April 27, 1937. J. GREGER 2,078,848

CLAMP

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Fig. 1.

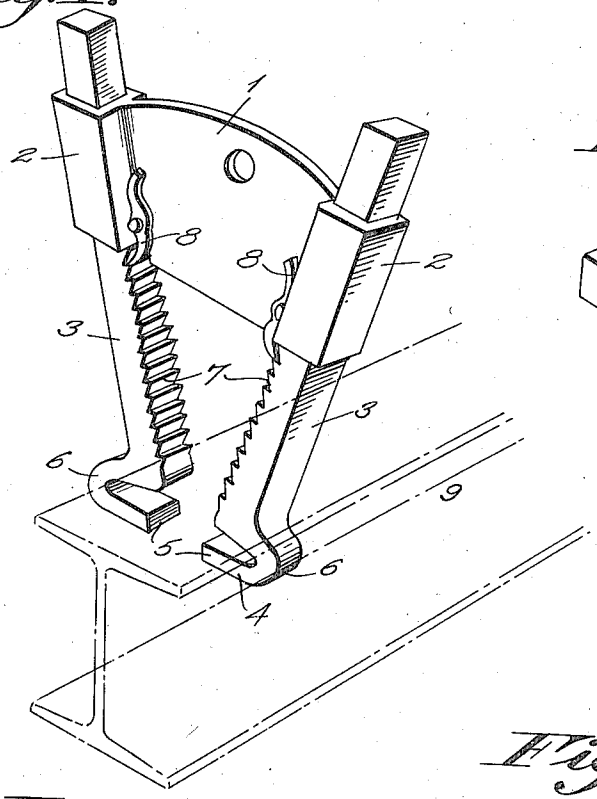


Fig. 2.

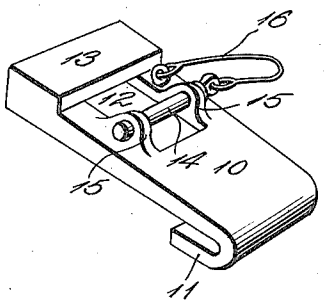


Fig. 4.

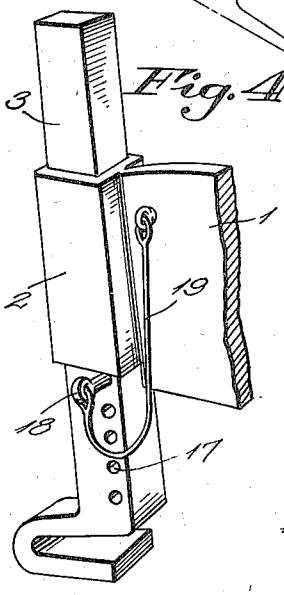
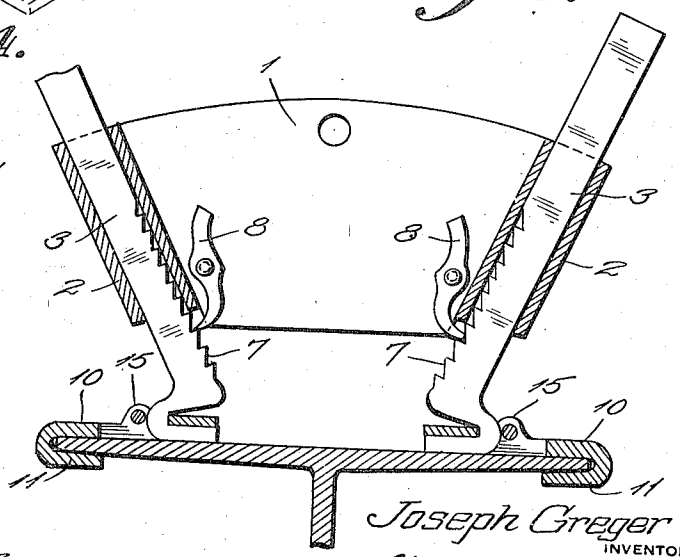


Fig. 3.



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WITNESS

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Fig. 5.

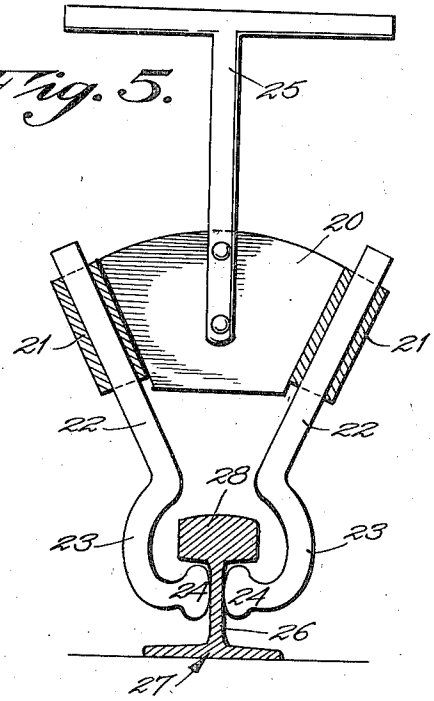


Fig. 7.

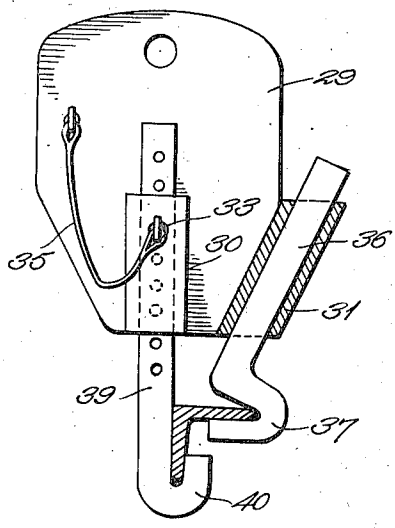
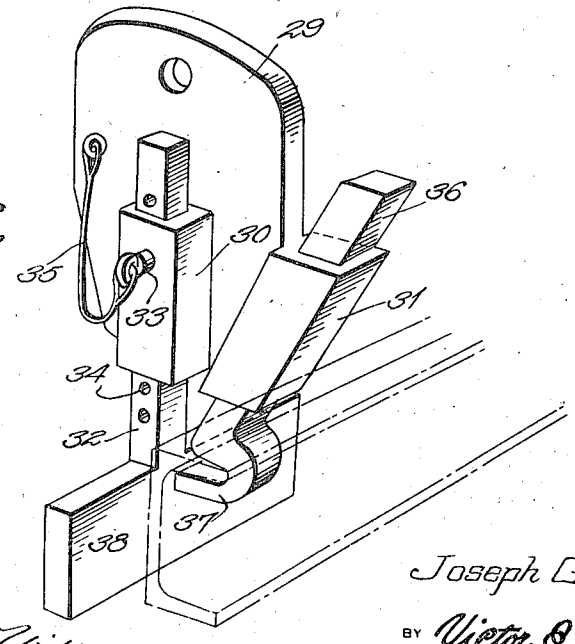


Fig. 6.



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2,078,848

CLAMP

Joseph Greger, Long Island City, N. Y.

Application March 21, 1936, Serial No. 70,159

2 Claims. (Cl. 294—86)

This invention relates to clamps especially adapted for handling structural steel, railroad rails and like devices and has for the primary object the provision of a simple, durable and efficient clamp of the above stated character which may be readily adjusted so as to be adaptable to different sizes of structural steel and like devices and whereby the latter may be lifted and carried either by motive or manual power and when at rest will not become accidentally detached therefrom.

With these and other objects in view, this invention consists in certain novel features of construction, combination and arrangement of parts to be hereinafter more fully described and claimed.

For a complete understanding of my invention, reference is to be had to the following description and accompanying drawings, in which

Figure 1 is a perspective view illustrating a clamp adapted to structural steel of I beam construction and which is constructed in accordance with my invention.

Figure 2 is a perspective view illustrating one of the removable jaws to be used in conjunction with the clamp.

Figure 3 is a vertical sectional view illustrating the clamp equipped with the removable jaws and adapted to an I beam.

Figure 4 is a fragmentary perspective view illustrating a modified form of means for adjustably securing a jaw shank to the connecting plate.

Figure 5 is a vertical sectional view illustrating a modified form of clamp employed for the handling of railroad rails.

Figure 6 is a perspective view illustrating another modified form of clamp employed for the handling of channel iron.

Figure 7 is a front elevation, partly in section, illustrating another modified form of clamp employed for handling angle irons.

Referring in detail to the drawings, the numeral 1 indicates a connecting plate having formed integrally with its ends converging sleeves 2 each of rectangular shape in cross section and each slidably receives a correspondingly shaped jaw shank 3 having integral with one end a jaw 4 including a toe portion 5 and a heel portion 6. The sleeves 2 support the shanks 3 in converging relation and the opposed faces of the shanks have formed thereon ratchet teeth 7 engaged by dogs 8 pivoted to the connecting plate 1. Adjusting the connecting plate along the shanks 3 will permit the jaws 4 to be moved apart and towards each other. The jaws 4 are adapted to engage with an I beam 9, as shown, and with a lifting force applied to the connecting plate the I beam may be readily carried from one place to another with safety and when placed at rest the jaws will remain in engagement with said I beam so that danger of becoming accidentally detached therefrom will be obviated.

Removable jaws of the character shown in Figure 2 may be used in conjunction with the jaws 4, as clearly shown in Figure 3, and each consists of a plate 10 having one end bent into hook formation, as shown at 11. The plate 10 has a slot 12 and traversing said slot is a plate-like portion 13 forming an integral part of the plate 10. The toe 5 of the jaw 4 may extend under the plate-like portion 13 and the heel portion 6 is engaged by a pin 14 removably mounted in apertured ears 15 forming an integral part of the plate 10 and paralleling opposite sides of the slot. The pin 14 is secured to the plate 10 by a flexible element 16. The pin 14 when removed from the ears 15 will free the jaw 4 so that the plate 10 may be removed therefrom. The hook-shaped ends 11 of the plates 10 engage over opposite edges of structural steel or I beams, as shown in Figure 3.

Instead of employing the pivoted dogs 8 and the teeth 7, the shanks 3 may be equipped with a series of openings 17 in which may be positioned pins 18 to engage with the connecting plate 1. The pins 18 are connected to the plate 1 by flexible elements 19.

Referring to my modified form of invention, as shown in Figure 5, a connecting plate 20 has integral with its ends sleeves 21 slidably receiving shanks 22. Integral with the shanks 22 are arcuately curved jaws 23 terminating in heads 24. The connecting plate 20 has a T-shaped handle 25 secured thereto. The heads 24 of the jaws 23 engage opposite faces of the web portion 26 of a railroad rail 27 and under the tread portion 28.

Referring to my modified form of invention, as shown in Figure 6, a plate 29 is provided having formed thereon a vertically arranged sleeve 30 and also an inclined sleeve 31. The sleeve 30 slidably receives a shank 32 which may be held in adjusted position by a pin 33 fitting in any one of a series of openings 34 formed in said shank 32. The pin 33 extends through an opening in the sleeve 30 and is connected to the plate 29 by a flexible element 35. The sleeve 31 slidably receives a shank 36 arranged at an angle to the

shank **32** and one end thereof has integral therewith a jaw **37** shaped similar to the jaw **4**. The shank **32** has one end integral with a plate-like head **38**. The head **38** and jaw **37** cooperate in gripping structural steel of channel iron construction, as clearly shown in Figure 6.

Referring to my modified form of invention, as shown in Figure 7, the latter is of a similar construction to that described in the form disclosed in figure 6 except a shank **39** is substituted for the shank **32** and has a hook-shaped end **40** cooperating with the jaw **37** in gripping structural steel of angle iron formation.

Having described the invention, I claim;

1. A clamp comprising a connecting plate, sleeves integral with the ends of said plate and arranged angularly to each other, shanks slidably supported by said sleeves and converging, jaws carried by the converging ends of said shanks, teeth formed on said shanks, and dogs pivoted to said plate and engaging the teeth.

2. A clamp comprising a connecting plate, shanks slidably connected to said plate and converging, jaws integral with the converging ends of said shanks, removable jaws including plate-like portions slotted to receive the first-named jaws and overlying a portion of the latter and each having one end bent into hook formation, and pins removably secured to the plate-like portions and engaging the first-named jaws.

JOSEPH GREGER.