

No. 620,021.

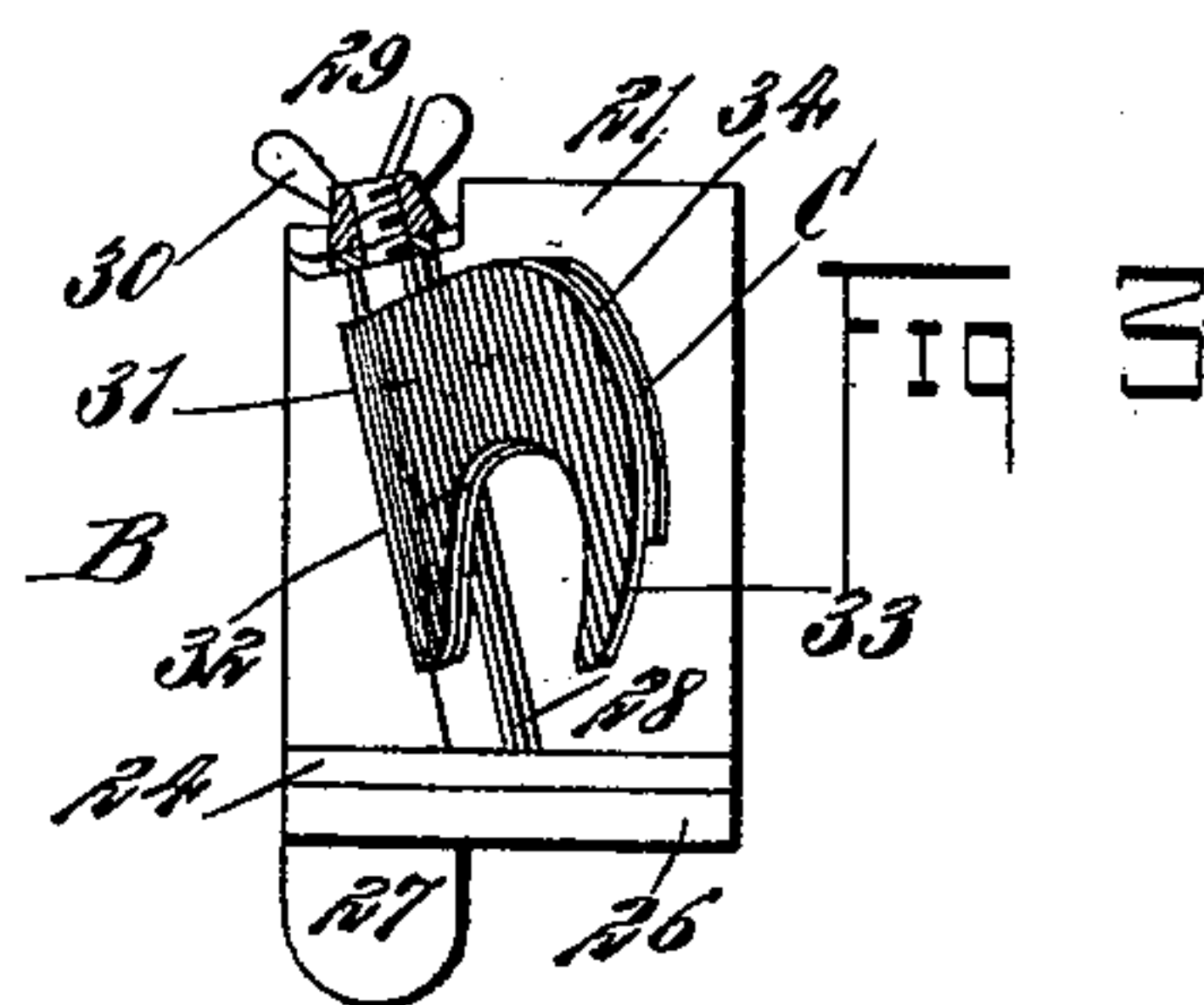
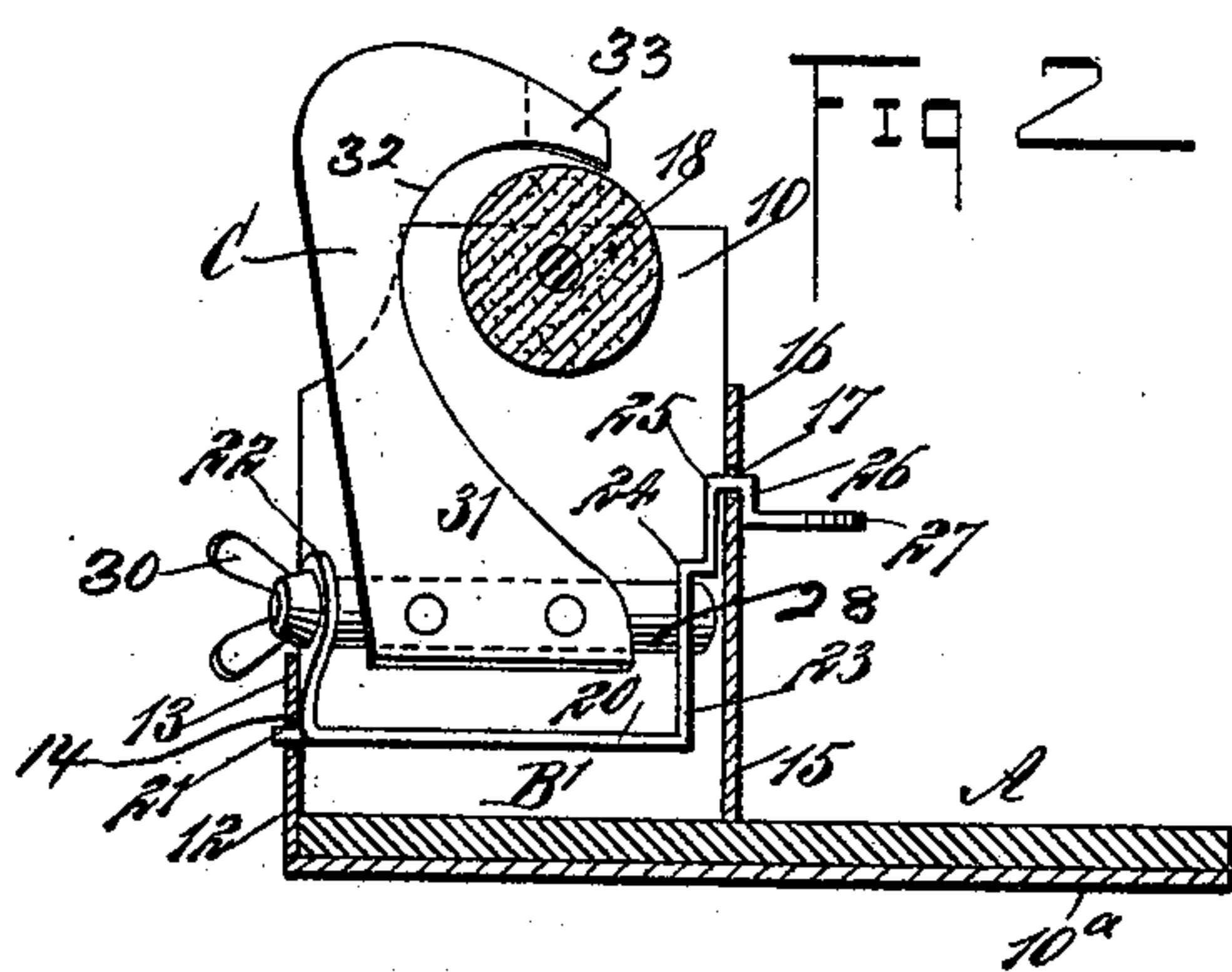
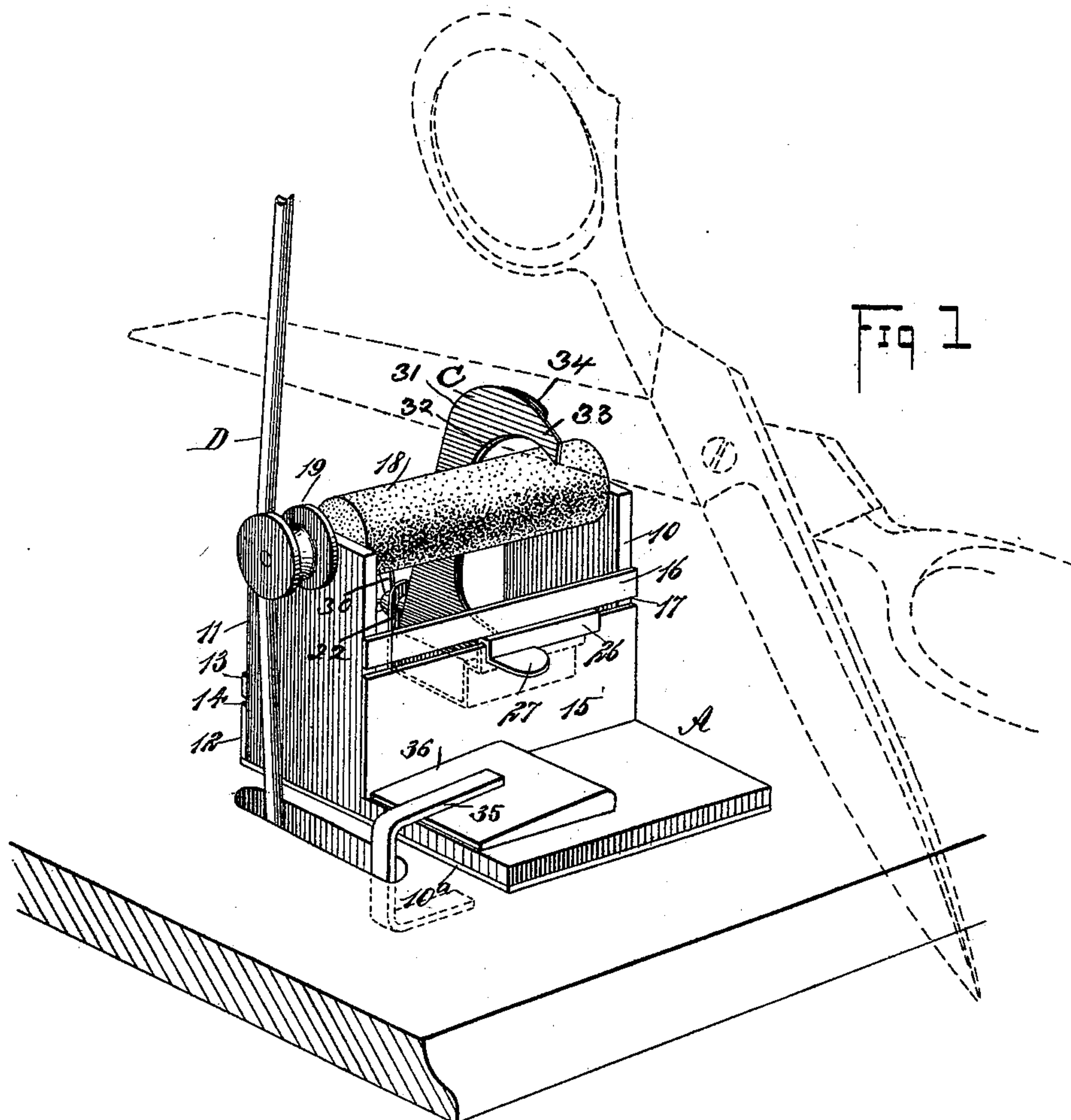
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C. A. DOW.

DEVICE FOR SHARPENING SCISSORS OR OTHER TOOLS.

(Application filed June 6, 1898.)

(No Model.)



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CHARLES A. DOW, OF SIOUX CITY, IOWA.

DEVICE FOR SHARPENING SCISSORS OR OTHER TOOLS.

SPECIFICATION forming part of Letters Patent No. 620,021, dated February 21, 1899.

Application filed June 6, 1898. Serial No. 682,699. (No model.)

To all whom it may concern:

Be it known that I, CHARLES A. DOW, of Sioux City, in the county of Woodbury and State of Iowa, have invented a new and Improved Device for Sharpening Scissors or other Tools, of which the following is a full, clear, and exact description.

The object of my invention is to provide a simple, durable, and economic device for sharpening scissors, shears, knives, and other cutting implements, the device being so constructed that it may be readily attached to a sewing-machine or other machine to which power is applied and be operated through the medium of the driving-belt of the machine.

A further object of the invention is to provide the device with a grinding-wheel, a carriage mounted to travel lengthwise of the wheel, and a guide for the implement to be sharpened, which guide may be adjusted to preserve the proper bevel of the cutting edge of the implement in grinding or hold the implement at any desired angle to the periphery of the wheel.

Another object of the invention is to provide a guide that may be adjusted in its carriage so that the entire periphery of the grinding-wheel may be utilized no matter how long the wheel may be.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a perspective view of the device applied to a sewing-machine table and illustrating a pair of scissors in position to be sharpened by the device. Fig. 2 is a transverse vertical section through the machine; and Fig. 3 is a plan view of the carriage and guide supported by the carriage, a portion of the adjusting device for the guide being in section.

A represents a base, which may be of any desired shape and of any approved dimensions, and from the said base two side pieces 10 and 11 are upwardly projected from a point adjacent to the rear end of the base. At the rear of the machine two strips 12 and

13 are secured to the uprights 10 and 11, the strip 12 being at the bottom and the strip 13 sufficiently above the bottom strip to provide an intervening space 14, while at the front of the device a bottom plate or board 15 is secured, which is wider than the strip or board 12, and above the front plate or board 15 a narrower plate or board 16 is secured to the said uprights, and between the two front plates or boards a space 17 is formed.

A grinding-roll, preferably made of emery or a like material, is employed in connection with the frame, the wheel being preferably of sufficient length to extend from one upright to the other, and the trunnions of the roll 18 are journaled in suitable bearings or boxes located at the top portions of the uprights, and one trunnion extends beyond the upright in which it is journaled in order to support a pulley 19.

In connection with the frame a carriage B is employed, which is adapted to slide longitudinally of, yet beneath, the grinding-roll 18. The carriage is best shown in Figs. 2 and 3 and consists of a bottom plate 20, provided with a rear lateral extension 21, which loosely enters the space 14 between the rear plates 12 and 13. From the rear portion of the bottom of the carriage, within the frame of the machine, a lug 22 is upwardly projected, the lug being at one corner of the carriage and more or less diagonally placed, as shown in Fig. 3. At the opposite end of the bottom or bed of the carriage an upright section 23 is formed, which connects with a horizontal section 24, and the horizontal section 24 is connected with a second upright section 25. This upright section 25 is carried as high as the space 17 between the front plates of the frame and is carried out through the said space and downward over the bottom plate 15 to form a guard 26, which guard is provided with a finger-piece 27.

A shaft 28 is journaled at or near the center of the front upright 23 of the carriage, the opposite end of the shaft being reduced and threaded and passed through a suitable opening in the lug 22, the threaded portion of the shaft having a thumb-nut 30 or its equivalent applied thereto, so that the shaft may be loosened and turned or when adjusted may be held fixedly in position in the carriage.

By reference to Fig. 3 it will be observed that the shaft 28 occupies more or less of a diagonal position in the carriage.

The shaft 28 is adapted to carry and support a guide C. This guide consists of a body-plate 31, secured rigidly to the shaft, being provided with a front concaved surface 32 and a hook-shaped head 33, the concaved surface 32 serving to clear the guide from the grinding-roll 18, beyond which it extends at the back, and the hook-head 33 of the body of the guide is adapted to extend over the said roll, yet be out of contact therewith. The guide 31 is completed by the addition of a spring-plate 34, which is likewise secured to the shaft 28 and corresponds in shape to the shape of the body-plate 31; but the head portion of the spring 34 at its forward end is preferably shorter than the corresponding portion of the body, although it may be of the same length.

A clamp 35 is employed to hold the base A upon the upper face of the table of a sewing-machine, for example, the bottom of the base being provided with a covering 10^a, so that the device shall not scratch the table. In applying the device to the table it is so located that the driving-belt D of the machine will engage with the driving-pulley 19 of the grinding-roll, and one member of the clamp 35 engages with the bottom of the machine-table, while the other member is adapted to pass over the upper face of the base, and the clamp is made to secure the device to tables of different thicknesses by the introduction, when necessary, of a wedge 36 between the upper face of the base and the member of the clamp that extends over said face.

In operation the thumb-screw 30 is loosened and the guide is adjusted relative to the grinding-roll to bring the blade of the scissors or other implement introduced between the members of the guide in engagement with the grinding-roll in such manner that the beveled surface of the blade will contact perfectly in a transverse direction with the said wheel. After this adjustment of the guide has been made the thumb-screw 30 is tightened and the grinding-roll is set in motion. The carriage is then moved back and forth in its guides, and the blade of the implement to be sharpened is drawn gradually backward and forward across the roll. In this manner no one portion of the roll is unduly worn, and it is obvious that the guide may be adjusted equally in direction of the left-hand end of the grinding-roll as in direction of its right-hand end.

The device is exceedingly simple, durable, and economic and need not be made very

large, and it is capable of convenient application particularly to a sewing-machine or a machine of a like character.

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

1. A device for sharpening tools, consisting of a revoluble sharpening-roll, supports therefor, a carriage mounted to slide longitudinally of the roll, and a guide for the tool supported by the carriage and arranged to hold the tool in engagement with the roll in proper position to be sharpened, for the purpose specified.

2. A device for sharpening tools, consisting of a support, a sharpening-roll held to revolve in the said support, a carriage having sliding movement in the support beneath the roll, and a guide for the tool to be sharpened adjustably supported in the carriage, a portion of the guide extending over the said roll, for the purpose set forth.

3. In a device for sharpening scissors and other tools, a support, a grinding-roll mounted to revolve in the said support, means for turning the said roll, a carriage having sliding movement in the support beneath the roll, a guide for the tool to be sharpened located upon the carriage, the said guide being carried upward at one side of the grinding-roll, extending over the same at the top, the guide being further provided with spring-jaws, and means, substantially as described, for adjusting the said guide relative to the said grinding-roll, for the purpose set forth.

4. In a device for sharpening scissors and other tools, the combination, with a base, a frame supported by the base, a grinding-roll mounted to revolve upon the said supports, and means for revolving the said grinding-roll, of a carriage mounted below the grinding-roll, guides for the carriage formed in the said frame, the carriage being adapted for horizontal movement lengthwise of the said grinding-roll, a shaft located in the said carriage, means for locking the said shaft, and a guide consisting of two plates, one of the said plates being of a spring material, the two plates being held close together but being free at their upper ends, both plates being made to extend upward at one side of the said roll and over the said roll, the edges of the plates forming the guides adjacent to the roll being concaved and their upper ends hook-shaped, for the purpose set forth.

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Witnesses:

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