BRITISH BUTTERSCOTCH BAKELITE:
I Can't Believe It's Really Bakelite!

by Jocelyn Howells

(This article includes information as presented originally by Jocelyn at the NBS 2004 Convention, ***with updates in italics.*** Jocelyn is very excited to have learned more about these buttons and is pleased to share it **FIRST** with WRBA *Territorial News* readers.)

Yes, these buttons really are phenolic resin, a type of thermoset plastic, which we commonly call Bakelite. However, these are cast directly into individual molds—as opposed to being cast into sheets or rods and machined into shape, as are the Catalin and Bakelite types we typically think of as "Bakelite." This *direct casting process* produces buttons quite different in appearance from those Bakelites machined from cast stock.

Great Britain seems to be the primary source of these buttons, so logically we can assume they were made there. I believe they were made in small workshops, but some might also be from cottage industry. I was originally able to confirm their material identification thanks to George Gauthier of Connecticut, the gentleman who helped me with other plastic identification by non-destructive infrared spectroscopy.

Thanks to a dear English friend who gave me an old book about plastics that she thought I might find interesting, I am thrilled to learn more about these buttons, and so happy to be able to share the new information with you here. The book is "Plastics in the School and Home Workshop," by A. J. Lockrey. Curiously enough, although the book was found in Great Britain, it was published in New York. A note of interest, the cover illustration was courtesy of the Bakelite Corporation.

My book is the second edition, which was warranted by sufficient changes in hobby work with plastics brought about during the war years. In one of the new chapters, I made some exciting discoveries that pertain directly to what I've named the British Butterscotch Bakelites. For the first time, in 1946, new products were available for both professional and amateur craftsmen that enabled them to make

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their own molds by the rubber technique from any object, to pour liquid plastic material into this mold, and cure it themselves (without formaldehyde hardening). I had surmised that this was the way our BBB buttons were made, but had no proof or confirmation until now. How exciting is this!

The vast majority of these appear to have been finished with a glaze, paint or metallization. Many of them show enough wear through the surface finish so that you can see he butterscotch color underneath. I've found just a few examples that have no finish of any kind on them.

It should be noted that I have found just a very few examples that are not one shade or another of butterscotch, but a sort of clambroth color. These hot-needle test exactly the same way as the butterscotch colored ones: *impenetrable, needle tip leaves just a tiny burn mark, no odor. The reason for the absence of the typical Bakelite odor is that these buttons are not hardened in formaldehyde and, therefore, cannot produce that particular odor.*

Further study of this book reveals the reason for this coloration change. In order to harden the liquid phenolic resin, an accelerator (e.g., hydrochloric acid) was mixed in. The more accelerator used, the faster the cure and the lighter the color of the finished product. Also, there were specific types of liquid (Catalin #700 Resin, for instance) that would produce a slightly bluish tinge water color (which I called "clambroth" color). Possiby that is what produced the few examples I've found that are not a butterscotch shade.

Because many of these buttons are metalized, I suspect that these were an attempt to furnish the clothing trade with buttons which looked like metal, at a time when metals were scarce and expensive just after the war. In some cases the metallization is quite heavy—like they are clad with a layer of actual metal, as opposed to being dipped in liquid metal or otherwise electroplated. You'll see one of the "clad" types illustrated here—the sun face.

You'll notice on some of the examples that there appear to be bubbles, usually burst, on the surface. I've not noticed this bubbly look on other kinds of buttons, so this could serve as a clue that you have a Bakelite button under the metalized layer. *My new documentation points out this bubble formation as one of the concerns that had to be*


Note Broken Bubbles

Note grinding marks on backs of these two examples

dealt with. If the resin and the accelerator were mixed too briskly, air bubbles had a tendency to form. As the material could set so quickly, the bubbles could be held in the liquid and any close to the surface could burst, creating a pitted surface. In commercial operations, a vacuum was applied to the mixed liquid just before pouring, which pulled the air bubbles out. So this explains and backs up my observation of surface bubbles often broken) as one of the visual identification clues for British Butterscotch Bakelite.

If you find a button that appears to be metal-clad, as opposed to solid metal, as evidenced by slight wrinkling in places, or where the metal doesn't quite come right up to the shank, then you can assume the button has another material underneath. I like to peel back just a bit of the metal layer at the shank and test what's underneath. Afterwards, if you want, you can smooth the metal back in place, but I leave it open to show what's there.

When you discover Bakelite underneath, it is always exciting. Occasionally you'll find celluloid under the metal. Much rarer, though, would be a ceramic button so metalized. These buttons are classified according to the material they are, and not their finish, no matter how thick it might be, so it behooves us to learn how to determine their base material.

Most of these buttons have an inserted metal loop shank. A few have applied plastic shanks, which are original applications. I accidentally have knocked off a couple of the applied shanks, and underneath you can see the butterscotch colored Bakelite with none of the finish that's on the rest of the button.

A few of these BBBs are sew-throughs, and I even found one self-shanked example. Some of the backs show straight-across saw marks. The backs are always flat or nearly flat, *and the book speaks to this also. It says that the hardened piece, after removing from the mold, must be ground level at the bottom, which would be the back of the button. I believe this would account for what I called "saw" marks we see on some of these buttons—not all. I assume that is because some of them were flat enough right out of the molds and didn't need grinding. Again I'm making an assumption, but so far my previous assumptions have proven to be correct.*

Many BBBs have a single deep vertical hole hear the shank. *Up until now I hadn't been able to figure out why this hole is there, but wondered* if it had something to do with

removing the button from the mold. *The book tells about the molding process and offers a clue why we see these holes in some of these buttons. It has to do with the register-holes that are punched in the plaster supports, which leave prongs in one half of the mold. While I don't pretend to understand the molding process, I am pretty sure this pertains to the existence of the deep holes we see in the backs of some BBBs.*

PAINTED/PEARLIZED

NOTE SAW/GRINDING MARKS, VERTICAL HOLE & BUBBLE

I've found quite a few of these from vintage collections on cards of plaster or wood compositions of the ANN and GAP types. Some of them have a similar look and could be mistaken for those materials at first glance. And, some of these buttons are truly outstanding in design and beauty and have great subject matter, which any collector would be proud to add to their collection.

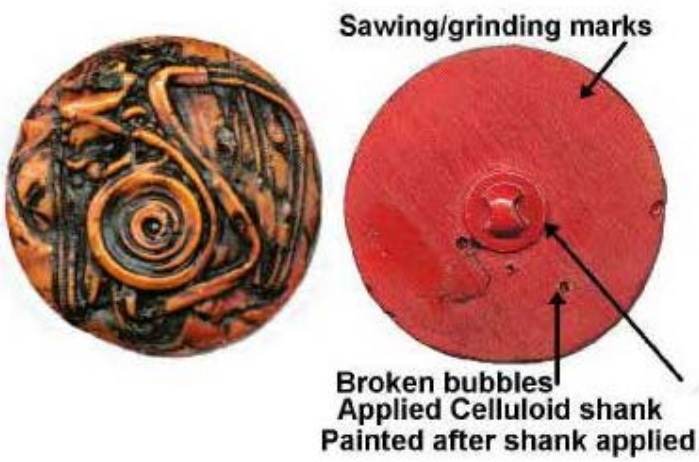
We now know that these buttons could have been made only since 1946. I am surmising that they continued to be made into the 1960s, approximately, but that still remains to be proven with additional documentation.

If using these in Bakelite competition, read the awards carefully to make sure what type of buttons are called for. Some Bakelite awards may want just the Catalin types machined/carved from cast rod or sheet stock. But if not excluded, these BBBs can definitely add to the variety of Bakelite buttons that can be represented in an award, along with the darker early types made from molding powders as well. And they could be a counter on a Bakelite tray, such as a metalized example *or unusual subject matter not otherwise available to Bakelite collectors.*

Yes, this information is cutting edge, and I think that not a lot of collectors are tuned into them yet. I did picture a few and tell about them in my plastic button book, but it still takes time for all that information to register and sift down to all collectors. But now <u>YOU</u> know—and can start looking for them and appreciating them for what they are. So, how many metalized Bakelite buttons do you think you already have in your collection *but just didn't know what they were? I bet there are a few! Happy hunting!*

After my original presentation at NBS National in 2004, the word started getting out, and more of you are seeking, recognizing and loving these buttons. Some of these buttons might fall into the category of "ugly" buttons in

the eye of some beholders. But definitely not to me and to others who have discovered their charm—they do have a way of growing on you—and they really are Bakelite!



To recap, the characteristics of British Butterscotch Bakelites are:

A. Straight-line saw marks across the back.

B. Backs flat or nearly flat.

C. Inserted metal loop shank OR an applied shank of various types—whatever the maker had available.

D. Sometimes a deep vertical hole near the shank that appears to be drilled, which is related to the molding process.

E. Bubbles may have been created if the hardening accelerator was added too briskly to the phenolic resin liquid prior to casting. Broken air bubbles may show on the exterior, either front or back.

F. Detailed molds, sometimes in high relief, created castings of virtually any subject or shape, but openwork is rare.

G. Metalized finish may resemble copper, brass, bronze, silver, pewter, etc.

H. The ones that are not metalized are normally finished with paint or a glaze, which also tended to wear off the high spots. Just a few were left as the unfinished natural butterscotch color.

I. The hot needle test produces very little reaction, other than a slight burn mark at the test site, if the needle is left in contact a sufficiently long time. There is no typical formaldehyde odor, as these are not hardened in formaldehyde as other cast phenolics are. In fact, there is very little, if any, odor of any kind when hot needle testing BBBs.

J. An occasional example may be found in an off-white color due to a higher quantity of hydrochloric acid added to hasten hardening. However, these hot-needle test the same as the butterscotch colored ones and are also phenolic.

K. Many of these are “funky and chunky,” and some would even say ugly.

L. These buttons date from 1946 to circa 1960, possibly later, and apparently were made primarily in Great Britain. So if you can determine origin and age of your button that would greatly aid in pointing to the possibility that you have British Butterscotch Bakelite.

This article is dedicated to all the wonderful British button dealers who helped me build my collection and add to my knowledge of these wonderful buttons. In particular, to WRBA member Margaret Blain who gave me **the** book, and to the memory of the late Dorothy Speculo, who sold me many of these buttons, and who is greatly missed.

Please contact the author at buttonjoss@aol.com if you have questions or additional information that would be pertinent to this research project.