

Sept. 29, 1953

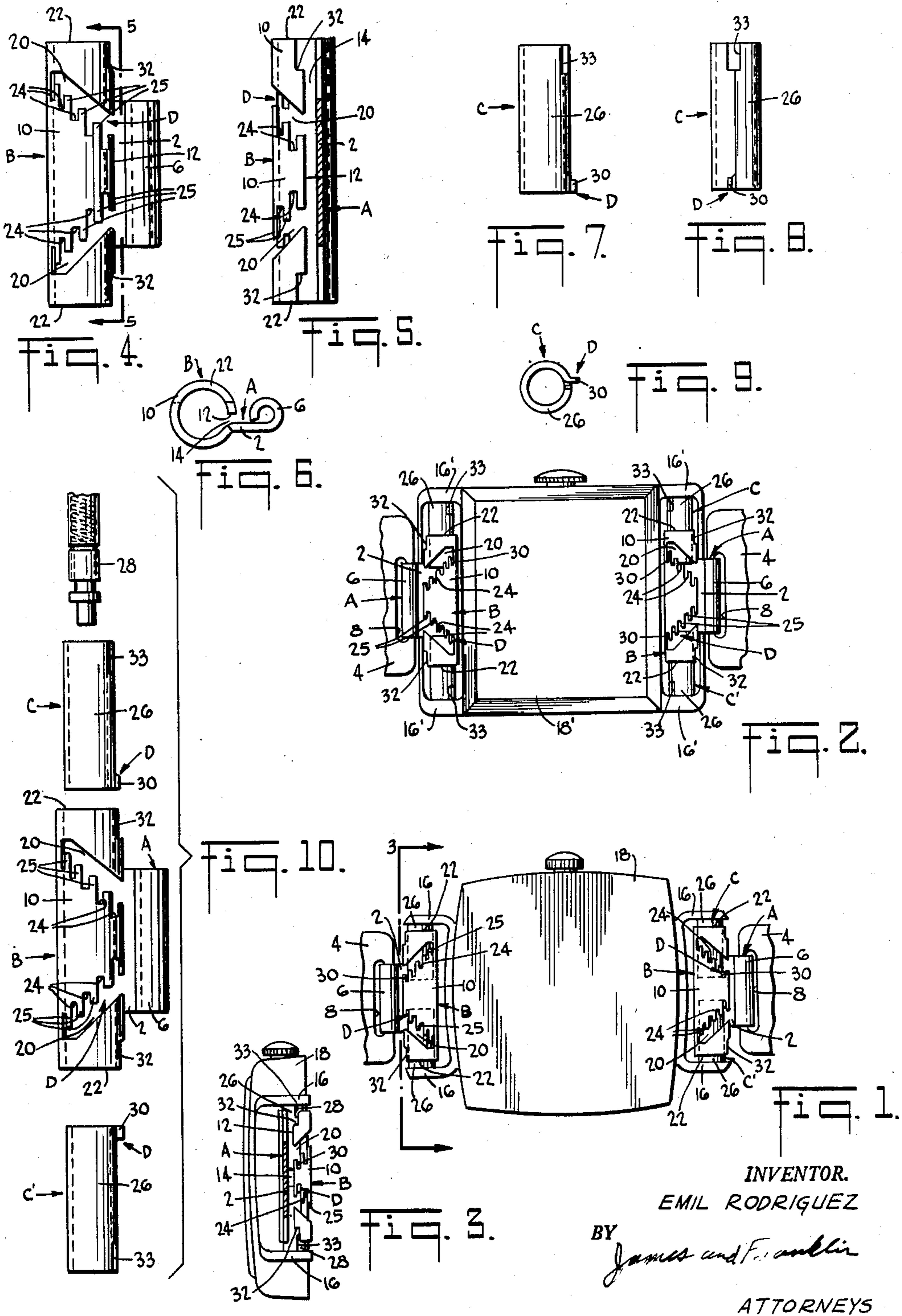
E. RODRIGUEZ

2,653,369

ADJUSTABLE WIDTH STRAP END

Filed May 4, 1950

2 Sheets-Sheet 1



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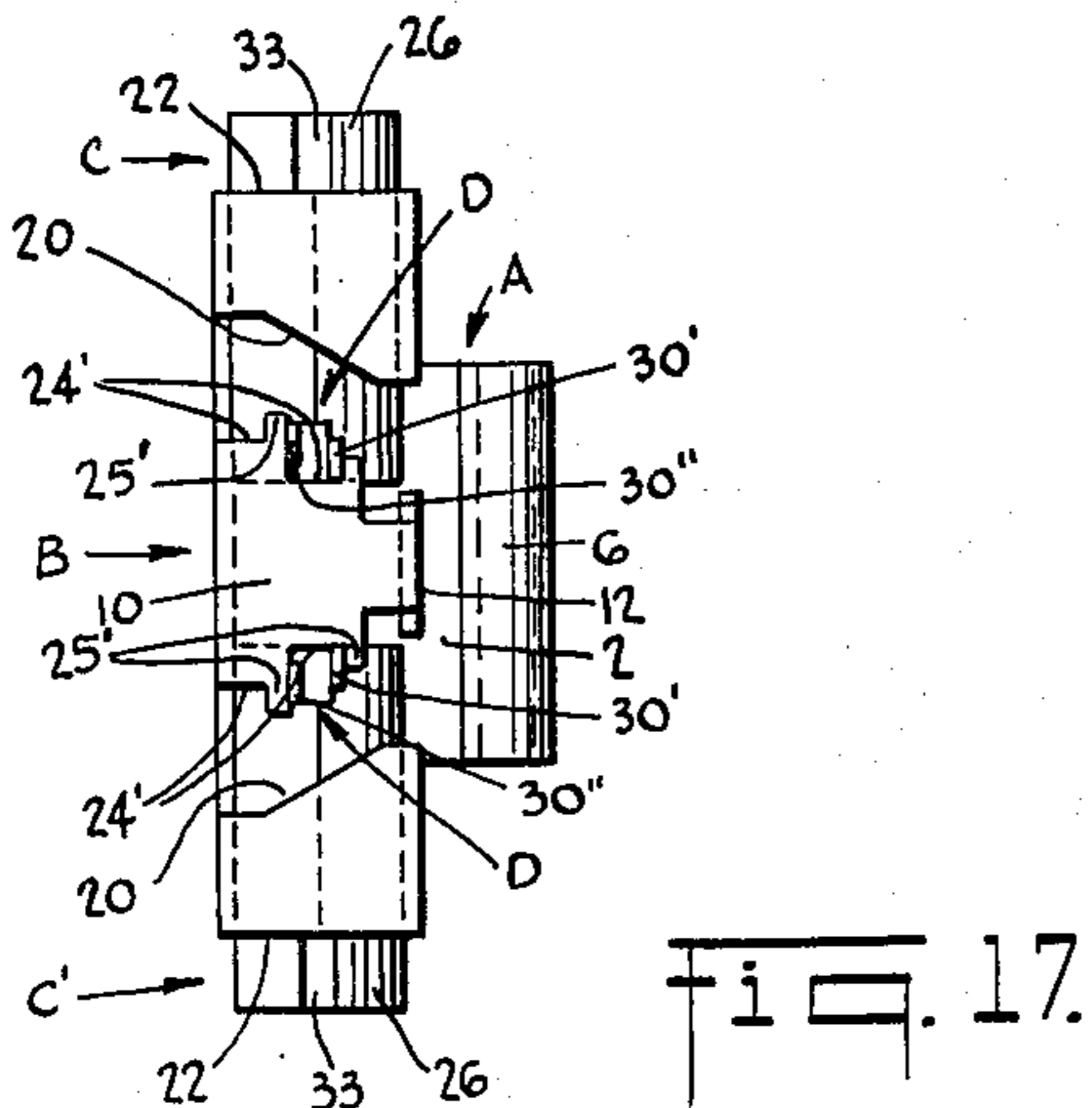
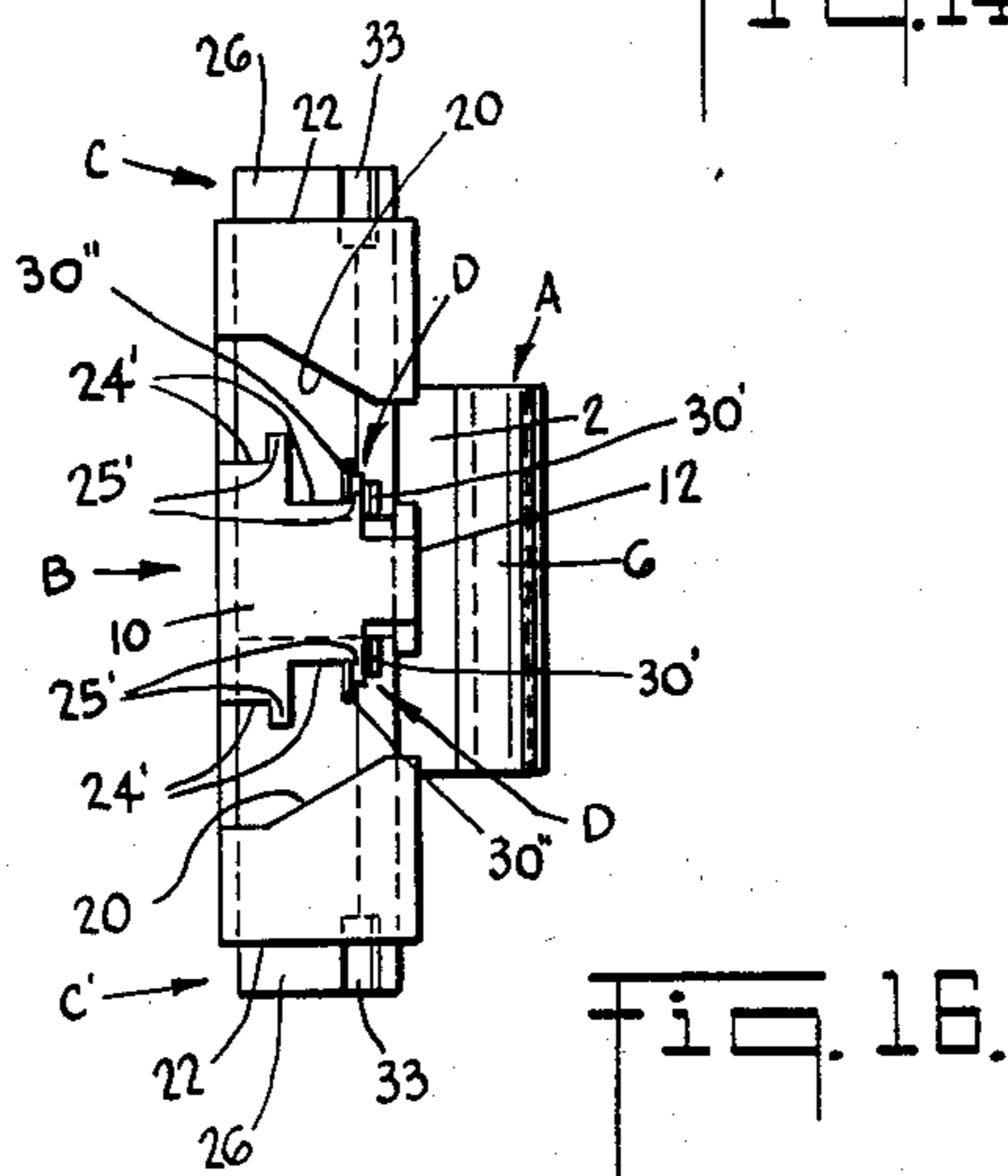
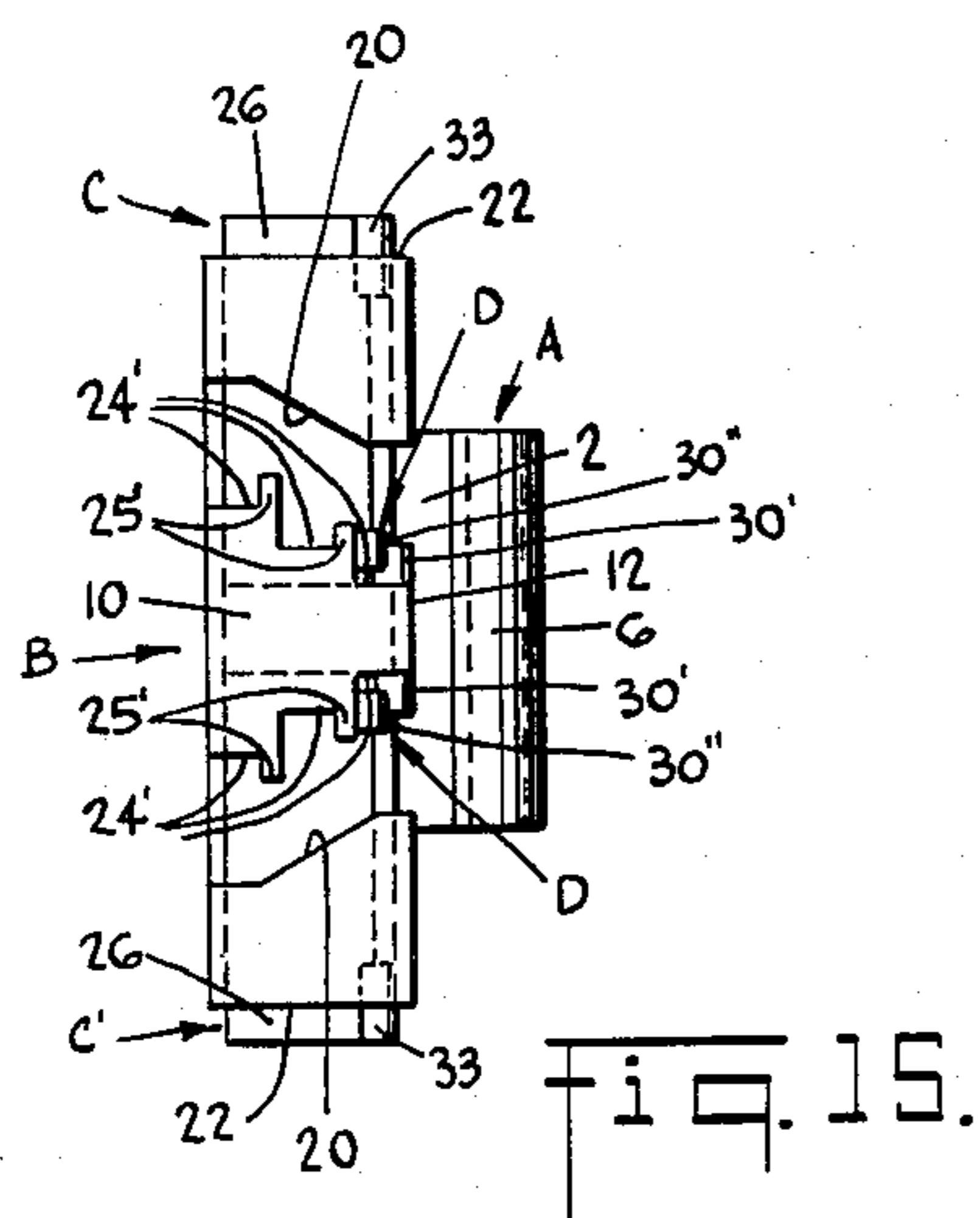
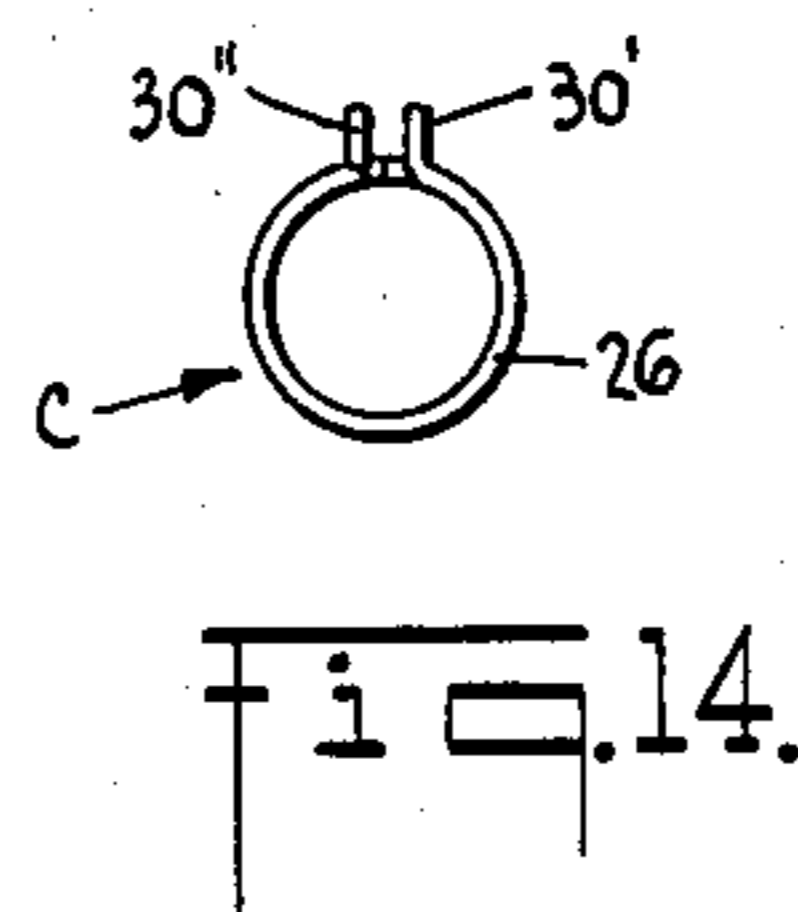
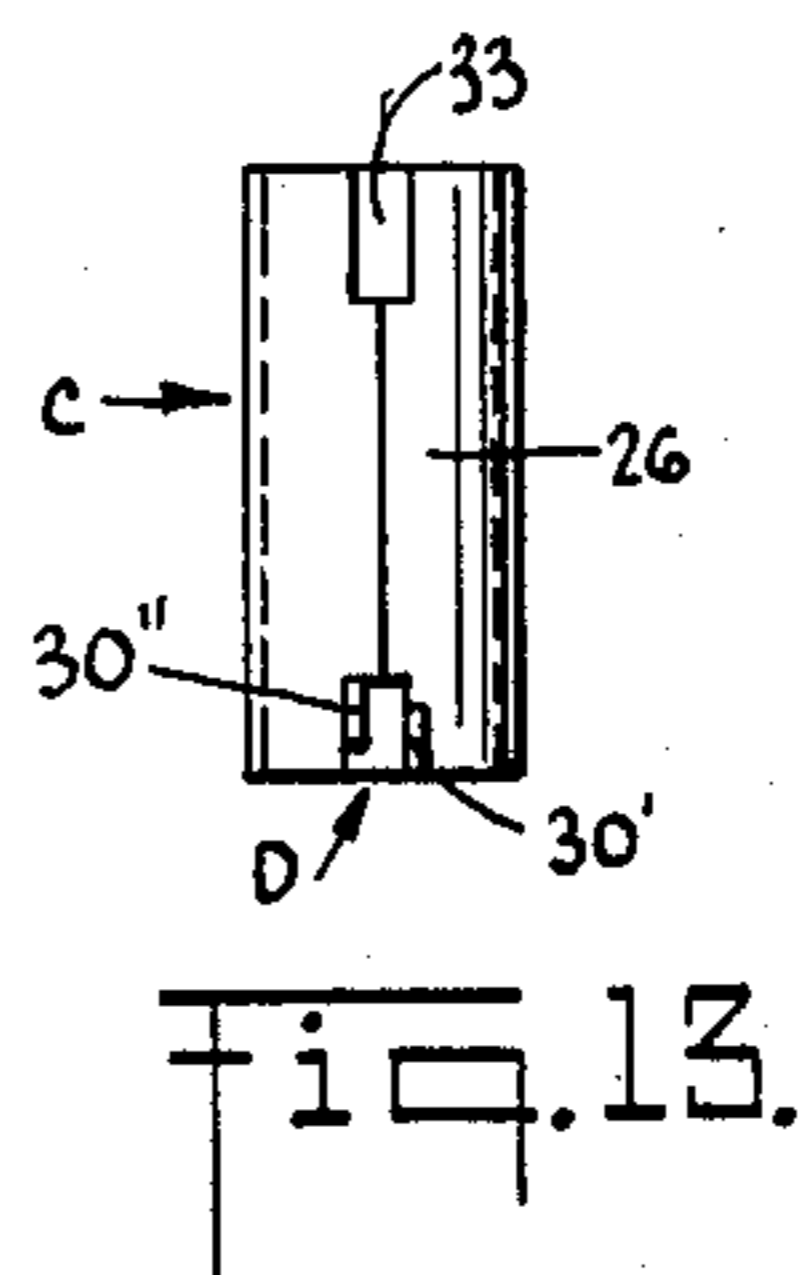
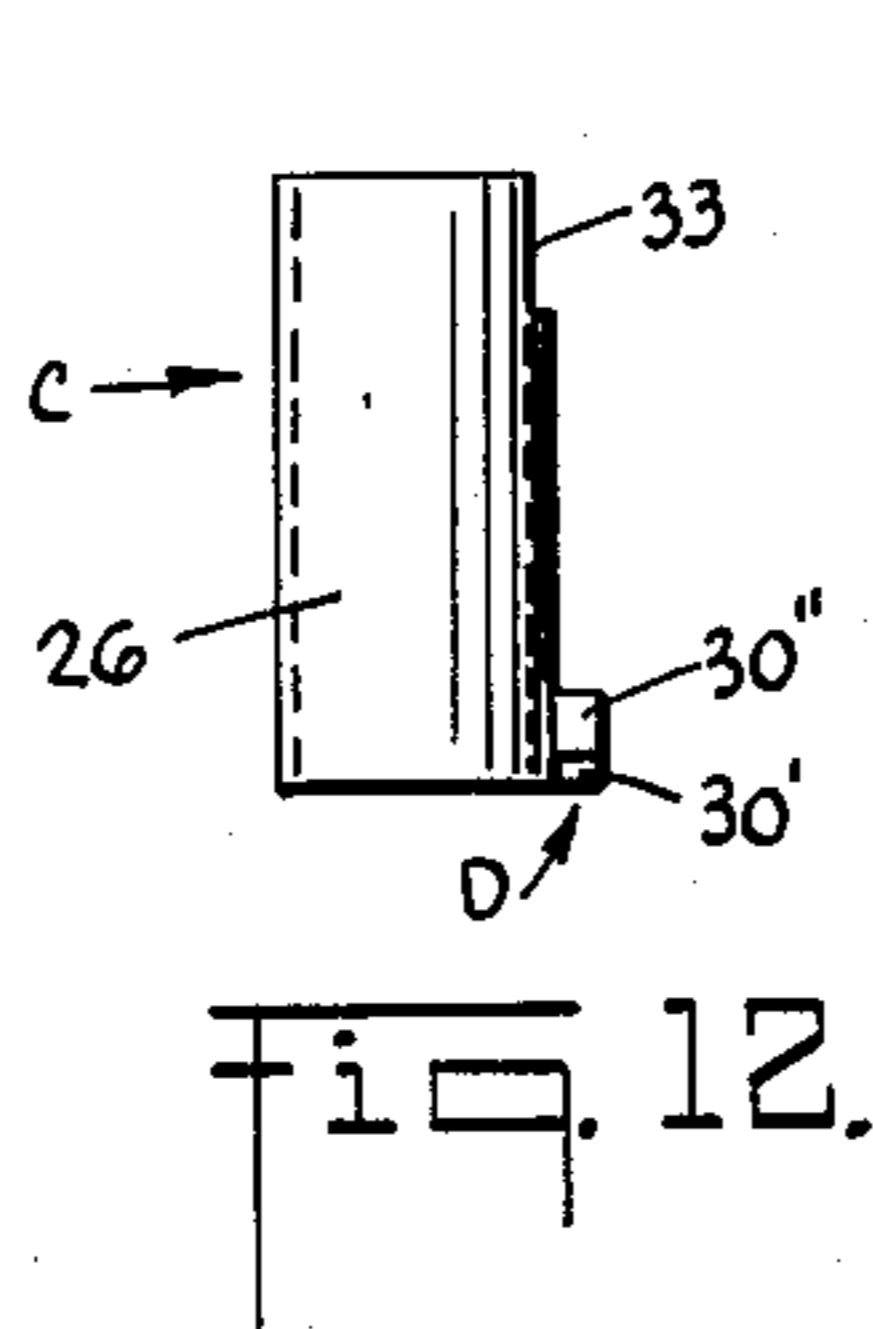
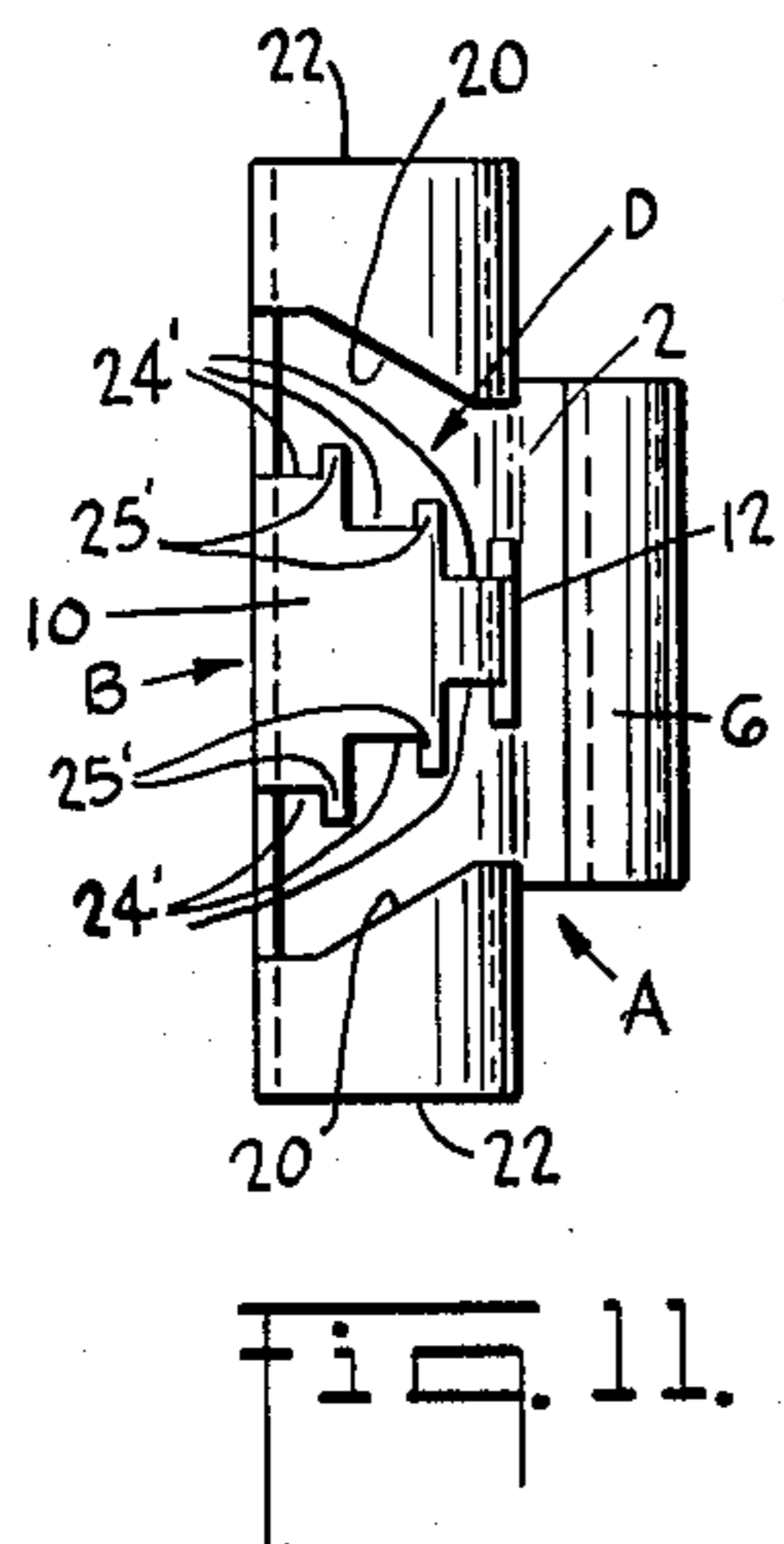
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ADJUSTABLE WIDTH STRAP END

Filed May 4, 1950

2 Sheets-Sheet 2



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## UNITED STATES PATENT OFFICE

2,653,369

## ADJUSTABLE WIDTH STRAP END

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Application May 4, 1950, Serial No. 159,893

24 Claims. (Cl. 24-265)

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The present invention relates to a strap end the width of which is adjustable at will so that the strap end can be accurately fitted between supporting lugs spaced apart to varying degrees.

This application is a continuation-in-part of application Serial Number 141,687, of February 1, 1950, now abandoned, entitled "Adjustable Width Strap End."

The invention as here specifically disclosed is applied to a bracelet to be secured between the lugs on a watch case, but it can of course be adapted for use in other applications.

Wrist watch bracelets are often sold separately from the watch to which they are to be attached. One reason for this practice is that styles in watch bracelets change somewhat more rapidly than styles in watches and watch cases, and the wearers of wrist watches will therefore, during the life of the watch, have occasion to use several different watch bracelets. Another reason is that the preference of the user for watch bracelets of different types, such as leather, plastic, metal, snake chain, ratchet buckle secured, or resiliently expandable, may change from season to season or at the whim of the person concerned.

A significant problem is presented to the manufacturer of watch bracelets sold separately from watches by reason of the fact that the watch case lugs between which the bracelet ends are to be secured are not uniformly spaced in all watches. The bracelet manufacturer has therefore been forced to make his bracelets in a great variety of widths so as to fit all watch sizes or else the jeweler from whom the bracelet is bought must perform a delicate and time-consuming operation on the bracelet to make it fit a particular watch. It will be apparent that this latter procedure is applicable only when the bracelet is wider than the distance between the lugs on the watch case. If the bracelet is narrower than that distance, it can, of course, be fitted between the lugs, but it will necessarily be loosely retained therebetween so as to be slidable from one side to another. This is very undesirable, since it not only makes for an unsightly appearance, but also exposes the securing pin to damage, deterioration, and accidental dislocation and is uncomfortable and sloppy-feeling to the wearer. To the retailer too the excessive inventory which he must carry in stock is a source of considerable dissatisfaction.

The object of the present invention is to devise a strap end construction of adjustable width, the strap end having a minimal width such that it can be fitted between a pair of closely spaced lugs, its width being extendable so as to snugly fit between more widely spaced lugs. This is accom-

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plished by utilizing one or more members telescopic within the strap end proper, an operative connection being provided between the strap end and the telescoping member so that the position of that member with respect to the strap end can be fixed in accordance with the spacing of the lugs between which the strap is to be attached. This operative connection takes the form of a finger moving within a helical slot, the member being rotatable within the strap end so as to cause the member, via the finger-slot connection, to controllably telescope into and out of the strap end as desired.

Once the width of the strap end has been determined in accordance with the spacing of the lugs between which the strap is to be secured, it is desirable that the width thereafter be fixed, at least while the strap end is secured between the lugs. Therefore the inner edge of the slot is provided with a plurality of stepped recesses into which the finger is receivable, thus fixing the relative position of the member within the strap end, and consequently the degree to which it extends out from the side of the strap end, at least until the finger is disengaged from the recess. Since when the strap end is snugly fitted between the lugs the member cannot then move outwardly with respect to the strap end proper, its position is fixed until the strap end is removed from between the lugs, at which time its width may again be effectively adjusted.

It is, of course, desired that the strap end be adjustable in small increments so that it can be accommodated to various watches in a snug and neat manner. Formation in the strap of a sufficient number of stepped recesses to provide for the desired degree of precision sometimes presents manufacturing problems, particularly where relatively fragile or easily bendable material is employed. One embodiment of the invention as here illustrated provides for the use of fewer stepped recesses than steps of adjustment, the additional steps of adjustment being provided by forming the telescopic members with a plurality of fingers variably spaced longitudinally thereof, any selected one of said fingers being engageable inside a given recess so as to fix the degree to which said member telescopes within said strap end.

More generally stated with reference to the aforementioned embodiment, it is another object of the present invention to provide for a maximum number of steps of adjustability by means of the simplest and sturdiest structure possible.

Another object of the present invention is to

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provide, in such a construction, for ready access to the securing means, usually in the form of a spring pin, which detachably fastens the strap end to the lugs. This is accomplished by providing cut-away portions on the outer end of the telescoping member through which access may be had to the securing pin, that pin being rendered accessible only in a limited way for protection and to prevent damage or accidental dislodgment.

To the accomplishment of the foregoing objects and such other objects as may hereinafter appear the present invention relates to a strap end construction as defined in the appended claims and as described in this specification taken together with the accompanying drawings in which:

Fig. 1 is a bottom plan view of a watch with closely spaced lugs to which the strap end of the present invention is secured;

Fig. 2 is a bottom plan view of a watch with widely spaced lugs to which the strap end of the present invention is secured;

Fig. 3 is a side cross-sectional view of the construction of Fig. 1, taken along the line 3—3 of Fig. 1;

Fig. 4 is a bottom plan view on an enlarged scale of the strap end proper;

Fig. 5 is a side cross-sectional view taken along the line 5—5 of Fig. 4;

Fig. 6 is an end view of the strap end proper of Fig. 4;

Fig. 7 is a top plan view on an enlarged scale of one of the telescoping members;

Fig. 8 is a view similar to Fig. 7 but with the member rotated 90° about its axis;

Fig. 9 is an end view of the telescoping member of Fig. 7;

Fig. 10 is an exploded view on an enlarged scale of the strap end proper, the telescoping members, and a portion of a conventional spring securing pin adapted to be used therewith;

Fig. 11 is a view similar to Fig. 4 but showing another embodiment of the strap end;

Fig. 12 is a top plan view on an enlarged scale of another embodiment of the telescoping member particularly adapted for use with the strap end of Fig. 11;

Fig. 13 is a view similar to Fig. 12 but with the member rotated 90° about its axis;

Fig. 14 is an end view of the telescoping member of Fig. 13; and

Figs. 15, 16 and 17 are bottom plan views of the assembled strap end of Fig. 11 and the telescoping member of Figs. 12-14, the member being shown in positions projecting outwardly from the strap end to progressively greater degrees.

Broadly considered, the strap end proper, generally designated A, includes a looped portion generally designated B, one or more members C, C' being receivable inside the looped portion B, being rotatable therein, and being movable axially into and out of an end thereof. An operative connection D of the finger and slot type is provided for converting rotative motion of the members C, C' with respect to the looped portion B into relative axial telescoping motion, so that the width of the strap end as defined by the looped portion B and the part of the members C which extend out from the ends of the portion B can be adjustably varied at will through rotation of the members C, C', within the looped portion B.

Described more specifically, the strap end proper A is here disclosed in the form of a metal

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sheet comprising a body 2 which forms a continuation of a strap 4 of any desired construction. As shown in the drawings the body 2 is separate from the strap 4 and is secured thereto by a curled-over portion 6 which passes through an aperture 8 in the strap 4, but the body 2 could just as well be an integral extension of the strap 4 or could be secured thereto in any other manner whatsoever.

The free end of the body 2, that is to say, the end directed away from the strap 4, is curled over at 10 to define the looped portion B, the end edge 12 of the looped portion B being spaced from the body 2 so as to define a passage 14 therebetween (see Figs. 5 and 6). The width of the looped portion B is such that it will fit between closely spaced lugs 16 on a watch case 18 (see Fig. 1) and its internal diameter is such that the telescoping members C, C' can rotate therewithin and can move axially with respect thereto.

A pair of slots 20 are provided in the looped portion B, these slots having open ends at the end edge 12 and being angularly disposed with respect to the ends 22 of the looped portion B, the slots 20 being relatively closely spaced at the end edge 12 of the looped portion A and diverging from one another, preferably in a uniform manner, along the looped portion B. The inner edges of the slots 20 are provided with recesses 24, stepped along the inclination of the slots 20, the innermost extent of each of the recesses 24 being spaced axially with respect to the looped portion B by a small amount such as, in Figs. 1-10,  $\frac{1}{64}$  of an inch. It will be noted that the recesses 24 are separated by projections 25, the depth of the recesses 24 thus exceeding the spacing of the innermost portions thereof along the axis of the looped portion 10.

The telescoping members C, C' are here disclosed in the form of metal tubes 26 which may conveniently be formed merely by rolling a metal sheet upon itself and cutting off the desired lengths. The members C, C' are in the form of tubes so that a conventional spring securing pin 28 can be passed therethrough, and the outer dimension of the tube 26 is such that it can be received inside the looped portion B, preferably in a relatively snug manner, so as to be rotatable and axially movable therewithin. In the embodiment illustrated in Figs. 1-10 a single finger 30 is provided on the tube 26, preferably by being struck up from one of the edges thereof, the finger 30 being of a size such that it can pass through the passage 14 between the end edge 12 of the looped portion B and the body 2 of the strap end proper A, can then be moved into a slot 20 via the open end thereof, and can be relatively snugly received within any one of the recesses 24 provided on the inner edge of the slot 20. In that embodiment the width of the recesses 24 is closely the same as the width of the fingers 30.

The manner of use of this construction is as follows: If the width of the looped portion B is such that it is snugly received between the watch case lugs 16 the members C, C' need not be used at all, the appropriate spring pin 28 being passed through the looped portion B to secure the strap end to the watch in a conventional fashion. It will be noted that, in order to permit access to the spring pin 28 in that situation and at the same time provide needed protection and hide the pin 28 from view when the strap is in place, the ends of the looped

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portion B are provided with cut-away portions 32 of limited area.

Normally, however, even the closely spaced watch lugs 16 will be somewhat wider than the looped portion B, as illustrated in Fig. 1, or even considerably more widely spaced than the width of the looped portion B, as illustrated by the watch lugs 16' on the watch case 18' of Fig. 2. In such a situation one or more of the telescoping members C, C' must be employed; it being preferred that both members C and C' be employed and in equivalent positions so that the strap end is secured centrally between the lugs 16 or 16'. The tubes 26 are slid into the looped portion A from opposite ends thereof, the ends of the tubes which carry the fingers 30 being inwardly disposed and the fingers 30 sliding through the passage 14 until they come to the open end of the appropriate slot 20. The tubes 26 are then rotated so that the fingers 30 move into the slots 20 and along those slots until they come opposite the recesses 24 corresponding to the degree to which it is desired that the tubes 26 project outwardly from the looped portion B. Thus, if the strap is to be fitted between closely spaced lugs 16 as in Fig. 2, the fingers 30 will be moved into the first notches 24, that is to say, the notches which are most inwardly disposed with respect to the ends 22 of the looped portion B, and which, as here illustrated, are nearest the end edge 12. If the strap end is to be fitted between the more widely spaced lugs 16' of Fig. 1 the tubes 26 are rotated until the fingers 30 come opposite the last recesses 24, that is to say, the ones most outwardly disposed with respect to the ends 22 of the looped portion B, or, as here specifically illustrated, the ones most remote from the end edge 12. When the tubes 26 are pushed inwardly so that their fingers 30 enter and fit snugly within the appropriate recesses 24, the tubes 26 cannot be further rotated and consequently their telescoping positions relative to the looped portion B are fixed in one direction. Where, as here specifically disclosed, the notches 24 are provided on the inner edges of the slots 20, the telescoping positions of the members C and C' are thus fixed inwardly, although the members C and C' can still be moved outwardly so as to disengage the fingers 30 from the recesses 24 and permit further adjustment.

The spring pin 28 is then passed through the looped portion A and the tubular members C and C' in the same manner as a spring pin is customarily employed to connect looped bracelet ends between watch lugs, that is to say, the spring pin 28 is received within the looped portion A and the tubular members C and C', its tips are contracted inwardly so as to pass between the watch lugs 16, and its tips are then permitted to spring outwardly into the apertures in the watch lugs 16. In order to provide access to the tips of the spring pin 28 the ends of the tubular members C and C' are provided with cut-away portions 33 of limited area.

When the adjusted strap end is secured snugly between the lugs 16 or 16' there is so little clearance between the outwardly projecting ends of the members C and C' and the inner surfaces of the lugs 16 or 16' that those members C and C' cannot be moved outwardly from the looped portion B a sufficient distance for the fingers 30 to move out of the recesses 24 in which they have been placed. This relationship is ensured by making the depth of the recesses 24 greater than the axial spacing from one recess to an-

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other. Consequently, the width of the strap end is positively fixed for so long as that strap end is secured snugly between a given set of lugs 16 or 16'. Once the spring pin 28 is disengaged and the strap end removed from between the lugs 16 or 16', members C and C' may then be readily pulled out so as to disengage the fingers 30 from the recesses 24, thus permitting ready readjustment of the width of the strap end without having to deform or bend any part of the structure. This last point is quite significant, since the structure involved is usually relatively thin and consequently bending or deformation will materially reduce its life.

It is preferred that the slots 20 extend only over the bottom of the looped portion B so that, when the strap end is secured to a watch, the slot and finger operative connection is obscured from view from above, thus retaining the decorative appearance of the strap end and masking all functional appearance.

The spacing of recesses 24 and the angularity and divergence of the slots 22 may, of course, be varied within wide limits. It is preferred that each recess 24 differ in axial spacing from those adjacent to it by  $\frac{1}{64}$  of an inch, thus providing for step-wise adjustment of the width of the strap end A in steps of  $\frac{1}{64}$  of an inch, and permitting centering of the strap end A between the lugs 16 in steps of  $\frac{1}{32}$  of an inch, but the choice of spacing depends largely upon the particular application to which the invention is to be put.

In the embodiment of Figs. 1-10, for each adjusted position of the telescoping member C or C' there must be a corresponding recess 24. The structure involved is usually relatively small, much smaller than here shown in the drawings, and the material of which it is made is comparatively fragile and subject to bending, particularly with respect to the flimsy projections 25. When a large number of recesses 24 and projections 25 must be produced a difficult manufacturing problem is often presented.

In order to avoid this difficulty the embodiment of Figs. 11-17 has been devised, in which embodiment there are twice as many steps of adjustment as there are recesses, and there are only half as many flimsy projections 25 as in the previously described embodiment. The strap end A of Figs. 11-17 is similar to that of Figs. 1-10 except for the fact that the recesses 24' on the inner edge of the slots 20 in the looped portion B are not as numerous as the recesses 24 in the embodiment of Figs. 1-10, and the axial spacing of each recess 24' differs from those adjacent to it by, for example,  $\frac{1}{32}$  of an inch rather than by  $\frac{1}{64}$  of an inch as in the previously described embodiment. It will also be noted that the recesses 24' are considerably wider than the recesses 24 in the previously described embodiment, and that there are fewer projections 25'. Hence the fabrication of the strap end A is materially facilitated.

In order not to lose any precision of adjustment, the telescoping members C and C' preferably used with the strap end A of Fig. 11 are, as best shown in Figs. 12-14, provided with a pair of fingers 30' and 30'', each of these fingers being conveniently struck up from an edge of the sheet material of which the members C and C' are made. As can best be seen from Figs. 13 and 14 the two fingers 30' and 30'' are separated from one another laterally with respect to the member C, and the fingers 30' and 30'' are also variably spaced longitudinally thereof, the finger 30' being closer to an end of the member C than the

finger 30''. The difference in longitudinal spacing between the fingers 30' and 30'' is, by way of example,  $\frac{1}{64}$  of an inch. The lateral separation of the fingers 30' and 30'' is preferably slightly greater than the thickness of one of the projections 25', so that said projection 25' can be snugly received between them. The distance between the outer surfaces of the fingers 30' and 30'' is preferably slightly less than the width of the recesses 24', so that both fingers can be snugly received within the same recess 24'.

The manner of use of the above described structure in order to obtain precise and fine degree of variation in adjustment may be seen from a comparison of Figs. 15, 16 and 17. In Fig. 15 the members C and C' are shown in fully telescoped position, both of the fingers 30' and 30'' being received within the first recess 24', the forward edge of the finger 30' abutting against the innermost portion of the first recess 24'. The next adjustment step is illustrated in Fig. 16, in which the members C and C' have been rotated until the projection 25' between the first and second recesses 24' passes between the fingers 30' and 30''. In this position the forward edge of the finger 30'' abuts against the innermost portion of the second recess 24', that edge being advanced  $\frac{1}{2}$  of an inch with respect to the comparable part of the first recess 24'. However, because the forward edge of the finger 30'' is  $\frac{1}{64}$  of an inch behind the forward edge of the finger 30', the members C and C' are only extended outwardly  $\frac{1}{64}$  of an inch with respect to their positions as shown in Fig. 15. By the same token, the forward edge of the finger 30' will be separated  $\frac{1}{64}$  of an inch from the innermost portion of the first recess 24'. If the members C and C' are then rotated to their position shown in Fig. 17, in which both fingers 30' and 30'' are received within the second recess 24', the forward edge of the finger 30' will now abut the innermost portion of the second recess 24', and consequently the members C and C' will extend outwardly  $\frac{1}{64}$  of an inch more than they do in Fig. 16 and  $\frac{1}{2}$  of an inch more than they do in Fig. 15.

It will thus be apparent that, although the strap end A provides only three stepped recesses 24', each spaced different from the next axially of the strap end by  $\frac{1}{2}$  of an inch, the overall adjustability of the unit permits six steps of adjustment, each differing from the other by  $\frac{1}{64}$  of an inch. The structure of Figs. 11-17 therefore permits the same flexibility of use as the structure of Figs. 1-10, but its structure is sturdier and easier to fabricate.

Although the telescoping members C and C' have been here disclosed in the form of tubes 26, it is not necessary that they be tubular if the means for securing the strap end to the lugs 16 or 16' be in some form which need not pass through the members C and C', as if, for example, the lugs 16 were resilient or if the members C and C' themselves contained a spring loaded device cooperable with the lugs 16 or 16'.

The structure of the present invention is simple and inexpensive and at the same time provides for ready adjustability in a convenient and simple manner which can be performed by any individual and not merely those with particular skills or equipment. Thus the fitting of a watch band to a watch is an operation which can be performed either by the jeweler from whom the bracelet is bought with no loss of time and at no expense to him, or by the individual purchaser in his own home. Moreover, if an individual purchaser

wishes to transfer his bracelet from one watch to another, the two watches having lugs spaced at different distances from one another, he can readily accomplish the transfer without expert assistance.

It will be apparent that many variations may be made in the specific structure here disclosed without departing from the spirit of the invention as defined in the following claims.

I claim:

1. A variable width strap end comprising a looped portion having a slot angularly disposed with respect to the ends of said looped portion, a tubular member rotatable within said looped portion and movable axially into and out of one end thereof, and a finger on said member receivable in said slot, rotation of said member within said looped portion causing said finger to move within said slot and the angularity of said slot causing said member to telescope into and out of said looped portion as the finger moves therewithin, thereby varying the width of said strap end, an edge of said slot being provided with a series of steps, said finger cooperating with said steps so as to provide for stepwise adjustment of the width of said strap end.

2. The variable width strap end of claim 1 in which the inner edge of said slot is stepped.

3. A variable width strap end comprising a looped portion having a slot angularly disposed with respect to the ends of said looped portion, a tubular member rotatable within said looped portion and movable axially into and out of one end thereof, and a finger on said member receivable in said slot, rotation of said member within said looped portion causing said finger to move within said slot and the angularity of said slot causing said member to telescope into and out of said looped portion as the finger moves therewithin, thereby varying the width of said strap end, an edge of said slot being provided with a series of stepped recesses separated by projections, said finger being receivable in said recesses so as to fix the position of said member relative to said looped portion both telescopically in one direction and rotatably, thereby providing for stepwise adjustment of the width of said strap end.

4. The variable width strap end of claim 3, in which the inner edge of said slot is provided with stepped recesses separated by projections.

5. The variable width strap end of claim 3, in which the width of said recesses is closely equal to the thickness of said finger.

6. A variable width strap end comprising a body forming a continuation of a strap, a looped portion on the free end of said body, the end edge of said looped portion being spaced from said body so as to define a passage therebetween, said looped portion having a pair of angularly disposed open-ended slots extending from the end edge of said looped portion, a pair of members rotatable within said looped portion and movable axially into and out of the ends thereof, and fingers on said members passable through said passage and receivable in said slots, rotation of said members within said looped portion causing said fingers to move within said slots and the angularity of said slots causing said members to telescope into and out of said looped portion, thereby varying the width of said strap end.

7. The variable width strap end of claim 6 in which said slots are relatively close together

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at the end edge of said looped portion, said slots diverging therefrom.

8. The variable width strap end of claim 6 in which an edge of each of said slots is provided with a series of steps, said fingers cooperating with said steps so as to provide for stepwise adjustment of the width of said strap end.

9. The variable width strap end of claim 8 in which the inner edges of said slots are stepped.

10. The variable width strap end of claim 6, in which an edge of each of said slots is provided with a series of stepped recesses separated by projections, said fingers being receivable in said recesses so as to fix the position of said members relative to said looped portion both rotatably and telescopically in one direction, thereby providing for stepwise adjustment of the width of said strap end.

11. The variable width strap end of claim 8, in which the inner edges of said slots are provided with stepped recesses.

12. The variable width strap end of claim 10 in which the width of said recesses is closely equal to the thickness of said finger.

13. A variable width strap end comprising a looped portion having a slot angularly disposed with respect to the ends of said looped portion, a member rotatable within said looped portion and movable axially into and out of one end thereof, an edge of said slot being provided with a series of stepped recesses separated by projections, and said member being provided with a pair of fingers variably spaced from an end of said member longitudinally thereof and spaced from one another laterally thereof, rotation of said member within said looped portion causing said fingers to move within said slot and the angularity of said slot causing said member to telescope into and out of said looped portion as said fingers move therewithin, thereby varying the width of said strap end, the width of said recesses and said projections being so related to the thickness of and lateral spacing between said fingers that said projections fit snugly between said fingers and said pair of fingers fit snugly within said recesses.

14. A variable width strap end comprising a looped portion having a slot angularly disposed with respect to the ends of said looped portion, a member rotatable within said looped portion and movable axially into and out of one end thereof, an edge of said slot being provided with a series of stepped recesses separated by projections, and said member being provided with a pair of fingers variably spaced from an end of said member longitudinally thereof and spaced from one another laterally thereof, rotation of said member within said looped portion causing said fingers to move within said slot and the angularity of said slot causing said member to telescope into and out of said looped portion as said fingers move therewithin, thereby varying the width of said strap end, the width of said recesses and said projections being so related to the thickness of and lateral spacing between said fingers that said projections fit snugly between said fingers and said pair of fingers fit snugly within said recesses, the space between the innermost portion of said recesses along the axis of said looped portion being greater than the longitudinal spacing of said fingers along said member.

15. A variable width strap end comprising a looped portion having a slot angularly disposed with respect to the ends of said looped portion,

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a member rotatable within said looped portion and movable axially into and out of one end thereof, an edge of said slot being provided with a series of stepped recesses separated by projections, and said member being provided with a pair of fingers variably spaced from an end of said member longitudinally thereof and spaced from one another laterally thereof, rotation of said member within said looped portion causing said fingers to move within said slot and the angularity of said slot causing said member to telescope into and out of said looped portion as said fingers move therewithin, thereby varying the width of said strap end, the width of said recesses and said projections being so related to the thickness of and lateral spacing between said fingers that said projections fit snugly between said fingers and said pair of fingers fit snugly within said recesses, the spacing between the innermost portion of said recesses along the axis of said looped portion being twice the longitudinal spacing of said fingers along said member.

16. A variable width strap end comprising a looped portion having a pair of divergent slots angularly disposed with respect to the ends of said looped portion, a pair of tubular members rotatable within said looped portion and movable axially into and out of opposite ends thereof, and a finger on each of said tubular members receivable within the corresponding slot, rotation of either of said members within said looped portion causing said finger to move within said slot and the angularity of said slot causing said member to telescope into and out of said looped portion as said finger moves therewithin, thereby varying the width of said strap end.

17. The variable width strap end of claim 16, in which each of said slots makes an equal angle with the side edges of said looped portion.

18. The variable width strap end of claim 16, in which the outwardly projecting ends of said tubular members are provided with a cut-away portion, said tubular members being adapted to receive a securing pin therethrough and the cut-away end portions thereof rendering said securing pin accessible and thereby facilitating removal of said strap end from between a pair of lugs.

19. A variable width strap end comprising a looped portion having a slot angularly disposed with respect to the ends of said looped portion, an edge of said slot being provided with a series of stepped recesses separated by projections, a tubular member rotatable within said looped portion and movable axially into and out of one end thereof, and a pair of fingers on said tubular member and receivable in said slot, said fingers being variably spaced from an end of said member longitudinally thereof and spaced from one another laterally thereof, the width of said recesses and projections being so related to the thickness of and lateral spacing between said fingers that said projections fit snugly between said fingers and said pair of fingers fit snugly within said recesses, rotation of said member within said looped portion causing said fingers to move within said slot and the angularity of said slot causing said member to telescope into and out of said looped portion as the fingers move therewithin, the cooperation of said fingers with said projections and recesses providing for stepwise adjustment of the width of said strap end.

20. The variable width strap end of claim 19, in which the spacing between the innermost portion of said recesses along the axis of said looped

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portion is greater than the longitudinal spacing of said fingers along said member.

21. The variable width strap end of claim 19, in which the spacing between the innermost portion of said recesses along the axis of said looped portion is twice the longitudinal spacing of said fingers along said member.

22. A variable width strap end comprising a body forming a continuation of a strap, a looped portion on the free end of said body, the end edge of said looped portion being spaced from said body so as to define a passage therebetween, said looped portion having a pair of angularly disposed open-ended slots extending from the end edge of said looped portion, an edge of each of said slots being provided with a series of stepped recesses separated by projections, a pair of members rotatable within said looped portion and movable axially into and out of the ends thereof, and a pair of fingers on each of said members passable through said passage and receivable in said slots, said fingers being variably spaced from an end of said member longitudinally thereof and spaced from one another laterally thereof, the width of said recesses and said projections being so related to the thickness of and lateral spacing between said fingers that said projections fit snugly between said fingers and said pair of fingers fit snugly between said recesses, rotation of said members within said looped portion causing said fingers to move within said slots and the angularity of said slots causing said members to telescope into

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and out of said looped portion, the cooperation between said fingers and said projections and recesses fixing the position of said members relative to said looped portion both rotatably and telescopically in one direction, thereby providing for stepwise adjustment of the width of said strap end.

23. The variable width strap end of claim 22, in which the spacing between the innermost portion of said recesses along the axis of said looped portion is greater than the longitudinal spacing of said fingers along said member.

24. The variable width strap end of claim 22, in which the spacing between the innermost portion of said recesses along the axis of said looped portion is twice the longitudinal spacing of said fingers along said member.

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