PLASTIC DISPOSABLE SAFETY RAZOR
this application Sept. 19, 1966, Ser. No. 586,915
1 Claim. (Cl. 20—32).

ABSTRACT OF THE DISCLOSURE

The razor of my invention comprises a head, a separate guard member and a blade interposed and clamped be-
tween the head and guard members. The head has integral pins extending through holes in the blade and guard mem-
ber. The head and guard members and pins are formed of an inexpensive disposable thermoplastic ma-
terial deformable by the application of heat and pressure, and the pins have deformed enlarged ends to permanently
secure the assembly together. A handle is secured to and projects from the guard member.

This application is a division of my copending applica-
3,274,683 granted Sept. 27, 1966, which is a continuation-
in-part of Ser. No. 291,036, filed July 5, 1963, now aban-
doned, and the invention relates generally to razors and
refers more particularly to a plastic disposable safety
razor.

It is an essential object of this invention to provide a razor which is inexpensive and therefore may be thrown away after being used one or two times.

Another object is to provide a razor composed of a head, guard, and a blade interposed between the head and
and the parts being secured together in a perma-

Another object is to provide a razor in which the head and guard are formed of an inexpensive easily molded
material such as plastic.

Another object is to provide a disposable safety razor having an integral part, preferably in the form of a pin
shaped member, extending from the plastic head and
engaging the guard to form a permanent assembly.

Another object is to provide a plastic disposable safety
razor in which at least one, and preferably two integral
pins extend from the head through clearances in the blade
and in the guard, the pin or pins have upset ends which
are larger than the clearances in the guard to engage the
underside of the guard and lock the assembled head,

Other objects and features of the invention will become
apparent as the description proceeds, especially when
taken in conjunction with the accompanying drawing,

FIGURE 1 is a side elevational view of a safety razor
constructed in accordance with my invention.

FIGURE 2 is a fragmentary sectional view taken on
the line 2—2 in FIGURE 1, and showing a final step in
the method of making the razor.

FIGURE 3 is an exploded view of the parts in section,
taken on the line 2—2 in FIGURE 1, showing the pins
which extend from the razor head before their ends are
upset to lock the parts of the assembly together.

FIGURE 4 is a bottom plan view of the head.

FIGURE 5 is a top plan view of the guard.

FIGURE 6 is a top plan view of the razor blade.

Reverting now to particularly to the drawing, the
design is generally designated 10 and is composed of a
head 12, blade 14, guard 16 and handle 18.

The head 12 is in the form of a relatively thin elongated
member which is straight in longitudinal section, as will
be apparent in FIGURES 2 and 3, but downwardly curved
and arched transversely as shown in FIGURE 1. The head
12 has integral pins 20 projecting downwardly from the
concave undersurface thereof. The pins, before assembly
of the razor, are cylindrical throughout their lengths, as
seen in FIGURE 3, and are spaced apart longitudinally
by the head. The pins are located equal distances from the
ends of the head and are disposed midway between the
opposite side edges thereof, as will be apparent in FIG-
URES 1 and 4.

The blade 14 may be an ordinary double-edged flexible
metal blade having the two shaving edges 22 and 24. The
outline of the razor blade is similar to the outline of the
head 12, as will be appreciated by a comparison of
FIGURES 4 and 6. Thus the razor blade is of thin stock
and relatively long and its side and end edges will be seen
to project slightly beyond the corresponding edges of the
head when the parts of the razor are assembled. The blade
may be similar to the type which is sold separately for
replacement in the conventional safety razor, although
it will be understood that the blade when used as a part
of the razor herein described will be a permanent part
of the assembly and will be disposed of when the entire
assembly is thrown away.

The guard 16 is in the form of a relatively thin elongated
member which is approximately equal in length to the
head although slightly wider than the head to under-
lie the cutting edges of the blade when the parts of the
razor are assembled. The guard is straight in longitudinal
section, as seen in FIGURES 2 and 3, and arched or
downwardly curved transversely as shown in FIGURE 1.
The guard has on its underside a central downwardly

The head 12, guard 16 and handle 18 may be formed
of any suitable material, but preferably are formed of an
inexpensive plastic which can be readily molded. A num-
ber of the well-known thermoplastic resins are suitable.
Suitable materials are vinyl and cellulose resins. The pins 20,
being integral parts of the head 12, are of course
molded at the same time as the head and formed of the
same material. An inexpensive material for these parts of
the razor is preferred because it is intended that the razor
will be a throw-away item. In other words, it will be used
once or twice, or until the edges of the blade become dull,
and then the entire razor will be thrown away. Obviously,

Of course, the handle 18 would not have to be thrown
away since it is separable from the head, blade and guard.

The parts of the razor are shown in FIGURE 3 before
assembly. It will be noted that the guard 16 has holes 26
which are spaced apart the same distance as pins 20 and
large enough to permit the pins to freely enter the holes.
The blade 14 has an elongated slot or cutout portion 28
formed with generally circular portions 30 likewise spaced
apart the same distance as pins 20 and of a size to freely
receive the pins. Considering FIGURES 2 and 3, the parts
are moved together during assembly so that the blade 14 is clamped between the head 12 and guard 16 and the pins 20 project through the openings 30 in the blade and 26 in the guard. In this
condition of the parts the guard 16 underlies the head 12
and the blade is sandwiched between. The blade will flex,

As shown in FIGURE 1, to lie in surface-to-surface rela-
tion with the opposite faces of the head and guard. Then
the projecting ends of the pins 20 are upset to provide in effect rivet heads 32 which are larger than the
holes 26 in the guard and hence engage and underlie the
concave undersurface of the guard to permanently

Patented May 21, 1968
secure the guard, blade and head together. The rivet heads 32 may be upset by the application of heat and pressure. The pin 34, in FIGURE 2, is a pressure applying member shown exerting sufficient force against the projecting end of one of the pins to upset it and form the rivet head.

The assembly thus formed is a permanent assembly and will be thrown away after it has been used a few times. For this reason the parts of the assembly are made of inexpensive material.

What I claim as my invention is:

1. A razor comprising a head in the form of a relatively thin elongated member, a separate guard likewise in the form of a relatively thin elongated member underlying said head member, a double-edged blade interposed and clamped between said head and guard members with the opposite cutting edges of said blade exposed along the opposite longitudinal edges of said head and guard members, means permanently securing said head member, guard member and blade together including a pair of parallel pins formed integrally with said head member and extending at right angles thereto, said pins being spaced from one another on the longitudinal center line of said head member and located equal distances from the longitudinal center of said head member, holes in said blade and guard member located on the longitudinal center line thereof and registering with said pins, said pins extending through said holes in said blade and guard member and terminating beyond said guard member, said head and guard members and pins being formed of an inexpensive, disposable thermoplastic material deformable by the application of heat and pressure, and said pins having integral, deformed and enlarged ends of greater cross section than said holes in said guard member and engaging the side of said guard member remote from said head member to permanently secure said head member, guard member and blade together, said guard member having an integral boss on said remote side thereof disposed on the longitudinal center line thereof midway between said holes therein, and an elongated handle having one end secured to said boss and projecting from said guard member at right angles thereto.

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