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ROTATABLE TOOL SUPPORT HAVING POSITIVE LATCH MEANS

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2 Sheets-Sheet 1

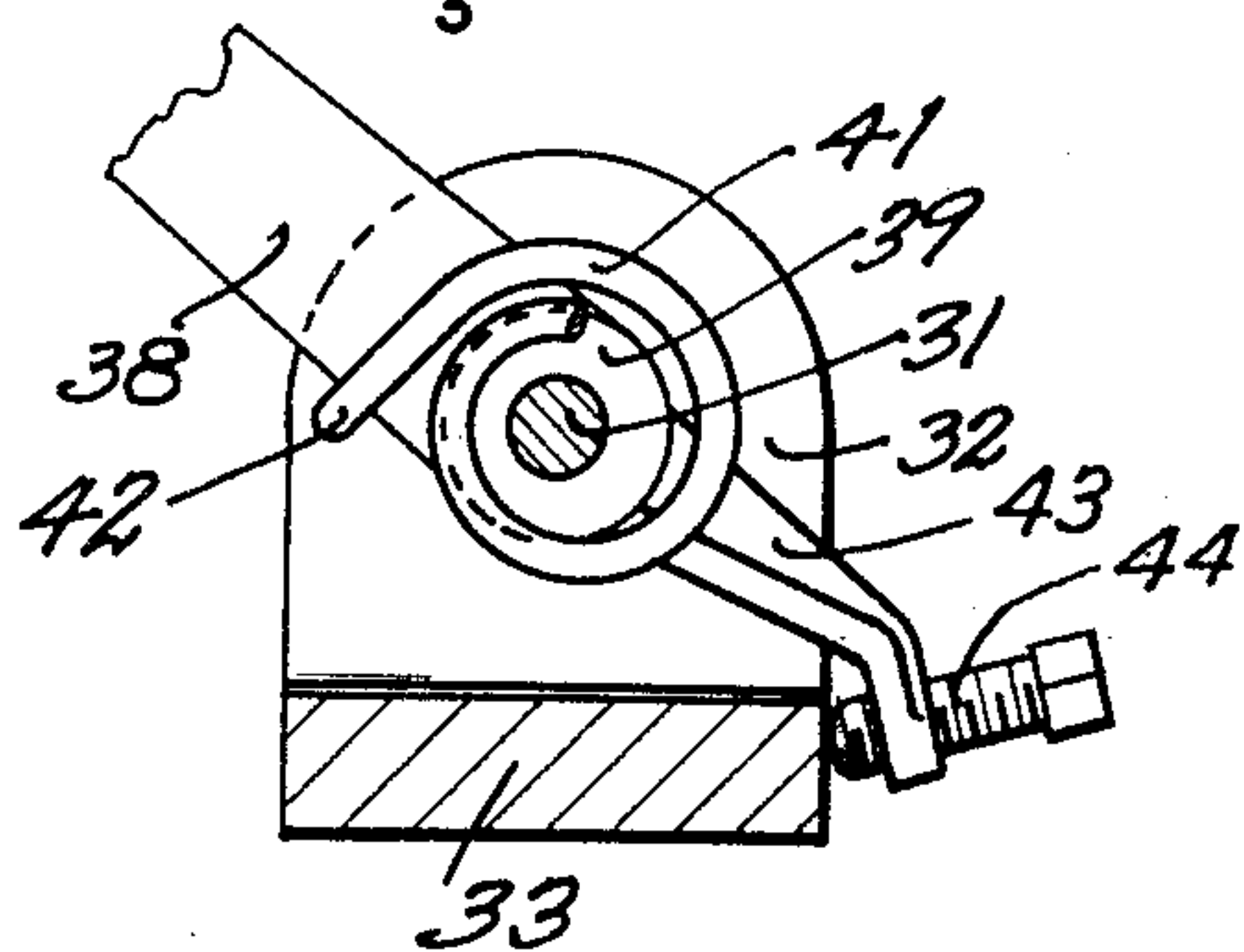
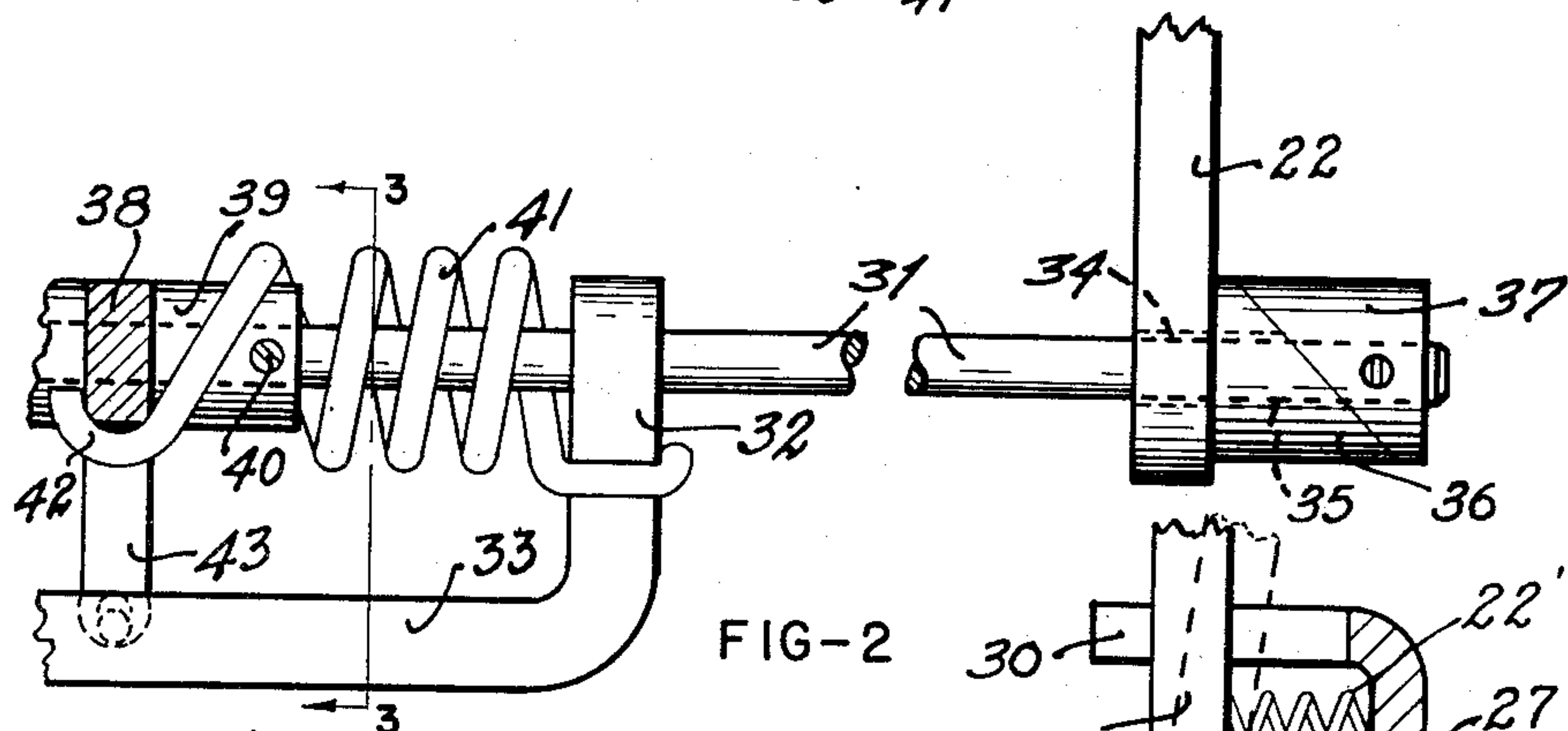
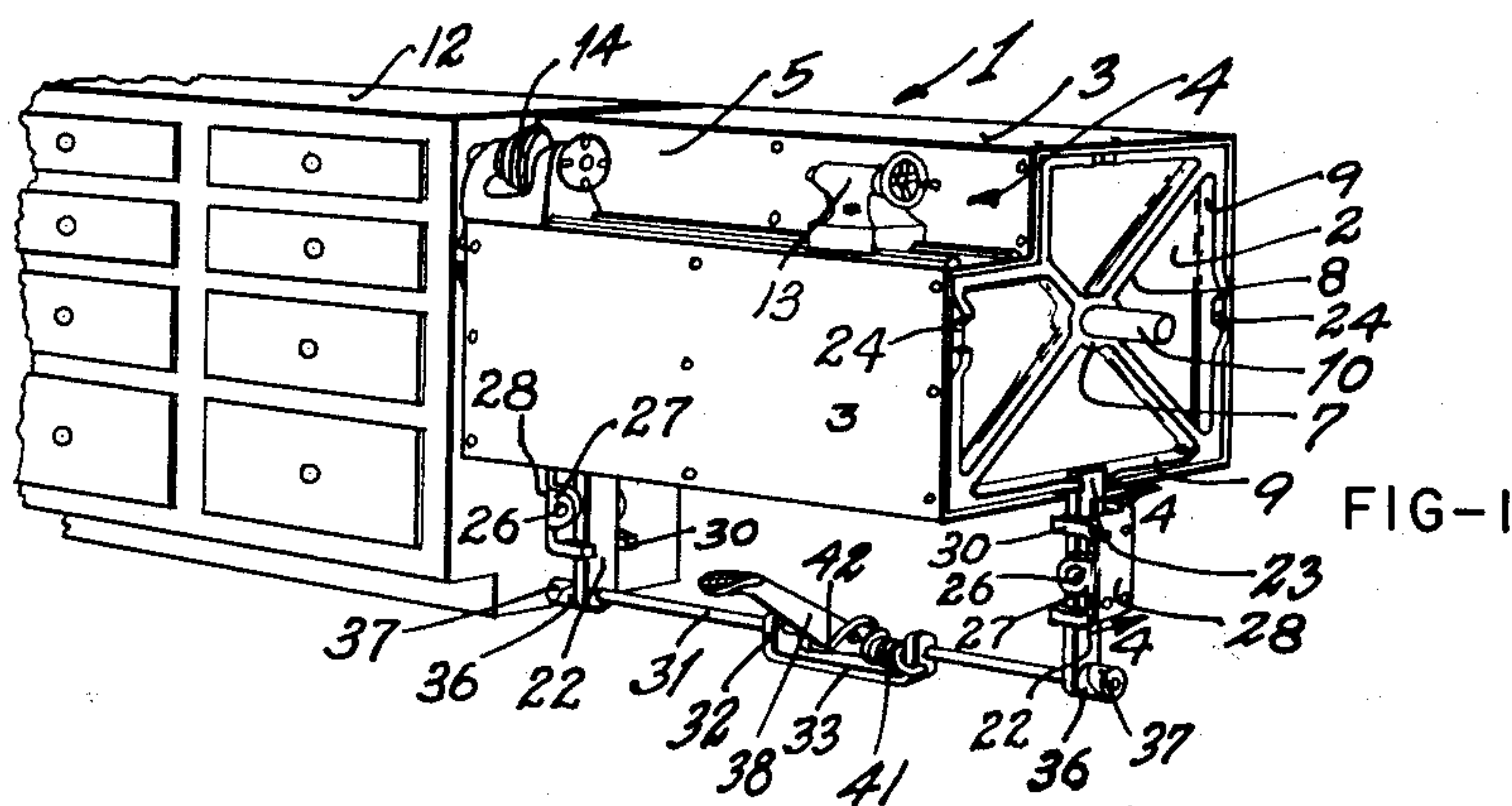


FIG-3

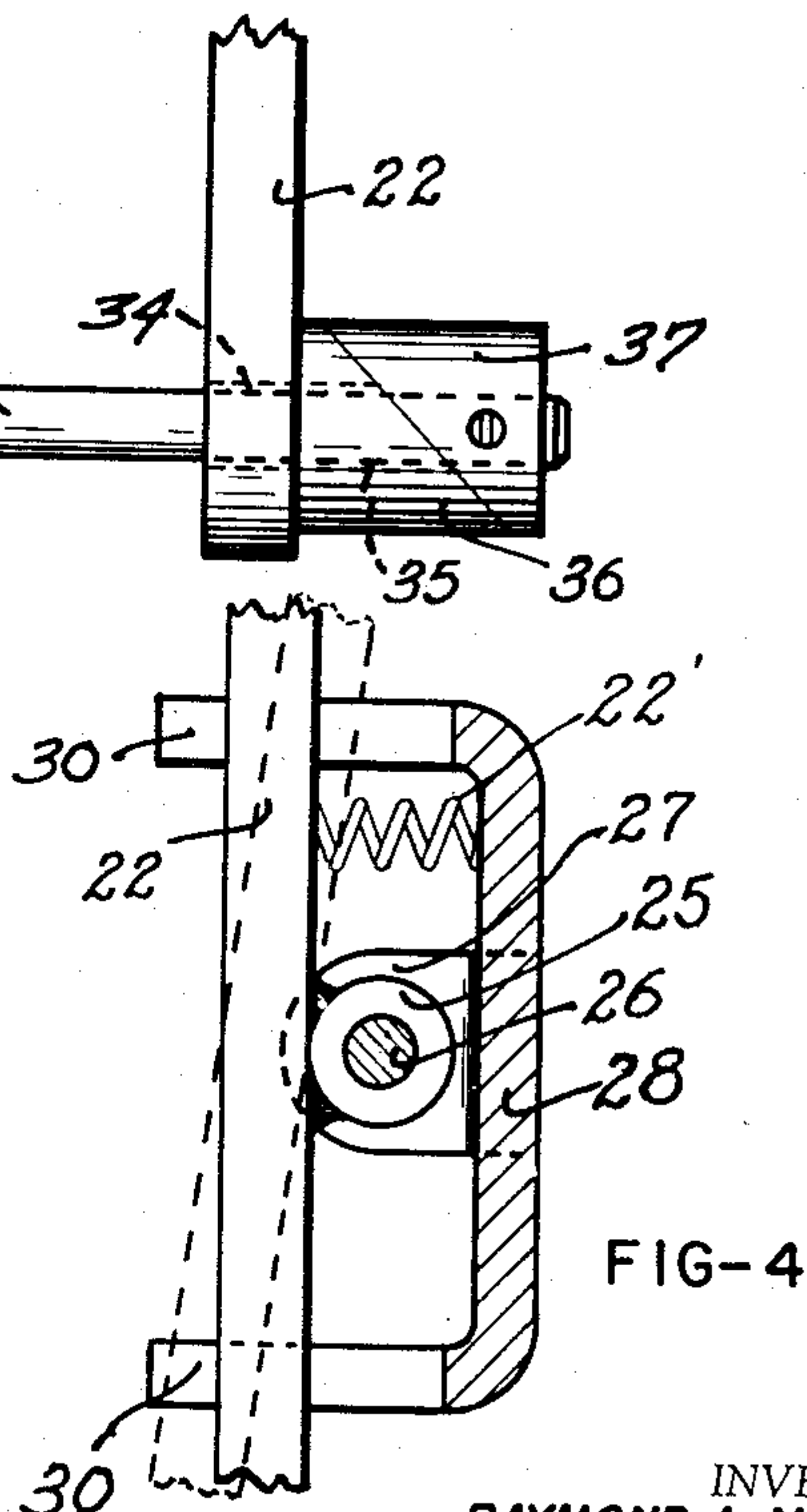


FIG-4

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2 Sheets-Sheet 2

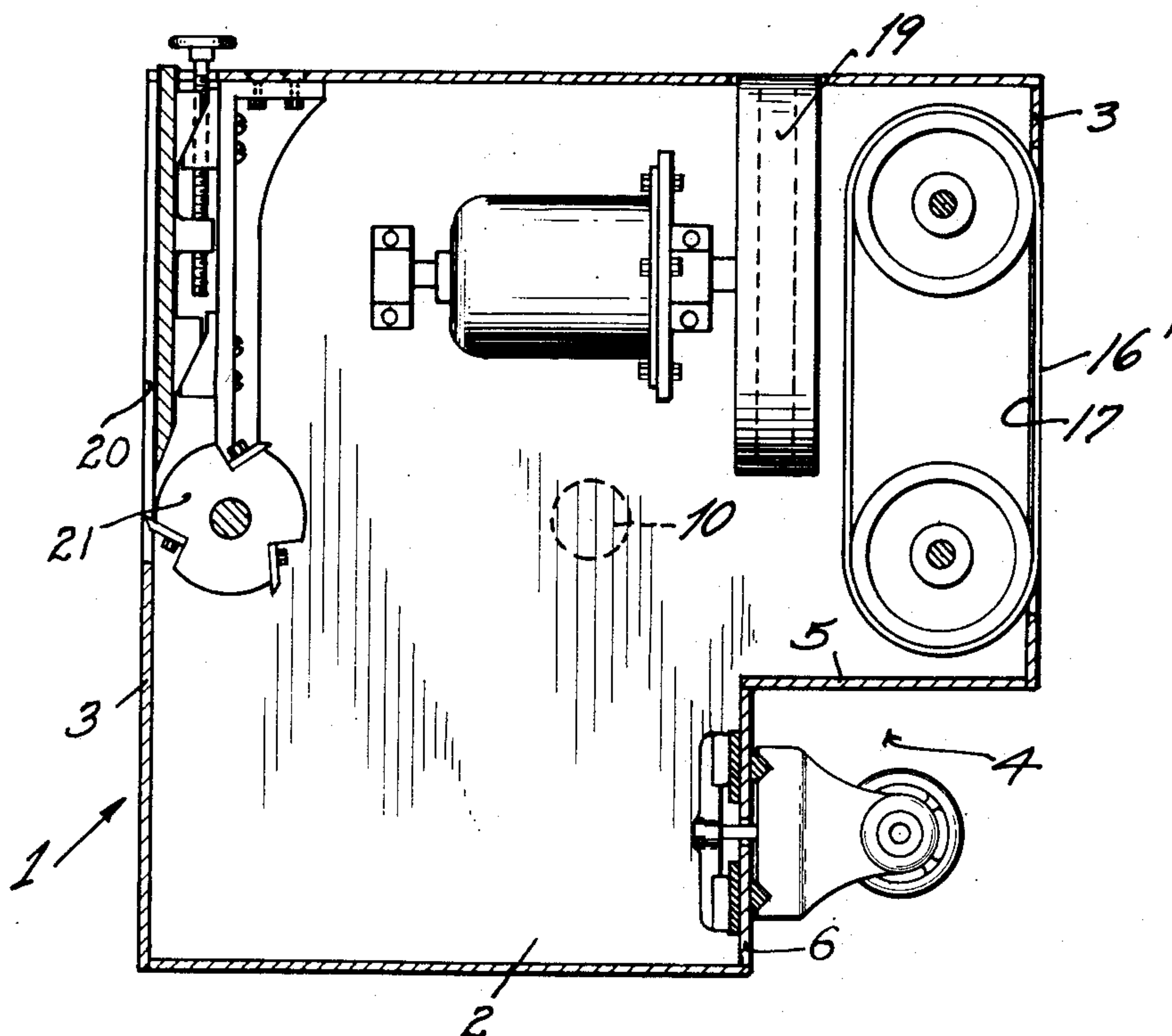
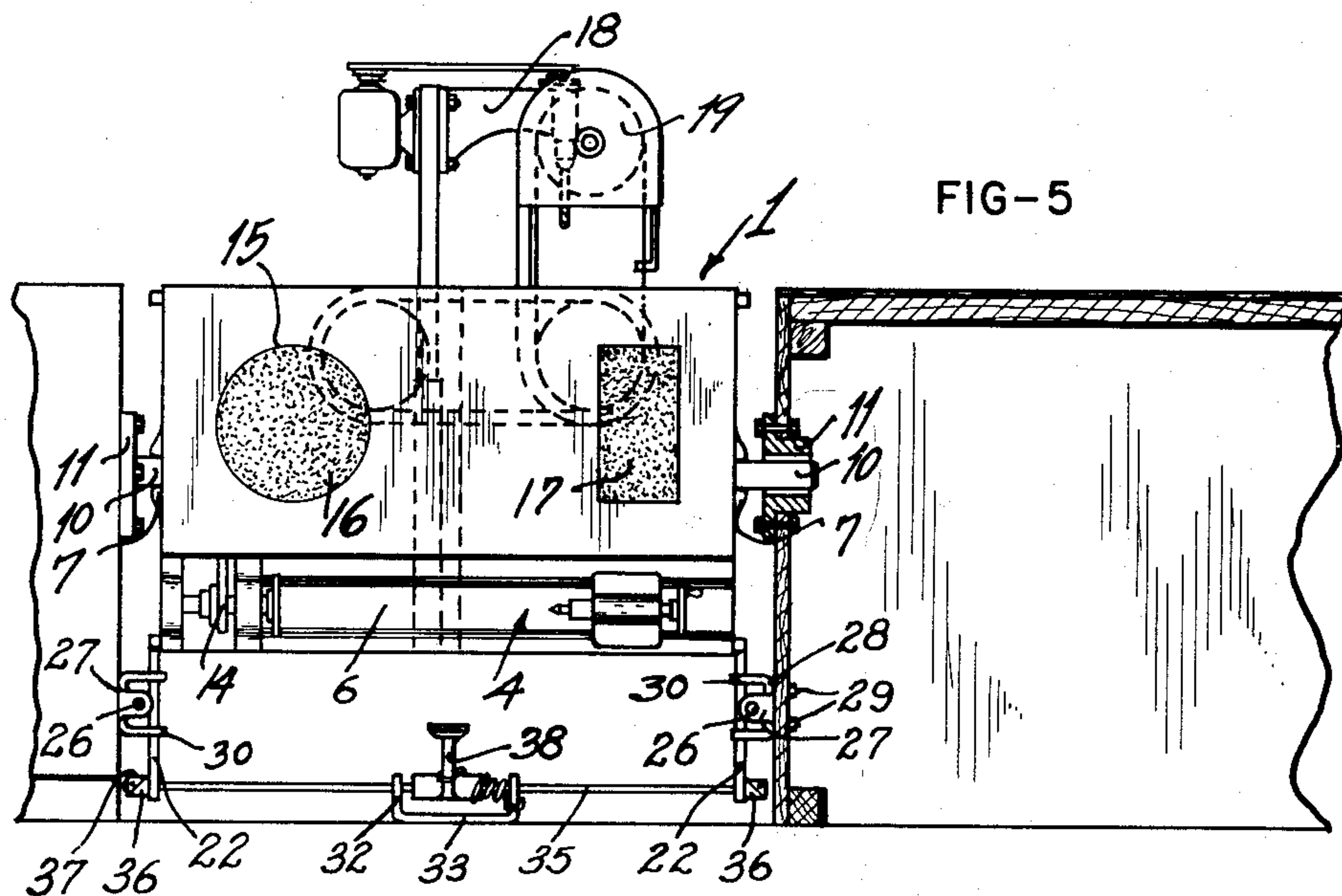


FIG-6

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ROTATABLE TOOL SUPPORT HAVING
POSITIVE LATCH MEANS

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3 Claims. (Cl. 144-1)

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This invention relates to an improved tool support and it is one object of the invention to provide a support which is adapted to carry a number of tools, such as a lathe or the like, the support being mounted in an improved manner for turning about a horizontal axis for bringing a selected tool in position for use and improved latching means being provided for securely holding the support against accidental turning movement after the desired tool is in position for use.

Another object of the invention is to provide a support which has flat tool carrying surfaces extending its full length to provide ample room for the tools, ends of the support being provided with end walls of spider-like formation which carry stub shafts for rotatably mounting the support and having marginal portions specially formed so that they may be engaged by latches which hold the support against accidental turning movement.

Another object of the invention is to provide improved latches which are mounted in an improved manner for tilting movement into and out of a support engaging position and yieldably held in the support engaging position.

Another object of the invention is to provide improved latch operating means consisting of a shaft rotatably mounted through a bearing bracket and carrying cams which act upon the latches, the shaft being turned by means of a foot lever or pedal which extends laterally from the shaft and is normally held in position to maintain the latches in securing engagement with the support by a spring coiled about the shaft and having one end engaged with the treadle and its other end engaged with a portion of the bracket through which the shaft is rotatably mounted.

Another object of the invention is to provide a tool support of such construction that it may be conveniently disposed between cabinets or work benches in a shop where it will be out of the way when not in use.

With these and other objects in view the invention consists of a special construction and arrangement of parts illustrated in the accompanying drawings wherein:

Figure 1 is a perspective view of the improved tool support and one of the cabinets between which the support is disposed when installed in a shop.

Figure 2 is a fragmentary view in elevation of a portion of the securing mechanism for the support.

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Figure 3 is a sectional view taken along the line 3-3 of Figure 2.

Figure 4 is a fragmentary view upon an enlarged scale taken on line 4-4 of Figure 1 and showing a portion of a latch and the mounting bracket therefor partially in elevation and partially in vertical section.

Figure 5 is a view showing the tool support in side elevation and a portion of a cabinet in vertical section.

Figure 6 is a sectional view upon an enlarged scale taken transversely through the tool support.

This improved tool support has an elongated horizontally disposed body 1 which is hollow and has end walls or heads 2 which are of spider-like formation and between which extend the walls 3 of the body. The body has been shown substantially square in cross section and therefore has four side walls but it will be understood that any number of side walls desired may be provided, the end walls or heads being shaped to conform to the number of walls. One corner portion of the body is projected inwardly to form a longitudinally extending recess 4 having walls 5 and 6. A hub 7 is formed at the center of each end wall or head and from this hub ribs or spokes 8 extend radially thereof to marginal portions of the head where they are integrally united with bordering ribs 9. Stub shafts 10 project outwardly from the hubs and fit into bearings 11 mounted in end walls of cabinets 12. Therefore the body or casing of the support is rotatably mounted between the cabinets and may be turned about a horizontal axis and selectively dispose tools associated with the various walls of the cabinet in position for use.

Various tools may be carried by the body or casing and in the illustration a lathe 13 has been shown mounted in the recess 4 and secured to the wall 6 thereof by suitable fasteners. The lathe is of conventional construction and may be driven from a source of power by a belt trained about the pulley 14 of the lathe. One wall of the body is formed with openings 15 through which a sanding disk 16 is exposed and in this wall is also formed an elongated opening or slot 16' through which a belt sander 17 is exposed. There has also been shown a drill press 18 mounted upon one side wall in which is formed an opening to accommodate a band saw 19 driven by an electric motor housed in the body or casing. A slot 20 is formed in the wall at the opposite side of the casing from the belt

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sander and through this slot is exposed a portion of a tool 21 which may be a jointer, planer, or a rotary saw. It will be understood that the various tools mentioned and shown in the drawings are merely illustrative of tools which may be carried by the body and selectively moved into position for use by turning the body or casing about its horizontal axis.

In order to releasably secure the body or casing in adjusted positions there have been provided latches 22 formed of metal bars or strips which are disposed vertically under end portions of the body and have bills 23 at their upper ends for engaging across the marginal strips 9 of the end walls 2, the bills when so engaged with the marginal strips being disposed in seats or keepers 24 each having surfaces sloping toward opposite sides of the seat to cause the latches to ride up the slopes and engage the seat and thereby serving very effectively to prevent turning of the body out of a set position. The latches are of duplicate construction and each has its shank portion welded to a sleeve 25 constituting a bearing and through which passes a pivot rod or pin 26 carried by arms 27 projecting from opposite side edges of a bracket 28 disposed vertically and secured flat against an end wall of an adjoining bench 12 by bolts 29. Fingers 30 project from opposite sides of upper and lower ends of the brackets and across opposite side edges of the latches and serve to guide tilting movement of the latches into and out of securing engagement with the heads of the body as well as serving to brace the latches against transverse strains. An expansion spring 22' is disposed between the bracket 28 and bill 23 and said springs thereby urge the latches into seating engagement with seats 24.

The latches must be tilted about the pins 26 away from the heads of the body in order to release the body for turning movement thereof to an adjusted position and in order to do so there has been provided a rocker shaft 31 which extends horizontally between the latches and is rotatably mounted through the upstanding ears 32 of a bracket 33 which may be secured upon the floor between the cabinets in any desired manner. Ends of the rod pass through openings 34 at lower ends of the latches and also through openings 35 formed through cam blocks or collars 36 carried by and projecting outwardly from the latches. Companion cam blocks or collars 37 are firmly mounted upon ends of the rocker shaft or rod 31 and these blocks 36 and 37 have diagonally extending confronting surfaces which bear against each other as shown in Figure 2. Referring to this figure and to Figure 1, it will be seen that when the rocker shaft is in its normal position the latches will be disposed vertically and have securing engagement with the heads of the body whereas when the shaft is turned in one direction the contacting diagonally extending surfaces of the blocks 37 will act upon the correspondingly disposed diagonally extending surfaces of the blocks 36 and cause the latches to be tilted about the pins 26 and moved out of the seats or keepers 24 to a position in which the body is freed and may be turned about its horizontal axis until a desired tool is brought into position for use. Rotary movement is imparted to the rocker shaft in a direction to tilt the latches to an inoperative position and release the body by means of a foot lever or treadle 38 which is mounted about the shaft and carries a collar 39 formed with a threaded opening to receive a set

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screw 40. When this screw is tightened the treadle is firmly secured to the rocker shaft and downward pressure upon the treadle causes the rocker shaft to be turned in a direction to move the latches to the releasing position. The helical spring 41 which is coiled about the shaft and has one end bearing against one of the ears 32 and its other end formed with a hook 42 engaged under the treadle urges the treadle upwardly and yieldably holds the rocker shaft in its normal position in which the latches are in the operative position for engaging in the seats 24 of the heads 8. It will thus be seen that after the latches have been moved to a releasing position and the body turned to a position in which the desired tool is in position for use, the operator may remove his foot from the treadle and the latches will be moved towards a position for engaging in the seats and securing the body stationary. If it is found that the latches fail to engage in the seats it is merely necessary to rock the body back and forth until the seats are in position to receive the latches. An arm 43 at the inner end extends downwardly and rearwardly therefrom with its free lower end overlapping the rear edge face of the bracket 33, and this rear end of the arm carries a screw 44 which constitutes an abutment and engages the said rear edge face of the bracket to limit turning of the rocker shaft in a direction to restore the latches to the operative position. By adjusting the screw, movement of the rocker shaft in this direction may be controlled. While it has been stated that the body is rotatably mounted between cabinets it will be understood that it may be rotatably supported by a frame of suitable construction which may have rollers so that it can be easily moved from one place in a shop to another.

Having thus described the invention, what is claimed is:

1. A tool carrier comprising a body having heads at opposite ends each including a bordering rib formed at sides of the body with recesses constituting seats and with surfaces sloping towards opposite sides of the seats, shafts projecting from centers of said heads for engaging in bearings and mounting the body for turning about a horizontal axis to adjusted positions, tools carried by said body and selectively presentable in position by turning the body to adjusted positions, brackets, latches pivoted to said brackets for tilting movement into and out of an operative position for engaging in the recesses and securing the body against turning out of a set position, cams carried by said latches, a rocker shaft spaced from and extending longitudinally of said body and having end portions loosely passing through said latches and carrying cams engaging the cams of the latches, a bracket rotatably mounting said rocker shaft, a treadle extending from said rocker shaft and operable to turn the shaft in a direction to cause the cams of the shaft to act upon the cams of the latches and tilt the latches to an inoperative position permitting turning of the body to an adjusted position, and a spring acting upon said treadle and yieldably holding the treadle and the rocker shaft in a normal position in which the latches are in the operative position.

2. A tool carrier comprising a body rotatable about a horizontal axis for selectively presenting tools carried by the body in position for use, said body having end portions provided with keepers spaced from each other about the body, latches disposed vertically and each pivotally mounted for tilting movement towards and away from the

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body by a bracket having ears at its sides between which a sleeve carried by the companion latch fits, a pin carried by the ears and passing through the sleeve and tiltably mounting the latch, fingers extending from upper and lower portions of said bracket across opposite side edges for guiding tilting movement of the latch, a rocker shaft cooperating with said latches and when turned away from its normal position effecting movement of the latches to an inoperative position for releasing the body, and means yieldably holding the rocker shaft in its normal position.

3. A tool carrier comprising a body rotatable about a horizontal axis for selectively presenting tools carried by the body in position for use, said body having end portions provided with keepers spaced from each other about the body, latches disposed vertically and mounted for tilting movement about a horizontal axis towards and away from the body into and out of an operative position, a rocker shaft cooperating with said latches and when turned away from its normal position effecting movement of the latches to an inoperative position for releasing the body, means yield-

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ably holding the rocker shaft in its normal position, each latch being formed near its lower end with an opening through which the rocker shaft loosely passes and having a beveled end face constituting a cam surface, and collars mounted about said shaft and having beveled end faces constituting cam surfaces contacting the cam surfaces of the block and cooperating therewith to tilt the latches to a releasing position when the shaft is turned away from its normal position.

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