

Nov. 12, 1935.

T. C. NORTH

2,021,082

CLAMP

Filed April 23, 1934

Fig. 1.

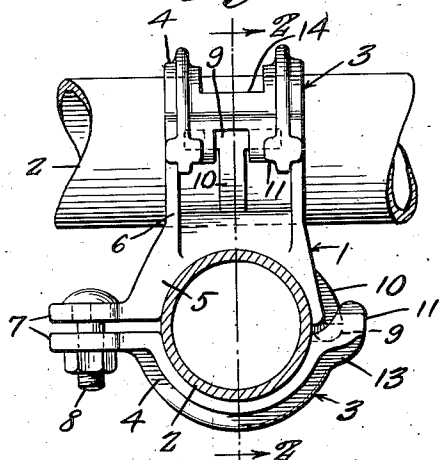


Fig. 2.

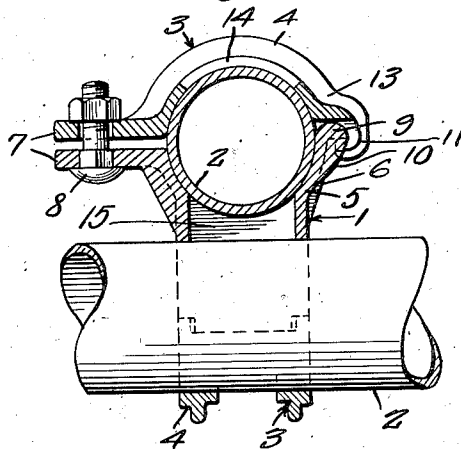


Fig. 3.

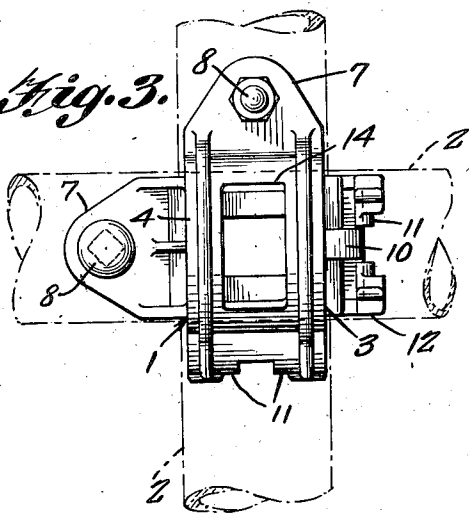


Fig. 4.

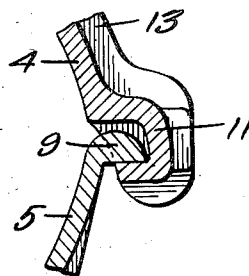


Fig. 6.

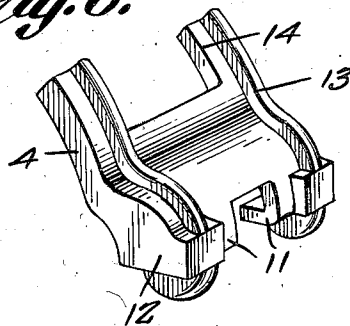
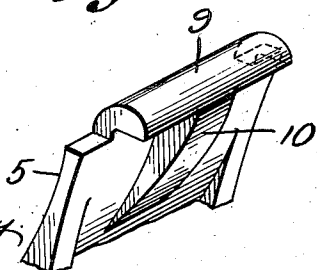


Fig. 5.



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WITNESS:

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2,021,082

CLAMP

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Application April 23, 1934, Serial No. 722,030

1 Claim. (Cl. 189—36)

This invention relates to improvements in a clamp of the character set forth in the U. S. Letters Patent No. 1,416,386, granted May 16, 1922, and has for the primary object the provision of a device especially adaptable for use in the erection and construction of various temporary and permanent pipe structures and is particularly adaptable in the construction of supports for switch boards, wires, cables in electrical installations, erection of signs, platforms, workbenches, machine guards and the construction of temporary working scaffolds, towers and similar structures and is made to accommodate structure members of cylindrical formation.

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 drawing, in which

Figure 1 is a side elevation, partly in section, illustrating a clamp constructed in accordance with my invention.

Figure 2 is a sectional view taken on the line 2—2 of Figure 1.

Figure 3 is a top plan view illustrating the device.

Figure 4 is a detail sectional view showing the interlocking jaws between sections of the clamp elements.

Figure 5 is a fragmentary perspective view illustrating the male jaw.

Figure 6 is a fragmentary perspective view illustrating the female jaw.

Referring in detail to the drawing, the numeral 1 indicates a clamp especially adapted for the joining or connecting of a pair of angularly related cylindrical elements 2 and when the latter are joined together by the clamp they will be efficiently retained against relative movement. The clamp includes a pair of clamp elements 3 arranged angularly to each other and integral with one another to produce rigidity and each consists of arcuately curved clamp sections 4 and 5. The sections 5 of the clamp elements 3 are integrally connected and arranged at approximately right angles to each other. The sections 5 are strengthened or reinforced by ribs 6. One end of each section 4 and 5 is extended angularly and flattened to form a lip or ear 7 apertured to receive a bolt 8. The other end of the section 5 is cut away to form an arcuately curved male jaw element 9 strengthened by reinforcing

ribs 10 integral with the jaw element 9 and with the clamp element 5 and arranged intermediate the ends of the jaw element 9. The other end of the clamp section 4 is extended and offset and slotted to form a pair of relatively spaced female jaw elements 11 adapted to receive the male jaw element 9 on the section 5. The jaw elements of the sections 4 and 5 hingedly connect said sections and permit of said sections to be readily detached from each other when the bolt 8 is removed from the ear 7. The slotted portion of the female jaw element receives therein the rib 10 for limiting endwise movement of the clamp sections 4 and 5 relative to each other when the male and female jaw elements are interfitted with one another. The outer sides of the female jaw elements are closed, as shown at 12, also aiding in limiting lateral movements of the clamp sections 4 and 5 relative to each other but which will permit said sections 4 and 5 to freely swing relative to each other. Reinforcing ribs 13 are integral with the sections 4 and 5 and extend into the female jaw elements to reinforce the latter. The reinforcing ribs 13 at one end terminate where the clamp sections 4 and 5 merge into the ears 7. The reinforcing ribs heretofore described thoroughly reinforce and strengthen the clamp sections as well as the male and female jaw elements and are so arranged that they do not interfere with the adjustment of the nut 30 on the bolt 8.

The sections 4 between the reinforcing ribs 13 are provided with slots 14 reducing the amount of material within said sections 4 and also materially reducing the weight thereof. An opening 15 is provided in the clamp sections 5 where the latter merge into each other, consequently reducing the weight and material involved in the construction of said sections 5.

A clamp constructed in accordance with the foregoing when applied to tubular or cylindrical elements may be caused to effectively grip said elements by the adjustment of the nuts on the bolts thereby establishing a substantially rigid connection between the cylindrical or tubular elements and further providing a clamp which may be readily applied to or removed from the tubular or cylindrical elements.

Having described the invention, I claim:

A clamp comprising a pair of integrally connected clamp elements arranged at right angles to each other to receive and grip right angularly positioned cylindrical elements each including a pair of arcuately curved clamp sections, flat apertured ears integral with said clamp sections,

male and female interfitting jaws integral with said clamp sections to permit the clamp sections to be detached and to swing one relative to the other, said female jaw elements provided with a slot, a reinforcing rib integral with the male jaw element and its respective clamp section and received within the slot of the female jaw section, said female jaw section having its outer ends closed and reinforcing ribs integral with one of the clamp sections and with the female

jaw element integral therewith, bolts having nuts threaded thereon extending through the apertured ears, certain of said clamp elements having slots between the last-named ribs and the other clamp elements having an opening where said clamp elements merge into each other, and reinforcing ribs integral with the last-named clamp elements.

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