Oct. 13, 1953 R. A. CRAMER 2,655,387

TABLE WITH RETRACTABLE CASTERS

Filed Aug. 28, 1950 4 Sheets-Sheet 1

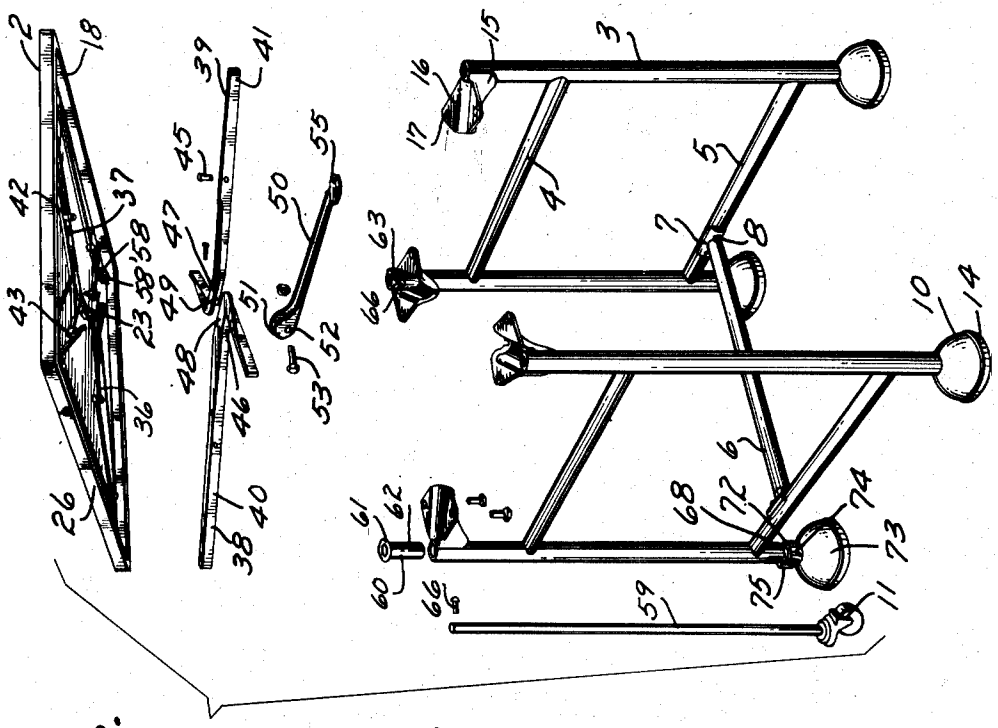

Fig. 2.

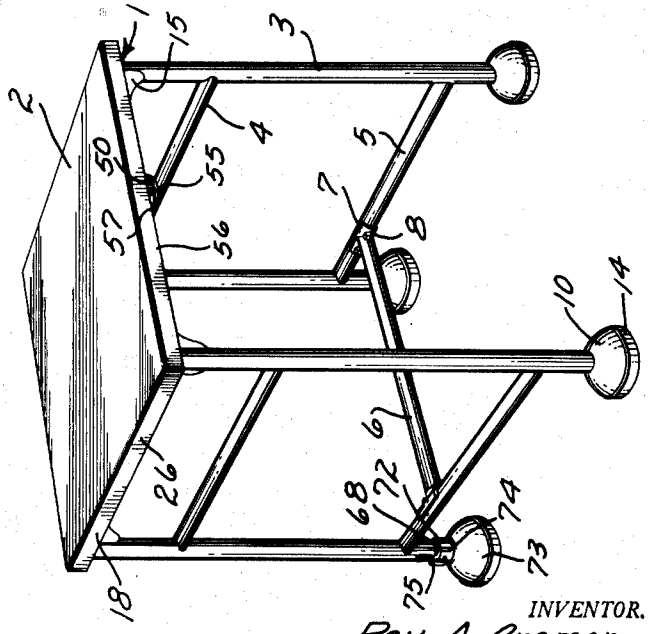

Fig. 1.

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TABLE WITH RETRACTABLE CASTERS

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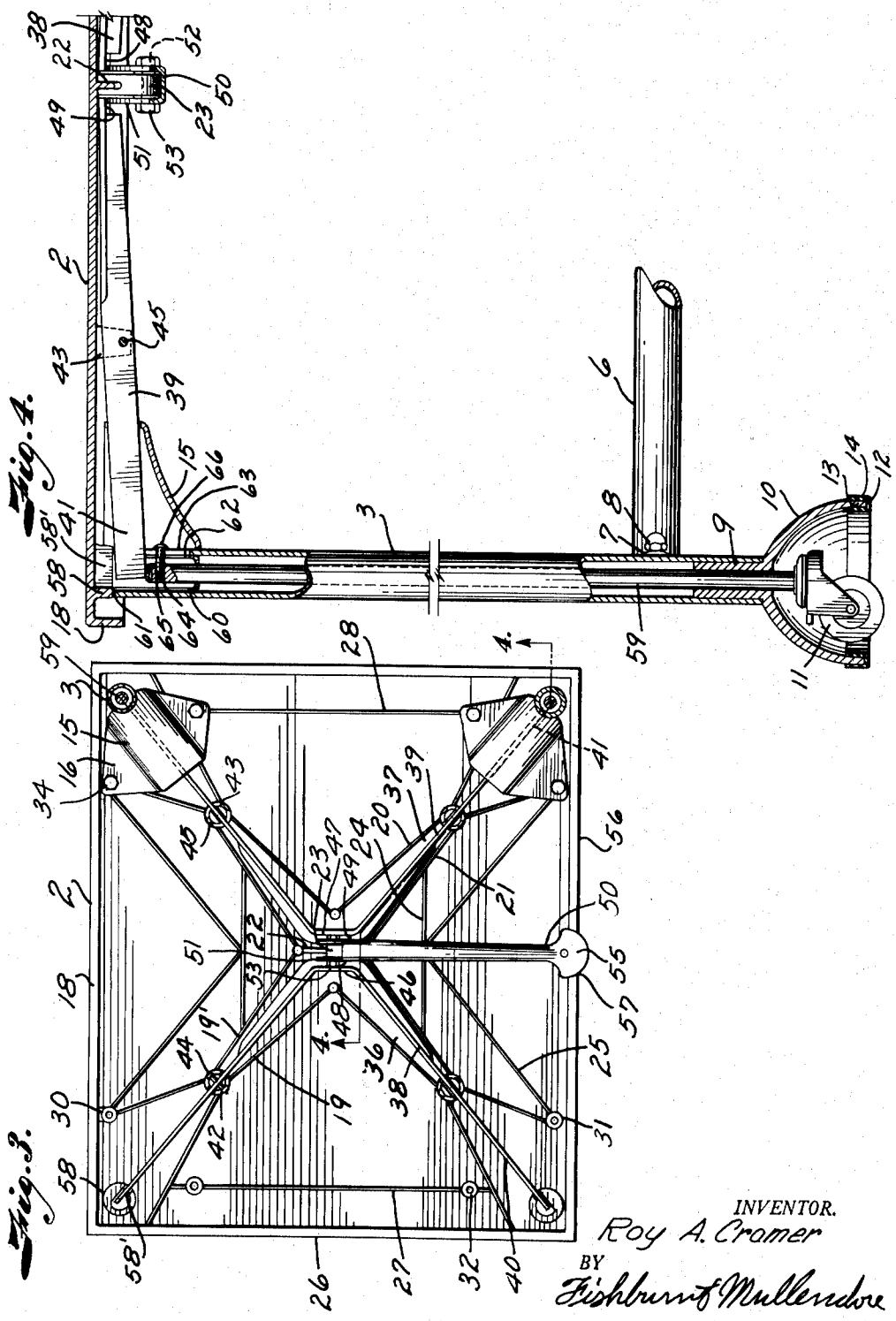

Fig. 4.

Fig. 3.

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Filed Aug. 28, 1950 4 Sheets-Sheet 3

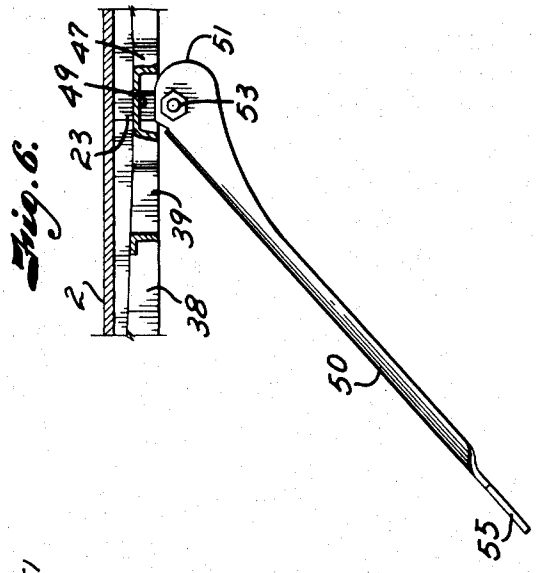

Fig. 6.

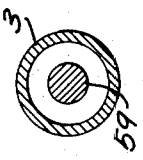

Fig. 8.

Fig. 7.

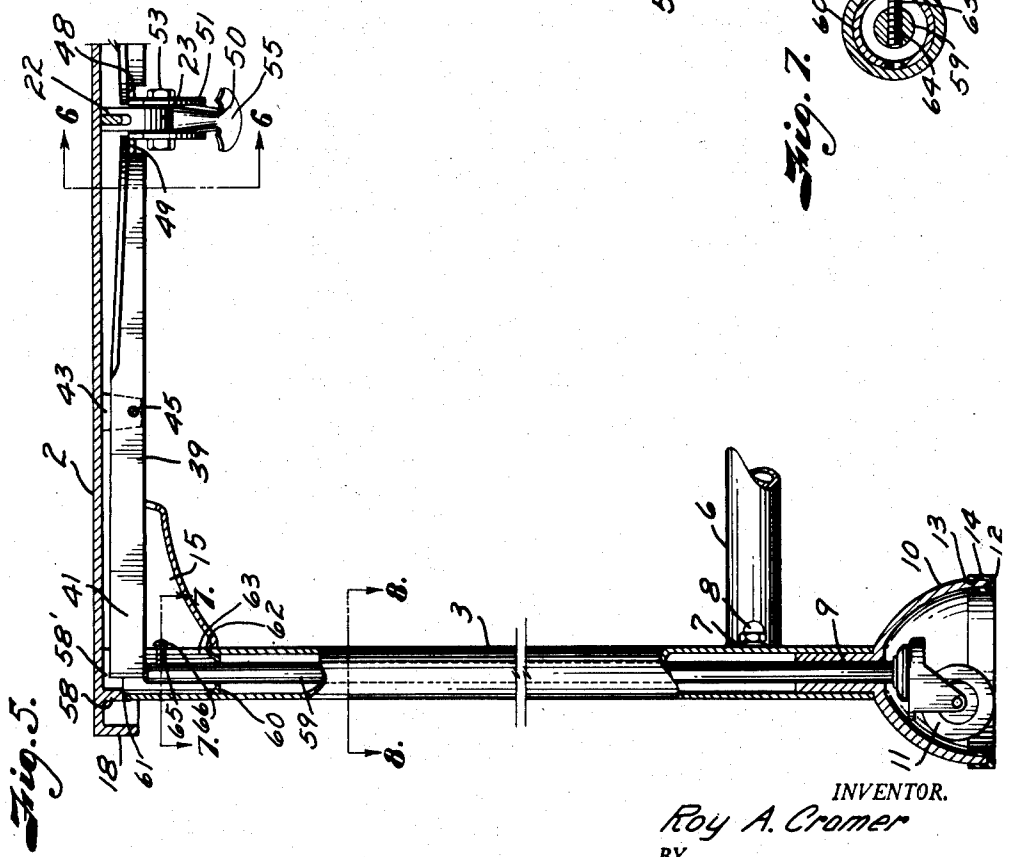

Fig. 5.

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TABLE WITH RETRACTABLE CASTERS

Filed Aug. 28, 1950 4 Sheets-Sheet 4

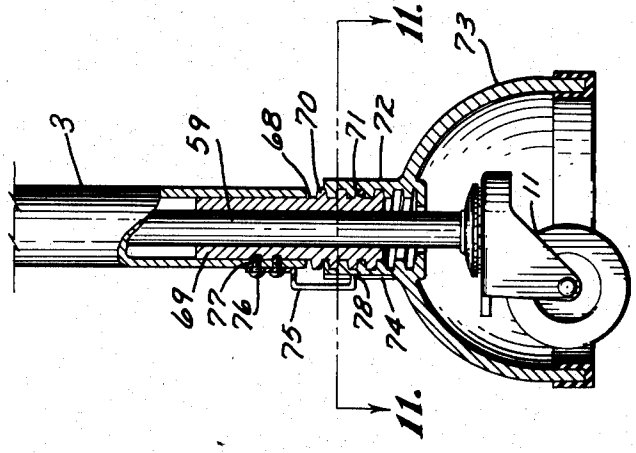

Fig. 10.

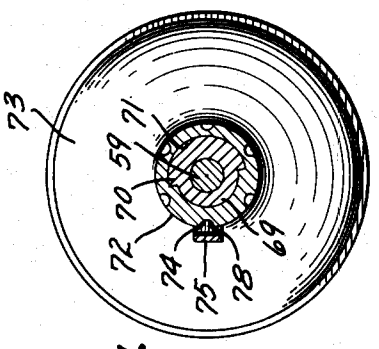

Fig. 11.

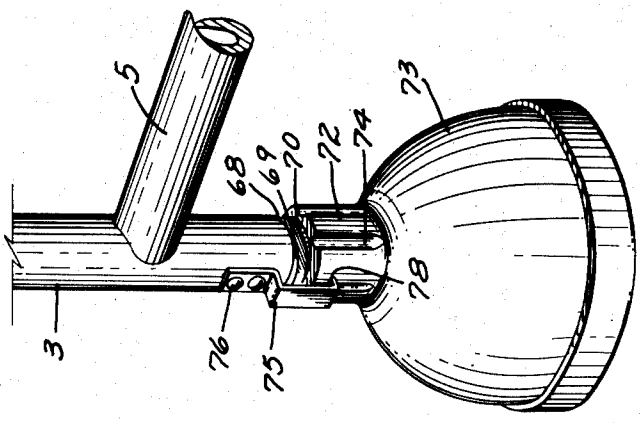

Fig. 9.

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TABLE WITH RETRACTABLE CASTERS

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Application August 28, 1950, Serial No. 181,848

5 Claims. (Cl. 280—44)

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This invention relates to stands or tables and is particularly adaptable for use in offices for supporting typewriters, adding machines or other office equipment as well as other uses.

The principal object of the present invention is to provide a table having legs equipped with bell-shaped bases and casters operable within the bell-shaped bases, and lever means for lowering the table from its support on the casters and supporting the same upon the bell-shaped bases for preventing moving on the floor when in use and raising the bases to support the table on the casters for movement as desired.

Other objects of the present invention are to provide a table or stand having a framework structure made from hollow tubing; to provide rods connected to the casters extending vertically through said tubular legs; to provide means for retaining the rods in the legs; to provide an adjustable base on one of the legs to accommodate for unevenness in floors; to provide lever arms underneath the table top having their free ends engageable with the top of the caster rods; to provide a handle having connection with the lever arms provided with cam means for raising or lowering the caster rods in the tubular legs; to provide an operating handle underneath the table top conveniently located for easy operation; to provide the underside of the table top with ribs forming channel ways for the lever arms; to provide ears on said ribs for pivotally mounting the lever arms in said channelways; and to provide a device of this character simple, economical to manufacture and efficient in operation.

In accomplishing these and other objects of the present invention, I have provided improved details of structure, the preferred form of which is illustrated in the accompanying drawings, wherein:

Fig. 1 is a perspective view embodying the features of my invention.

Fig. 2 is a perspective view of the table showing the parts in disassembled relation.

Fig. 3 is a plan view of the underneath side of the table top.

Fig. 4 is an elevational view partly in cross-section illustrating the caster in lowered position.

Fig. 5 is an elevational view partly in cross-section showing the caster in raised position.

Fig. 6 is an elevational view of the handle showing the cam member for raising and lowering the lever arm.

Fig. 7 is a cross-sectional view taken on a line 7—7, Fig. 5.

Fig. 8 is a cross-sectional view taken on a line 8—8, Fig. 5.

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Fig. 9 is a perspective view of an adjustable base on one of the legs.

Fig. 10 is a vertical sectional view through the base and leg illustrating the adjustable feature.

Fig. 11 is a cross-sectional view taken on the line 11—11, Fig. 10.

Referring more in detail to the drawings:

1 designates a table or stand embodying the features of my invention comprising a top 2 supported by a plurality of legs 3 having upper cross arms 4 and lower cross arms 5 connected by a brace 6. The legs are preferably made of tubular material and the cross arms 4 and 5 are welded or otherwise suitably secured thereto. The ends of the cross arm 6 are provided with brackets 7 having openings to accommodate set screws or the like 8 for securing the respective ends to the cross arms 5.

Pressed into the lower end of the tubular leg 3 are shanks 9 of bell-shaped hollow bases 10 for accommodating casters 11. The lower edges 12 of the bell-shaped bases are adapted to engage in a groove 13 of non-skid members 14 such as rubber, plastic or the like.

Welded or otherwise suitably secured to the upper ends of the legs 3 and extending inwardly therefrom are brackets 15 having out-turned flanges 16 on the respective sides provided with openings 17. The top 2 is adapted to rest on and be secured to the brackets 16. The top has a depending flange 18 around the outer periphery thereof. The top is preferably cast in one piece and has a plurality of spaced ribs 19—19' and 20—21 extending from near the respective corners of the top to near the center of the underneath side of the table. The inner portion of the ribs 19 and 20 are spaced apart as best illustrated in Fig. 3, and the ribs 19' and 21 are also spaced apart at the center thereof and are connected by a rib 22 provided with a depending arm 23 for a purpose later described.

The ribs 19 and 21 have connecting ribs 24 substantially toward the center of the top and V-shaped ribs 25 connect thereto and run to near the outside of the top. Spaced from the ends 26 are parallel ribs 27 and 28 which connect with the ribs 19' and 20 respectively. Depending threaded bosses 30 and 31 are provided near the edges of the respective sides of the top at the terminating point of the ribs 25 and 19 and 21 respectively. Spaced depending threaded bosses 32 and 33 are provided on the ribs 27 and 28. The threaded depending bosses 30, 31, 32 and 33 are so located to mate and align with the opening 17 in the brackets 15 and threaded bolts 34 engage in said openings in the threaded bores of

the depending bosses to hold the top to the supporting base or legs.

The ribs form a support for the top to make a more rigid structure and also to form substantially V-shaped channelways 36 and 37 extending from the respective corners of the top to near the center thereof, and spaced from the rib 22. Adapted to engage in the channelways 36 and 37 are substantially V-shaped arms 38 and 39 having their free ends 40 and 41 extending to substantially near the corners of the table top. The channelways 36 and 37 are provided at substantially midway of the arms with deepnding spaced ears 42 and 43 to which each leg of the arms is pivoted by pins 44 and 45. The legs of the arms 38 and 39 are connected by arms 46 and 47 and said arms are provided with inwardly facing flanges 48 and 49 extending around the V-shaped portion of the arm as best illustrated in Fig. 3. A handle lever 50 is provided having spaced ears 51 provided with an opening 52 adapted to receive a bolt 53 for engaging in the opening 54 of the arm 23 depending from substantially the center of the table top. The ears 51 provide cams adapted to engage the flanges 48 and 49 of the V-shaped arms 38 and 39 for a purpose later described. The outer end of the handle 50 is provided with a finger portion 55. The handle is of a length so that the finger portion will extend slightly outside of the side 56 of the table top as indicated at 57, Fig. 1, so that it will be readily accessible to the operator of the table. The corners of the top are provided with depending bosses 58 having a slot 58' through which the ends 40 and 41, respectively, of the arms 38 and 39 extend.

The casters are provided with upstanding rods 59 which engage in the tubular shank 9 of the base member 10 and extend upwardly to near the top of the table as illustrated in Figs. 4 and 5. Adapted to fit in the upper end of the tubular legs are guide sleeves 60 having an outwardly extending flange 61 for retaining the sleeves within the legs. The guide sleeves are slotted as indicated at 62, Fig. 2, and the upper end of the tubular legs are also slotted as indicated at 63, Fig. 4. The upper ends of the rods 59 are provided with transverse threaded openings 64 adapted to receive the threaded shank 65 of pins 66 which extend through the slots 63 and 62, respectively, of the upper ends of the legs and the guide sleeves thus preventing the casters from falling out of the legs if the table is raised from the floor or other supporting structure.

In operation of a table constructed and assembled as described, it will be noted the bosses 57 are in substantial alignment with the tops of the tubular legs 3, and the free ends 40 and 41 of the arms 38 and 39 extend through the slots 63 and 62, respectively, of the legs 3 and the guide sleeve 60. With the lever 50 extended downwardly as indicated in Figs. 5 and 6, the cams on the ears 51 will be out of contact with the surface of the flanges 48 and 49, respectively, of the arms 46 and 47 of the V-shaped members 38 and 29, thus allowing the weight of the table to push the casters 11 upwardly and allow the bell-shaped bases to contact the floor or other supporting structure, the non-skid devices 14 preventing sliding of the table over the floor.

When it is desired to move the table, raising of the lever 50 upwardly towards the top of the table will cause a cam action of the lever on the flanges to pivot the V-shaped arms 38 and 39 to cause the outer free ends to move downwardly pushing the caster rods 59 down and raising the table so that the casters will engage the floor and roll thereover. The cam surface of the ears 51 will lock the lever arms 38 and 39 to hold the casters by means of a rod 59, extended until it is desired to again lower the bell-shaped bases to the floor by movment of the lever arm 50 downwardly as above described.

In Fig. 9, I have shown the leg of the table 1 that is provided with an adjustable base for accommodating unevenness in floors upon which the table is used. The lower end of one of the hollow legs is cut slightly shorter than the remaining legs as indicated at 68 (Fig. 10). A hollow sleeve 69 is pressed into the lower end of the hollow leg and forms a bearing for the rod 59 attached to the caster 11. The lower end of the hollow sleeve 69 extends below the end 68 of the leg 3 and is provided with threads 70 adapted to receive internal threads 71 of a hub or stem 72 extending upwardly from the bell-shaped base 73 forming a housing for the caster 11. The upper end of the threads 70 is flattened and the lower end of the leg 3 rests thereon. The hub or stem 72 is provided with radial grooves 74 around its periphery as best illustrated in Fig. 11. A bracket 75 is secured to the lower end of the leg 3 by set screws or the like 76, and if desired, may be threaded into the threaded bores 77 in the sleeve 69 to assist in holding the sleeve 69 in the leg. The bracket 75 is preferably made of spring steel and has an inwardly turned flange 78 adapted to engage in the radial groove 74 of the stem 72 to hold the base 73 in position after it has been adjusted to the floor.

While I have here shown the adjustable base on only one leg, it may be placed on as many legs as desired without departing from the spirit of my invention, and may be easily adjusted by turning the base with respect to the leg to the desired place to engage the floor.

It will be obvious from the foregoing that I have provided an improved table or stand having lever mechanism underneath the table top connecting with rods attached to casters for easy retraction and extension of the casters as desired, and an adjustable base for accommodating unevenness in floors.

What I claim and desire to secure by Letters Patent is:

1. A table of the character described comprising, a top, tubular legs supporting said top, said legs having bell-shaped bottoms forming hollow bases for said legs, casters having rods secured thereto extending upwardly through said tubular legs and to near the top thereof, guide sleeves in the top of said legs, said sleeves and the top of said legs having slots therein, said rods having threaded openings near the upper ends thereof, a pin extending through said slots and into said threaded openings for limiting sliding movement of said rods in said legs, substantially V-shaped arms pivotally mounted to the underneath side of said top, said arms having free ends engaging the top of said caster rods, and a lever engaging said arms for pivoting same to move the caster rods and extend the casters from said bases to raise the bases from a supporting structure.

2. A table of the character described comprising, a top having ribs forming channelways separated by one of the ribs into substantially V-shaped channelways, said V-shaped channelways having depending ears substantially midway thereof, said one of the ribs separating said

channelways having a depending arm, arms pivotally mounted to the ears in said channelways and having portions parallel with and adjacent said separating rib in said channelways, tubular legs supporting said top, said legs having hollow bases on the lower ends thereof, casters having rods secured thereto extended upwardly through the tubular legs, and a lever having cam surfaces pivotally mounted on said depending arm for engaging the pivoted arms and moving same in response to operation of said lever, said pivoted arms having free ends engaging the top of said rods whereby the weight of the table causes the bases to engage a support and movement of said lever will cause the cam surfaces thereof to engage said arms to pivot said arms in the channelways and move said rods in said legs to extend said casters from the bases and raise same from the support.

3. A table of the character described comprising, a top having ribs forming channelways separated by one of the ribs into substantially V-shaped channelways, said V-shaped channelways having depending ears substantially midway thereof, said one of the ribs separating said channelways having a depending arm, arms pivotally mounted to the ears in said channelways and having portions parallel with and adjacent said separating rib in said channelways, said arms having facing flanges adjacent said depending arm, tubular legs supporting said top, said legs having hollow bases on the lower ends thereof, casters having rods secured thereto extended upwardly through the tubular legs, and a lever having cam surfaces pivotally mounted on said depending arm for engaging said facing flanges on said arms and pivoting said arms in response to operation of said lever, said pivoted arms having free ends engaging the top of said rods whereby the weight of the table causes the bases to engage a floor and movement of said lever will cause the cam surfaces thereof to engage said facing flanges and pivot said arms and move said rods in said legs to extend said casters from the bases and raise same from the floor.

4. A table of the character described comprising, a top having ribs forming channelways separated by one of the ribs into substantially V-shaped channelways, said V-shaped channelways having depending ears substantially midway thereof, said one of the ribs separating said channelways having a depending arm, substantially V-shaped arms pivotally mounted to the ears in said channelways and having portions parallel with and adjacent said separating rib in said channelways, said arms having facing flanges adjacent said depending arm, tubular legs having inwardly extending brackets supporting said top, said legs having hollow bases on the lower ends thereof, casters having rods

secured thereto extended upwardly through the tubular legs, a lever having cam surfaces pivotally mounted on said depending arm for engaging said facing flanges on said V-shaped arms and pivoting said V-shaped arms in response to operation of said lever, and means slidably retaining the rods in said legs, said V-shaped arms having free ends engaging the top of said rods whereby the weight of the table causes the bases to engage a floor and movement of said lever will cause the cam surfaces thereof to engage said facing flanges of said arms to pivot said arms to extend said casters in said bases and raise the bases from the floor.

5. A table of the character described comprising, a top having ribs forming channelways separated by one of the ribs into substantially V-shaped channelways, said V-shaped channelways having depending ears substantially midway thereof, a said one of the ribs separating said channelways having a depending arm, substantially V-shaped arms pivotally mounted to the ears in said channelways and having portions parallel with and adjacent said separating rib in said channelways, said arms having facing flanges adjacent said depending arm, tubular legs having inwardly extending brackets supporting said top, said legs having hollow bases on the lower ends thereof, casters having rods secured thereto extended upwardly through the tubular legs, a lever having cam surfaces pivotally mounted on said depending arm for engaging said facing flanges on said V-shaped arms and pivoting said V-shaped arms in response to operation of said lever, guide sleeves in the upper ends of said legs, and means slidably retaining the rods in said legs, said V-shaped arms having free ends engaging the top of said rods whereby the weight of the table causes the bases to engage a floor and movement of said lever will cause the cam surfaces thereof to engage said facing flanges of said arms to pivot said arms to extend said casters in said bases and raise the bases from the floor.

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