

H. E. HESSLER & F. W. BAST.

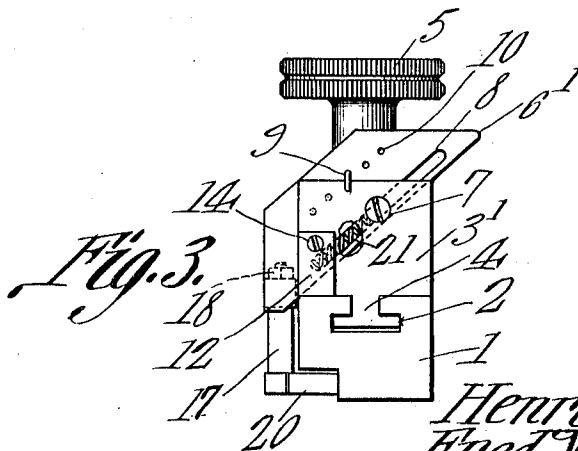
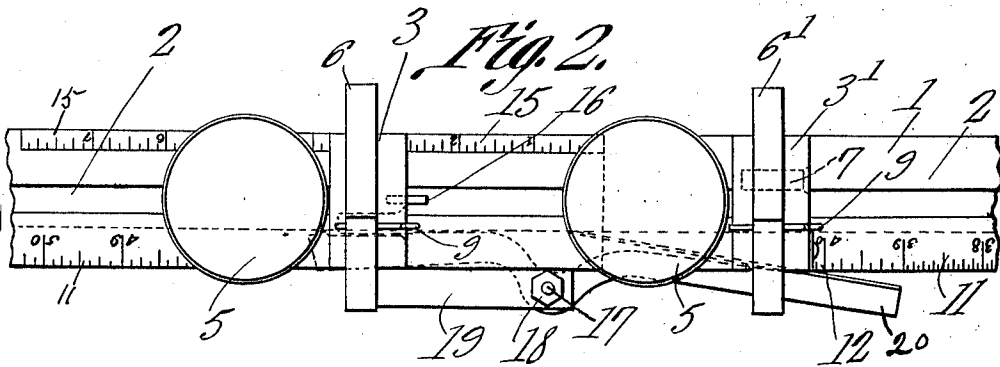
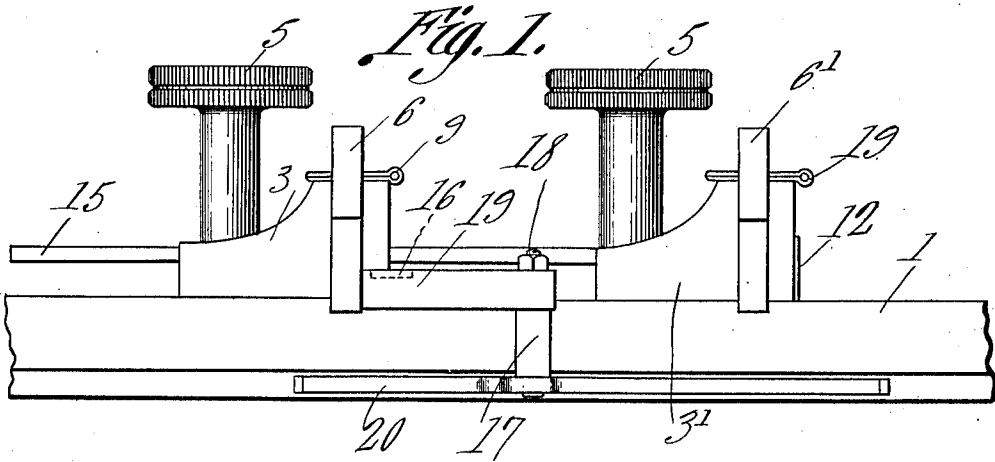
TENON MACHINE GAGE.

APPLICATION FILED MAR. 13, 1911.

1,020,422.

Patented Mar. 19, 1912.

2 SHEETS-SHEET 1.



Witnesses

J. H. Wilson
L. H. Wilson.

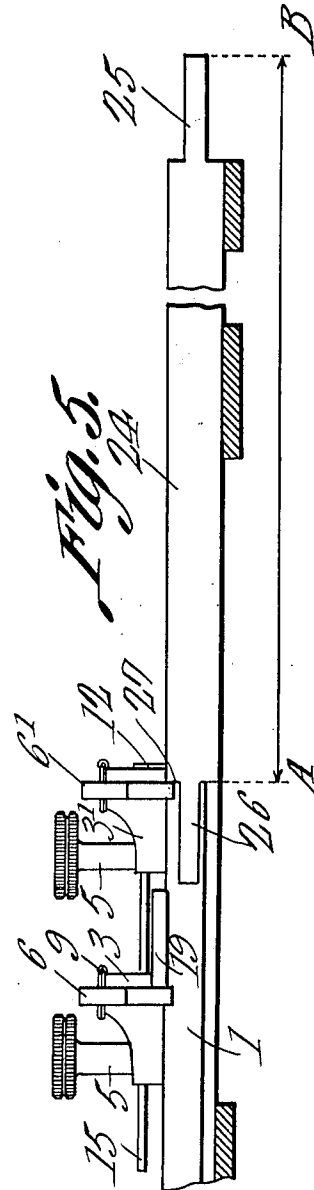
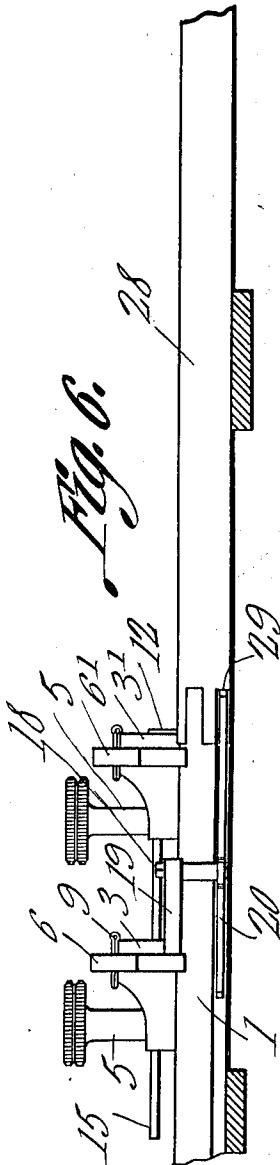
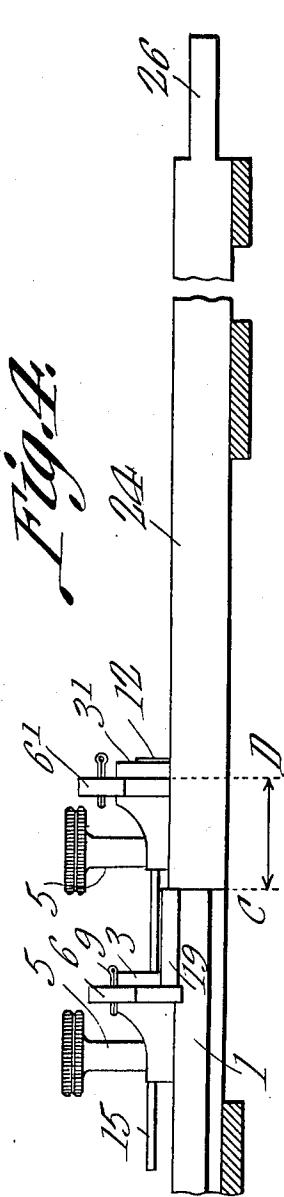
Henry E. Hessler
Fred W. Bast ^{AND}
Inventors.

by *C. A. Snow & Co.*
Attorneys

H. E. HESSLER & F. W. BAST.
TENON MACHINE GAGE.
APPLICATION FILED MAR. 13, 1911.

1,020,422.

Patented Mar. 19, 1912.
2 SHEETS—SHEET 2.



Witnesses

J. P. Tomlin
L. H. Wilcox

Henry E. Hessler
Fred W. Bast, AND *Inventors.*
by *C. A. Snow & Co.*
Attorneys

UNITED STATES PATENT OFFICE.

HENRY E. HESSLER AND FRED W. BAST, OF MUSCATINE, IOWA.

TENON-MACHINE GAGE.

1,020,422.

Specification of Letters Patent.

Patented Mar. 19, 1912.

Application filed March 13, 1911. Serial No. 614,113.

To all whom it may concern:

Be it known that we, HENRY E. HESSLER and FRED W. BAST, citizens of the United States, residing at Muscatine, in the county of Muscatine, State of Iowa, have invented a new and useful Tenon-Machine Gage, of which the following is a specification.

The device forming the subject matter of this patent, is a gage adapted to be mounted upon a single tenon machine, the gage comprising elements whereby the use of a rule, to lay out the work, is rendered unnecessary.

The invention aims to provide a means whereby the time employed in laying out tenon work will be curtailed, the operation of tenoning the ends of the cross rails of sashes, doors, blinds and the like being carried forward with accuracy and with despatch.

With the above and other objects in view which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of invention herein disclosed can be made within the scope of what is claimed without departing from the spirit of the invention.

In the drawings,—Figure 1 is a fragmental side elevation; Fig. 2 is a fragmental top plan; Fig. 3 is an elevation showing the right hand end of Fig. 1; and Figs. 4, 5 and 6 are side elevations, illustrating the application of the invention.

In carrying out the invention there is provided a base 1, adapted to be secured to a tenoning machine, the base 1 having in its upper face, a guideway 2. Blocks 3 and 3' (constituting carrying members) are slidable upon the base 1, longitudinally of the same, the blocks 3 and 3' having, in their lower ends, ribs 4, adapted to interlock slidably in the guideway 2, so that, although the blocks 3 and 3' are free to slide upon the base 1 longitudinally thereof, the blocks will have no other movement upon the base. The blocks 3 and 3' are held in adjusted positions upon the base 1, by means of set screws 5, which are threaded into the blocks. By rotating these set screws 5, the same may be made to engage with the base 1, thereby preventing relative movement between the blocks 3 and 3' and the base. The blocks 3 and 3' are provided in their upper edges

with diagonal seats, disposed transversely of the base 1. Slidably mounted in these seats, are stops 6 and 6'. The stops 6 and 6' are held in operative relation to their respective blocks 3 and 3', by means of screws 7, the same being inserted into the end faces of the blocks 3 and 3', to register in slots 8, formed in the stops 6 and 6', parallel to the inclined seats in which the stops 6 and 6' move. The stops 6 and 6' are held in adjusted vertical positions with respect to the blocks 3 and 3', by a step-by-step mechanism, including pins 9, adapted to be mounted successively in openings 10 in the stops 6 and 6', the pins 9 engaging the upper edges of the blocks 3 and 3'.

The upper face of the base 1 is graduated, as shown at 11, and an indicator, 12, held in place by a screw 14 upon the block 3', registers upon the graduations 11. In the block 3' is secured one end of a graduated arm 15, this arm 15 being disposed parallel to the base 1, and being movable with respect to the block 3. From one face of the block 3, a pin 16 outstands, the function of this pin 16 being to engage the block 3', to prevent the blocks from coming into too close contact.

The stop 6 carries an arm 19, extended along one side of the base 1 toward the block 3'. Depending from the arm 19, is a pin 17, held in place by a nut 18 or the like. Fulcrumed intermediate its ends upon the lower end of the pin 17, is a spring lock 20, adapted at one end to bear against one side of the base 1, and at the other end to outstand slightly from the base 1, as clearly appearing in Fig. 2. Compression springs 21 are located in the slots 8, the springs at their upper ends, bearing against the screws 7, and at their lower ends, bearing against the stops 6 and 6', at the bases of the slots 8. By removing the nut 18, the pin 17 and the stop lock 20 may be removed from the arm 19.

Referring, then, to Fig. 4, the block 3' is adjusted along the base 1, until the reading of the indicator 12 upon the scale 11 indicates the distance A—B of Fig. 5, this distance representing the full length of the member 24 which is to be tenoned, minus the length of the tenon 25. The block 3 is then adjusted along the base 1 until the reading afforded by the movement of the block 3 upon the graduated arm 15 equals the distance C—D, the distance C—D being

the length of the tenon 25 or 26. The distance C—D is measured from the extremity of the arm 19 to the outer face of the stop 6', as clearly indicated in Fig. 4. The stop 6' is then elevated, as shown in Fig. 4, the spring 21 being compressed. One end of the member 24 is passed beneath the stop 6', into abutment with the end of the arm 19. The tenon 26 is then cut, as shown in Fig. 4. The member 24 is then turned end for end, to bring the tenon 26 adjacent the stop 6', the stop 6' engaging the shoulder 27 (see Fig. 5) formed by the tenon 26. The tenon 25 is then cut.

It occasionally happens, as shown in Fig. 6, that it is desirable to stop the member 28 which is being tenoned, from its lower edge. Under such circumstances, the pin 17 and the stop lock or auxiliary stop member 20 are mounted in place upon the arm 19, the stop lock 20 engaging the member 28 along its lower edge, adjacent one end, as shown at 29. The member 20, therefore, affords a third point of terminal abutment, differing from the points of terminal abutment afforded by the members 19 and 6'.

Having thus described the invention, what is claimed is:—

1. In a device of the class described, a base; carrying members slidable longitudinally of the base; and stops having movement transversely of the base, in inclined seats fashioned in the carrying members, to effect an elevation and depression of the stops.

2. In a device of the class described, a base; carrying members slidable longitudinally of the base; stops slidable transversely of the base, in inclined seats fashioned in the carrying members, for elevation and depression; spring means for depressing the stops; and a positive, step-by-step means for limiting the depression of the stops.

3. In a device of the class described, a base; carrying members slidable upon the base; stops secured to the carrying members transversely thereof and gravitationally movable in inclined seats in the carrying members into depressed positions; and adjustable means engaging the stops and the carrying members, to limit the depression of the stops.

4. In a device of the class described, a base; cooperating elements including a carrying member slidable upon the base longitudinally of the same, and a stop slidable in the carrying member, transversely of the base, one of which elements is provided with an inclined surface, disposed transversely of

the base, and engageable by the other of said elements, to effect a raising and lowering of the stop, when the stop is moved transversely of the base; and means for holding the stop in adjusted positions.

5. In a device of the class described, a base; carrying members slidable longitudinally of the base; stops mounted for sliding movement in the carrying members, transversely of the same, and the stops and the carrying members having relatively inclined faces whereby the stops will be elevated and depressed in their sliding movement; and an auxiliary stop member removably connected with one of the stops, and adapted to extend beneath the other stop.

6. In a device of the class described, a base; a carrying member slidable thereon, longitudinally of the base; means for holding the carrying member in adjusted positions, longitudinally of the base; a stop slidable in an inclined seat fashioned transversely in the carrying member; means for securing the stop to the carrying member for sliding movement in the seat; and means for adjusting the stop both vertically and horizontally with respect to the carrying member.

7. In a device of the class described, a slidably mounted carrying member; a stop slidable in an inclined seat fashioned transversely in the carrying member; a pin insertible into the carrying member and adapted to register in a slot in the stop; and a pin adapted to be removably inserted, successively, into openings in the stop, to engage with the upper edge of the carrying member.

8. In a device of the class described, carrying members mounted for sliding movement in one direction; stops slidable in the carrying members transversely of their line of movement; one of said stops carrying an auxiliary stop member adapted to extend beneath the other stop; both of the stops being connected with their respective carrying members for transverse retraction and advancement, the stops and the carrying members having relatively inclined surfaces, securing a vertical elevation and depression of the stops.

In testimony that we claim the foregoing as our own, we have hereto affixed our signatures in the presence of two witnesses.

HENRY E. HESSLER.
FRED W. BAST.

Witnesses:

RALPH LILLIBRIDGE,
LEE L. RICHARDS.