June 11, 1929. T. ANTONIOW 1,716,997

LOGGING HOOK

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Fig. 1.

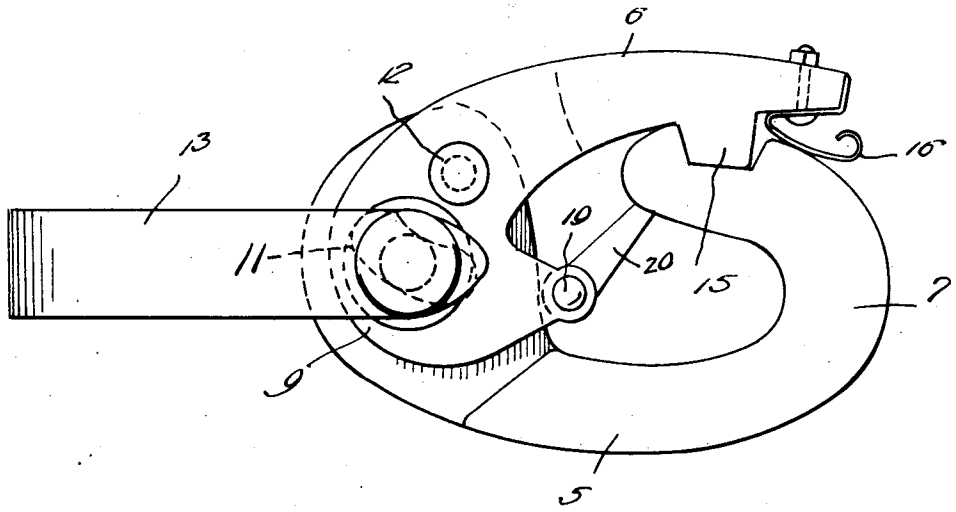
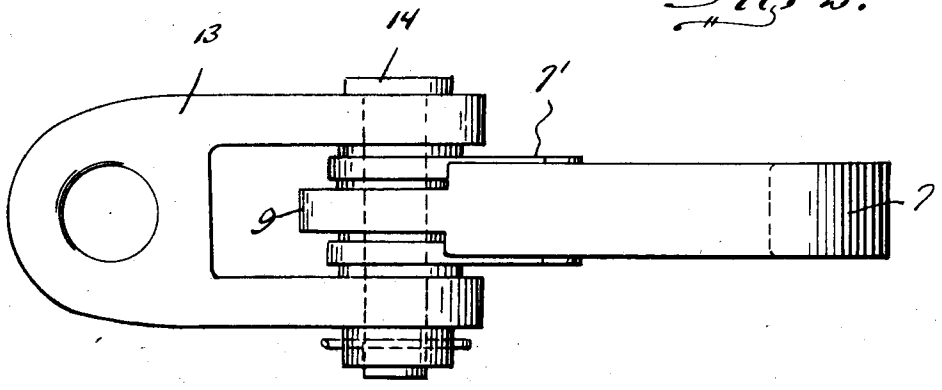


Fig. 2.



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Fig. 3.

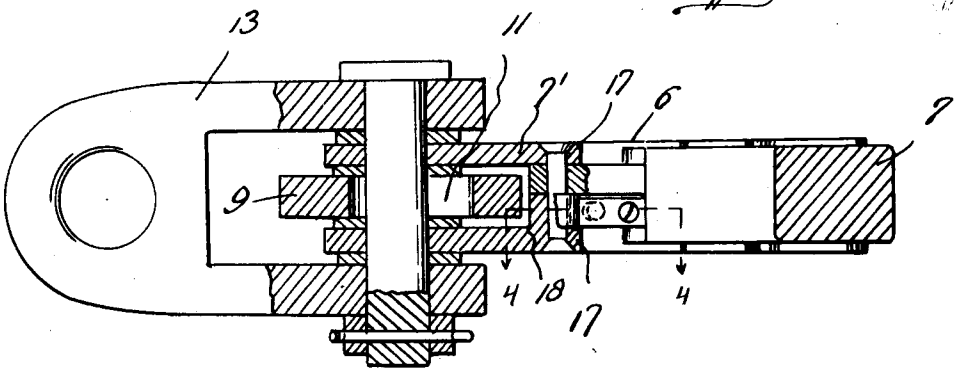


Fig. 4.

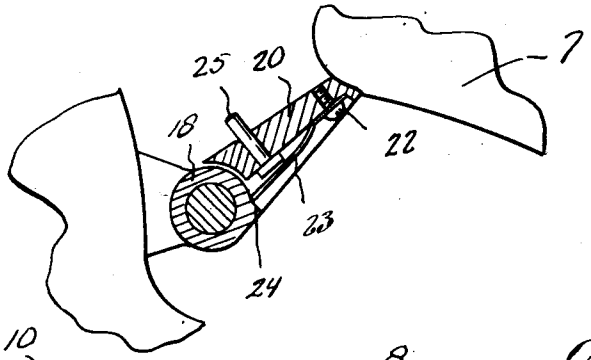
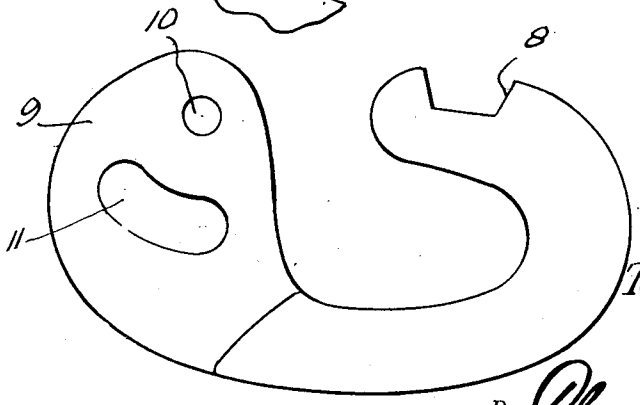


Fig. 5.



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Patented June 11, 1929. 1,716,997

UNITED STATES PATENT OFFICE.

TASSOS ANTONIOW, OF SEATTLE, WASHINGTON.

LOGGING HOOK.

Application filed October 31, 1928. Serial No. 316,126.

This invention relates to new and useful improvements in logging hooks, and aims to provide a hook for use in logging operations, in loading and unloading ships, on railroad trains, steam shovels, cranes and the like and aims to provide a hook structure wherein the same includes generally a pair of pivotal jaws that are automatically moved to closed position when a strain is applied thereto so that there will be no liability of the hook becoming released under load. Furthermore there is provided means for positively locking the jaws of the hook in closed position so that the same will not open even though the pull upon the hook is released.

In the drawings wherein like reference characters indicate corresponding parts throughout the several views:

Figure 1 is a side elevation of my improved hook, the jaws being disclosed in closed position.

Figure 2 is an edge elevation of the hook.

Figure 3 is a detail longitudinal section, and

Figure 4 is an enlarged fragmentary view taken substantially upon the line 4—4 of Figure 3 for more clearly disclosing the positive locking means between the two jaws, and

Figure 5 is a plan view of the main jaw member.

Now having particular reference to the drawing, my novel hook consists of a main and a secondary jaw designated generally by the reference characters 5 and 6. One end of the main jaw 5 is bent reversely to provide a hooked end 7, while the outer edge of this hooked end is provided with a notch 8 for a purpose hereinafter more fully described.

The inner end of the jaw 5 is of enlarged area and reduced thickness to provide a plate 9 formed at its end with a pivot pin opening 10 and at one side of said opening with a wide arcuate shaped slot 11.

The secondary jaw 6 is of slight curvature throughout its length and the outer end thereof is adapted for engagement against the outer edge of the hook shaped end 7 of the jaw 5 when said jaws are in the closed position as indicated in Figure 1. The inner end of this secondary jaw 6 is of enlarged diameter and is bifurcated as at 7 so as to receive the plate end 9 of the main jaw 5, the side walls of the bifurcation having openings for registration with the opening 10 in the plate end of said jaw 5 whereby said jaws may be pivotally interconnected through the medium of a pivot pin 12. Registering with the arcuate slot 11 in the plated end of the main jaw 5, the walls of the bifurcated end of the secondary jaw 6 are provided with registering openings, while arranged upon opposite sides of the bifurcated end of said jaw 6 are the side legs of a clevis 13 secured in position through the medium of a pivot pin 14 that extends through the legs of the clevis, the walls of the bifurcated end of the secondary jaw 6 as well as through the arcuate slot 11 in a main jaw 5. Obviously by reason of the fact that the pivot 10 between the jaws 5 and 6 is off center of the line of pull, a cable ring or the like engaged in the hooked end 7 of the jaw 5 will cause the automatic closing of the jaws whenever a pull is applied to the hook. The closing of the jaws will result in a lug 15 formed upon the inner edge of the secondary jaw 6 to engage within the notch 8 of the hooked end of the main jaw 5 providing one form of locking means between said jaws.

Arranged upon the inner edge of the outer end of said secondary jaws 6 forwardly of the lug 15 is an expansible leaf spring 16 that will bear with force against the hooked end of the jaw 5 to normally cause the opening of the jaws when the positive locking means hereinafter to be described has been released.

At the inner edges of the side walls of the bifurcated end 7′ of the secondary jaw 6 there is formed inwardly extending tongues 17—17 the inner face of one of which is formed with a boss 18. These tongues are formed at their ends with registering openings as is also said boss for receiving a pivot pin 19. Loosely mounted upon the pin 19 between the boss and the adjacent tongue is a latch finger 20, the outer end of which is curved to conform to the curvature of the adjacent portion of the end of the hook 7 of said jaw 5 so as to be wedged against the jaw in the manner as clearly indicated in Figure 1. The inner face of this finger 20 is channeled as at 21 and anchored within the forward end of the channel as at 22 is a rearwardly extending slightly outwardly sprung leaf spring 23. Said boss 18 is formed at its front side with a shoulder 24 over which the inner end of said spring 23 will engage when the finger 20 is forced into position for preventing the accidental releasing of the finger from engage-

ment with the hooked end of said main jaw 5 to thus prevent the opening of the jaws until the latch finger is released.

Slidable through an opening in the finger 20 within the free end of the spring 23 is a pin 25 which when forced inwardly will release the spring from the shoulder so that said finger can be swung inwardly of the hooked end of the jaw 5 whereupon the jaws may be opened and the cable ring, hook, or the like removed from the hooked end of said main jaw 5. Obviously, the presence of the spring 16 carried by the secondary jaw 6 will automatically open the jaws as soon as the latch finger 20 is released.

In view of the foregoing description when considered in conjunction with the accompanying drawing it will be obvious that I have provided a highly novel, simple, and extremely efficient hook for use in logging, shipping, hauling, lifting, and the like, and even though I have herein shown and described the invention as consisting of certain detailed structural elements it is nevertheless to be understood that some changes may be made therein without affecting the spirit and scope of the appended claims.

Having thus described the invention, what I claim as new and desire to secure by Letters Patent is:—

1. In a hook of the character described, a main hook jaw and a secondary hook jaw, said main hook jaw being reversely bent at one end to provide a hook and being of reduced thickness at its opposite end, and of enlarged area to provide a plate, said secondary jaw being bifurcated at one end and straddling the plate end of the main jaw, a pivotal off center connection between the said ends of the jaws, the said secondary jaw being of such construction that the outer end thereof will engage the outer edge of the hooked end of the main jaw, means carried by the outer end of one jaw for normally causing the jaws to separate and means for locking the jaws in closed position.

2. In a hook of the character described, a main hook jaw and a secondary hook jaw, said main hook jaw being reversely bent at one end to provide a hook and being of reduced thickness at its opposite end, and of enlarged area to provide a plate, said secondary jaw being bifurcated at one end and straddling the plate end of the main jaw, a pivotal off center connection between the said ends of the jaws, the said secondary jaw being of such construction that the outer end thereof will engage the outer edge of the hooked end of the main jaw, means carried by the outer end of one jaw for normally causing the jaws to separate and means for locking the jaws in closed position, said means consisting of a pivotal latch arm carried by the inner edge of the bifurcated end of the secondary jaw and adapted for wedged engagement at its outer end against the hooked end of the main jaw when the jaws are in closed position.

3. In a hook of character described, a main hook jaw and a secondary hook jaw, said main hook jaw being reversely bent at one end to provide a hook and being of reduced thickness at its opposite end, and of enlarged area to provide a plate, said secondary jaw being bifurcated at one end and straddling the plate end of the main jaw, a pivotal off center connection between the said ends of the jaws, the said secondary jaw being of such construction that the outer end thereof will engage the outer edge of the hooked end of the main jaw, means carried by the outer end of one jaw for normally causing the jaws to separate and means for locking the jaws in closed position, the walls of the bifurcated end of the secondary jaw being formed with registering openings at the center line of the complete hook and the plate end of the main jaw being formed at its center line with an arcuate slot, a clevis having a pair of side legs, the inner ends of which are arranged over the bifurcated end of the secondary jaw and having openings for registration with the walls of the bifurcation and a pivot pin passing through the legs of the clevis, the bifurcated end of the secondary jaw and the slot of said main jaw.

4. In a hook of the character described, a main hook jaw and a secondary hook jaw, said main hook jaw being reversely bent at one end to provide a hook and being of reduced thickness at its opposite end, and of enlarged area to provide a plate, said secondary jaw being bifurcated at one end and straddling the plate end of the main jaw, a pivotal off center connection between the said ends of the jaws, the said secondary jaw being of such construction that the outer end thereof will engage the outer edge of the hooked end of the main jaw, means carried by the outer end of one jaw for normally causing the jaws to separate, and means for locking the jaws in closed position, said means consisting of a pivotal latch arm carried by the inner edge of the bifurcated end of the secondary jaw and adapted for wedged engagement at its outer end against the hooked end of the main jaw when the jaws are in closed position, and automatic means for retaining the latch arm in engaged position.

5. In a hook of the character described, a main hook jaw and a secondary hook jaw, said main hook jaw being reversely bent at one end to provide a hook and being of reduced thickness at its opposite end, and of enlarged area to provide a plate, said secondary jaw being bifurcated at one end and straddling the plate end of the main jaw, a pivotal off center connection between the said ends of the jaws, the said secondary jaw being of such construction that the outer end thereof

will engage the outer edge of the hooked end of the main jaw, means carried by the outer end of one jaw for normally causing the jaws to separate, means for locking the jaws in closed position, said means consisting of a pivotal latch arm carried by the inner edge of the bifurcated end of the secondary jaw and adapted for wedged engagement at its outer end against the hooked end of the main jaw when the jaws are in closed position, automatic means for retaining the latch arm in engaged position, and manual means for releasing said first mentioned means.

In testimony whereof I affix my signature.

TASSOS ANTONIOW.