March 26, 1968 C. E. McMANAMA 3,374,812

POSITIONING AND RETAINING DEVICE SYSTEM FOR LOGS IN A HIGH CAPACITY SAWMILL EMPLOYING A HORIZONTAL TRAVERSING BANDSAW ADJUSTABLY MOUNTED OVER THE LOG BEING SAWED

Filed June 26, 1964 2 Sheets-Sheet 1

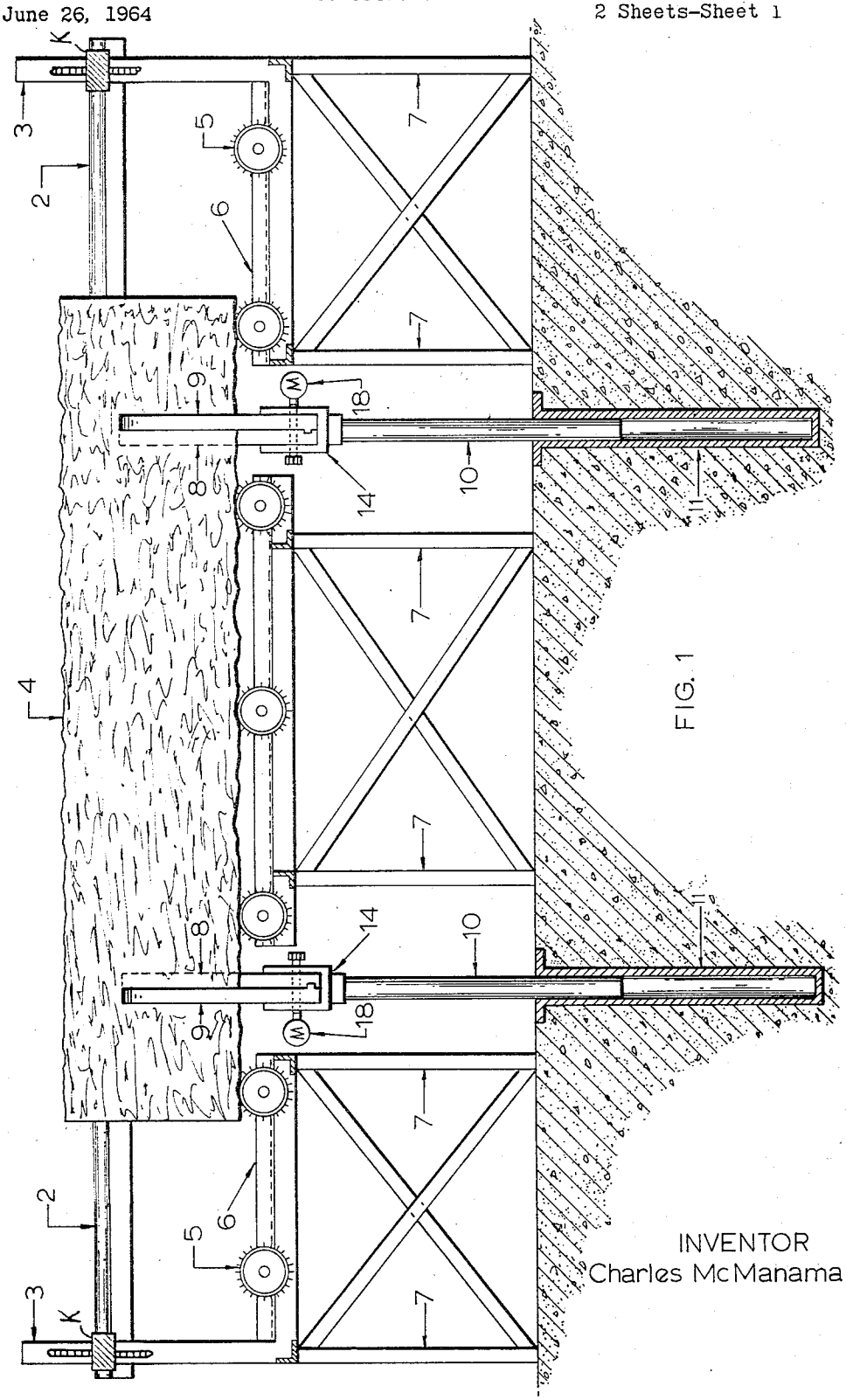


FIG. 1

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Filed June 26, 1964 2 Sheets-Sheet 2

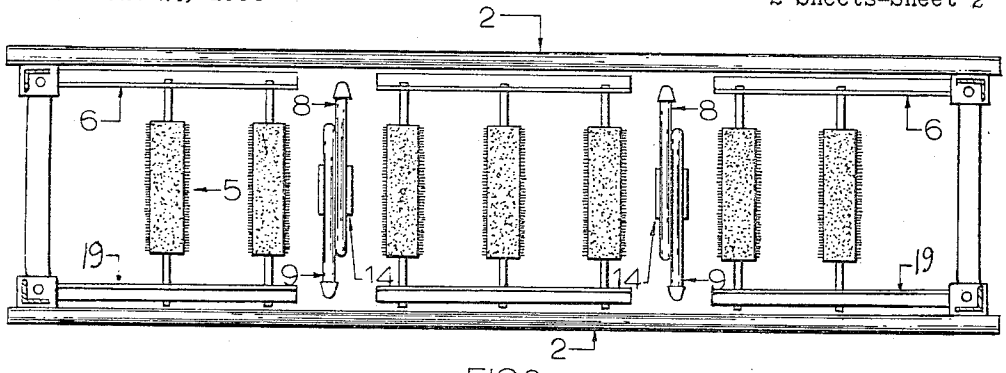


FIG. 2

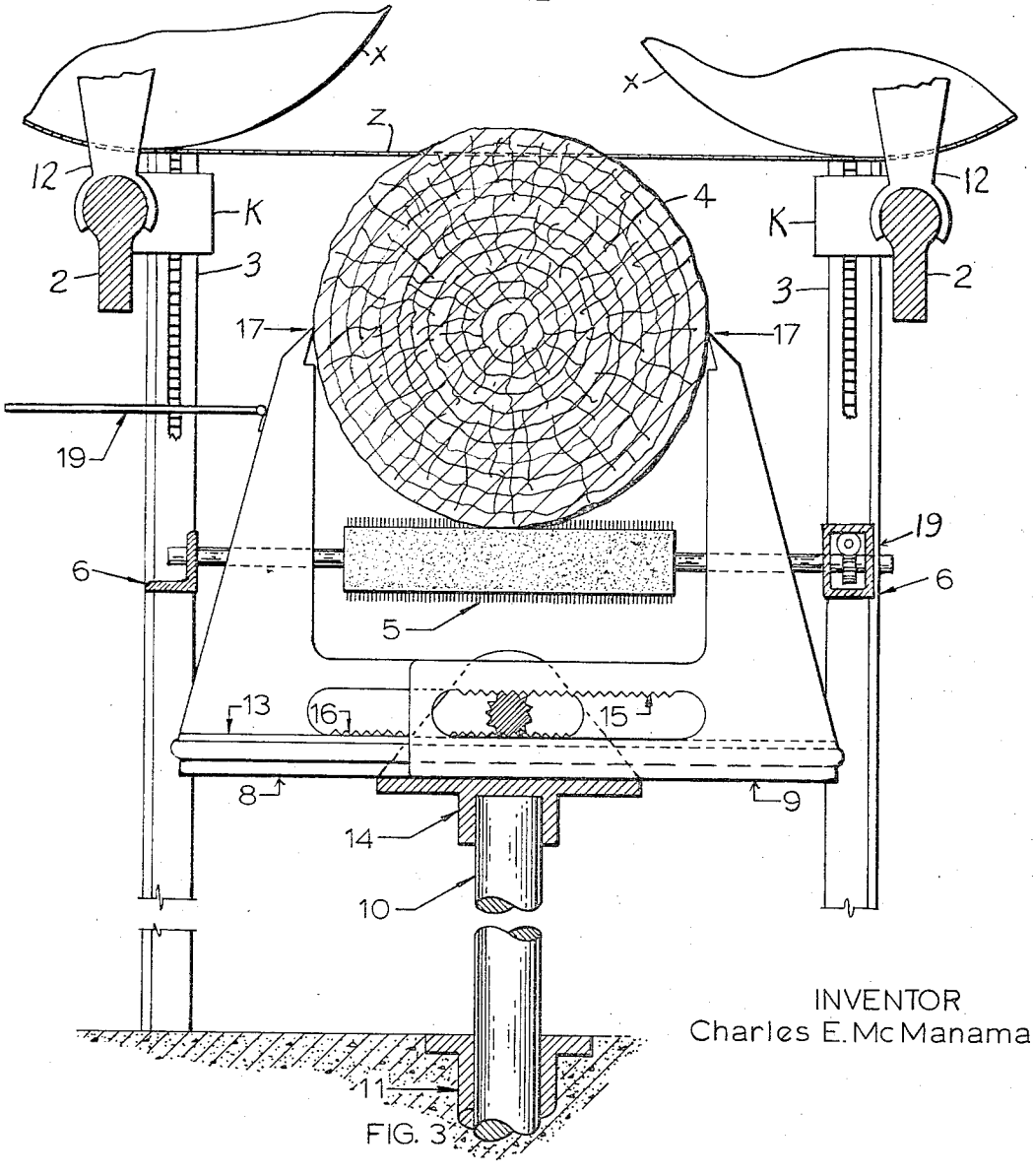


FIG. 3

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2 Claims. (Cl. 143—19)

This device compares in function to the log carriage of the conventional type sawmill having a traversing log carriage. Its function it to provide means of support to the log while being sawed, and to provide means of fastening the log in sawing position.

However, there are differences which make this device in its function quite unique, Aforesaid means of support is a powerable reversible roll case instead of "headblocks." Aforesaid fastening means instead of being "setting dogs" is two or more pairs of jaws forming vise like structures which rise from properly spaced positions between the supporting rolls within the roll case, and are extendable and retractable above said rolls in unison with each other.

Such described means of log support is able to propel any log or cant thereon in either lineal direction by control, facilitating selective channeling of gangsaw cants to a gangsaw and of other heavy timbers to their respective dock. Considering also the lateral direction of lumber from the machine, there is a three directional flow of lumber and cants from the machine—something that does not readily lend itself to other designs. This factor is the primary object and value of the invention.

This aforementioned lateral direction of lumber flow from the log carriage can be received by a conventional lateral conveyor chain at the side of the roll case. Likewise, a lateral conveyor chain at the opposite side of the roll case can deliver logs. There are other common means that could be used, and the form thereof is not respective to the invention.

In regard to aforesaid fastening means, the vise like jaws, comprising in effect a log vise, hold the log in sawing position, counteract the saw thrust, and open equally to the left and to the right—automatically centering the log in the saw throat for maximum utility of the saw throat. These jaws are extendable above the rolls far enough to accommodate the largest logs, but an interconnected safety control prevents them from being extended into the path of the saw. Sharpened upper edges of the jaws firmly grip a round log, while the inside surfaces of the jaws are square and smooth to accommodate squared cants. Also these jaws when elevated and released from the log would assist a log turning device, of which suitable kinds are in common use.

This device is illustrated further in the accompanying drawings.

FIGURE 1 is a sectional side view intersecting the lineal center of the machine, except parts **4**, **8**, **9**, **10**, **14**, and **18** illustrated in surface view.

FIGURE 2 is a top view.

FIGURE 3 is a sectional end view intersecting a log vise unit which is illustrated in surface view along with a portion of its supporting standard for clarity.

In greater detail, FIGURE 1 shows: the far guide rail of paired traversing bandsaw guide rails **2**, the elevating mechanisms K (shown as commonly known jackscrew type devices) and guide posts **3**, at each end of each guide rail, which vertically guide and adjustably support the bandsaw and guide rails over the log **4** in a manner that accurate lumber may be sawed therefrom. Illustrated further, log **4** is supported by rolls **5** which have an

adequately tractionized surface and are reversibly powerable in a synchronized manner by worm drive mechanism units **18**, and are mounted in an integrating framework **6** supported upon framework **7**. The log positioning jaws **8** and **9** (in pair) are rigidly and adjustably supported upon hydraulically elevated standards **10** which are mounted in cylinder wells **11** shown rigidly encased in concrete. Also shown are the individual powering units **18** to open and close each pair of jaws, the guiding tongue and groove **13** at their adjoining faces which keeps them in alignment with each other, and the clevice shaped guide **14** on the supporting standard which keeps both jaws in rigid alignment to it. FIGURE **2** shows the top view of the powerable rollers **5**, guide rails **2**, and log vise jaws **8** and **9**, and their relative positions. FIGURE 3 shows the end view, which is more detailed: centered gear pinion which opens and closes jaws **8** and **9** by action upon gear racks **15** and **16**, sharpened edges **17** upon the jaws which engage the round of the log before it is squared, and control switch **19** which prevents the jaws from being elevated into the path of the saw, and is activated by engagement of guide rail **2** upon its contact surface.

FIGURES 2 and 3 show comparison views. FIGURE 3 also shows lower portions of the bandsaw pulleys X, lower portions of the bandsaw supporting structure with guide rail shoes **12**, and the bandsaw blade Z intersecting log **4**.

Due to the nature of the invention, description in certain details necessarily for purposes of presentation involves specific forms. These forms are not intended to be restrictive of any other forms wherein the spirit of the invention may also exist.

Having hereby described my invention which I wish to protect by Letters Patent, I make the following claims of invention.

1. In a sawmill having a horizontal bandsaw which traverses in sawing upon paired side rails which straddle a log, a mechanism to adjustably support said rails as desired to saw dimensions of lumber from said log, and a log carriage to support the log; a log carriage comprising powerable and reversible rolls in a roll case aligned beneath and with said rails, and a number of log engaging vises having paired laterally opening jaws extending upward through the roll case between the rolls at appropriate intervals beneath and between said rails, a means in each said vise operating the jaws thereof so the log will be held in a centered position under the saw, and a means to raise and lower said vises from their positions between the rolls.

2. In a mechanism as set forth in claim **1**, a safety control means which automatically prevents the jaws from being extended into the path of the saw, comprising an activating contact respective to said jaws and aforesaid rails, and means to lower said jaws actuated by control from the said activating contact so the jaws are retained below the path of the traversing saw.

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DONALD R. SCHRAN, *Primary Examiner.*