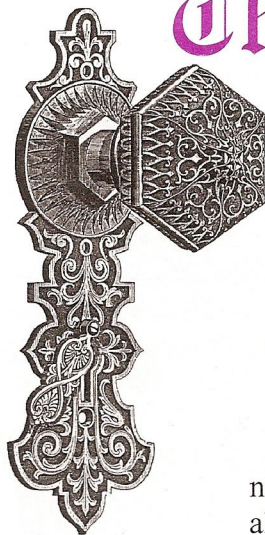


The Doorknob Collector



Number 138

August 2006

A Publication of The Antique Doorknob Collectors of America

A Nonprofit Organization Devoted to the Study and Preservation of Ornamental Hardware

GUTTA PERCHA!

By Allen S. Joslyn

No, the title of this article is not a college football cheer, nor an announcement that one has hooked a perch. It is a thermoplastic that was used for all sorts of things in the Nineteenth Century and still used in root canal dentistry today. Today, however, the term is indiscriminately applied generally to objects from the 1850-1880s, most of which in fact have nothing to do with the real thing. For example, a Victorian hair brush shown here was recently described on eBay was "Gutta Percha (also known as Vulcanite)", and bearing the inscription "Diatite Pat. March 5 1868, 1872", thus neatly encompassing three quite different compositions.

Gutta Percha

Gutta percha is made from the sap of the Gutta tree, which is chemically close to rubber but has different properties. It came from Malaysia, Indonesia, and (somewhat) the Philippines. It is a natural "thermoplastic" because it softens when heated, it can then be molded, and hardens again when it cools down. It was, in a sense, one of the first "plastics", and a natural rather than a synthetic plastic (although some would dispute the name).

Gutta percha first became known in the West in the early 1840s when William Montgomerie, Assistant Surgeon to the Presidency in Singapore, noticed that gum from Gutta Palaquium trees was used by native woodsmen to make handles for their parangs. He got samples and realized the substance could be used to fabricate medical instruments. He sent samples to the Medical Board of Calcutta and the Royal Society of Arts, and in 1847 was awarded a gold medal from the Society of Arts in London for his work with gutta percha bandages.

A sample of GP came into the hands of two people in England who were interested in bottle stoppers, and who formed the Gutta Percha Company in 1845. That company effectively controlled the supply of gutta percha in England.



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The uses for Gutta Percha exploded. Indeed, at the 1851 Crystal Palace Exposition in London, a sideboard made from GP was displayed. But GP had its problems; in particular, when exposed to the air, it becomes brittle, cracks, and eventually may turn to dust. A contemporary magazine, The London Illustrated News, remarked that “unfortunately, although this highly-decorated structure [the sideboard] in gutta percha is carefully surrounded by a cordon, and has yet experienced no wear and tear – we discover symptoms of dislocation in part of the ‘pendant’ foliage and something like a ‘split’ in a pear of no ordinary proportions.”

Natural gutta percha does not, however, deteriorate in water, unlike India rubber. Accordingly its most important use was to coat underwater telegraph cables, the first successful one between England and France in 1851, and eventually the transatlantic cable laid by the ship Great Eastern in 1858. But clearly in the air it suffered severe disadvantages.

Rubber and Its Uses

To carry the GP story further, we must return to rubber, which came into use earlier; indeed, the first patent for the use of rubber for waterproofing cloth and leather was issued in 1791, and its use as an eraser was noted in 1770. (If you see references to caoutchouc, it is a French term for rubber gum from South America called ca-huchu by the Amazon natives, meaning “tree that weeps.”). Unlike GP, natural rubber (of-

ten called “India rubber”) is soft. In the early 19th century it was being widely used for waterproofing. It had, however, two problems – it melted in the sun (Sorry, Sir, your raincoat has become that puddle), and became brittle in the cold.

Enter Charles Goodyear, who devoted his life to improving India rubber, and sometimes ended up in debtor’s prison for his efforts. He discovered that mixing the India rubber with sulphur and white lead, and subjecting the mixture to high heat – vulcanization - altered the composition drastically. The basic patent for this process was issued in 1844 (Patent 3,633). And thus the modern rubber industry began. Now rubber could be used for a vast variety of products, from raincoats to industrial belts to life preservers. Charles licensed his patent to a variety of manufacturers, and required that each article produced under his patent bear the patent date and his name. Patent protection expired in 1865.

Charles’ brother, Nelson, was issued a patent in 1851 for “hard rubber”, which was produced by mixing other substances together with India rubber and some sulphur and subjecting it to higher heat for a longer period than ordinary vulcanization. (There is considerable doubt whether Nelson actually was the inventor.) Hard rubber would not bend, and it could be cut with a knife or machined. It was used, for example, for buttons, knife handles, combs, pipes (lined with meerschaum), powder flasks, and the list goes on. The patent expired in 1872. Most hard rubber items made before 1872



The Doorknob Collector®



Published six times a year by **Antique Doorknob Collectors of America, Inc.**

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07928-0031

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Annual Membership in US \$25.00

Foreign rates on request.

Single issue of **The Doorknob Collector** \$5.00

Founded Sept 1981, the **Antique Doorknob Collectors of America** is a non-profit organization devoted to the study and preservation of ornamental hardware.

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(and some thereafter) bear the Goodyear patent date of May 6, 1851.

There is a marvelous book on this area, Mike Woshner, India Rubber and Gutta Percha In The Civil War Era (O'Donnell Publications, 1999), on which I have heavily relied. It is difficult to overstate the variety of applications of vulcanized and hard rubber (and gutta percha) illustrated in this exhaustively researched book. Look around and note the many uses we make of synthetic plastics today; many of those used rubber or soft GP in the Nineteenth Century. (BTW, Amazon lists the book as available from \$60 to \$85; Mike will be happy to sell it directly to you for \$40, contact mwoshner1@verizon.net.)

To return to GP, a vulcanization process similar to that used with rubber was applied to GP, but with other chemicals being mixed in. The key patent was that issued to John Rider on June 1, 1852, # 8,992. The result did not smell of sulphur, greatly increasing its acceptability in domestic uses. A point in contrast in vulcanization between rubber and GP: while vulcanization of rubber renders it less pliable and elastic, the same process as applied to GP adds elasticity and pliability. The end-results were similar, but – it was argued – vulcanized soft GP products were lighter and prettier in finish and would not become sticky and would not emit the sulphur odor.

It was claimed that the same process could produce a hard vulcanized GP, which was described as resembling “buffalo horn; is jet black – receives a brilliant polish...can be molded, while hot, into any shape or form desired, which it retains when cold”.

Soft GP was widely used, especially for waterproofing fabrics, but it is unclear how much hard vulcanized GP was ever produced. While almost all hard rubber carries a reference to the basic Goodyear patent (an essential for patent protection), Mike Woshner has never seen a hard product citing the Rider patent. A further hint is that the North American Gutta Percha Company's catalogue lists numerous items in soft GP, with stock numbers and prices, merely lists the type of items available in hard vulcanized GP, but gives no stock numbers or prices.

Compositions

These were not, however, the only articles being molded in the 1860-1880s. There were also compositions based on shellac and fillers being produced in vast quantities. The most familiar examples were the frames and boxes used to house Daguerreotypes, but also hand mirrors, hairbrushes – and some doorknobs. Beautiful and finely detailed as these objects are – see the hairbrush on page 1 – and while they are often referred to as “gutta percha”, they have nothing to do with GP.

An example is the products of the Florence Manufacturing Company of Florence, Mass. which claimed to operate under Patent 85018, among others, under the trademark “Diatite”. The composition used was gum shellac and diatomaceous earth (silica), which was subjected to heat and pressure in steel moulds. Vern Eklund wrote a fascinating article, “You Just Never Know”, on the company in the January-February, 1991 issue of TDC (reprinted in the May-June 2003 TDC), including the discovery of the original moulds in a basement vault in the still-operating factory. At least one other company, the Boston Diatite Company, claimed to own the patent and trademark of “Diatite”. There were, of course, numerous other types of compositions. Some were crude; others, such as those of the Florence Manufacturing Company, produced finely detailed and smooth surfaces.

So, to get back to the hairbrush, what was wrong with its description? Well, “vulcanite” was a name for hard rubber, which is not gutta percha. And the name “Diatite” was used by the Florence Manufacturing Company and at least one other company on their products composed of gum shellac and diatomaceous earth. There is no reference to the GP patent. So the hairbrush is definitely a composition.

Apparently GP fell into disuse. Synthetic plastics were developed to coat underwater cables, and GP trees were decimated. By 1903, most of the trees had been felled in the Malay Peninsula and the remaining areas of production in Borneo and Sumatra were in inaccessible mountains. The Dutch had been, however, developing GP plantations.

What's The Difference?



So the issue for collectors is, how can one tell the difference between hard rubber, hard GP and compositions? Of course, any markings as to the manufacturer or Patent Date are controlling. Hard rubber usually carried either the Goodyear name and/or patent number (even after patent protection expired) and/or a manufacturer's name. Some compositions also carried patent numbers and/or dates. Whether there were any items of vulcanized hard GP produced is uncertain. The three alternatives cannot necessarily be differentiated on the basis of smoothness or crispness of details. See the hairbrush. Mike Woshner says that hard rubber, when rubbed, gives off a sulphur odor, and that some compositions tend to chip, and when chipped, their interiors are generally coarse and porous. (Presumably

that is not true for the Florence doorknobs.) Assuming the issue was important, a sample of the object in question would probably have to be taken and analyzed

Accompanying this article are pictures of four fantastic knobs that at one time or another were (or are) in the Menchhofer collection. Steve Menchhofer notes that, depending on the weather, they develop a white dust on the exterior, but turning white on exposure to water is a characteristic of shellac finishes. Based on photographs, Mike Woshner thinks they are composition. Obviously if they are GP, they would be hard GP, but it is doubtful if that was ever commercially used.

The origin of these knobs is unknown and they have no markings. As far as we know, these are unique. They are all middle brown. If these had been produced in any quantity, my vote would have favored a hard composition, simply because it probably was cheaper to use shellac, and diatomaceous earth (i.e. silica), than imported GP. (Shellac is a product of insects, which have unrivaled reproduction abilities; GP comes from trees, which when cut down and bled, produced on average about 1 lb of sap per tree). I would assume that a manufacturer would shoulder the extra cost of GP only if it offered a unique characteristic for the particular use. Since these knobs may have been the product of a talented sculptor having fun, or even a prototype that never was manufactured, there is no obvious answer. But the question remains: with numerous compositions available, as well as hard rubber, why would one choose hard GP – which apparently was not widely used, if at all, - for a doorknob? What, indeed, is the evidence for hard vulcanized GP as the substance? Anyone else have any opinions? Does it matter, anyway?

Sources:

Mike Woshner, India-Rubber and Gutta-Percha In The Civil War Era (O'Donnell Publications, 1999) and conversations with Mr. Woshner; Research Notes of Maud Eastwood; [www.atlanticcable.com/article/Gutta Percha](http://www.atlanticcable.com/article/Gutta%20Percha); www.mernick.co.uk/victplas.htm; www.plastiquarian.com; P, Sherman, The Gutta Percha and Rubber of the Philippine Islands (U. S. Department of the Interior, Manila, 1903); Boston Diatite Company v. Florence Manufacturing Company, 114 Mass. 69, 19 Am. Rep. 310 (Sup. Judicial Ct., Mass. 1873)

Did You Forget?

It's easy to forget to send in your membership renewal because you receive only **ONE NOTICE**. Unlike the magazines you receive we do not send a notice every month for six months in ad-

vances. You can easily see when your membership is due by looking in the upper right corner of the mailing label. It seems that it is just too easy to set it aside and forget it. But, it is never too late to renew. We want to make sure that we have the correct information in the database so we ask you to review the tear-off at the bottom of the letter and return it with your dues. Remember the ADCA database is used for club business **ONLY**.

You may give more than the \$25 US if you are so inclined. The following chart may be of help.

Levels of Giving

Basic	\$25
Supporter	\$50
Sustaining	\$100
Patron	\$250
Benefactor	\$500

Note: > Contributions in excess of \$25 per year in these categories are tax deductible to the extent of the law as a contribution to a non-profit organization. You will receive a receipt at the end of the year...

At the time of this writing there are several of you who have not renewed your membership since last spring. We don't want you to miss any of the issues of *The Doorknob Collector* so sit down and do it now. Your membership must be up to date to attend the annual convention. Please send your dues to ADCA, PO Box 31, Chatham, NJ 07928-0031

In Memoriam

Allen Still (#37) of West Des Moines, Iowa died on June 5, 2006. He was a long time member of the ADCA. He enjoyed collecting a wide variety of antiques, especially builder's hardware, etching and engravings. He is survived by his wife, Janet, two daughters, and two stepsons. He also leaves four grandchildren. Allen was one of the earliest members of The Antique Doorknob Collectors. We send our condolences to his family.

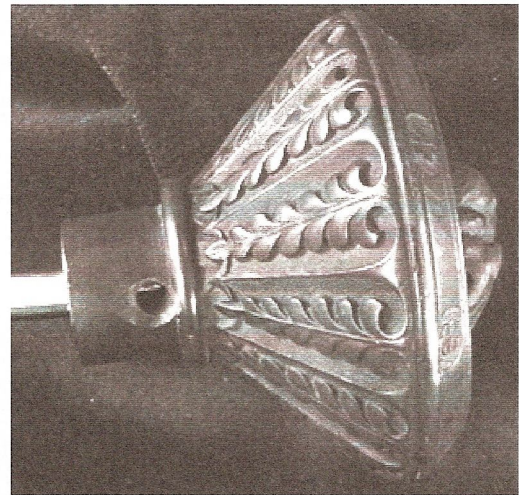
Get Ready to Travel

If you plan to visit Canada, just over the border from Buffalo, you may be asked to prove your citizenship, so have acceptable documents with you. A U.S. passport is by far the best proof of citizenship. If you do not have a passport, a U.S. birth certificate (no photo copies) or naturalization papers may be accepted. Check your passport for the expiration date. Remember that the American Falls at Niagara are the broadest and they can only be seen fully from the Canadian side. See you in Buffalo in September.

Send in you Convention Registration TODAY!



Front View



Side View

A Call to Serve

Most of us agree there are a number of benefits to belonging to ADCA and hopefully that will continue. One of the issues that arise, however, with a volunteer organization like ours is the need for the members to also participate in the organization's operations and administration. While it does not take a great deal of time, it does take some and when it is spread out amongst a large number of members, they don't get burned out from overwork.

Our club is at a critical state in that we need more members to participate in the board and on some committees. This doesn't require a great deal of time and can generally be done on the computer through emails. Historically, a small group of people have done the bulk of the work and now some are getting burned out and rightfully don't want to carry the load anymore. I want to thank all of the members who have done so much to build and hold the organization together for so long.

I also want to put out this call for newer members and older members to submit your name to the nominating committee if you are interested in participating in more of the decision making that goes on each year. I can assure you that it does not take a lot of time and the positions are not stressful, so it actually makes a difference for the club without taking a lot out of your schedule.

Please consider giving a little bit of your energy to a good cause and get active in this club. The years fly by fast and we are only talking about a few hours of work per year to really make a difference in the club.

Brad Kittel

TIME TO VOTE

Use the yellow Proxy form enclosed!

This year the Club is taking a vote whether it should change its name from Antique Doorknob Collectors of America to something else. You will find an insert announcing the meeting and a proxy which requests that you register your preferences if you are not attending the 2006 Convention. Just fill it in, fold and mail back. Your vote will be cast at the meeting in accordance with your wishes.

Over the last few years we have seen a trend whereby the club is shrinking in membership and the turnout at the conventions is also declining. There are national trends toward the decline of fraternal

organizations and collector club membership rolls, but we hope that we can reverse the trend. While there is a growing interest in doorknob collecting, it is a narrow field and one possible reason for changing the name is to make it clear that our focus is not only on door knobs but includes all of builder's hardware. At this stage, the board of directors has voted to present the option to the membership and allow them to decide if they want a name change, and if so, which new name from a short list picked by the board.

In the process of considering a name change for the club, the board has examined a number of names and issues involved in making the change. The following will be a summary of the pros and cons of the issue and will hopefully give you some information to make your decision on the issue and cast your vote the Convention (either in person or by proxy).

REASONS FOR A CHANGE

The reasons for the name change are centered around trying to increase the scope of collectors that might be interested in joining the club. Since many of us are also interested in back plates, doorbells, peepholes, hinges, coat hooks, window locks, and many other types of builders hardware, it only seems right to broaden the scope of the name to include those items of interest. This is stuff that always shows up at our conventions and is part of the incredible builder's hardware category that our doorknobs belong to. While there are members who do not collect more than door knobs, it is likely that people who share our interest in builders hardware will likely have doorknobs as well as all of the other great stuff in the builders hardware category.

REASONS AGAINST A CHANGE

The possible reasons against a change were summarized as follows: (1) all club paraphernalia with our logo will need to be updated (web page, stationery, brochures, newsletters, etc.); (2) current name recognition / goodwill may be lost, which means current hardware publications will no longer refer to us by our correct (new) name. This may seem trivial but there are some who missed out on years of club membership because they sent their dues to an incorrect address published in one of the early hardware publications; (3) a name change might affect our "credit" status change in regards to choosing and booking our yearly convention hotel. It has been relatively easy for the host to cite previous convention properties, and a possible name change could have impact; (4) It seems to be that most people can already discern that the ADCA is more than a doorknob-only club, so that adding a name such as "Builder's", "Victorian" or the like will have little impact. If a person collects doorknobs they most likely also collect other builders' hardware items. (5) Depending upon the name chosen, it may include so much territory as to lose focus on what we really do collect. In short, "if it ain't broke, don't fix it".

The names that made it to the short list are:

1. Antique Builders' Hardware Association (ABHA)
2. Antique Door/Hardware Collectors of America (ADCA)
3. Antique Hardware Association (AHA)

While there were 13 names suggested, these were the 3 favorites. Give this some thought and plan on voting either by proxy or in person at the convention. Lets see where it leads. Feel free to submit your thoughts via email to Brad at bwk@discoverys.net.

The Doorknob Exchange

Members are reminded that your dues entitle you to advertise items for sale, trade, or wanted at no charge. ADCA is not responsible for any transaction or the condition of the items advertised.

Wanted:

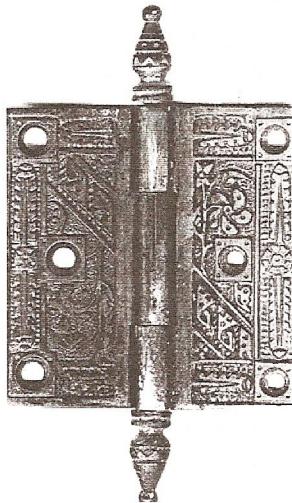


Brass, 3-feathered Indian Head Knob (A-317) to be used as a gear shift knob on a restored 1936 Indian Four motorcycle.

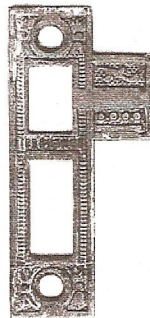
John Decker (#141),
 P.O. Box 918, Bakersfield, CA 93302-0918,
 (661) 323-7850
 sgdeckerbak@msn.com

Also Wanted:

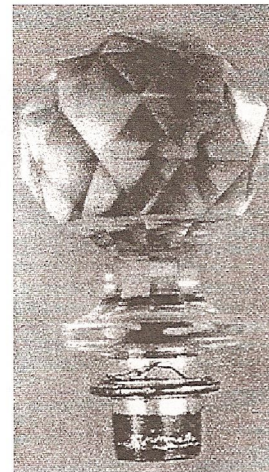
By Vicky Berol,
 Gofer Unlimited
 415-771-9899:



3.5 x 3.5 hinges, steeple pin



Strike plate



One pair prism cut knobs

Membership	Newsletter and Other Questions	Web Site
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