July 25, 1961 W. W. GOOD 2,993,740

PORTABLE STAND

Filed March 21, 1958 2 Sheets-Sheet 1

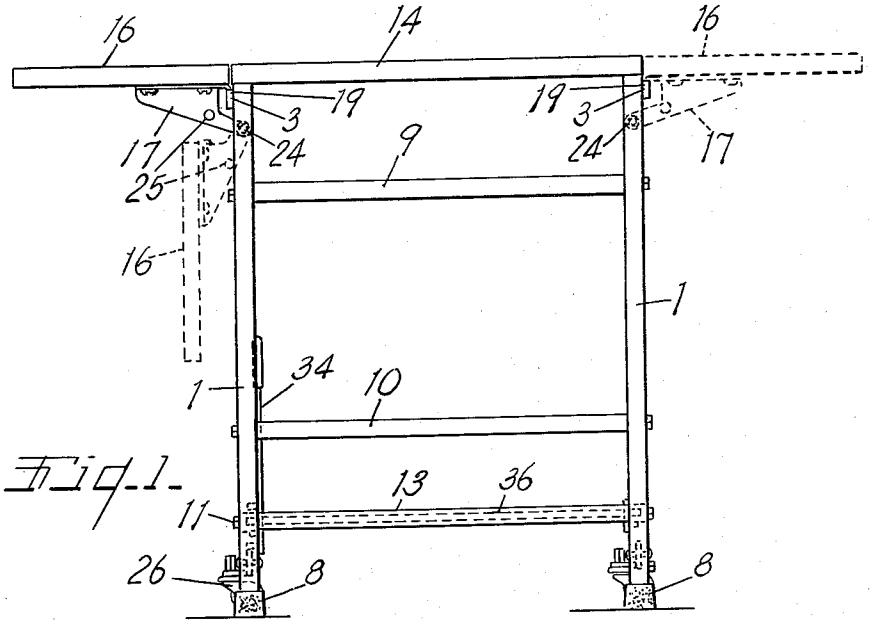


Fig. 1.

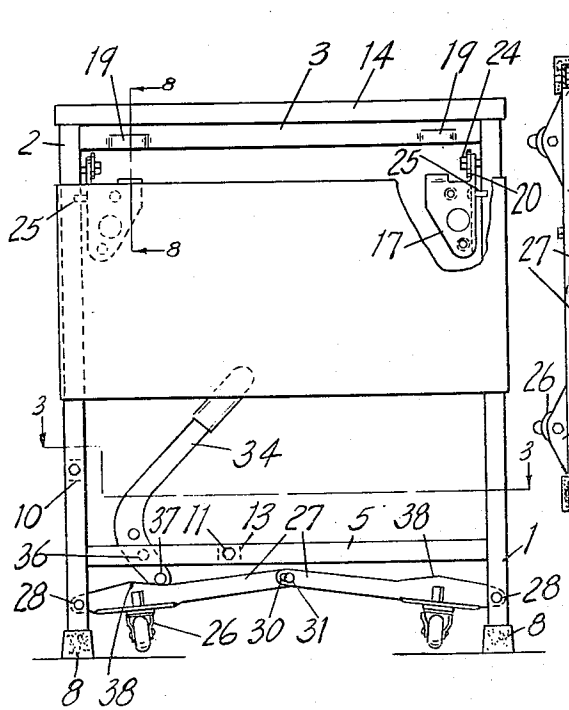


Fig. 2.

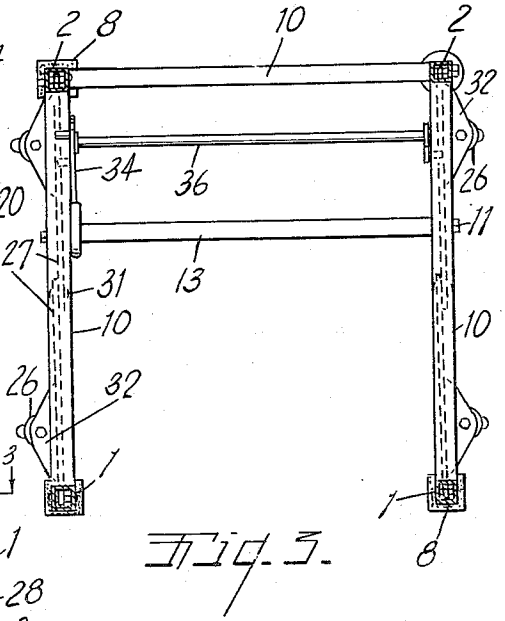


Fig. 3.

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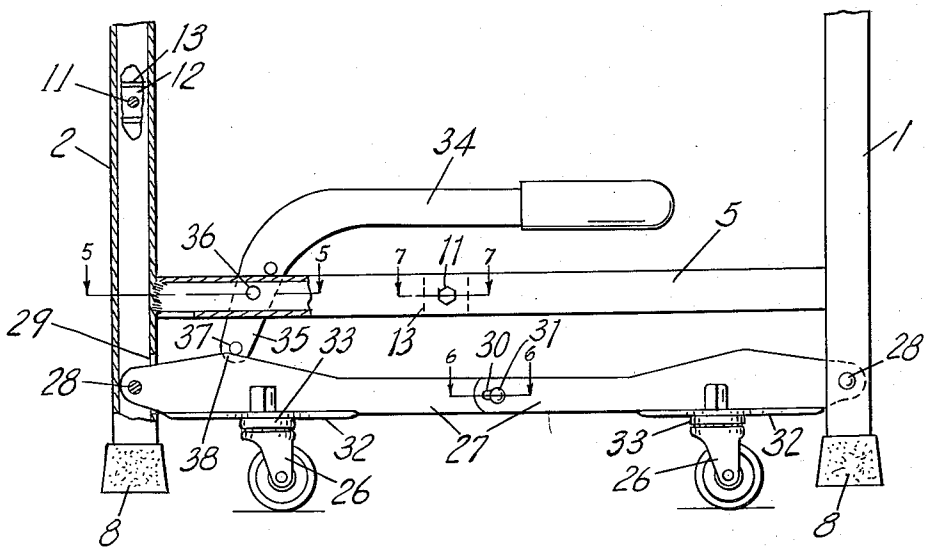


Fig. 4.

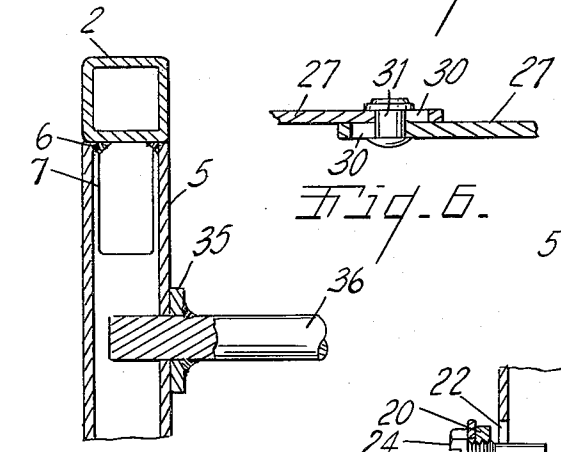


Fig. 5.

Fig. 6.

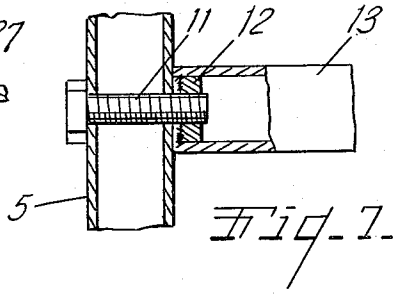


Fig. 7.

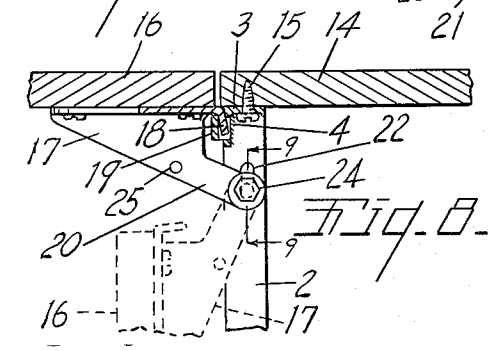


Fig. 8.

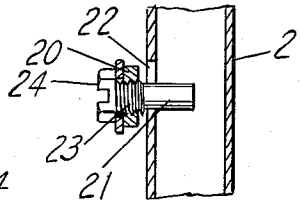


Fig. 9.

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2,993,740

PORTABLE STAND

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8 Claims. (Cl. 311—60)

This invention relates to a portable stand which is well adapted for use as an office machine stand.

The main objects of this invention are:

First, to provide a stand for office use which is well adapted for a typewriter, an adding machine or the like, and while strong and rigid when erected may be collapsed for shipment or storage and easily erected by an unskilled workman as occasion may require.

Second, to provide a stand having these advantages which is formed mainly of metal, is strong and rigid and at the same time relatively light in weight.

Third, to provide a portable stand adapted for office use which is provided with casters which may be quickly and easily adjusted to and from operative position.

Fourth, to provide a stand of this type having a collapsible leaf or leaves which may be quickly adjusted from collapsed to erected position and vice versa, and at the same time is rigidly supported in erected position, and also one in which a pair of leaves may be provided or a single leaf provided and may be selectively positioned at either side of the stand or shifted from one side to the other.

Objects relating to details and economies of the invention will appear from the description to follow. The invention is defined and pointed out in the claims.

A preferred embodiment of the invention is illustrated in the accompanying drawing, in which:

FIG. 1 is a front elevational view with one leaf shown in erected position by full lines and in collapsed position by dotted lines, the reversible positioning of the leaf relative to the top being illustrated by dotted lines.

FIG. 2 is an end elevational view looking from the left of FIG. 1 with the leaf in collapsed position, a portion of the leaf being broken away to illustrate structural details.

FIG. 3 is a view in horizontal section on a line corresponding to the broken line 3—3 of FIG. 2.

FIG. 4 is a fragmentary end elevational view viewed from the left corresponding to that of FIG. 2, with the caster wheel supports adjusted to operative position.

FIG. 5 is a fragmentary view mainly in horizontal section on a line corresponding to line 5—5 of FIG. 4.

FIG. 6 is a fragmentary view mainly in section on line 6—6 of FIG. 4, illustrating the operative connection of the caster support members to each other.

FIG. 7 is a fragmentary view partially in section on a line corresponding to line 7—7 of FIG. 4.

FIG. 8 is an enlarged fragmentary view partially in section on a line corresponding to line 8—8 of FIG. 2 with a leaf in erected position.

FIG. 9 is a fragmentary view partially in section on a line corresponding to line 9—9 of FIG. 8.

The embodiment of my invention illustrated is particularly designed for office use as a stand for typewriters, accounting or adding machines and the like, although it should be understood that it is desirable for various other purposes, such as a table, and that the dimensions may be greatly varied. In the embodiment illustrated the parts are associated so that the stand may be shipped or stored in the knock-down and readily erected at the place of use, and does not require special skill or tools for erecting.

The embodiment illustrated comprises two leg units, each consisting of a front leg 1 and a rear leg 2 desirably of rectangular tubular stock. These legs are connected at their upper ends by top side bars 3 of angular section

disposed to face inwardly and downwardly. The ends of these top bars are disposed in abutting relation with the opposed sides of the front and rear legs 1 and 2 and fixedly secured thereto as by welds indicated at 4, FIG. 8. The tops of these side pieces 3 are flush with the upper ends of the legs. The bottom bars or cross pieces 5 are disposed adjacent, but spaced upwardly from the lower ends of the legs and are fixedly secured to the opposed sides of the legs as by welds indicated at 6 of FIG. 5, holes 7 being provided in the under sides of the bottom bars at their ends to facilitate the welding to the inner sides of the legs as is indicated. The bottom side bars 5 are desirably of the same horizontal width as the legs. The legs are provided with foot pieces 8 desirably of some material having friction qualities.

These leg units are connected by the vertically spaced rear transverse bars or cross pieces 9 and 10 which are disposed with their ends in abutting relation to the opposed sides of the rear legs. These cross bars are detachably secured to the rear legs by screws 11 arranged through the legs and having threaded engagement with the nuts 12 fixedly secured within the ends of the cross bars. A corresponding transverse cross bar or cross piece 13, which may be used as a foot rest if desired, is disposed between the lower side bars 5 approximately centrally thereof, but desirably somewhat nearer the rear legs than the front legs and this cross bar 13 is secured in the same manner as the rear cross bars 9 and 10.

The top 14 is preferably a panel formed of wood and of dimensions to correspond to the spacing of the legs and is superimposed upon the top side bars 3 in overlapping relation to the upper ends of the legs, and is detachably secured to the side bars 3 by means of screws 15 arranged through the inwardly projecting arms of the top side bars, as is clearly shown in FIG. 9. The top thus secured provides an effective bracing element and supplements the bracing of the rear and bottom cross bars 9, 10 and 13.

One or more leaves 16 are provided. The leaf is mounted for adjustment to erected position as shown in FIG. 1 by full lines or to collapsed position shown at the left of FIG. 1 by dotted lines. The dotted lines at the right of FIG. 1 illustrate that the leaf may be positioned either at the left end or at the right end side of the stand, however, it should be borne in mind that two leaves may be provided if desired, the leaves being duplicates. The leaf is provided with supporting brackets 17 which have inwardly and downwardly projecting tongues 18 releasably engageable with loops 19 struck outwardly from the vertical arms of the top side bars. The brackets have downwardly and inwardly projecting arms 20 provided with studs 21 engaging and vertically adjustable in slots 22 in the inner sides of the rear legs. Desirably these studs are headed and are disposed through the arms and have threaded portions 23 to receive the nuts 24 on the inner sides of the arms 20, as is illustrated in FIG. 9, which permits ready engagement and disengagement of the studs with the slots. This arrangement permits vertical movement of the leaf to engage and disengage the tongues from the supporting loops and the studs serve as thrust members when the leaf is in erected position and is collapsed to the position shown by dotted lines in FIG. 8, in which position the stops 25 on the brackets engage the legs to limit the inward swinging of the leaf and minimize the swaying thereof.

The leg units are provided with casters 26 which are mounted on the coacting pairs of caster supports 27, the outer ends of which are mounted on the pivots 28 for vertical swinging movement of the supports. The legs are slotted at 29 to receive the outer ends of the support members 27. The inner ends of the support mem-

bers 27 are disposed in overlapping relation and slotted at 30 to receive the connecting pin 31, see FIG. 6. This arrangement permits the four caster supports being duplicates. These caster supports are provided with laterally projecting brackets 32 with which the caster mounts 33 are supportedly engaged. The details of the casters which are desirably of the ball bearing type are not illustrated as they form no part of this invention.

The caster supports are actuated to and from operative position by means of the lever 34 which in the embodiment illustrated is an extension of one of the arms 35 secured to the pivot rod 36 which is rotatably or pivotally supported in the bottom side members 5.

The arms 35 are provided with laterally projecting cam engaging portions 37 which coact with the cams 38 on the caster support members 27. When the lever is actuated to the position shown in FIG. 4, both pairs of caster supports are forced downwardly so that the stand is supported by the caster wheels and may be translated thereon. When the lever is adjusted to caster wheel retracting position, as best shown in FIG. 2, the pivotal connection for the caster support members swings above the plane of the pivotal connections for the support members to the legs and the caster support members are retained in retracted position. The caster support members are subjected to some longitudinal stress owing to the spacing of the inner ends of the slots to the pivots of the caster members. This effectively retains the casters in retracted position. However, little effort is required to adjust the casters. The shelf can be quickly erected or collapsed as may be desired.

I have illustrated and described my invention in a highly practical embodiment thereof. I have not attempted to illustrate various adaptations which may be made without departing from the scope of my invention, as it is believed that such variations or modifications will be readily understood by those skilled in the art to which my invention relates.

Having thus described the invention, what is claimed as new and desired to secure by Letters Patent is:

1. A stand of the class described comprising spaced pairs of front and rear legs of rectangular section, top side bars of angled section disposed in inwardly and downwardly facing relation between and with their ends in abutting relation to the inner sides of the pairs of legs and fixedly secured thereto and with their upper surfaces flush with the upper ends of the legs and their outer surfaces flush with the outer sides of the legs, a top disposed upon and secured to said side bars in overlapping relation thereto and to the upper ends of the legs, a leaf, laterally spaced supporting brackets fixedly secured to the under side of the leaf and having downwardly and inwardly projecting arms disposed on the inner sides of the legs in lateral thrust supported relation thereto and provided with laterally projecting studs, the legs having vertical slots therein with which said studs are in slidable, laterally thrust engagement, one of said top side bars having longitudinally spaced loops struck outwardly from the vertical arm thereof, said brackets having downwardly projecting tongues on their inner edges releasably engageable with said loops on said top side bar, the slots in said legs being of such length as to permit vertical adjustment of the leaf for engagement and disengagement of said tongues with said loops of said side bars and the suspended collapsing of the leaf at the outer side of the legs with said studs in supported engagement with the bottom ends of said slots of the legs, said brackets having stops thereon positioned to engage the legs when the leaf is in substantially collapsed vertical position.

2. A stand of the class described comprising spaced pairs of front and rear legs of rectangular section, top side bars of angled section disposed in inwardly and downwardly facing relation between and with their ends in abutting relation to the inner sides of the pairs of legs and fixedly secured thereto and with their upper surfaces flush with the upper ends of the legs and their outer surfaces flush with the outer sides of the legs, a top disposed upon and secured to said side bars in overlapping relation thereto and to the upper ends of the legs, a leaf, laterally spaced supporting brackets fixedly secured to the under side of the leaf and having downwardly and inwardly projecting arms disposed on the inner sides of the legs in lateral thrust supported relation thereto and provided with laterally projecting studs, the legs having vertical slots therein with which said studs are in slidable, laterally thrust engagement, one of said top side bars having longitudinally spaced loops struck outwardly from the vertical arm thereof, said brackets having downwardly projecting tongues on their inner edges releasably engageable with said loops on said top side bar, the slots in said legs being of such length as to permit vertical adjustment of the leaf for engagement and disengagement of said tongues with said loops of said side bars and the collapsing of the leaf at the outer side of the legs.

3. A stand of the class described comprising spaced pairs of front and rear legs, top side bars extending between and fixedly secured to said legs, a top, a leaf, laterally spaced supporting brackets fixedly secured to the underside of the leaf and having downwardly and inwardly projecting arms disposed in lateral thrust supported relation to said legs and provided with laterally projecting studs, the legs having vertical slots therein with which said studs are in slidable lateral thrust engagement, one of said top side bars having an outwardly projecting loop, a downwardly projecting tongue on said leaf releasably engageable with said loop on said top side bar, the slots in said legs being of such length as to permit vertical adjustment of the leaf for engagement and disengagment of said tongue with said loop of said side bar and the suspended collapsing of the leaf at the outer side of the legs with said stud in supported engagement with the bottom ends of said slots of the legs, said brackets having stops thereon positioned to engage the legs when the leaf is in substantially collapsed vertical position.

4. A stand of the class described comprising spaced pairs of front and rear legs, top side bars extending between and fixedly secured to said legs, a top, a leaf, laterally spaced supporting brackets fixedly secured to the underside of the leaf and having downwardly and inwardly projecting arms disposed in lateral thrust supported relation to said legs and provided with laterally projecting studs, the legs having vertical slots therein with which said studs are in slidable lateral thrust engagement, one of said top side bars having an outwardly projecting loop, a downwardly projecting tongue on said leaf releasably engageable with said loop on said top side bar, the slots in said legs being of such length as to permit vertical adjustment of the leaf for engagement and disengagement of said tongue with said loop of said side bar and the collapsing of the leaf at the outer side of the legs.

5. A stand of the class described comprising spaced pairs of front and rear legs of rectangular section, top side bars of angled section disposed between and in inwardly and downwardly facing relation and with their upper surfaces flush with the upper ends of the legs and with their ends in abutting relation to the inner sides of the pairs of legs and fixedly secured thereto, a top disposed upon said top side bars and in overlapping relation to the upper ends of the legs and secured to said top side bars, a leaf provided with laterally spaced supporting brackets secured to the underside of said leaf and having downwardly directed tongues projecting from its inner edge, at least one of said top cross bars having loops struck outwardly from the vertical arm thereof and spaced to receive said tongues, said brackets being provided with downwardly and inwardly projecting arms disposed on the inner sides of the front and rear legs and provided with laterally projecting studs, the legs being provided with vertical slots with which said studs are slidably engaged whereby the leaf may be adjusted to erected position with the said tongues

engaged in said loops or collapsed at the outer side of the legs, said brackets being provided with stops engaging the legs when the leaf is in collapsed position.

6. A stand of the class described comprising spaced pairs of front and rear legs of rectangular section, top side bars of angled section disposed between and in inwardly and downwardly facing relation and with their upper surfaces flush with the upper ends of the legs and with their ends in abutting relation to the inner sides of the pairs of legs and fixedly secured thereto, a top disposed upon said top side bars and in overlapping relation to the upper ends of the legs and secured to said top side bars and at least one leaf having laterally spaced supporting brackets fixedly secured to the underside thereof and having downwardly directed tongues projecting from its inner edge, at least one of said top cross bars having loops struck outwardly from the vertical arm thereof and spaced to receive said tongues, said brackets having downwardly and inwardly projecting arms disposed on the inner sides of the front and rear legs and provided with laterally projecting studs, the legs having vertical slots therein with which said studs are slidably engaged whereby the leaf may be adjusted to erected position with the said tongues engaged in said loops or collapsed at the outer side of the legs.

7. A stand of the class described comprising spaced pairs of front and rear legs, top side bars disposed at the upper ends of the legs and fixedly secured thereto, bottom side bars disposed between and spaced upwardly from the lower ends of the legs and fixedly secured thereto, a rear cross bar extending between and detachably secured to the rear legs, a cross bar disposed between said bottom side bars intermediate the ends thereof and detachably secured thereto, a top disposed upon said top side bars and in overlapping relation to the upper ends of the legs and detachably secured to said top side bars, and at least one leaf provided with supporting brackets secured to the underside thereof and having downwardly directed tongues projecting from their inner edges, at least one of said top cross bars having loops struck outwardly therefrom and spaced to receive said tongues, said brackets being provided with downwardly and inwardly projecting arms disposed on the inner sides of the front and rear legs and provided with laterally projecting studs, the legs being provided with vertical slots with which said studs are slidably engaged

whereby the leaf may be adjusted to erected position with the said tongues engaged in said loops or collapsed at the outer side of the legs, said brackets being provided with stops engaging the legs when the leaf is in collapsed position.

8. A stand of the class described comprising spaced pairs of front and rear legs, top side bars disposed at the upper ends of the legs and fixedly secured thereto, bottom side bars disposed between and spaced upwardly from the lower ends of the legs and fixedly secured thereto, a rear cross bar extending between and detachably secured to the rear legs, a cross bar disposed between said bottom side bars intermediate the ends thereof and detachbly secured thereto, a top disposed upon said top side bars and in overlapping relation to the upper ends of the legs and detachably secured to said top side bars, and at least one leaf provided with supporting brackets secured to the underside thereof and having downwardly directed tongues projecting from their inner edges, at least one of said top cross bars having loops struck outwardly therefrom and spaced to receive said tongues, said brackets being provided with downwardly and inwardly projecting arms provided with laterally projecting studs, the legs being provided with vertical slots with which said studs are slidably engaged whereby the leaf may be adjusted to erected position with the said tongues engaged in said loops or collapsed to a pendant position.

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