To all whom it may concern:

Be it known that I, GEORGE ARTHUR SCHIEREN, a citizen of the United States, residing at Beachleigh, Great Neck, in the county of Nassau and State of New York, have invented certain new and useful Improvements in Safety Razors, of which the following is a specification.

The present invention relates particularly to an index adjusting device for use in connection with safety razors of the Gillette type wherein a flexible and elastic blade is provided with cutting edges that are adjustable toward or from the guard member of the razor. This adjustment of the cutting edges of the blade is accomplished by turning the handle of the razor to the desired position with relation to the head of the razor. In actual practice, after the user has shaved, assuming the blade to be in correct position during the operation, when the razor is taken apart for cleansing, the former correct position or adjustment of the blade is lost. When the razor is again to be used, the former correct position of the blade can only be secured by trial and frequent changes in the adjustment of the blade.

The primary object of my invention is the provision of means, in combination with the razor, by which the blade may successively be adjusted to exactly the same angle every time it is used, thus insuring at all times a known and correct adjustment of the blade, and eliminating loss of time and annoyance otherwise attendant upon the adjustment of the blade by trial.

To this end the invention consists essentially in the combination with the handle and head of the razor of this type, of an index member adjustable on the handle and complementary to a stationary index member preferably on a portion of the head of the razor, by means of which a uniform adjustment of the blade may be secured with facility and convenience.

In the accompanying drawing I have illustrated one complete example of the physical embodiment of my invention, wherein the parts are combined and arranged according to the best mode I have thus far devised for the practical application of the principles of my invention. It will be understood however that changes and alterations may be made in the device as shown without departing from the spirit of my invention, and within the scope of my appended claim.

Figure 1 is a view in side elevation of a safety razor embodying my present invention.

Figure 2 is an edge view of the razor, at right angles to Fig. 1.

Figure 3 is a bottom plan view of the guard plate of the razor.

Figure 4 is a transverse sectional view at line 4—4 of Fig. 2.

Figure 5 is an enlarged, detail sectional view, partly in elevation showing the relation of the adjustable friction sleeve of the index device, on the razor handle.

Figure 6 is a modified form of the invention.

In the preferred form of the invention as illustrated in the drawings a safety razor of the Gillette type is shown having the rotatable handle 1 and flexible, elastic blade 2 provided with the opposed cutting edges 3, 3, the blade being detachable for cleansing or replacement, and adjustable with relation to the guard plate 4.

The flexible, elastic blade is clamped between the guard plate 4 and the clamp plate 5 which has a central screw or threaded bolt 6 which passes through the opening 6' in the guard plate 4, and also has a pair of spaced posts 7 that pass through guide openings 7' in the guard plate.

The handle 1 is provided with a threaded socket-head 8 to be screwed on the complementary bolt 6, and it will be apparent that by turning the handle 1, the blade 2, which is clamped between the clamp plate 5 and guard plate 4, will be flexed, and its cutting edges 3, 3, adjusted with relation to the guard plate 4, in order to secure the proper or desired shaving position of the edges of the blade.

After this proper position or adjustment of the cutting edges of the blade has been secured, I utilize my index device in order that said adjustment may again readily be secured, after the razor has been dismantled for cleansing and is again put together for use. In carrying out my invention I utilize a stationary finger or pointer 9, which is a stud or pin that may be integral with or firmly secured in the guard plate, at one side of the central opening 6', and which projects a sufficient distance below the guard plate as shown in Figures 1 and 2.
Between the body of the handle and its 
socket-head 8 I provide a reduced portion 
and neck 10, having a cylindrical periphery, 
and about which a sleeve 11 is adjustable. 
The sleeve has thereon a series of index fig-
ures and marks adapted to register selec-
tively with the stationary pointer 9 and the 
knurled head 12 of the sleeve may be utilized 
for facile turning of the sleeve. The sleeve 
is free to be moved or rotated about the 
neck of the handle, but is provided with a 
frictional connection with the handle suffi-
cient to hold the sleeve in adjusted position 
and prevent accidental displacement of the 
adjusted sleeve under normal conditions. 
An adequate frictional engagement is in-
sured by milling out or otherwise fashion-
ing an annular or circular groove 13 of 
proper dimensions in the wall of the head 
12 of the sleeve, and placing a flat spring 
plate 14 within the groove. In Fig. 4 the 
relation of the spring plate will be apparent 
where it is shown with its ends located in the 
ends of the groove 13 and bearing against 
the walls of the groove or recess. The cen-
tral portion of the resilient plate or spring 
plate has a close frictional contact with the 
periphery of the neck portion 10 of the 
handle. Before its application to the recess 
or groove, the spring is in the form of a 
bow with its ends curving to the left in Fig. 
4, but when placed in the recess and in con-
tact with the handle the resilient, bowed 
plate assumes the position shown with its 
ends firmly embedded in the recess and its 
central portion in close frictional contact 
with the neck of the handle. 

Because of this frictional connection, the 
sleeve may be rotated or revolved about the 
neck portion of the handle by pressure ap-
plied through the thumb and fingers. Thus, 
assuming that the handle has been turned 
and the edges of the blade have been proper-
ly positioned with respect to the guard 
plate 4 (it being understood that the top of 
the head 8 is in close frictional contact with 
the bottom face of the guard plate) as in Fig. 
1, and a satisfactory shave has been accom-
plished, it will be noted that the index mark 
3" registers with the pointer 9. After 
shaving, the razor is usually dismantled and 
cleansed. In putting together the cleansed 
parts, the handle is screwed on the bolt 6 
until the index number "3" again registers 
with the pointer and the adjustment of the 
blade is the same as previously secured. 

In adjusting the index sleeve, the handle 
is first turned until a slight or initial fri-
citional contact is made between the head 8 
and the face of the guard plate. Then the 
"0" or zero mark on the index sleeve is made 
to register with the pointer by turning the 
sleeve on the handle. After the sleeve has 
been adjusted to its initial position, the 
handle is turned until the required or de-
sired adjustment of the cutting edges of the 
blade is secured with relation to the guard, 
and thereafter the same adjustment of the 
blade may be accomplished by turning the 
handle until the index number as "3" reg-
isters with the pointer 9. 

In the modification of the invention as 
shown in Figure 6 of the drawings, where-
in parts are broken away for convenience of 
illustration, the sleeve 1a is made integral 
with the guard plate 4', and the handle H 
which forms a continuation of the sleeve is 
utilized for adjusting the blade between the 
clamp plate 5' and the guard 4'. In this 
form of the invention the central bar 6'' 
which is integral with the clamp plate, is 
passed through the sleeve 1a and its threaded 
end 6' is engaged by the socket head S of the 
handle H. The socket-head has a reduced 
diameter, and an enlarged end collar C 
which frictionally engages the lower end of 
the sleeve 1a as shown. The rotary adjust-
ing or index sleeve 11a is revolvable on the 
socket-head between the collar C and annu-
lar shoulder H' of the handle, and is fric-
tionally engaged on the socket-head, in man-
ner similar to that of the sleeve 11 in Figure 
5. 

The index is impressed or stamped on the 
sleeve 11a and is adapted to register with 
the arrow on the lower end of the fixed 
sleeve 1a, across the comparatively narrow 
collar C. The adjustment of the blade is 
secured by turning the handle H on the 
threaded end 6' of the bar or stem 6'' and the 
sleeve 11a which may be revolved on the 
socket-head, also turns with the handle H 
in securing the adjustment. 

From the above description taken in con-
nection with my drawings, it will be appar-
ent that I have provided an index device 
that is compactly arranged, comparatively 
 inexpensive in cost of manufacture, and 
simple, but efficient in performing its re-
quired functions. 

Having thus fully described my invention, 
what I claim as new and desire to secure by 
Letters Patent, is: 

In a razor the combination of a clamp 
plate having a threaded stem, a blade, a 115 
guard, a threaded handle having a socket-
head, said head being in contact with the 
guard, an index sleeve on the handle and 
below said head, resilient means between the 
sleeve and handle, and a single index in con-
nection with the guard, whereby a predeter-
mined width and angle of the cutting blade 
is reset by a single adjustment. 

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