ADJUSTABLE CLIP FOR EARRINGS HAVING A SINGLE TOOTH THREAD MEANS

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This invention relates to ornamental jewelry manufac-
ture, and in particular to improvements in earring-type
clips for personal wear.

One of the objects of the improvement is to provide a
spring-type earring clip which, after it has been attached
to an ear-lobe, may have its gripping force capable of be-
ing adjusted progressively and independently of its nor-
mal spring-applied clamping pressure whereby the clip
will grip the ear with sufficient force to prevent it from
becoming dislodged, but without causing uncomfortable
pinching of the ear-lobe.

Another object of the improvement is to provide an
earring clip of the type specified which is of simple con-
struction, economical to manufacture, and durable in use
without requiring screw-threaded bearing apertures there-
in for an adjusting screw for regulating the force of the
gripping action to render it comfortable for the wearer.

Further objects of the improvement are set forth in
the following specification wherein is described a pre-
ferred embodiment of the invention illustrated in the ac-
companying drawings, in which:

FIG. 1 is a view in side elevation of an earring clip em-
bodying the present invention;

FIG. 2 is a side elevational view of the earring clip
shown in FIG. 1 depicting the hinged clamping jaw mem-
ber as moved to open position;

FIG. 3 is a fragmentary detailed cross-sectional view
in enlarged scale illustrating the upper portion of the
hinged clamping jaw member of the device shown in FIG. 1, illustrated as constructed in accordance with the
present invention;

FIG. 4 is a vertical sectional view, taken substantially
on line 4—4 of FIG. 3, and viewed in the direction indi-
cated by the arrows;

FIG. 5 is a side elevational view of a modified con-
struction of the device; and

FIG. 6 is a vertical sectional view, taken substantially
on line 6—6 of FIG. 5, and viewed in the direction indi-
cated by the arrows.

In accordance with the prevailing mode, hinged spring-
operated earring clips carrying jewels and other orna-
ments often cause annoyance to the wearer or become
lost because no means are provided for adjustment of the
clamping pressure in accordance with the thickness of the
ear-lobe.

Such prior earring clips depend solely on the strength
of a leaf spring for operating the gripping means and
when the lobe is relatively thick the gripping forces is too
severe and results in pinching the ear with discomfort to
the wearer. In the other hand, if the ear-lobe is rela-
tively thin, the gripping pressure is too weak to hold fast
and the earring may drop off. Also, the force in the
spring in such devices frequently varies either when it is
new, or in the course of continued use.

The present invention overcomes the above defects or
deficiencies by providing the hinged clamping member or
jaw with adjusting means for regulating the gripping force
to insure comfort and security to the user. Such a form
of construction embodies a transverse pad-carrying screw
which is so mounted on the jaw member that no screw-
threading of the bearing for the latter is required.

To obviate the need for tapping or screw-threading the
bearing for the screw, the present improvement conten-
plates use of an inexpensive plain adjusting screw com-
prising one or more pierced holes and a tooth-like prong
constructed integral with the bearing and engageable be-
tween adjacent threads of the screw to cooperate ther-
ewith to effect adjustment thereof relatively of said clamp-
ing member or jaw.

Referring to the present drawings, and more particu-
larly to the embodiment of the invention illustrated in
FIGS. 1 through 4, one preferred form of construction is
shown therein with the earring generally designated by
the numeral 10 and provided with two opposed relatively
movable clamping members or jaws 21 and 14 pivoted
together at their lower terminal portions by means of a
transverse pin 15 suitably secured therein.

The jaw 12 constitutes the fixed clamping element of
the clip structure and may be made from flat wire of suitable
cross-sectional width, or from sheet-metal stock struck up
and shaped in dies to provide a J-shaped body having a
lower loop portion 16 of oval or circularly curved for-
mation extended upwardly in a slimmer arm 17. The
movable clamping jaw 14 is pivotally mounted on the up-
per end of the arm 17 referred to above.

The upper end portion of the jaw 12 may be mounted
with a jewel, pearl 18, or other ornament suitably affixed
thereto and formed on the opposite side with a circular
pad 19 for contact with the ear-lobe.

The pivoted clamping member or jaw 14 may be con-
structed from sheet-metal stock struck up and shaped in
dies with its lower end portion bifurcated to provide two
axially-aligned spaced hinge-ears 20, one only being
shown in FIGS. 1 and 2, pierced with alined holes 24
(FIG. 5) for the pivot pin 15. A leaf spring 23 is clamped
to the jaw member 14 by bent lugs 24 and with its
end bearing against the end of the arm 17. The
spring 23 acts to rock said member 14 about the pivot
pin 15 beyond dead-center to resiliently urge it toward
the fixed jaw 12; such a form of construction being usual
as well known in the art.

Mounted adjacent the upper end of the pivoted clamp-
ing member or jaw 14 is a transversely-disposed adjusting
screw 25 slidably held in smooth bores 32 and 33 to pro-
vide a bearing therefor as best shown in the enlarged view,
FIG. 3. The upper end portion of the jaw member 14 is
bent around by a suitable swaging operation, or other-
wise, to form a depending, generally G-shaped loop 27 with its
end engaging against the upper portion of the jaw 14.
By this construction dual bearing bores 32 and 33 are pro-
vided for the adjusting screw 25. Each side of the G-
shaped loop 27 may be drilled, or pierced by a punching
operation when it is formed in dies, to provide the plain
or smooth bearing bores 32 and 33 disposed in axial aline-
ment as shown in FIG. 3. The bores 32 and 33 are of suit-
able diameter to support the screw 25 and allow it to slide
freely therethrough; but as will be observed the bores are
devoid of screw threads and thus have no threaded con-
nection therewith.

The screw 25 is disposed in substantially co-axial aline-
ment with the convexly faced contact pad 19 on the sta-
tionary clamping jaw 12. At the inwardly directed end
of the screw 25 is a convexly faced pad 29 for contact with
the inner side of the ear-lobe. A knob 30 having a
knurled periphery is provided at the outer end of the screw
25 for manually rotating it in either direction as desired
to regulate the pressure of the pads 19 and 29 against the
ear.

In order to effect the required longitudinal adjust-
ment of the screw 25 transversely of the clamping member or
jaw 14, an upwardly projecting tooth-like element 34 is
provided on the G-shaped loop portion 27 of the jaw for
engaging with the threads 28 of the screw 25. To provide
for a substantial extent of engagement with the threads

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on the screw 25 the so-called tooth 34 is formed with an arcuate beveled edge partly encircling the screw and engaging between two adjacent threads thereon. Also, with a preferred form of tooth construction the engaging edge of the tooth 34 extends at a slight angle or helically to correspond with the pitch of the screw threads 25.

FIGS. 5 and 6 illustrate a modified form of construction of the invention wherein the fixed jaw 12 is essentially the same as that shown in FIG. 1 and above described.

As an alternative form of construction, a different type of jaw 40, shown in FIGS. 5 and 6, is used in place of the jaw member 14. The jaw 40 has a shorter loop 27' at its upper end provided with the pair of aligned bearings 32', 33' for the screw 25. The means for engaging the threads 28 of the screw 25 is embodied in a modified form of leaf spring 39 which has an arcuately recessed edge 38, FIG. 6, beveled on its sides to accurately engage between adjacent threads 28 on the screw 25. As previously explained in connection with the spring 23, FIG. 1, the spring 39 is carried by the hinged clamping member or jaw 40 and normally biases the jaw toward the opposite stationary jaw 12 for gripping the ear-lobe therebetween.

While the invention is herein shown as embodied in two illustrated forms of construction, it is to be understood that various other modifications may be made in the structure and arrangement of the parts of the device without departing from the spirit of the invention or the scope thereof as expressed in the following claims. Therefore, without limiting myself in this respect, I claim:

1. In a clip for earrings and the like, a stationary jaw member comprising means for contact with the ear-lobe, a movable jaw member pivotally connected to said stationary jaw member, a leaf spring connected to said movable jaw member and bearing against said stationary jaw member for urging said movable jaw member toward said stationary jaw member, a loop formed on the end of said pivot jaw member with its opposite parallel sides pierced by a pair of smooth bores disposed in axial alignment, a screw rotatable and slidable in said bores, said loop having its terminal portion directed toward said screw and formed with integral tooth means at its end shaped to provide an arcuate beveled edge located adjacent one of said bores and extending helically in engagement with one side of said screw between adjacent threads thereof, said tooth means normally acting to hold said screw from sliding in said bores, said screw also being manually rotatable to move it in opposite directions axially of said bores for adjusting the amount of pressure applied to bind the earring to the ear.

2. In a clip for earrings and the like, a fixed jaw member carrying means for contact with the lobe of a person's ear, a movable jaw member pivotally connected to said fixed jaw member, a spring extending between said movable jaw member and said fixed jaw member and arranged to urge said movable jaw member toward said fixed jaw member, said pivoted jaw member formed with a looped terminal portion having its opposite spaced sides pierced by a pair of smooth bores disposed in axial alignment, a screw rotatable and axially slidable in said bores, contact means at one end of said screw adapted to cooperate with said contact means on said fixed jaw member for engaging the opposite side of said ear-lobe, said looped portion of said movable jaw member having its terminal portion projecting toward said screw and shaped to provide a sharp ended tooth means with said sharp edge in engagement with one side of said screw between adjacent threads thereof, said tooth means normally holding said screw from sliding in said bores, and means at the outer end of said screw for manually rotating it to slide said screw in opposite directions for adjusting the amount of pressure applied to bind the earring to the ear.

3. A clip for earrings and the like as defined in claim 2 having said spring fastened to said movable jaw member with its opposite end bearing against one end of said fixed jaw member to cause it to swing said movable jaw member towards said fixed jaw member for applying pressure on the ear-lobe in accordance with the adjustment of said screw.

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