To all whom it may concern:

Be it known that I, WILLIAM HENRY TROUT, a citizen of the United States, residing at Milwaukee, in the county of Milwaukee, and State of Wisconsin, have invented a certain new and useful Improvement in Steam Log-Holders for Cut-Off Saws, of which the following is a specification.

This invention relates to improvements in the construction of sawmill machinery and has particular relation to improvements in log holders for cutoff saws, such appliances being commonly known as log dogging devices.

An object of the invention is to provide a log holder for cutoff saws, which is simple in construction and efficient in operation. Another object is to provide a log holder which will grip and hold the log that is being cut, and having the log held in a position of definite shape. A further object is to provide a log holder which will effectively grip logs of irregular shape. Still another object is to provide a device which will grip logs of different diameters. A further object is to provide a log holder which may be applied to a log-way without interrupting the continuity of the log-way.

A clear conception of an embodiment of the invention may be had by referring to the drawings accompanying and forming part of this specification, in which like reference characters designate the same or similar parts in the several views.

Figure 1 is a fragmentary part sectional front elevation of a steam log holder for cutoff saws, showing the jaws in extreme open position in full lines and in their extreme closed position in dot and dash lines.

Fig. 2 is a top view of the steam log holder for cutoff saws.

Fig. 3 is a fragmentary part sectional side elevation of a steam log holder for cutoff saws.

The steam log holder disclosed is especially adapted to grip and hold logs resting upon a log-way, while the ends thereof are being cut square by means of a saw located intermediate the two sets of gripping jaws. The frame is preferably formed as a one-piece casting and is rigidly secured to the adjacent portions of the log-way, thereby maintaining the rigidity and continuity of the log-way adjacent the device. The logs are positioned between the jaws by means of a conveyor chain provided with cleats and movable along the log-way in the usual manner. The jaws, of which there are two pairs spaced apart longitudinally of the log-way, are provided with gripping teeth and are pivoted at their lower extremities to movable elements. The elements are pivoted to the frame in pairs, each pair being mounted on a common pivot. Each element is provided adjacent one end with a projection forming an abutment engageable with an adjustable abutment on the adjacent jaw. The jaws are limited in their opening movement, by stops formed integral with the frame. A pair of floating links are pivotally connected to each jaw adjacent the upper end thereof, and have their lower extremities pivotally connected to the frame by means of connecting elements. The links are connected with swivel blocks mounted upon the equalizing levers, by means of connecting links. The equalizing levers are pivotally mounted upon the cross-head, see Figs. 1 and 3. The cross-head is vertically reciprocable along parallel guides by means of a piston and operable in a cylinder. The guides are braced at their upper ends by means of cross-bars.

During the normal operation of the device the log to be sawed is advanced in proximity to the jaws by means of the conveyor chain and the cleats associated therewith, the jaws being in extreme open position as indicated in Fig. 1. When the log has been properly positioned relatively to the saw, the piston is moved upwardly by admitting steam or other working fluid to the lower face thereof, causing the cross-head to move upwardly along the parallel guides and moving the jaws toward the log and simultaneously swinging the elements about the pivots. The teeth of the jaws eventually strike, grip and slightly elevate the adjacent log, the pressure against the piston being maintained until it is desired to release the log after cutting. The jaws may be readily released by admitting steam to the upper face of the piston, causing the cross-head to move downwardly and to withdraw the jaws from the log.

It will be noted that the arrangement of
elements 4 and jaws 2 as disclosed, causes the teeth of the jaws to approach the log in such a direction that most effective gripping of the log results. By slightly raising or elevating the log adjacent the cut, the weight of the portions of the log on the sides of the jaws 2 remote from the saw, will cause the portions of the log adjacent the saw faces to swing free from the saw, thereby avoiding binding or clenching. The equalizing levers 20 and elements 21 permit the jaws 2 to adjust themselves and to conform to irregularities on the log. The movable elements 4, besides elevating the log adjacent the cut, automatically alter the position of the lower jaw pivots in such a manner that the jaw teeth will effectively grip logs of different diameters. The abutments 15, 16 prevent excessive impingement of the jaws 2 against the frame 3 and form stops for arresting and varying the extent of the closing movement of the jaws 2. The one-piece frame 3 preserves the rigidity and continuity of the log-way.

It should be understood that it is not desired to be limited to the exact details of construction herein shown and described, for obvious modifications within the scope of the appended claims may occur to a person skilled in the art.

It is claimed and desired to secure by Letters Patent:

1. In combination, a frame, a pair of elements pivoted to said frame, a jaw pivoted to each of said elements, and means for moving said jaws.

2. In combination, a frame, a pair of elements connected to said frame by a common pivot, a jaw pivoted to each of said elements, and means for moving said jaws and said elements about said common pivot.

3. In combination, a frame, a pair of elements pivoted to said frame, each of said elements, each of said jaws having an abutment, a jaw pivoted to each of said elements, and means for moving said jaws and said elements about said common pivot.

4. In combination, a frame, a pair of elements connected to said frame by a common pivot, each of said elements having an abutment, a jaw pivoted to each of said elements, each of said jaws having an abutment engageable with said element abutment to limit relative movement of said jaw and said element, and means for moving said jaws.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."
It is hereby certified that Letters Patent No. 1,254,946, granted January 29, 1918, upon the application of William Henry Trout, of Milwaukee, Wisconsin, for an improvement in "Steam Log-Holders for Cut-Off Saws," were erroneously issued to the inventor, said Trout, whereas said Letters Patent should have been issued to Allis-Chalmers Manufacturing Company, of Milwaukee, Wisconsin, a corporation of Delaware, as shown by the records of assignments in this office; and that the said Letters Patent should be read with this correction therein that the same may conform to the record of the case in the Patent Office.

Signed and sealed this 26th day of February, A. D., 1918.

[Seal]

F. W. H. CLAY,

Acting Commissioner of Patents.