J. M. LEAVER, Jr.

GAGE.

957,780. APPLICATION FILED JAN. 15, 1908. Patented May 10, 1910.

3 SHEETS—SHEET 1.

Fig. 1.

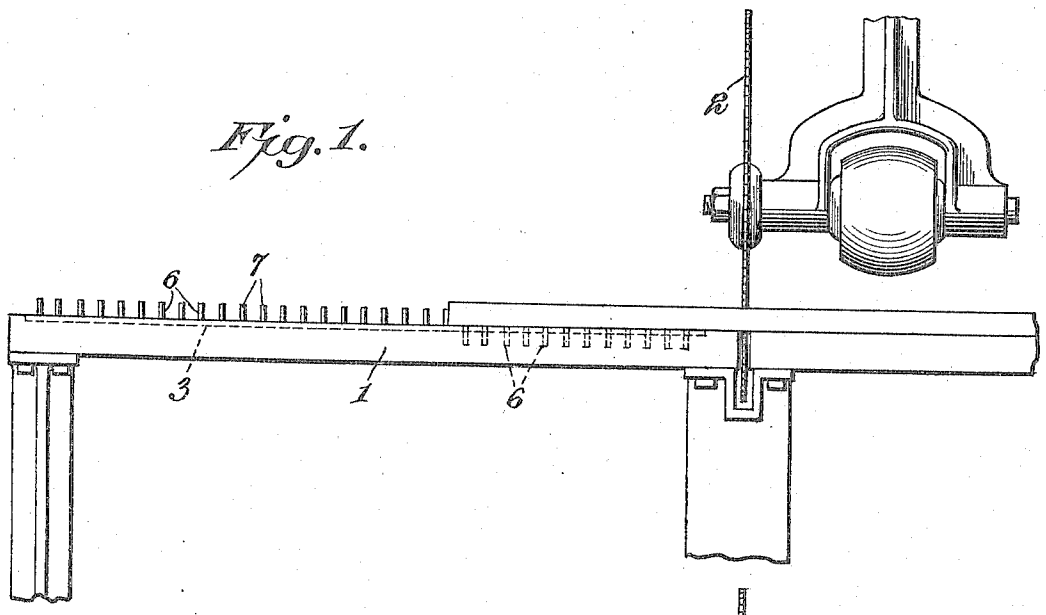
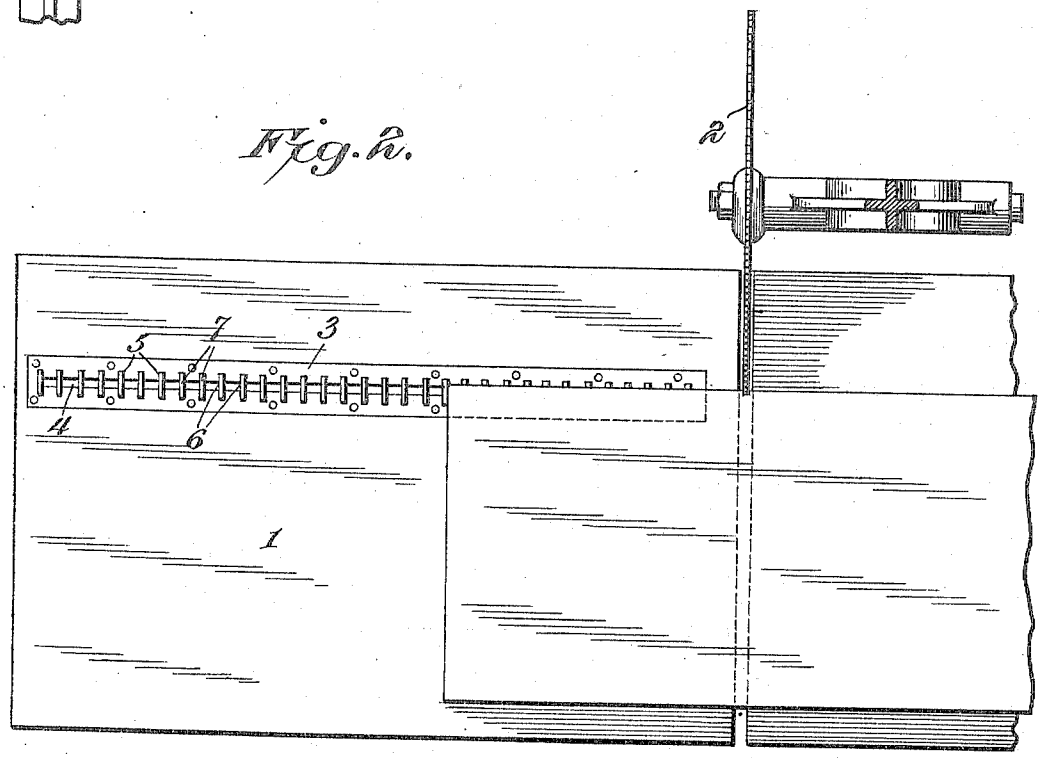


Fig. 2.



Witnesses
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3 SHEETS—SHEET 2.

Fig. 3.

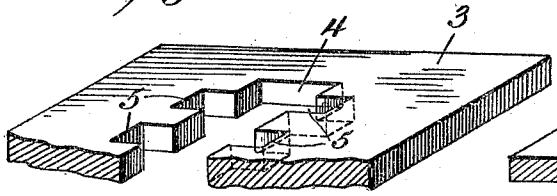


Fig. 7.

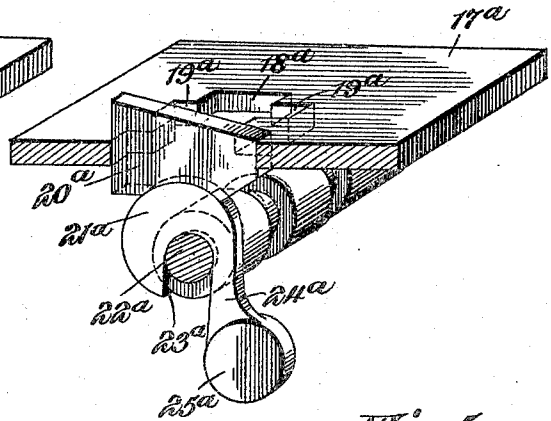


Fig. 4.

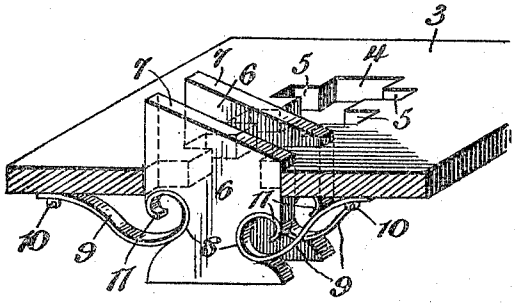


Fig. 5.

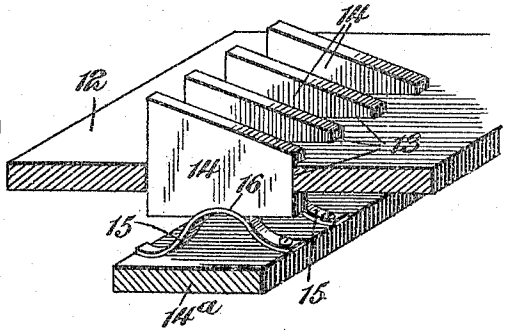


Fig. 6.

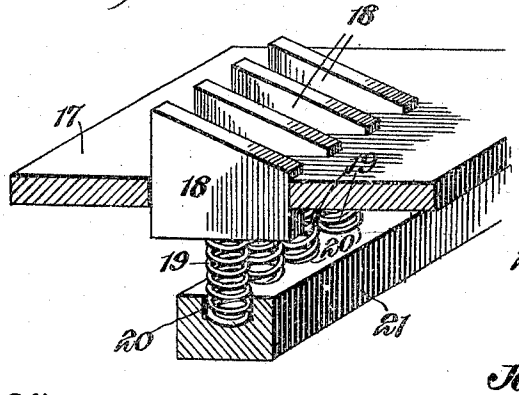
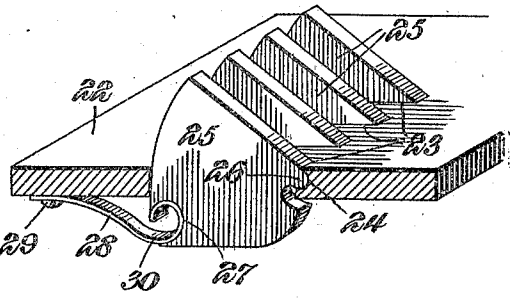


Fig. 8.



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3 SHEETS—SHEET 3.

Fig. 9.

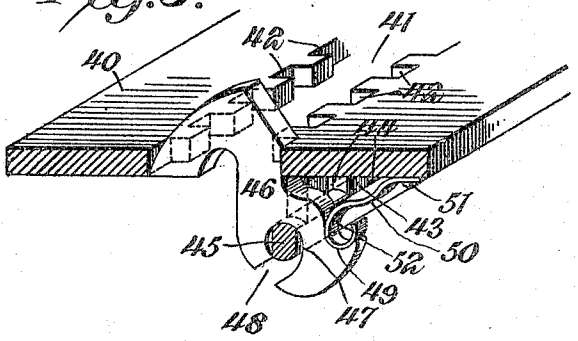


Fig. 10.

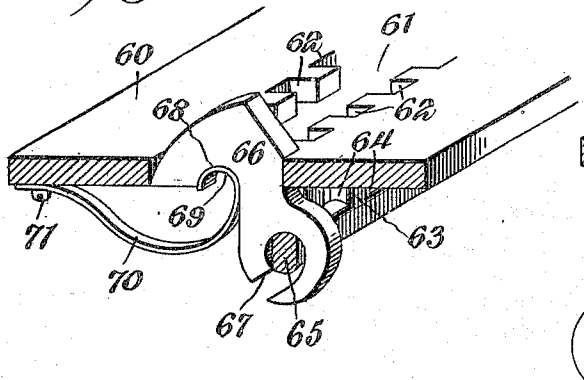
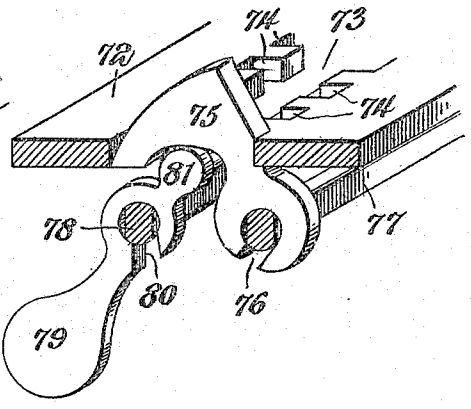


Fig. 11.



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UNITED STATES PATENT OFFICE.

JAMES MARSHALL LEAVER, JR., OF SONORA, CALIFORNIA.

GAGE.

957,780. Specification of Letters Patent. Patented May 10, 1910.

Original application filed January 15, 1908, Serial No. 410,980. Divided and this application filed January 15, 1908. Serial No. 410,981.

To all whom it may concern:

Be it known that I, JAMES M. LEAVER, Jr., a citizen of the United States, residing at Sonora, in the county of Tuolumne and State of California, have invented a new and useful Gage, of which the following is a specification.

The present invention, while primarily devised for the purpose of gaging the length of lumber being sawed, is not necessarily limited thereto, but as will be evident to those skilled in the art, is applicable to cutting, punching, slotting, etc. various materials used in the mechanical arts.

The primary object of the invention is to provide a gage of a novel and simple character having a plurality of stops, each of which is movable independently of the others, and is detachable from its support without affecting the others, so that said gages may be readily adjusted or interchanged with ease and expedition.

The preferred embodiments of the invention are illustrated in the accompanying drawings, but it will be evident from an inspection of the claims hereto appended that said invention is not limited exclusively to the forms of construction disclosed.

In the drawings, Figure 1 is a side elevation of a saw table, showing a gage applied thereto and also illustrating the saw. Fig. 2 is a top plan view of the same. Fig. 3 is a perspective view of a portion of the base plate. Fig. 4 is a detail perspective view of a portion of said plate, showing some of the gage stops in place. Fig. 5 is a detail perspective view of a slightly modified form of construction. Fig. 6 is another embodiment of the invention. Fig. 7 illustrates another form of construction. Fig. 8–11 inclusive are still other modifications of the invention.

Similar reference numerals designate corresponding parts in all the figures of the drawings.

Referring to the structure illustrated in Figs. 1–4 inclusive, the saw table, which may be of any suitable character, is designated by the reference numeral 1, and a circular saw 2 coöperates therewith. On the saw table is mounted a base plate 3, which is provided with a longitudinal slot 4 and transverse slots that communicate with the longitudinal slot, and form seats 5 on opposite sides of said slot. A plurality of vertically slidable gage stops 6 are mounted in the seats or transverse slots 5, their upper ends being preferably tapered, as shown at 7, the opposite side margins of their lower ends being provided with recessed seats 8. Leaf springs 9, secured at their outer ends to the under side of the base plate by screws 10 or other fasteners, have their inner free ends curved or coiled, as shown at 11, and detachably engaged in the seats 8. These springs therefore serve to maintain the upper ends 7 of the gage stops projecting above the base plate, but said ends may be forced downwardly, as will be evident. The gage is used in a manner well understood. The end of a piece of timber is abutted against the desired stop, as illustrated in Figs. 1 and 2, and consequently the stops beneath the timber will be depressed, so that they are out of the way. In this construction, each stop can be removed without displacing any of the others, and therefore stops with projections on the sides may be supplied for gaging fractional lengths. The longitudinal slot in this form of the invention is advantageous, in that the stops may be shifted from one of the transverse slots 5 to another without the necessity of wholly removing the stops from the base plate, the narrow portions between the seats 8 permitting this movement.

The mounting of the stops may be modified in various ways. Thus in Fig. 5, the base plate 12 has transverse slots 13 therein, in which vertically slidable stops 14 are located. Beneath the stops is placed a supporting plate 14^a, and bowed leaf springs 15, mounted on said plate, have their intermediate portions engaged in seats 16 formed in the lower edges of the stops.

In Fig. 6 the base plate 17 has vertically reciprocating gage stops 18 mounted therein, said stops being supported on coiled springs 19, the lower ends of which are located in seats 20 formed in the upper face of a supporting bar 21.

A base plate 17^a is illustrated in Fig. 7, and has a longitudinal slot 18^a with transverse slots 19^a communicating therewith. Vertically reciprocating gage stops, one of which is shown at 20^a operate in the trans-

verse slots and are supported on cams 21ª journaled on a pivot rod 22ª located beneath the base plate. The cams have slots 23ª that receive the pivot rod and furthermore have depending arms 24ª which carry counterbalancing weights 25ª. In Fig. 8, the base plate 22 has transverse slots 23, the rear walls of said slots being provided with bearing sockets 24. Vertically swinging gage stops 25 have lips 26 journaled in the sockets, constituting hinge joints. The opposite lower corners of the gage stops are provided with seats 27, and leaf springs 28 secured at their outer ends by fasteners 29 to the under side of the base plate 22, have their inner ends curved, as shown at 30 and engage in the sockets. The upstanding ends of these gage stops therefore swing downwardly.

In the structure disclosed in Fig. 9, the base plate 40, has a longitudinal slot 41 with transverse slots 42, forming seats. The base plate at one side of the longitudinal slot is provided with a depending flange 43, and slots 44, formed therein, terminate short of the lower edge of said flange, forming a pivot 45. Gage stops, one of which is illustrated at 46 are journaled on the pivot, each gage stop having an upwardly inclined slot provided with an enlarged inner portion 47 that receives the pivot and a contracted mouth 48 through which the pivot can pass when the gage stop is in an inoperative position. The upper end of each stop slides through one of the transverse slots, and projects above the base plate. Its lower portion in rear of the depending flange 43, has a seat 49, and a leaf spring 50, secured to the under side of the base plate, as shown at 51, has a curved inner end 52 engaged in the slot so that the upper end is yieldingly maintained in projecting relation with respect to the base plate.

In Fig. 10, a base plate, designated 60, has a longitudinal slot 61 and transverse slots 62 extending on opposite sides of the longitudinal slot. The base plate furthermore has a depending flange 63, the slots 64 therein terminating short of the lower edge forming a pivot 65. The gage stops 66 are journaled on the pivot, being provided with slots 67 that detachably receive the same. These gage stops operate in the transverse slots 67, and have in their under sides seats 68 in which the curved free ends 69 of leaf springs 70 engage, said springs being fastened to the under side of the base plate 60 by suitable devices 71.

In Fig. 11, the base plate 72 has a longitudinal slot 73 and transverse slots 74. Swinging gage stops, one of which is illustrated at 75, have slots 76 in their lower ends that receive a pivot rod 77 located beneath the base plate. Another pivot rod 78 disposed at one side of the pivot rod 77 constitutes a support on which a plurality of counterweights 79 are mounted, said counterweights having slots 80, in which the pivot rod 78 is engaged. Each counterweight has an upstanding ear 81 that bears against the under side of the gage stop 75, and serves to yieldingly hold the same in elevated position.

No specific claims are made in this application to the structure disclosed in Figs. 7 and 11, inasmuch as they constitute the subject-matter of another divisional application, filed simultaneously herewith, Serial No. 410,982.

From the foregoing, it is thought that the construction, operation and many advantages of the herein described invention will be apparent to those skilled in the art, without further description, and it will be understood that various changes in the size, shape, proportion and minor details of construction, may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention. In this connection, it may be stated that this application is subsidiary to copending application, Serial No. 410,980, and the broad claims are in said other application.

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

1. In a gage of the character described, the combination with a substantially horizontal fixed base plate having a longitudinal slot, and transverse slots communicating therewith and forming seats on opposite sides of the longitudinal slot, of a plurality of reciprocatory gage stops slidably mounted in the seats and having their upper ends normally projected above the base plate, and yieldable means located beneath the base plate and engaging the gage stops for normally holding them in an elevated position.

2. In a gage of the character described, the combination with a substantially horizontal fixed base plate having a longitudinal slot, and transverse slots that communicate therewith and form seats on opposite sides of the longitudinal slot, of a plurality of vertically movable gage stops mounted beneath the base plate and slidable through the seats, and means located beneath the base plate for yieldingly maintaining the stops with their upper ends in projecting relation with respect to the upper face of the base plate.

3. In a gage of the character described, the combination with a substantially horizontal fixed base plate having a longitudinal slot, and transverse slots communicating therewith and forming seats on opposite sides of the longitudinal slot, of a plurality of reciprocatory gage stops slidably mount-

ed in the seats and having their upper ends normally projecting above the base plate, and springs located beneath the base plate and engaging the gage stops for normally holding them in elevated positions.

4. In a gage of the character described, the combination with a fixed base plate having slots, of leaf springs permanently located at one side of the base plate and having curved terminals, and gage stops detachably and slidably mounted in the slots and having seats that detachably receive the curved terminals of the springs and permit the removal of the stops individually through the slots without disturbing the others or their mountings.

In testimony, that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

JAMES MARSHALL LEAVER, JR.

Witnesses:
JAMES M. LEAVER, SR.,
A. M. DIVOLL.