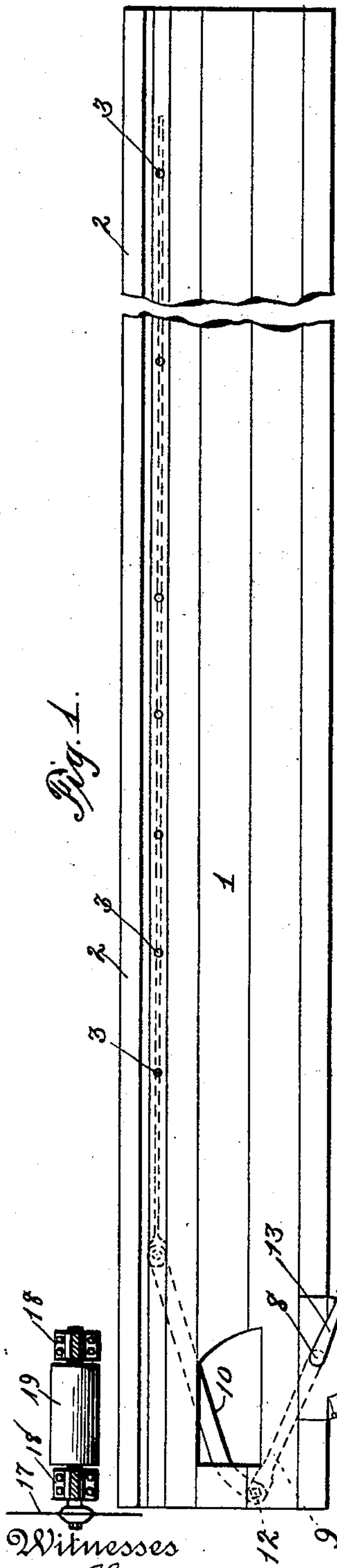


(No Model.)

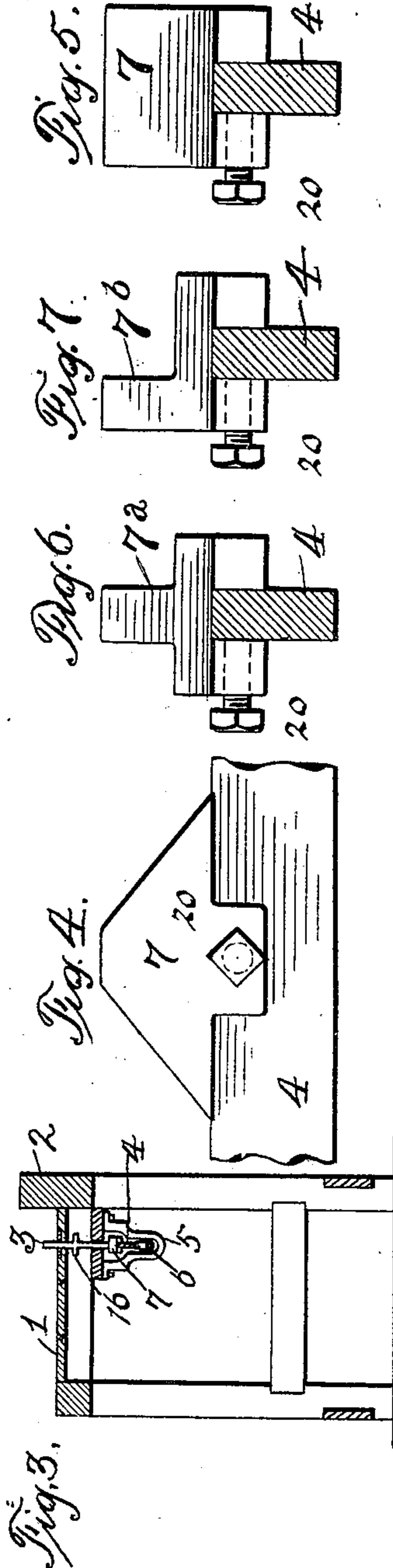
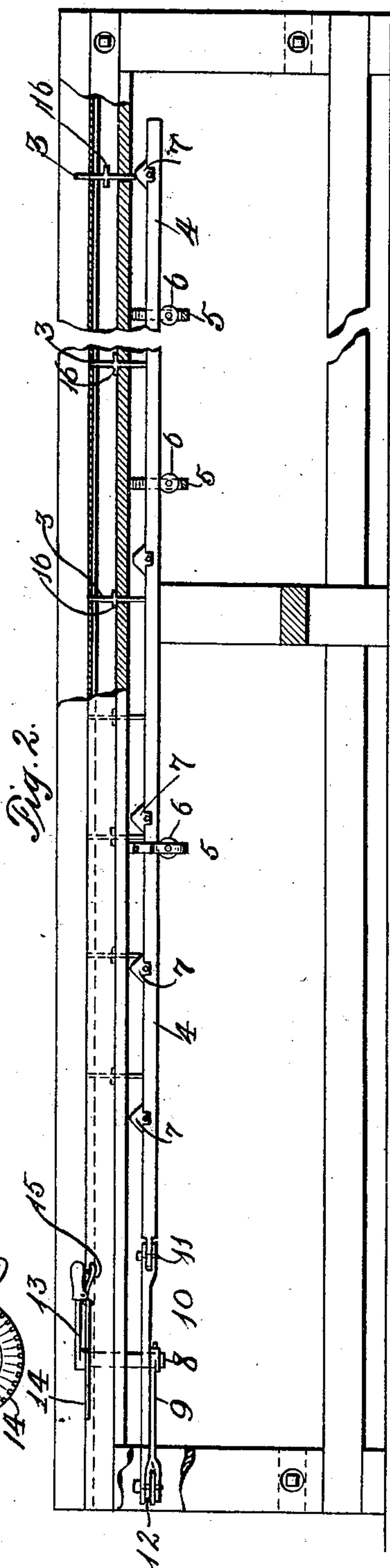
F. D. BUTZER.  
SAWING MACHINE.

No. 512,600.

Patented Jan. 9, 1894.



Witnesses  
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# UNITED STATES PATENT OFFICE.

FREDERICK D. BUTZER, OF COSMOPOLIS, WASHINGTON.

## SAWING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 512,600, dated January 9, 1894.

Application filed June 28, 1893. Serial No. 479,041. (No model.)

*To all whom it may concern:*

Be it known that I, FREDERICK D. BUTZER, a citizen of the United States, residing at Cosmopolis, in the county of Chehalis and State of Washington, have invented certain new and useful Improvements in Sawing-Machines, of which the following is a specification.

My invention relates to a saw-table for cutting up boards into any desirable lengths, a series of stops at various distances from the cutting point being arranged so that the board abuts against one of them as it is projected and the length of the board thereby determined, said table also having in connection with said stops means under control of a single lever for projecting any one of them at will by moving said lever over a dial graduated to indicate which stop is about to be projected and consequently the length of the board to be sawed.

In the accompanying drawings: Figure 1 represents a plan of my improved table. Fig. 2 is a side elevation partly in section of the same. Fig. 3 is a transverse section through one of the stops. Fig. 4 is a detail view showing in side elevation one of the stop operating cams. Fig. 5 is an end elevation of the same. Figs. 6 and 7 represent modifications in the form of said cams, the views corresponding to Fig. 5.

The machine consists of a suitable elongated table 1 having on its rear side an aligning wall 2 and a series of stops 3 at various distances from the forward end of the table and adapted to be raised up for use as abutting stops for the end of the board which is placed against the wall 2 and thereby determines the length of the board which remains upon the table to be severed by the saw to be hereinafter referred to.

In order to provide convenient means for elevating any one of the stops 3, at will, said stops are made to project down beneath the table as shown in Figs. 2 and 3, and beneath the series of stops is mounted a longitudinal draw-bar 4, which works in brackets 5 on rollers 6, and has mounted upon it a series of elevating cams 7, which may be drawn beneath the respective stops and there retained in order to hold said stops in elevated position, for use.

In order that the pins may not be simultaneously engaged by their controlling cams, said cams are spaced apart at intervals greater than the distances between the pins and at no time, when one pin is engaged, will any other pin in the series be engaged by a cam. The draw-bar 4 is under the control of a shaft 8 through the medium of crank-arm 9 and pitman 10 connected at 11 and 12 with the draw-bar and crank-arm respectively. The shaft 8 projects upward through the table in which it has bearing, and is provided on its upper end with a crank-handle 13 which moves over a segmental scale 14 and is held in any desired position to said scale by a locking-device 15 which enters notches at the various lines of indication on the scale. The relation of the movement of the crank-handle 13 over the scale and the position of the cam 7 on the draw-bar 4, is such that a different pin will be elevated for each new position assumed by said handle 13. In this way it will be readily seen that any desired pin may be elevated by moving the handle to a corresponding point on the dial. The pins 3 are loosely mounted in the table so that they rise and fall freely and in order to limit their vertical movement in either direction, they are provided with projections 16 which move in a space formed for the purpose between the surface of the table and a point below.

If, instead of spacing the cam 7 as above intimated, said cams can be given various shapes and the pins be correspondingly located, the same effect will be produced. Examples of such variations in the shape of cams are shown by 7<sup>a</sup> and 7<sup>b</sup>, Figs. 6 and 7.

The cams may be mounted upon the draw-bar 4 in any suitable manner, as for instance by means of sockets formed on the cams for receiving said draw-bar and set screws 20.

17 represents the saw mounted in bearings 18 and having a driving-pulley 19. It will be understood that the saw and its bearings may be swung back and forth to effect the necessary cutting of the boards.

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

1. In combination with a saw table, a series of stops mounted therein, a draw-bar having mounted upon it a series of cams in working

relation to said stops for projecting them, a lever having controlling connection with said draw bar and a dial or indicator graduated to indicate the engagement of the respective  
5 stops by the cams, substantially as herein set forth.

2. In a saw-table, the combination of a series of stops vertically movable in said table, the draw-bar located beneath the series of  
10 stops and having mounted thereon a series of

cams adjusted to engage said stops successively, a shaft having pitman connection with said draw-bar, a crank-handle for controlling said shaft and a dial over which the crank-handle moves, substantially as herein set  
15 forth.

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