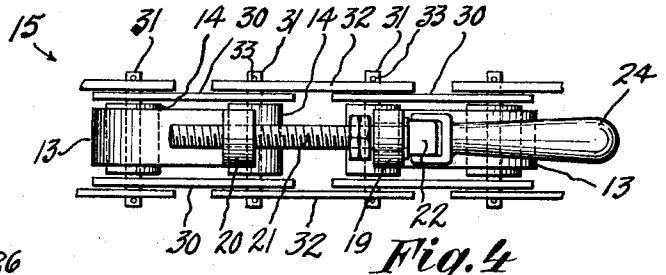


Fig. 4

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UNITED STATES PATENT OFFICE

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CHAIN CLAMP

Application filed September 19, 1928. Serial No. 306,833.

This invention relates to clamping devices and has particular reference to chain clamps.

One object of the invention is to provide an improved device of the character described which comprises few and simple parts, is inexpensive to manufacture, rugged in construction, and reliable and efficient to a high degree in use.

Another object of the invention is to provide an improved chain clamp which is adapted for quantity production and in which the various stresses are properly taken up, while the clamp itself is maintained of a very simple nature.

Other objects and advantages of the invention will become apparent as the specification proceeds.

With the aforesaid objects in view, the invention consists in the novel combinations and arrangements of parts hereinafter described in their preferred embodiments, pointed out in the subjoined claim, and illustrated on the annexed drawings, wherein like parts are designated by the same reference characters throughout the several views.

In the drawings:

Figure 1 is a side view in elevation of a device embodying the invention.

Fig. 2 is a bottom plan view thereof.

Fig. 3 is an end view of the device showing in dotted lines a different operating position of the handle.

Fig. 4 is a fragmentary view of a chain with the clamp in position thereon.

The advantages of the invention as here outlined are best realized when all of its features and instrumentalities are combined in one and the same structure, but, useful devices may be produced embodying less than the whole.

It will be obvious to those skilled in the art to which the invention appertains, that the same may be incorporated in several different constructions. The accompanying drawings, therefore, are submitted merely as showing the preferred exemplification of the invention.

Generally described, the invention provides a chain clamp which is adapted to function in conjunction with chains of the type that are used on trucks and the like. Occasionally a chain of the type referred to breaks, and in that event, it is necessary to pull the adjacent ends of the chain together and then to connect a new set of parts to replace those that were broken. It has been found that this is ordinarily very troublesome, requiring a great deal of effort and exertion. By this invention, the broken chain can be readily drawn together and repaired. The device can be readily mounted upon the chain and by a very simple movement rendered effective to exert a high degree of tension on the chain so as to retain the adjacent ends thereof in any desired position with respect to each other, thus facilitating the operation of repairing the chain.

Referring in detail to the drawings, 10 denotes a device embodying the invention. The same includes a pair of jaw members 11 and 12 which are essentially similar in construction. These members can be cast exactly alike, whereby the device is adapted for quantity production. Each includes a curved hook 13 which is of a radius sufficient to enable the hook to properly take around a roller 14 of the chain 15. The said hooks are mounted upon straight shanks 16 which lie in the same plane and extend toward one another. At their ends the said shanks terminate in hubs 17 and 18. The latter extend to one side of the plane of the shanks 16 and are oppositely related to said plane with respect to said hooks 13. The hub 18 has a smooth walled hole 19 therein, while the hub 17 has a threaded hole 20. Passing freely through the hole 19 is a screw member 21 which has threaded engagement in the hole 20. Thus while the hubs 17 and 18 are in alinement with each other, the screw 21 extends in parallelism to the shanks 16. It will be noted that the axis of the screw is in relatively close proximity to the shanks 16, thus making for a compact tool. The screw 21 has a square head 22 which has bearing relation with the hub 18 as, for example, by means

of a washer 23. To turn the screw, a handle 24 is provided which includes a yoke structure 25 between the arms 26 of which the head 22 is slidingly received. A pin 27 passes through the head 22 and the arms 26 so as to form a swivel connection between the handle 24 and the screw 21. While the handle 24 may extend in alinement with the screw 21 as shown in Fig. 1, nevertheless when the said screw is to be turned, the handle is swung about the pin 27 into a position as shown in Fig. 3, thus furnishing a leverage to facilitate the turning of the screw. By this invention the handle 24 is in each case manipulated through an angle of 180° after which it is swung about the pin 27 and again turned through an angle of 180°. To limit the relative movement as between the screw 21 and the hub 18, stop means is provided which may be of any suitable form and may be embodied, for example, in a plurality of lock nuts 28, 29 which are jammed up against one another, making a slight clearance with the hub 18 to facilitate the free turning of the screw 21.

The use of the device will now be clearly apparent. Referring to Fig. 4, we show a drive chain 15 of the type that is usually used in trucks. The same comprises a plurality of links 30. A pair of links are disposed in side by side relation and have mounted therebetween a pair of rollers 14, each of which is disposed at an end of the unit. The said rollers are journaled on shafts 31 which extend through the said links 30. Interconnecting the units are a plurality of links 32, one of which is positioned at each side of the chain, the said links 32 engaging the ends of adjacent shafts 31 and being held in position thereon by pins 33. The chain clamp 10 is used, for example, when one of the links 32 breaks in which case the hooks 13 are placed over a pair of remote rollers 14, after which the handle 24 is manipulated to turn the screw 21, causing the hooks 13 to move together and bring a high degree of tension to bear upon the chain. This draws the ends of the chain together into any desired spaced relation, permitting a new set of links 32 to be readily slipped in place and secured by the pins 33. Thereafter the handle 24 is again manipulated and the screw 21 turned in a reverse direction, releasing the clamp 10 from the chain.

It will thus be seen that we have provided a device which fulfills the several objects of the invention and is well adapted to meet the conditions of practical use.

We claim:

A device of the character described, including a plurality of hooks having elongated shanks extending toward each other along a substantially straight line, said shanks terminating in hubs which in the collapsed position of the device are in relatively close proximity to each other, said hubs having alined openings, a screw in said openings coacting with the hubs to move said hooks relatively of each other, the axis of the screw being substantially parallel to the shanks, and means for turning the screw, the length of the screw and said means being in the said collapsed position substantially equal to the length of the hooks and shanks, the axis of the screw being in relative proximity to said shanks, and said means being pivotally connected to the screw to move into a position at an angle therewith or to lie along the axis of the screw in the collapsed position of the device.

In testimony whereof we affix our signatures.

EMIL KESSLER.
CHARLES H. JAMES.