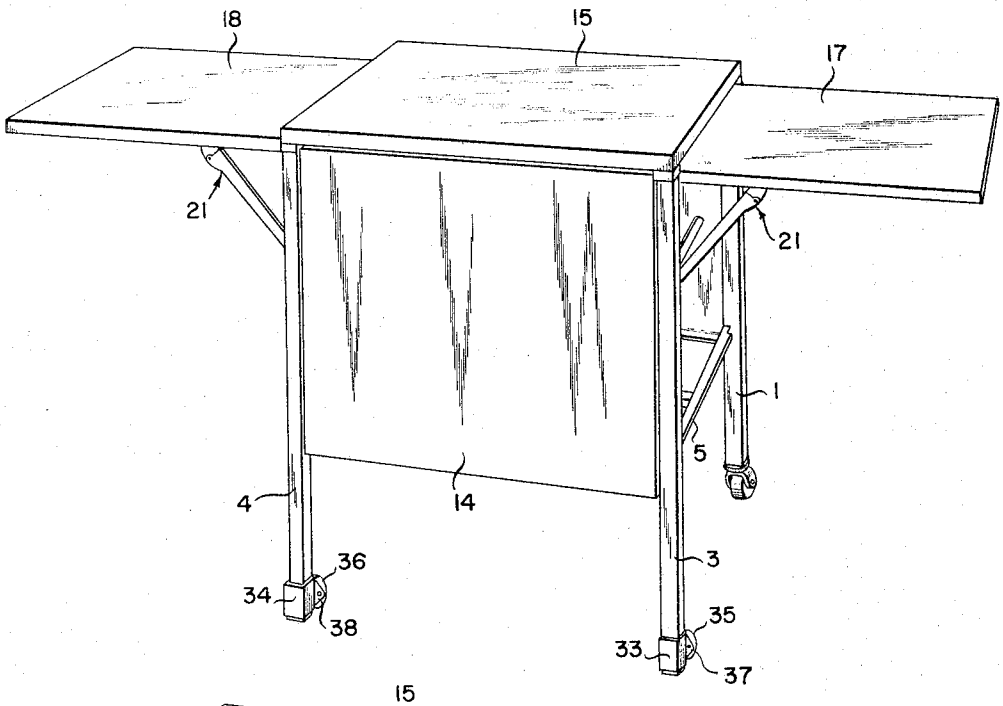
Dec. 27, 1966 W. W. GOOD 3,294,412

BUSINESS MACHINE STAND

Filed May 20, 1965 3 Sheets-Sheet 1

Fig. 1



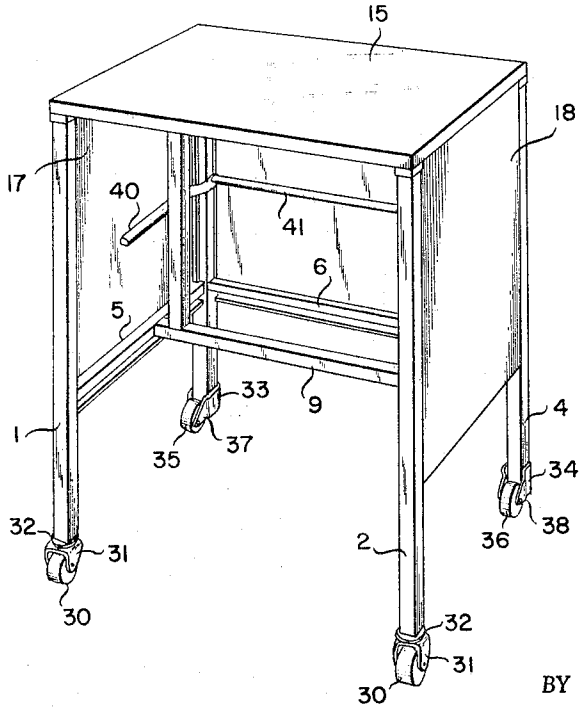


Fig. 2

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Dec. 27, 1966 W. W. GOOD 3,294,412

BUSINESS MACHINE STAND

Filed May 20, 1965 3 Sheets-Sheet 2

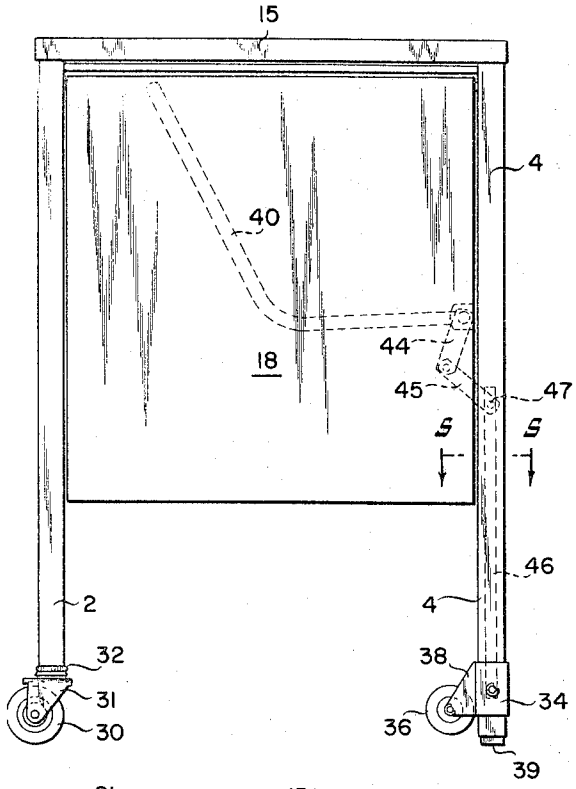


Fig. 3

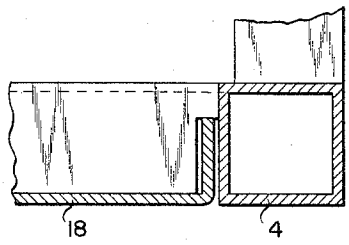


Fig. 5

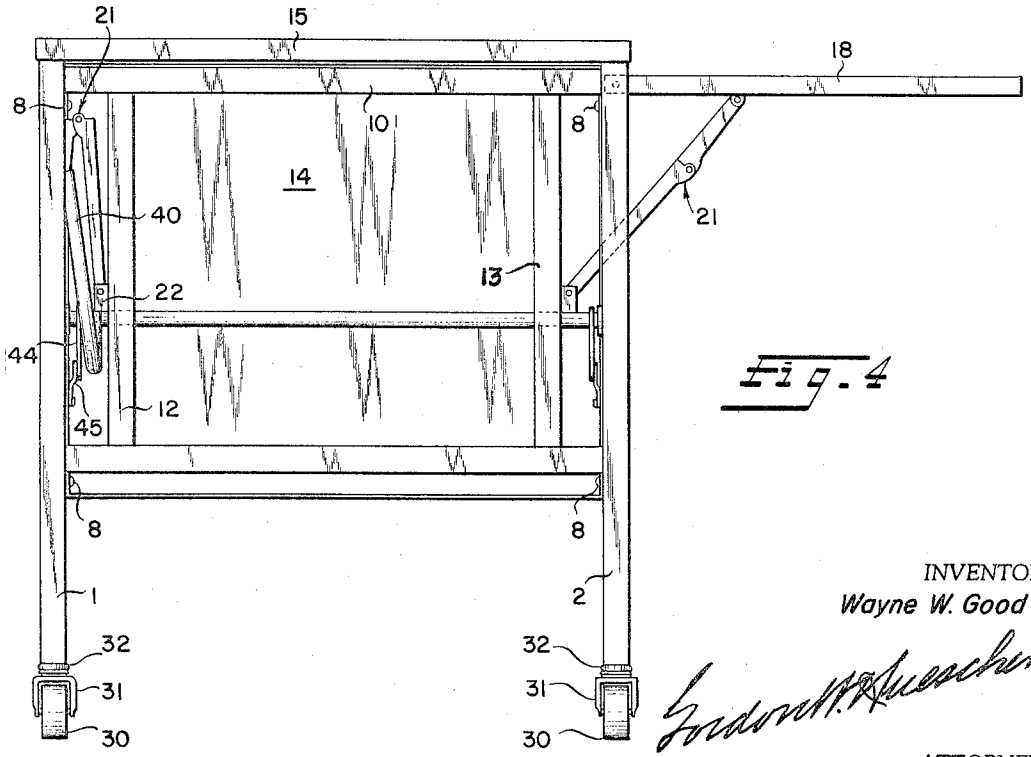


Fig. 4

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Dec. 27, 1966 W. W. GOOD 3,294,412

BUSINESS MACHINE STAND

Filed May 20, 1965 3 Sheets-Sheet 3

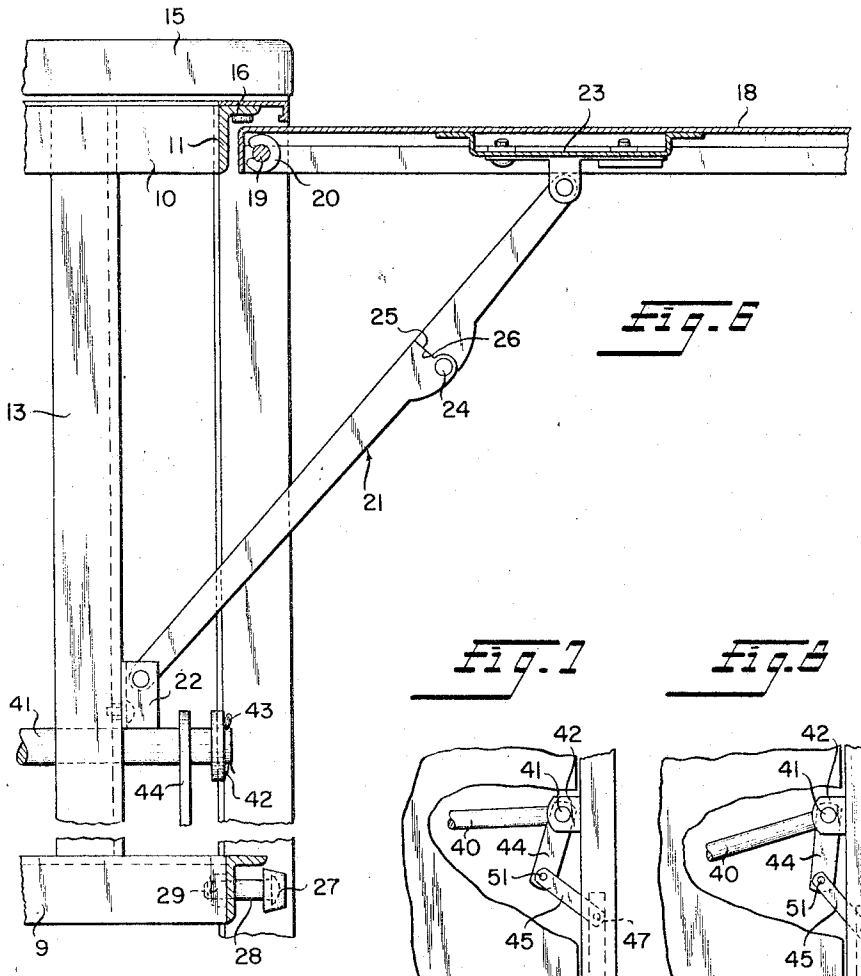


Fig. 6

Fig. 7

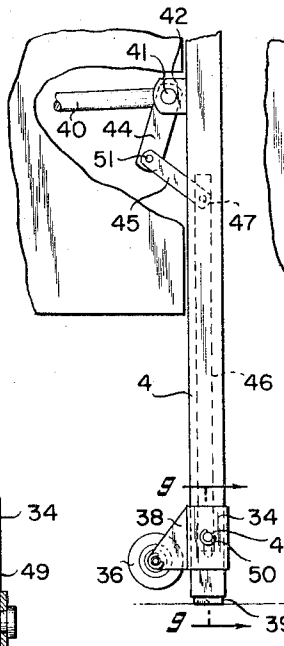


Fig. 8

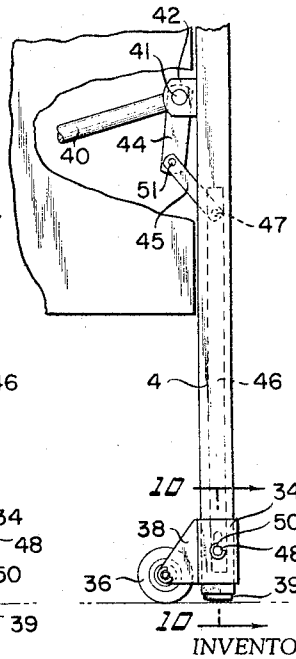


Fig. 9

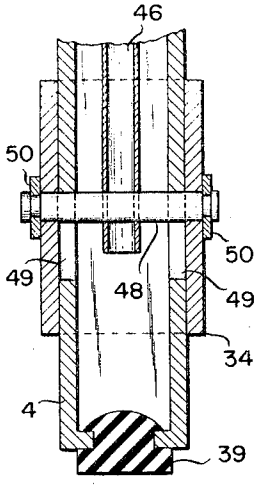
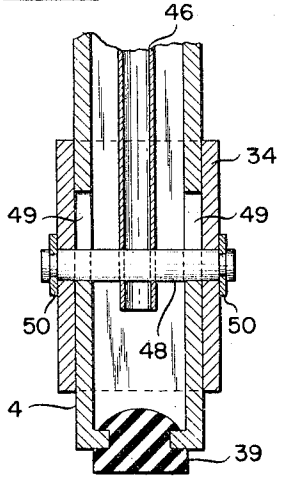


Fig. 10



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United States Patent Office 3,294,412 Patented Dec. 27, 1966

3,294,412

BUSINESS MACHINE STAND

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Filed May 20, 1965, Ser. No. 457,395
5 Claims. (Cl. 280—43.13)

The present invention relates to stands, and is more particularly concerned with a business machine stand having casters at the ends of the legs thereof for enabling said stand to be readily moved, and at least some of which casters may be immobilized to prevent movement when a machine supported by the stand is being used, and which machine stand comprises retractable side panels which, when retracted, lie flush with the primary frame of the stand.

Many different types of stands have been disclosed in the art suitable for supporting business machines. Most of such stands have one of a variety of devices for immobilizing the stand when the machines placed thereon are in use. Some stands are provided with shrouds affixed to the ends of the legs which surround the casters. When it is desired to immobilize the stand, the casters are retracted and the shrouds frictionally engage the surface on which the stand rests for preventing movement of the stand. Other machines have utilized various other structures for immobilizing the casters when the machine is in use. However, the various structures previously employed have been singularly consistent in their lack of a pleasing esthetic appearance. Moreover, the machines currently marketed have the disadvantage that their folding extension or side panels, even when in retracted position, extend beyond the primary frame of the stand. Such structures have shown a propensity for snagging clothing and causing tears in the operator's clothing or runs in the operator's hose, and generally contributing to loss of composure and deterioration in disposition on the part of the machine operator.

It is an object of the invention to provide a business machine stand which is attractive in appearance. It is still further an object to provide a business machine stand having folding side panels which when folded do not conspicuously extend beyond the machine frame in such a manner as to interfere in any way with the operator of the machine or the operator's clothing. It is still further an object to provide such a machine having casters and means for immobilizing the casters during operation, which means is efficient and attractive in appearance. The accomplishment of the foregoing and additional objects will become more fully apparent hereinafter.

According to the invention, a business machine stand is provided having legs of rectangular cross-section and folding side panels each of which folds to a position between a pair of legs, with its outer surface flush with the outer surfaces of the legs. Casters are provided at the ends of the legs, two of which casters are retained in a slideably mounted retainer sleeve which is of substantially the same cross-sectional form as the legs. Means is provided for raising and lowering the retainer sleeves for mobilizing or immobilizing the casters contained thereon. The operation of the structure is efficient and the structure has an esthetically attractive appearance.

The invention in its preferred embodiment is illustrated by the accompanying drawings in which:

FIG. 1 is a perspective view of the business machine stand of the invention taken from the rear, and showing the side panels in horizontally extended position.

FIG. 2 is a perspective view of the machine stand of FIG. 1 taken from the front, and showing the side panels in folded position.

FIG. 3 is a side elevation showing the arrangement for raising and lowering the casters, in broken lines.

FIG. 4 is a front elevation.

FIG. 5 is a fragmentary cross-sectional view taken at the line 5—5 of FIG. 3.

FIG. 6 is a fragmentary cross-sectional view taken at one end of the stand.

FIG. 7 is a fragmentary view, partially broken away, showing one of the retractable caster assemblies in retracted position.

FIG. 8 is a fragmentary view partially broken away showing the caster assembly in extended position.

FIG. 9 is a fragmentary cross-sectional view taken at the line 9—9 of FIG. 7; and

FIG. 10 is a fragmentary cross-sectional view taken at the line 10—10 of FIG. 8.

Reference is now made to the accompanying drawings for a better understanding of the invention, wherein all the parts are numbered and wherein the same numbers are used to refer to corresponding parts throughout.

As shown in the drawings, the machine stand comprises four legs 1, 2, 3, and 4, of rectangular cross-section and maintained in position by means of metallic horizontal braces 5, 6, and 7 of any suitable construction such as angle form, channel-form, or tubular. The braces may be affixed to the legs by any suitable means, such as welding. A lower cross-brace 9, shown in FIG. 2, connects the braces 5 and 7 (not shown). Vertical braces 12 and 13 connect the lower cross brace 9 with an upper cross-brace 10.

As shown in FIGS. 1 and 4, a flanged rear panel 14 is affixed to the rear legs 3 and 4 by means of bolts 8. A table top 15 comprised, for example, of a wood panel having a plastic top, as for example of Formica, is affixed to the frame by means of screws 16, as shown in FIG. 6.

At each side of the stand flanged side panels 17 and 18 are hingedly mounted on the frame by means of panel hinge rods 19 journaled through holes provided in the flanges of the side panels, and secured in place by means of E-rings 20, as shown in FIG. 6. The side panels are supported in horizontal position by means of a hinged brace 21 hingedly mounted on the vertical braces 12 and 13 by means of brackets 22 and 23, the brace 21 comprising two parts hinged together at a pin 24 and having mutually engageable limit edges 25 and 26. Means for properly positioning the side panels in flush folded down position comprises a rubber bumper 27 mounted on bolts 28 secured to the frame by means of a nut 29. Each of the front legs is provided with a revolvable front caster assembly comprising a caster 30 rotatably mounted in a bassick 31 which in turn has a vertical pin (not shown) rotatably mounted in a bassick socket 32. The front caster assemblies are consequently free to revolve about a vertical axis defined by the bassick pin. The rear legs 3 and 4 are each provided at their lower end with a rear caster assembly having sleeves 33 and 34 of substantially rectangular cross-section slideably mounted over the legs 3 and 4. Casters 35 and 36 are rotatably mounted between flanges 37 and 38 extending from the sleeves 33 and 34, respectively. However, the caster assemblies are not free to revolve. Flange bumpers 39 of a material such as rubber are provided at the ends of the rear legs.

The arrangement for raising and lowering the rear caster assemblies comprises a hand lever 40 affixed at one end to a shaft 41 rotatably journaled at each end in bracket 42 affixed to each rear leg. The shaft is maintained axially by means of cotter pins 43. A lever 44 is affixed at each end of the shaft 41. A connecting rod 45 is pivotally connected to the free end of the lever 44 and at its other end is pivotally connected to a push rod 46 mounted within the rear leg by means of a cap screw

47 journaled through a hole in the lever 45 and threaded into a hole provided in the end of the push rod. The cap screw 47 is arranged to travel vertically in a slot provided in the inner wall of each rear leg.

As shown in greater detail in FIGS. 9 and 10, the lower end of the push rod 46 has a hole provided therein through which a retainer pin 48 is journaled. The retainer pin 48 is arranged to travel vertically in slots 49 provided in the walls of each rear leg. The retainer pin 48 is also journaled through holes provided in the walls of the sleeves 33 and 34 and is maintained in place by means of E-rings 50.

The side panels 17 and 18 are placed in the horizontally extended position by grasping the outer edge thereof and swinging the panel upwardly until the hinged brace 21 is in fully extended position, in which position it is self locking and provides a rigid support for the panel. In order to lower the panel, force is applied to the hinged brace at the hinge point, causing it to jack-knife and release the panel. The panel may then be lowered until it is completely and snugly contained within a space between the front and rear legs at that end, and with its outer surface substantially flush with the outer surfaces of the legs, as regulated and so positioned by bumper 27.

FIG. 7 shows the rear caster assembly in position whereby the bumper flange 39 at the end of the leg engages the floor and prevents movement of the stand. In order to lower the rear caster assemblies to permit the stand to move, the hand lever 40 is grasped and pulled downward, causing the push rod 46 to be lowered. This movement causes the rear caster assemblies to be lowered also. The structure is so designed that when the casters have been lowered sufficiently so that they engage the floor and the bumper flange 39 has been raised above the floor, the pivotal point defined by the pin 51 connecting the end of the lever 44 to the end of the connecting rod 45 has passed beyond the dead center position, that is, beyond the line connecting the cap screw center 47 to the shaft center 41. In this position the caster assemblies are maintained in the extended position and the machine stand may be moved about. When it is once again desired to immobilize the stand, the hand lever 40 is again raised until the bumper flange 39 once again engages the floor.

The machine stand of the present invention has a number of advantages over those of the prior art. It is strong, rigid, and relatively inexpensive to build. It has side panels which may be locked in horizontal position during operation, and which may be folded flush with the legs of the stand when not in operation, thus avoiding interference with the operator or the operator's clothing. The retractable caster assemblies are so designed that they blend with the rectangular legs and offer a highly esthetic appearance. Moreover, they are efficient in operation, and, together with the assembly for raising and lowering, contribute toward a highly efficient apparatus.

It is to be understood that the invention is not limited to the exact details of construction, operation, or exact materials or embodiments shown and described, as obvious modifications and equivalents will be apparent to one skilled in the art, and the invention is therefore to be limited only by the scope of the appended claims.

I claim:

1. A machine stand comprising a rectangular table top, a frame supporting said table top including front and rear legs each having a rectangular cross-section and mounted one at each corner of said stand, said front legs having casters revolvably mounted at the ends thereof, said rear legs each being provided with a vertically retractable caster assembly comprising a rectangular sleeve slideably mounted about said leg having means at one side thereof rotatably supporting a caster, and means provided at least partially within said rear legs for alternatively positioning said caster assembly in extended position whereby said caster supports said leg and in retracted position whereby the end of said leg engages the surface on which said machine stand is supported, rectangular side panels, hingedly mounted at one edge on each end of said machine stand and so arranged that when each of said side panels is folded down in storage position it is entirely contained within the space defined between the two legs at the end of said machine stand with its outer surface substantially flush with the outer surfaces of said rectangularly cross-sectional legs, and releasable means for supporting said side panel in laterally extended operating position.

2. A machine stand comprising a rectangular table top, a frame supporting said table top including front and rear legs each having a rectangular cross-section and mounted one at each corner of said stand, said front legs having casters revolvably mounted at the ends thereof, said rear legs each being provided with a vertically retractable caster assembly comprising a rectangular sleeve slideably mounted about said leg having means at one side thereof rotatably supporting a caster, and means provided in said machine stand for alternatively positioning said caster assembly in extended position whereby said caster supports said leg and in retracted position whereby the end of said leg engages the surface on which said machine stand is supported, comprising a rod movably mounted within each of said legs having its lower end operatively connected to said caster assembly, lever means, and a connecting rod operatively connected at one end to an upper portion of said rod and at the other end to said lever means, a rectangular side panel hingedly mounted at one edge on each end of said machine stand and so arranged that when each of said side panels is folded down in storage position it is entirely contained within the space defined between the two legs at the end of said machine stand with its outer surface substantially flush with the outer surfaces of said rectangularly cross-sectional legs, and releasable means for supporting said side panel in laterally extended operating position.

3. A machine stand of claim 2, wherein the rectangular side panel, when in laterally extended position, is downwardly flanged on its three sides which are not hinged to said stand, wherein the side panel including its flanges is entirely and snugly contained within the space defined between the two legs at the end of the stand with its outer surface flush with the surface of said rectangularly cross-sectional legs when in folded down position, and wherein the support means for said side panel when in its laterally extended position comprises a hinged brace mounted at one end to a flange of said side panel and at the other end to said stand.

4. In a machine stand comprising a table top, a frame supporting said table top including front and rear legs each having a rectangular cross-section and mounted one at each corner of said stand, said front legs having casters revolvably mounted at the ends thereof, the improvement wherein said rear legs are each provided with a vertically retractable caster assembly comprising a rectangular sleeve slideably mounted about said leg having means at one side thereof rotatably supporting a caster, and means provided in said machine stand for alternatively positioning said caster assembly in extended position whereby said caster supports said leg and in retracted position whereby the end of said leg engages the surface on which said machine stand is supported comprising a rod movably mounted within each of said legs having its lower end operatively connected to said caster assembly, lever means, and a connecting rod operatively connected at one end to an upper portion of said rod and at the other end to said lever means.

5. In a machine stand comprising a table top, a frame supporting said table top including front and rear legs mounted one at each corner of said stand, said front legs having casters revolvably mounted at the ends thereof, the improvement wherein said rear legs are each provided with a vertically retractable caster assembly comprising a sleeve slideably mounted about said leg having means at

one side thereof rotatably supporting a caster, and means provided in said machine stand for alternatively positioning said caster assembly in extended position whereby said caster supports said leg and in retracted position whereby the end of said leg engages the surface on which said machine stand is supported comprising a rod movably mounted within each of said legs having its lower end operatively connected to said caster assembly, lever means, and a connecting rod operatively connected at one end to an upper portion of said rod and at the other end to said lever means.

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