April 22, 1958 J. P. HARTNETT 2,831,746

TYPEWRITER PLATFORM

Filed July 15, 1955

Fig. 1

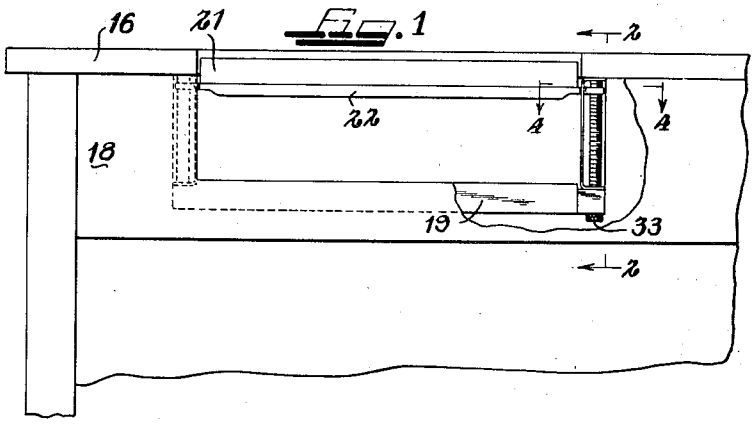


Fig. 2

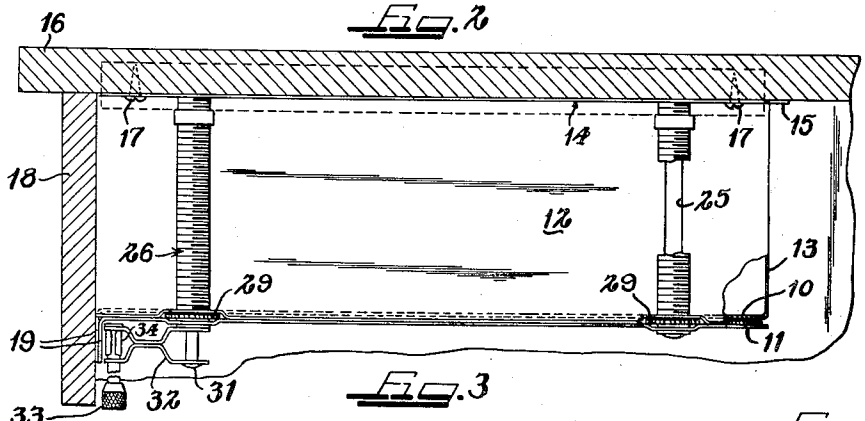


Fig. 3

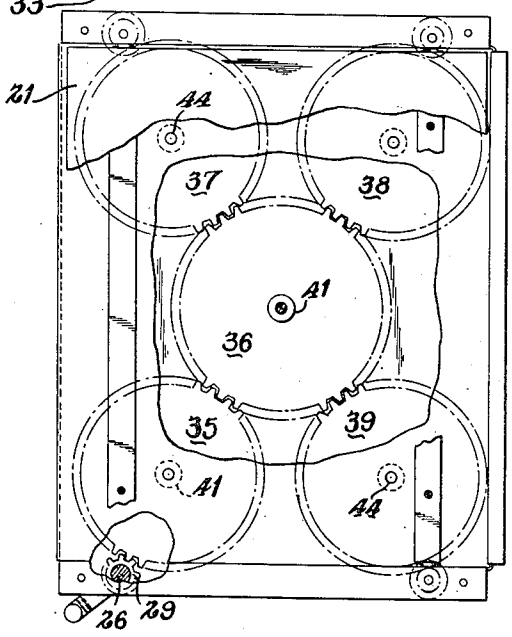


Fig. 4

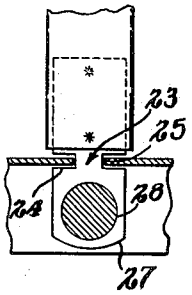
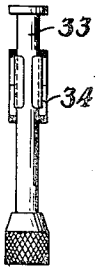


Fig. 5



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United States Patent Office 2,831,746 Patented Apr. 22, 1958

2,831,746

TYPEWRITER PLATFORM

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Application July 15, 1955, Serial No. 522,287

9 Claims. (Cl. 312—306)

The invention relates to improvements in an adjustable supporting apparatus and is particularly concerned with the novel construction and assembly of a rugged adjustable support for a typewriter or like machine.

The invention pertains to a pre-assembled apparatus of the character referred to which may be mounted as a unit in a conventionally constructed desk at the time of its manufacture. Typewriter desks usually are formed with a well or recess that opens onto the front and top surface of the desk and which is intended to receive and support a typewriter. Such conventionally constructed desks, however, have no provision to vary the elevation of the typewriter to accommodate different workers. The present invention permits adjustment to be accomplished with such ease that the elevation of the typewriter can be changed quickly and without the aid of tools or like devices to locate it in the most convenient position for use.

It is therefore an object of the invention to provide such an apparatus.

Another object is to provide a typewriter platform adjusting mechanism that is positive in operation and very sturdy in construction so as to prevent vibration of a typewriter or other machine positioned on the platform.

Another object is to provide a self-contained preassembled supporting apparatus that may be easily and quickly installed as a unit in a desk or the like during the manufacture of said desk.

With the foregoing and other objects in view which will appear as the description proceeds, the invention consists of certain novel features of construction, arrangement and combination of parts hereinafter fully described, illustrated in the accompanying drawings, and particularly pointed out in the appended claims, it being understood that various changes in the form, proportion, size and minor details of the structure may be made without departing from the spirit or sacrificing any of the advantages of the invention.

For the purpose of facilitating an understanding of my invention, I have illustrated in the accompanying drawings a preferred embodiment thereof, from an inspection of which, when considered in connection with the following description, my invention, its mode of construction, assembly and operation, and many of its advantages should be readily understood and appreciated.

Referring to the drawings in which the same characters of reference are employed to indicate corresponding or similar parts throughout the several figures of the drawings:

Fig. 1 is a fragmentary front elevational view of a desk embodying the present invention and showing portions broken away to better illustrate details of its construction.

Fig. 2 is a vertical sectional view through the desk, taken substantially along line 2—2 of Fig. 1.

Fig. 3 is a top plan view of the apparatus showing portions broken away.

Fig. 4 is an enlarged detail sectional view taken substantially on line 4—4 of Fig. 1.

Fig. 5 is an enlarged detail view of the operating handle.

Referring to the accompanying drawings, the apparatus includes an open faced box-like structure preferably fabricated from light gauge sheet steel. The box-like structure includes a double walled bottom consisting of an inner wall 10 and an outer wall 11, parallel side walls 12, and a back wall 13 integral with the inner wall 10. The front and top of the structure are open. The upper margins of the side walls 12 and back wall 13 are turned outwardly to define flanges 14 and 15 respectively which are adapted to underlie and abut the bottom face of the desk top 16 when the box-like structure is mounted in the desk.

Suitable screws 17 are provided to secure the box-like structure in place, said screws passing through the flanges 14 and engaging in the table top 16. The usual apron 18 of the desk is suitably cut away to provide an opening in the front side of the desk corresponding in size to the front opening of said structure, and in order to insure utmost rigidity to the installation, both bottom walls 10 and 11 are provided on their forward edges with downturned overlapped flanges 19 which bear against the inside face of the apron 18 and may be secured thereto in any suitable manner.

The box-like assembly is adapted to contain therein a vertically adjustable typewriter platform 21. This platform has an outline conforming substantially to the internal dimensions of the box-like structure and it is supported on and secured to a pair of bars 22 which extend transversely of the box-like structure. There are two such bars 22 and each is provided at its ends with an extension 23 that is suitably notched, as at 24, on its side edges to provide guide means cooperating a related vertical slot 25 provided in the side walls 12. The slots 25 extend the full height of said side walls, thus affording guide means of a kind that will permit the bars 22 to be moved into any position of adjustment vertically between the upper and lower edges of said side walls.

Mounted outwardly of each side wall 12 are two upstanding screws 26, one in registering alignment with each slot 25. Each screw 26 is journalled at its ends in the side wall flanges 14 and bottom wall 11 so as to afford utmost rigidity thereto. The projecting end 27 of each bar extension 23 has a threaded aperture 28 to receive therethrough in threading engagement therewith, one of the screws 26. It should be quite evident at this time that rotation of the screws 26 in unison will raise or lower the bars 22 simultaneously and thus elevate or lower the typewriter platform 21 carried thereon.

In order to impart rotation to the screws 26 in unison, said screws are suitably connected together in a manner now to be described.

Each screw 26 is provided adjacent its lowermost end with a pinion 29, said pinion resting upon the top surface of the laterally extending margin of the bottom 11. One of the screws, preferably one of the forwardly disposed screws, has a depending axial projection 31 upon which is fixedly mounted a crank arm 32 carrying on its free bifurcated end a crank pin or handle 33. Referring now to Fig. 5 it will be observed that the crank pin 33 is slidably mounted in the crank arm 32 and is provided with a friction clip 34 to frictionally retain said pin in its lowermost depending position, as illustrated in Fig. 2, or in a retracted position as illustrated in Fig. 5. The pin normally is extended so that it can be grasped easily in order to rotate the screw carrying said crank arm 32, but when not in use it is moved into its retracted position so as not to be visible when the desk is viewed from the front.

A train of gears including gears 35, 36, 37, 38 and 39 is provided to operatively connect all of the pinions 29 so

that when the crank arm 32 is rotated, such rotation is imparted to all of the screws to insure simultaneous uniform rotation thereof. The gear train 35 through 39 may be of any conventional construction and it is preferred that the gears comprising said train be fabricated from thin sheet metal stock and that each be provided with a bearing boss 41. These gears are mounted between the inner and outer bottom walls 10 and 11 and they are pivotally secured in place by rivets 44 which pass through said gears and said walls, the bosses 41 minimizing friction during operation of the mechanism. The incorporation of the gear train illustrated insures firm locking of the screws 26 so that the platform 21 supported thereby is rigid and will not become displaced vertically through vibration or jarring of the assembly.

It is believed that my invention, its mode of construction and assembly, and many of its advantages should be readily understood from the foregoing without further description, and it should also be manifest that while a preferred embodiment of the invention has been shown and described for illustrative purposes, the structural details are nevertheless capable of wide variation within the purview of my invention as defined in the appended claims.

What I claim and desire to secure by Letters Patent of the United States is:

1. A typewriter supporting and adjusting apparatus comprising an open faced box-like casing including a double walled bottom and upstanding side walls, a plurality of upstanding screws journalled in the casing, said screws being arranged in pairs with one pair outwardly of each side wall, a platform mounted for movement vertically within the confines of the box-like casing, said side walls having vertical passages one in registering alignment with each screw, lateral extensions on said platform projecting through said passages threaded on said screws, a pinion mounted firmly on each screw, a gear train connecting all of said pinions, said gear train being arranged between said bottom walls, and a crank arm operable to rotate all of the screws in unison for raising and lowering the platform.

2. A typewriter supporting and adjusting apparatus comprising an open faced box-like casing including a bottom and upstanding side walls, a plurality of upstanding screws journalled in the casing, said screws being arranged in pairs with one pair outwardly of each side wall, a platform mounted for movement vertically within the confines of the box-like casing, said side walls having vertical passages therein one in registering alignment with each screw, bars supporting said platform and extending through said passages threaded on said screws, a pinion mounted firmly on each screw, a gear train connecting all of said pinions, and means on one screw operable to rotate all of the screws in unison for raising and lowering the platform.

3. A typewriter supporting and adjusting apparatus comprising an open faced box-like casing including a bottom and upstanding side walls, a plurality of upstanding screws, said screws being arranged in pairs with one pair outwardly of each side wall, a platform mounted for movement vertically within the confines of the box-like casing, said side walls having vertical passages therein one in registering alignment with each screw, means on said platform extending through said passages threaded on said screws, a pinion firmly mounted on each screw, a gear train connecting all of said pinions, and a crank arm on one screw operable to rotate all of the screws in unison for raising and lowering the platform.

4. A typewriter supporting and adjusting apparatus comprising an open faced box-like casing including parallel upstanding side walls and a bottom wall, external top and bottom flanges on said side walls, a plurality of upstanding screws arranged in pairs with one pair located outside each side wall, said screws being journalled at their ends in the top and bottom flanges of the respective side walls, pinions one mounted firmly adjacent to the lower end of each screw, support bars bridging the box-like casing threadingly mounted at their ends on related screws so as to be raised and lowered in unison when the screws are rotated, a platform supported on said bars, means on one screw operable to impart rotation to all of said screws, and a gear train operatively connecting all of the pinions to rotate all of the screws in unison when the operable means is actuated.

5. A typewriter supporting and adjusting apparatus of the kind recited in claim 4, in which the bottom wall consists of two material thicknesses and the gear train is interposed between said thicknesses.

6. A typewriter supporting and adjusting apparatus comprising an open faced box-like casing including parallel upstanding side walls and a bottom wall, external top and bottom flanges on said side walls, a plurality of upstanding screws arranged in pairs with one pair located outside each side wall, said screws being journalled at their ends in the top and bottom flanges of the respective side walls, pinions one mounted firmly on each screw, support bars bridging the box-like casing threadingly mounted at their ends on related screws so as to be raised and lowered in unison when the screws are rotated, a platform supported on said bars, means on one screw operable to impart rotation to all of said screws, and a gear train operatively connecting all of the pinions to rotate all of the screws in unison when the operable means is actuated.

7. A typewriter supporting and adjusting apparatus comprising an open faced box-like casing including parallel upstanding side walls and a bottom wall, external top and bottom flanges on said side walls, a plurality of upstanding screws arranged in pairs with one pair located outside each side wall, pinions one mounted firmly adjacent to the lower end of each screw, support bars bridging the box-like casing threadingly mounted at their ends on related screws so as to be raised and lowered in unison when the screws are rotated, a platform supported on said bars, means operable to impart rotation to one of said screws, and a gear train operatively connecting all of the pinions to rotate all of the screws in unison when the operable means is actuated.

8. In an apparatus including a box-like structure having a bottom wall and upstanding side walls, said side walls having spaced apart vertical slots, screws mounted outside said side walls one adjacent to and parallel with each slot, pinions one on each screw, means to rotate one screw, a gear train carried by the bottom wall operatively connecting all of said pinions, and means engaging all of said screws and extending through said slots for supporting a platform in said box-like structure.

9. In an apparatus of the kind recited in claim 8 in which the bottom wall is of two material thicknesses and the gear train is journalled between said thicknesses.

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