

(No Model.)

H. J. KURIGER.
LOG SKIDDING DEVICE.

No. 561,674

Patented June 9, 1896.

Fig 1.

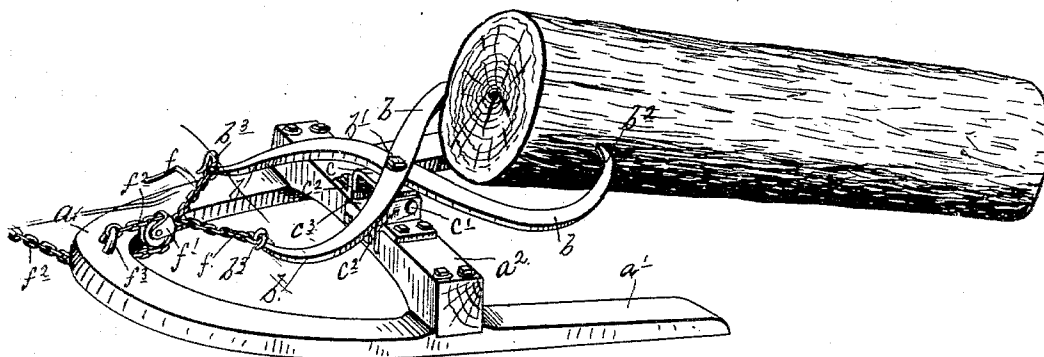


Fig 3.

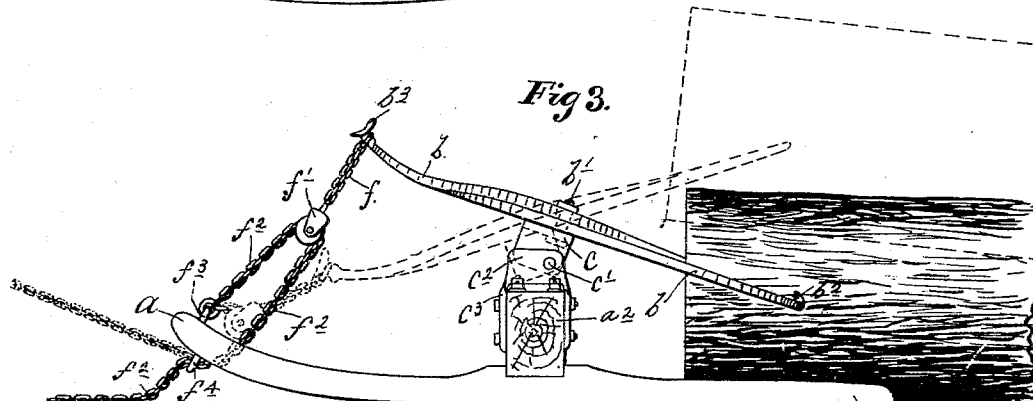


Fig 4.

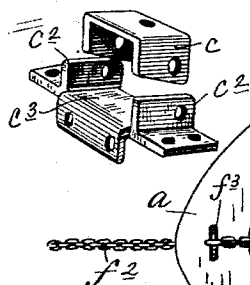
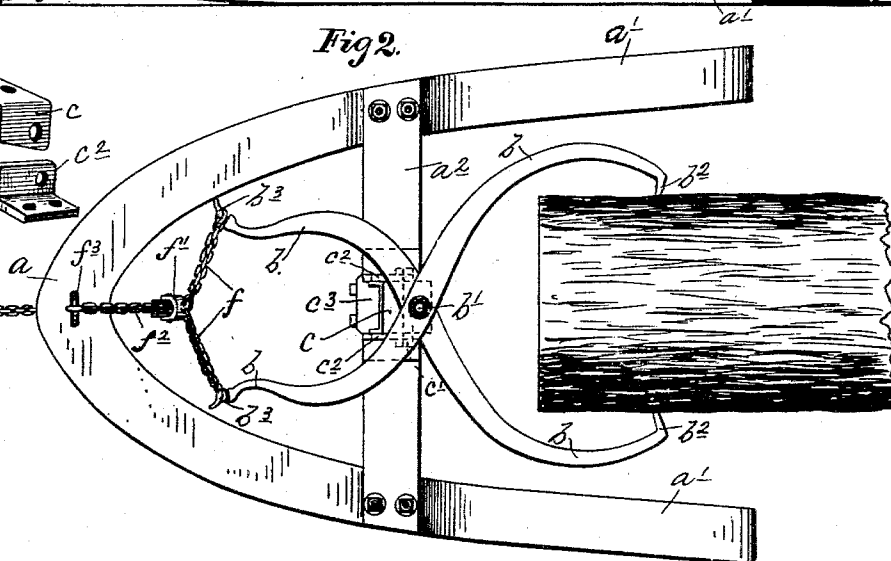


Fig 2.



Witnesses.

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LOG-SKIDDING DEVICE.

SPECIFICATION forming part of Letters Patent No. 561,674, dated June 9, 1896.

Application filed October 18, 1895. Serial No. 568,044. (No model.)

To all whom it may concern:

Be it known that I, HENRY J. KURIGER, a citizen of the United States, residing at Minneapolis, in the county of Hennepin and State of Minnesota, have invented certain new and useful Improvements in Log-Skidding Devices; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to devices for skidding logs or timbers, and has for its object to provide an attachment for coöperation with the ordinary so-called "go-devil" or other portable support, whereby the logs or timbers may be handled much more rapidly and at much less cost.

To this end my invention consists of the novel devices and combinations of devices hereinafter described, and defined in the claims.

My invention is illustrated in the accompanying drawings, wherein, like letters referring to like parts throughout the several views—

Figure 1 is a perspective view showing a go-devil equipped with my attachment with the parts shown as they would appear when dragging a log. Fig. 2 is a plan view of the same parts as they would appear when about to pick up a log. Fig. 3 is a side elevation of the same, with the parts in full lines, as about to pick up a log, or as shown in Fig. 2 and in dotted lines, as they would appear when the log has been picked up and the animal is under way, or as the parts are shown in Fig. 1. Fig. 4 is a detail in perspective showing the grapple-bearing brackets for connection with the go-devil bunker detached and pulled apart.

a is the tip or forward end, and a' the separated portions, of the base or runner portion of the go-devil.

a^2 is the bunker, which is securely bolted or otherwise secured to the parts a' of the base a about midway of the length of the same. The said parts a a' a^2 constitute a device in extensive use by woodsmen or lumbermen and which is called by them a "go-devil." The base or runner portion a a' of this device is of oval or shoe-like form and turns up at its forward end, which construc-

tion adapts the go-devil to readily pass over or sheer around any obstacle with which it may meet. The cross-bolster or bunker a^2 rigidly connects the spread-out portions a' of the runners or base, and the so-called "go-devil" thus constructed will stand the roughest kind of usage.

With the ordinary go-devil as above described, however, it has been necessary to lift or roll the end of the log onto the bunker and tie the same thereto with a chain or some other form of binder. On reaching the skid where the logs are to be piled it has been necessary hitherto to drop or release the log and pile the same by hand. Hence it has been the practice to employ two men and sometimes three to accompany or handle each go-devil.

The object of my invention is to provide an attachment whereby the work can be much more speedily done by one man. To this end I mount a grapple flatwise on the bunker of the go-devil for pivotal movement in the vertical plane and arrange the draft devices in such a manner that the forward movement of the draft-animal will close the grapple onto the log, lift the engaged end of the log above the ground, and continue to hold the log until slack is given to the draft devices.

The grapple tongs or levers b are pivotally connected together by a central pin b' , so as to be capable of the ordinary grappling action by pivotal movement of the grapple arms or levers in the horizontal plane; but the pin b' also serves to connect the grapple with a channel-iron bracket c , the downturned ends of which bracket c are connected by horizontal bolt or pivot-pin c' with the upwardly-extended lugs c^2 of a bearing-plate or center-iron c^3 , which is securely bolted to the center of the bunker a^2 . The center-iron c^3 is constructed to embrace the top and sides of the bunker for strengthening the same. The said connections c c' c^2 c^3 serve to mount the grapple on the bunker, with freedom for up-and-down pivotal motion on the horizontal pivot or bolt c' . Otherwise stated, the channel-iron bracket c serves as a rocker for the grapple-levers b .

The engaging ends of the grapple-levers b are provided with sharpened hook or brad-like ends b^2 , which are preferably set at a

slight upward angle to the main portions of the levers for insuring a better grip on the log or timber in the grappling action. The forward ends of the grapple-levers *b* are preferably provided with hooks *b*³ as a convenient means for the adjustable attachment thereto of a pulley-chain or other flexible connection *f*, which is provided with a pulley-block *f*¹, secured to its central link. The draft-chain 10 or other flexible draft connection *f*² is attached at its rearward end to a staple or eye-piece *f*³, fixed to the top of the go-devil at its forward end, passes thence over the pulley in the block *f*¹, and down through a staple or other guide *f*⁴, fixed to the under surface of the go-devil at its forward end, as best shown in Fig. 3 of the drawings. The forward end of the chain *f*² is provided with means (not shown) for the attachment of a 20 horse or other draft-animal.

With the attachments above described it is obvious that the runners of the go-devil may be made to straddle the end of a log and simultaneously therewith that the brad ends 25 of the grapple-levers may be brought into position to also straddle the end of the log while lying on the ground, as shown in full lines in Figs. 2 and 3 of the drawings. By then starting the draft-animal the strain from the draft-chain *f*², as applied through the pulley-chain *f*, will close the grapple on the log, so as to 30 securely engage the same, and the continued pull will rock the grapple into the position shown in dotted lines in Fig. 3 and in full lines in Fig. 1 of the drawings. Thereafter 35 the pulling strain will take effect both to hold the log in the position shown in Fig. 1 and to pull forward the go-devil and its load until slack is given to the draft-chain. On reaching 40 the skids, where the logs are to be piled, the draft-animal may be made to drag the go-devil directly across the skidway, so as to bring the log into piling position. By then giving slack to the draft-chain *f*² the grapple 45 will be automatically released under the weight of the log, and the log will be dropped onto the skids in position to be rolled onto the pile without requiring to be lifted by hand or otherwise. The go-devil may thus 50 be dragged across the skids, because of the way in which the strain from the draft-chain *f*² is received at the forward end of the go-devil. Inasmuch as the said chain passes under the forward end of the go-devil, the 55 pulling strain thereon will tend to lift the same over the skids or any other obstacle which may be met.

From the foregoing description of the construction and operation it is obvious that the 60 teamster alone can readily handle the go-devil without requiring any additional help either for picking up the log onto the go-devil or for placing the same on the skids at the pile. Moreover, it is obvious that the log can be 65 very quickly picked up at the point where

found and be instantly dropped when landed on the skids. Otherwise stated, one man or boy can with this device handle many more logs in any given time than could be done in the old way. 70

It is important that a chain or some other suitable connection should be used to unite the forward arms of the grapple-levers *b* with the pulley *f*¹ in such a way as to make the said connection adjustable. This adjustment 75 is desirable in order to vary the extent of pivotal motion permitted to the grapple-levers in respect to each other for adaptation to different sizes of logs.

The hook ends of the grapple-levers must 80 of course be permitted to open to a spread sufficient for any size of log, and on the other hand it must be possible to close the same onto a small log without bringing the pulley-block *f*¹ against the staple *f*³ or fast end of the draft-chain, or otherwise the log would 85 not be held.

Of course it will be understood that the connections between the grapple and the go-devil bunker might be of any other suitable 90 construction, which would permit the flatwise mounting and pivotal motion of the grapple, as required to do the work. The draft appliances might also be of any other suitable construction which would give substantially 95 the same action. The particular mounting of the grapple, however, and the particular arrangement of the draft appliances, as shown and described, will be found the most convenient and practicable. 100

While the invention herein disclosed was especially designed for use in dragging logs from the place where the trees have been felled and sawed into logs to the place where 105 piled onto skids adjacent to the sled-roads, it will be understood, of course, that the invention can also be used in many other places—such, for example, as in handling timbers, for the construction of buildings or in moving, and for various other uses. 110

It should also be understood that instead of the go-devil the forward member of a pair of bob-sleds or any other suitable portable support might be used. For example, a two-wheel truck might be used instead of a go-devil or sled. Any support which is adapted 115 to be moved over the ground and to which the grapple may be pivoted flatwise for pivotal movement in the vertical plane will answer, provided the support is of a character to permit the grapple to straddle one end of the log. 120

What I claim, and desire to secure by Letters Patent of the United States, is as follows:

1. The combination with a portable support, of a grapple formed by a pair of crossed 125 and pivotally-connected arms, said grapple being pivotally mounted, flatwise, on said support, and serving as a lever to lift the log, and draft connections applied to said support and to the forward ends of said grapple- 130

arms, whereby under the pulling strain, the log will be lifted and suspended, substantially as described.

2. The combination with a go-devil, of a
5 grapple pivoted flatwise to the go-devil bunker, the chain f with pulley-block f' applied to the forward arms of the grapple and the draft-chain f^2 fast to the go-devil, at f^3 , threaded through the pulley-block f' and passed

through a guide f^4 , under the tip of the go- 10
devil, substantially as and for the purposes set forth.

In testimony whereof I affix my signature
in presence of two witnesses.

HENRY J. KURIGER.

Witnesses:

E. F. ELMORE,

F. D. MERCHANT.