May 24, 1927. 1,629,751

W. F. WEMLINGER

LINK FORMING DEVICE

Filed June 2, 1924 2 Sheets-Sheet 1

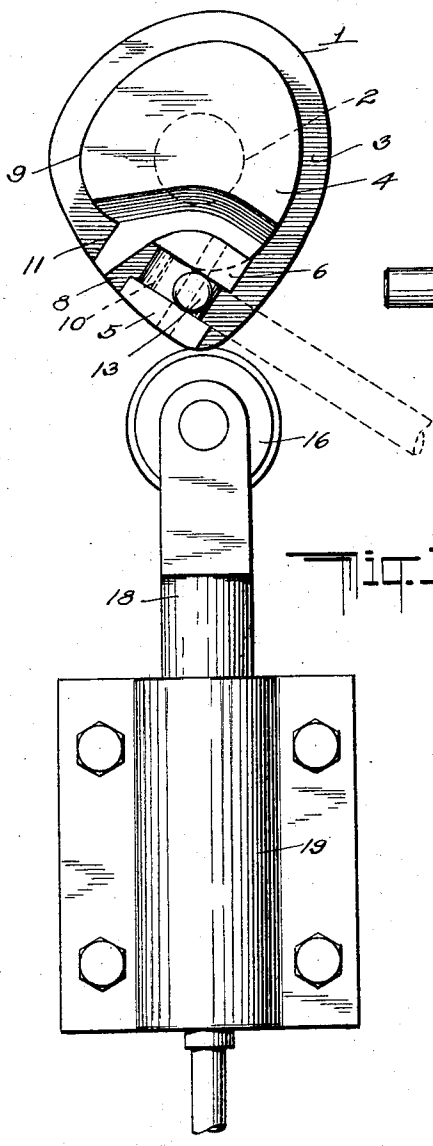


Fig. 1.

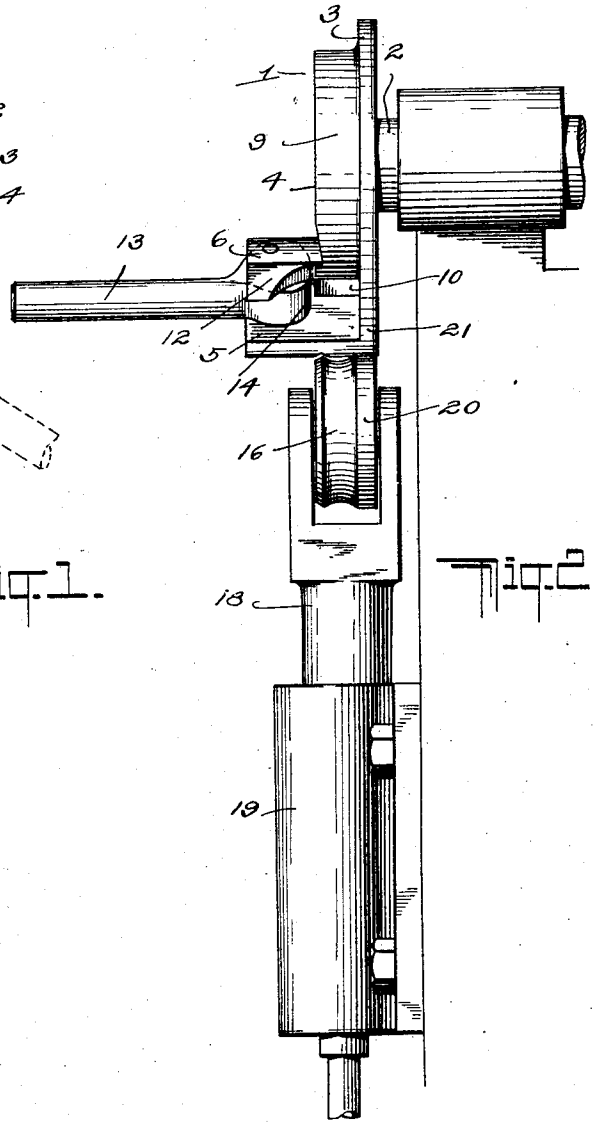


Fig. 2

Inventor

W. F. Wemlinger

By C. C. Shepherd.

Attorney

May 24, 1927. 1,629,751

W. F. WEMLINGER

LINK FORMING DEVICE

Filed June 2, 1924 2 Sheets-Sheet 2

Fig. 3.

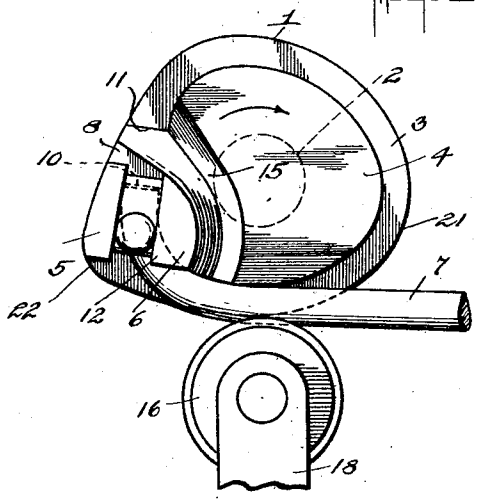


Fig. 4.

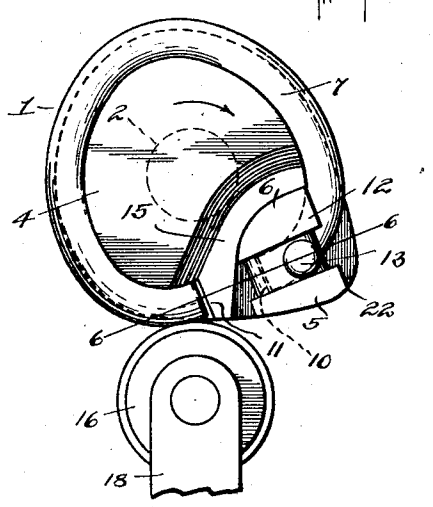


Fig. 5.

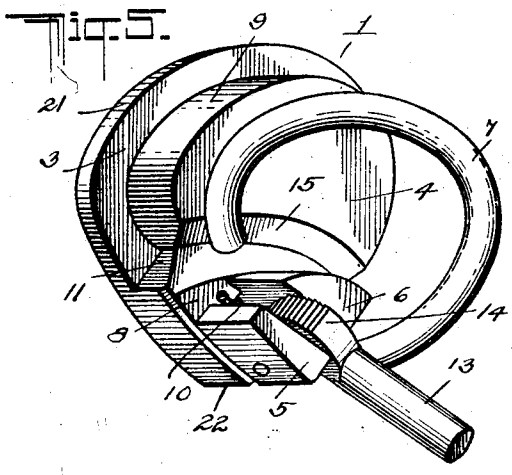


Fig. 6.

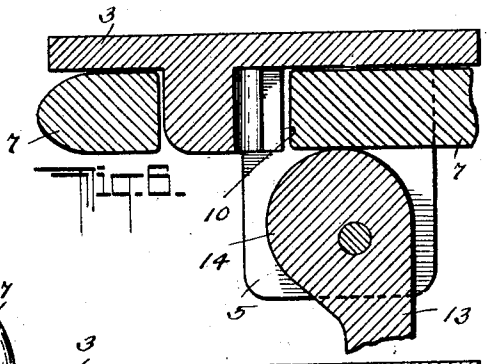
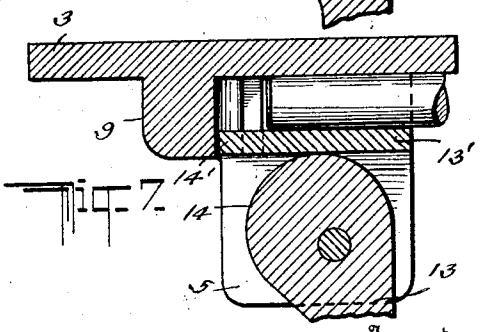


Fig. 7.



Inventor

W. F. Wemlinger

By C. C. Shepherd.

Attorney

Patented May 24, 1927. 1,629,751

UNITED STATES PATENT OFFICE.

WILLIAM F. WEMLINGER, OF COLUMBUS, OHIO, ASSIGNOR OF ONE-THIRD TO LEO BAUER AND ONE-THIRD TO JETHRO BELLINGHAM, BOTH OF COLUMBUS, OHIO.

LINK-FORMING DEVICE.

Application filed June 2, 1924. Serial No. 717,305.

My invention relates to chain link forming devices.

An object of my invention is to provide a device of this character which greatly simplifies the forming of the links more especially those used in making up large chains and thus brings about a great saving in time and labor.

A further object of my invention is to provide a device of this character which by a single simple operation converts the heated bar of stock into a completely formed link.

A still further object of my invention is to provide a device of this character capable of forming links from stock of large or small diameter.

With these and other objects in view as will become apparent as the description proceeds my invention consists in the novel features of construction, combinations of elements and arrangements of parts hereinafter to be fully described and claimed.

In the accompanying drawing:

Figure 1 is a side elevation of my improved link forming device,

Figure 2 is an end elevation thereof,

Figure 3 is a view similar to Fig. 1 showing the link in the process of formation,

Figure 4 is a similar view showing the link completely formed,

Figure 5 is a perspective view of the link former showing the manner in which the link is removed therefrom,

Figure 6 is an enlarged sectional view taken on the line 6—6 of Fig. 4, and

Figure 7 is a similar view showing the means for clamping stock of smaller diameter.

Referring more in detail to the drawing in which similar reference numerals indicate similar parts throughout the several views, reference character 1 designates the main link forming member which is preferably cast all in one piece of any suitable metal and is mounted on the end of the shaft 2 to rotate therewith.

The member 1 comprises the irregularly shaped plate 3 from which extends the forming block 4. From the plate 3 and block 4 respectively project the arms 5 and 6 which have their adjacent sides parallel and spaced apart a distance approximately equal to the diameter of the largest stock 7 to be bent by the device.

As it is desired in the forming of the links that they should not be completely closed the peripheries of the block 4 and plate 3 coincide for a short distance as at 8. The bar of stock 7 is bent in a manner hereinafter to be described around the edge 9 of the block 4 and its opposite ends lie adjacent the portions 10 and 11 of said edge when fully formed. A part of the arm 6 extends past the edge 9 as at 12 and aids in holding the bar 7 in position.

The clamping lever 13 which is pivotally mounted between the arms 5 and 6 is serrated and irregularly curved at its lower end 14 to engage and hold the stock 7 firmly in position against the plate 3. It is to be noted in this connection that when the stock 7 is engaged by the lever 13 the tendency of the stock to full out in the link forming process serves to bind it tighter owing to the curvature of the end 14.

When stock is to be formed which is so small as not to be engaged by the lever 13 the spacing block 13′ is secured in position, between arms 5 and 6 by pin 14′, which is inserted in an aperture in the member 1, and serves to make the lever 13 effective.

The top surface of the block 4, is recessed as at 15 (best shown in Figure 5 of the drawing) to permit easy removal of the stock 7 when completely formed.

Wheel 16 grooved as at 17 to engage the stock 7 is forced by a constant pressure toward the member 1 in any desired manner. I have shown the wheel 16 as rotatably mounted at the end of the piston 18 movable in cylinder 19 in which a constant pressure is maintained but it is of course obvious that the desired pressure of the wheel might be obtained in many other well known ways.

The wheel 16 is so arranged that the flange 20 thereof is continually in engagement with the edge 21 of the plate 3. This arrangement is essential to the proper operation of the device as the stock is fed to the machine while very hot and consequently is quite soft and if the wheel were not spaced from the block 4 the stock would be crushed at points and a poor link would result.

After the stock is formed the wheel 16 is cammed by the revolving member 1 into the position, as shown in Fig. 1 of the drawing, on the comparatively pointed portion 22 of the plate 3 and when in this position offers no obstruction to the removal of the formed

link and insertion of another bar of stock 7 to be formed.

In the operation of my device with the parts in the position shown in Fig. 1, a heated bar of stock 7 is placed in the former so that it engages the edge 10 and is clamped securely by the lever 13. The shaft 2 which is under the control of the operator is caused to rotate and the stock 7 is forced to take the form of the outer edge 9 of the forming block 4 as is clearly shown in Figs. 3 and 4 of the drawing. Obviously after the link is formed the continued rotation of shaft 2 causes the parts to take the position shown in Fig. 1 and while in this position the formed link is removed (as shown in Fig. 5) and another bar 7 inserted.

While I have illustrated my invention in but one specific embodiment thereof, it is obvious to those skilled in the art that it is susceptible of various minor changes and modifications without departing from the spirit thereof, and I desire, therefore, that only such restrictions shall be placed thereupon as are imposed by the prior art or are specifically set forth in the appended claims.

I claim:

1. A link former comprising a rotatable body having an offset forming shoulder of irregular peripheral contour provided on the working face thereof, said shoulder being arranged within the marginal limits of said body to provide a backing flange on said face, clamping means for securing one end of the stock to be bent adjacent to said shoulder, a guide engaging said former to force the stock into shaping relation with said shoulder upon rotation of the body, there being a stop releasing recess provided in said face and entering said shoulder to facilitate removal of a formed link therefrom.

2. A link former comprising a rotatable body having an offset forming shoulder of irregular peripheral contour provided on the working face thereof and arranged within the marginal limits of said face, a pair of spaced arms provided on said body, a clamping lever pivoted to said arms and adapted to engage one end of the stock to be bent that is placed between said arms, a guide engaging the former peripherally to force the stock into shaping relation with said shoulder upon rotation of the former, there being an arcuate recess provided in the face of said former and entering said shoulder at opposite ends thereof to facilitate the removal of a formed link from said body.

In testimony whereof I affix my signature.

WILLIAM F. WEMLINGER.