This invention relates to apparatus whereby a tailor may take the inseam measurement of a customer in fitting the latter with a pair of trousers. The improved apparatus has been devised with the following objects in view: To provide an apparatus by which the measurement may be taken quickly and accurately. To construct the apparatus mainly of wood so as at once to be inexpensive as to materials and labor and readily portable and adapted to be finished to suit other furniture in the tailoring apartment. To insure the free movement at all times of its movable parts notwithstanding possible swelling or warping of the parts incident to atmospheric conditions. To construct the apparatus so that it will be readily adapted for boxing and shipping in compact state and at least expense. To provide for “placing” the customer with his feet definitely located while the measurement is being taken.

In the drawings,
Fig. 1 is a side elevation of the apparatus;
Fig. 2 is a similar view, but with the near side plate removed;
Fig. 3 is a horizontal section on line 3—3, Fig. 2;
Fig. 4 is a perspective view of one end of the indicator bar;
Fig. 5 is a plan with the gage-plunger and scale-plunger removed and showing the stand for “placing” the customer with his feet definitely located,
Fig. 6 is a side elevation of the apparatus with certain parts removed and the stand in folded state; and
Fig. 7 is a view illustrating the spring plunger 21.

A fixed structure providing guideways is formed as follows: There is an elongated base plate or base 1 of wood having sockets 2 spaced from each other lengthwise of the base and formed in its flat top surface, being preferably midway between its long margins and equidistant from its ends. Into these are to be fitted the terminals of wood strips forming uprights 3. Between the uprights and preferably resting on the base is an upstanding wood plate 4 which lies in a plane common to the uprights. The plate 4 and uprights are, as it were, sandwiched between two panels 5 and 6 each of which has an area substantially equal to the combined area of plate 4 and the uprights in their indicated spaced relation to each other and the plate, uprights and panels combine to provide a lower surface which abuts squarely against the base. Thus, if the parts formed at least by the uprights and panels are in some way rigidly secured together they will together form a unitary upright generally flat structure of less area than the base and having a broad base surface to rest on the base (such surface being formed by the lower end surfaces of the panels and plate), and this structure will be rigidly secured to the base by merely such an expedient as the dowelling of the uprights into the base.

The rigid securing together of the parts 3, 5 and 6 may be by glueing, preferably with the aid of dowels 7 which penetrate the uprights and have their ends fitted into sockets in both of the panels 3 and 6; I prefer glueing so as to prevent the apparatus being dis-assembled except by the producer.

The plate 4 is secured preferably to only one of the panels 5 and 6, as to the panel 6 and by screws 19a so as to facilitate assembly of the fixed structure (comprising the base, uprights, plate and panels) with the movable parts, to be described.

The plate 4 forms with the uprights vertical guideways 8 and 9.

In the guideway 8 is movable vertically a rod forming the stem or shank of a gage plunger constructed as follows:

1. It is such stem and 11 a horizontal indicator bar affixed thereto at its upper end and forming therewith a T, both being of wood. At the outer end of this bar is an extension bar 12 which is pivoted on a bolt 13 in bar 11 to be movable in a vertical plane. The bolt, which has a thumb nut 14, penetrates a slot 15 in the bar 12 permitting the bar when raised to the horizontal position to be moved lengthwise to permit the notch shown in its end to receive a pin 16 on bar 11, thus to hold bar 12 in such position.

In the guideway 9 is movable vertically a rod forming a scale-plunger 17 also of wood. This has a series of numerals, reading say from “38” down, being an inch apart and designating inches; these numerals may be on one or more faces of the plunger.

Each strip which forms the scale-plunger and the stem of the gage-plunger has less thickness from one panel 5 to the other 6 and from plate 4 to the corresponding upright so as to be quite loose in the guideway formed by these parts, thus to prevent warping or swelling interfering with its free movement. But it is nevertheless confined as much as possible against all but rectilinear movement by providing pins 19, three of which may be in the upright and one in a panel, to engage in vertical slots 18 which are formed in said stem, panel 5, plate 4 and the uprights.

The gage-plunger is made to coat with the scale on the scale-plunger by providing it with a sheet metal attachment 20 having a pointer 20a. 
to lap the scale-plunger. And to prevent dislocation of the pointer from the scale-plunger (as by the customer when he straddles the bar 12) the bar 11 may have a stud 21 engaged in a vertical slot 22 in the scale-plunger.

The gage-plunger, with bar 12 horizontal, is to be straddled by the customer and then raised the required distance, the measurement taken being indicated on the scale by the pointer. In its raised position the gage-plunger is to be releasably held at one of equidistant points, as half-inch apart, and for this purpose the stem of the gage-plunger has a spring-pressed plug 23 which engages a corrugated surface 24 suitably provided on the adjoining upright. There may be a spring-pressed plug 26 set in the upper end of the upright to bear against the adjoining face of said stem, thus to insure guidance of the stem in a truly rectilinear path.

The scale-plunger occupying the position shown when the apparatus is not in use, is to be elevated so as fully to expose its scale when a measurement is taken, and at that time it is held in its elevated position by a spring-plunger 27 mounted in the adjoining upright and adapted to enter a hole 28 in the scale-plunger when the same has been fully elevated. When the plug is retracted and permits the plunger to fall a rubber cushion 29 receives the impact of the plunger.

I might omit the plunger 17 and provide a suitable scale on the gage-plunger to be read in reference, say, to the top of the fixed structure as a pointer.

It is desired that the customer's feet shall be so placed as to be well apart when the measurement is taken. Hence I provide the stand shown in Figs. 5 and 6. 30 designates two elongated foot plates, as of wood, spaced apart the required distance and on which the customer places his feet.

These are positioned offset from that end of the base which projects in the same direction as the extension bar 12 when elevated and each has suitably secured to its ends a metal strip 31, such strips projecting toward the other plate. The two inner strips are respectively pivoted at 32 to angle-strips 33 which are pivoted at 34 to the sides of the base 1, whereas the two outer strips are pivotally connected by a strip 35. The pivoting points 32 are at least as far apart as the width of the part of the fixed structure formed by the uprights, panels and plate 4. The footplates are in planes radial with respect to the pivoting axes 32, so that they may rest flat on the floor. When the apparatus is to be shipped or is not in use the stand may be swung up on its pivot 34 and the units formed by the plates and strips 31 folded against said part of the fixed structure. 36 designates removable pins entered in the angle-strips and base 1 and serving to support the port when the apparatus is lifted and moved about.

Having thus fully described my invention what I claim is:

1. A tailor's measuring apparatus including a pair of panels occupying substantially parallel planes, three spaced members between the panels forming therewith a pair of parallel guideways and means securing the panels and members together, in combination with a gage-plunger and a scale-plunger movable lengthwise of and in the respective guideways and having terminals protruding therefrom in the same direction, the scale-plunger having a scale extending lengthwise of the guideways and the gage-plunger a pointer cooperative with the scale.

2. A tailor's measuring apparatus including fixed structure providing a gage-plunger and a gage-plunger occupying movable lengthwise of and in the gage-plunger having one terminal protruding therefrom, said plunger having one cross-sectional dimension thereof less than the corresponding dimension of the gage-plunger, and said structure and plunger having cooperating means to oppose displacement of the plunger in the gage-plunger lengthwise of such dimension.

3. In combination, with a measuring apparatus of the class described including an upstanding fixed structure, members pivoted to the lower portion of said structure on a horizontal axis, and members including foot-plates pivoted to the respective first-named members on axes perpendicular to the first axis, the foot-plates lying in planes substantially radial to their pivoting axes.

4. A tailor's measuring apparatus including a fixed structure providing vertical guideways and a scale-plunger and a gage-plunger vertically movable in the respective guideways and protruding upwardly therefrom, the scale-plunger having a vertical series of numerals and the gage-plunger a horizontal bar with its upper end terminating near and providing a pointer to connect with said numerals-series, and the scale-plunger having in its side adjoining the gage-plunger a vertical slot and the scale-plunger a stud engaged in the slot.

5. Means for guiding the up-and-down movable gage-plunger rod of a tailor's measuring apparatus including, with a base providing a flat top surface, an upright structure of less area than and arranged on the base and comprising spaced upright parallel panels having their lower ends conforming to a common plane and abutting the base, uprights between the panels forming therewith a gage-plunger for said rod and having the panels secured thereto and their lower ends dowelled into the base, and means securing the panels and uprights together.

6. Means for guiding the up-and-down movable gage-plunger rod and scale-plunger rod of a tailor's measuring apparatus including, with a base providing a flat top surface, an upright structure of less area than and arranged on the base and comprising spaced upright parallel panels having their lower ends conforming to a common plane and abutting the base, uprights between the panels forming therewith a pair of vertical guideways for the respective rods and having the panels secured thereto and their lower ends dowelled into the base, and means securing the panels and uprights together.

7. In a tailor's measuring apparatus, the combination, with a gage-plunger rod and a scale-plunger rod both upright and vertically movable and the latter having a vertical scale and the former a bar projecting laterally toward the scale-plunger rod and terminating at the scale, of means for guiding each rod including a base providing a flat top surface and an upright structure of less area than the base and itself including broad upright panels arranged in parallel planes and secured to, and having their lower ends conforming to a common plane and abutting the base, said structure receiving the rods between the panels and confining each rod against angular displacement in every direction.  

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