

Paper Used For United States Stamps

One area that seems to confuse most beginning or novice collectors is paper identification. While catalogs generally provide a brief explanation of different paper types, only the major types are included in catalog Introductions, often no detailed explanations are given, and many of the types found are only mentioned in the Introduction to the category area, ie; paper used for Revenue stamps are listed there. This article will attempt to cover all of the various papers used to print United States stamps and present them in the order that we find them in the catalogs, by Issue. We believe that way of describing them may be more useful to readers than to simply list them in alpha order, for example.

UNDERSTANDING DIFFERENCE BETWEEN “HARD” AND “SOFT” WOVE PAPER

Wove paper is made by forming the pulp upon a wire cloth and when this cloth is of a closely-woven nature, it produces a sheet of paper which is of uniform texture. Wove paper is further defined as being either “hard” or “soft”.

Because there is a difference in the value or identification of some U.S. stamps when printed on both hard and soft paper, it is therefore very important that you can tell them apart. Pre-1877 regular-issue U.S. stamps were all printed on hard paper, but beginning about 1877 Continental Bank Note Company, who held the postage stamp contract at that time, began to use a softer paper, which was then continued when the 1879 consolidation of companies resulted in the American Banknote Company holding the contract. The paper used by American was even softer than that used by CBNCo. Some of the regular-issue stamps of the same denomination and design were printed on both hard and soft paper, so it is critical that you can tell the difference. Hopefully, the following will help;

HARD PAPER – Stiff. Whiter than soft paper. Not translucent when held to light (the paper weave appears to be “solid” versus soft paper, which has a distinct porous mesh appearance. It also appears whiter under longwave UV light (because it is less dense than softer paper. Perf tips appear more solid when viewed with magnification (recommend 10X-15X) than soft paper (which will display more paper fibers on the tips. You can detect hard paper by observing these traits. Some people can also ID hard paper by “flicking” the edges and thereby “feeling” the stiffness of the paper versus the feel of soft paper if flicked in the same way.

SOFT PAPER – A looser weave more porous paper than hard, so it feels softer, displays a mesh or weave when viewed by holding the stamp between your eyes and light so that you are looking “through” the stamp. It appears to be grayer or darker when viewed under UV light and will show lots of paper fibers on the perf tips when viewed with 10c-15x magnification.

*Tip – Learn to identify the differences between hard and soft paper by studying them both using reference copies of stamps that **MUST** be on one of the papers. For hard, any stamp of the 1861-67 series is good (a 3c 1861 used cost is under \$2.00) and for soft use any 1883-1889 Issue stamp or even an 1893 Columbian stamp.*

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1847 ISSUE

Catalogs describe the paper used for this issue as "thin bluish wove". Indeed, it *is* thinner than subsequent early U.S. Issues, but the "bluish" is misleading in that very few copies will actually appear "bluish" to your eye, so for practical purposes, it's thin wove paper. However, the wove paper used for this issue was very "tight", meaning that it isn't porous at all. If you hold to the light (looking "through" the stamp at the light) you will not see any porosity, whereas in the subsequent issues, as well as in the 1875 Special Printings, those papers all show porosity when looking through the paper when held to light. The "thin" is a very good description and again, compared to subsequent issues, it is much thinner, though perhaps not quite as thin as the 1868 "very thin paper" used for several of the grilled issues.

My general "tip" as previously noted, when trying to learn to identify specific papers is, of course, to build a reference collection consisting of the lowest-priced examples you can find of each type. Unfortunately, with the 1847 issue, even a very faulty used #1 will cost over \$50. and I'm not so sure it's even really necessary to have an 1847-issue stamp as only a reference for paper type anyway.

1851-77 ISSUES

All of these issues were printed on "hard white wove paper" so you can use a low-priced 3c 1861 used stamp as your reference copy or any other pre-1877 stamp where because of the unique design, it cannot be anything else but hard paper (nearly all pre-1870 stamps fit into this category).

VARIETIES FOUND IN THESE ISSUES

1. LAID PAPER – Has the appearance of parallel lines in the paper, which can usually be observed when the stamp is immersed in watermark fluid, with the lines appearing darker than the spaces in between the lines. This is caused by wire cloth used in the papermaking process. Laid paper usually cannot be detected outside of wmk fluid, at least on U.S. stamps. Some foreign stamps were printed on laid paper where the lines can be seen with the naked eye, but as far as I am aware, no U.S. stamp on laid paper can be detected out of fluid.
2. RIBBED PAPER – Also has the appearance of parallel lines in the paper, but the difference between ribbed and laid is;
 - a. Ribbed can NOT be detected while in watermark fluid. It can only be detected by viewing the stamp such that light is reflected off the surface at an angle allowing the fine lines to be visible;
 - b. The parallel lines on ribbed paper are spaced much more closely than most laid paper (about 40 lines per inch on ribbed, less on laid, which has variable number of lines per inch).

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NOTE – Since ribbed paper in the classic issues is considered to be ONLY a product of Continental BNCo, the only reported certified copy of the 24c Continental stamp (Scott #164) can only be identified because it is on ribbed paper.

3. **SILK PAPER** – Is an inaccurate description of this variety, as the tiny pieces of colored fiber found in some stamps, primarily of the 1873 regular issue, but occasionally seen on other early issues, are really tiny rag fragments found in the paper pulp. The silk paper found ONLY on the 1873 regular issue (aside from the color- fibered type already described) consists of extremely tiny BLACK fibers, which require strong magnification (15X+) to detect. The other type of “silk” paper is that found on the early revenue stamps. The difference is that the type used for revenue stamps has the rag fibers strewn over the paper during manufacture, then impressed into the paper, whereas the type found on regular issues are mixed directly into the paper pulp. The type found on the regular issues is described by catalogers as “paper with silk fibers” whereas the other type is “silk paper”. Still another type “Experimental Silk”, will be discussed with the Private Die Proprietary stamps.
4. **STRAW PAPER** – is, as the name implies, paper that contains tiny pieces of straw, presumably having gotten there during the pulp-mixing process. While the variety can occur on any issue, it is mostly found on the 1870-1889 Issues.
5. **DOUBLE PAPER** – Although not really a true paper type, it is rather a style consisting of two layers, a thin surface paper and a thicker backing paper. In the early period, it was patented and used in the 1870s, by Continental BNCo and is considered experimental in nature.
6. **VERY THIN PAPER** – Was used for some of the 1868 grilled issues. Brookman speculated that this paper was “experimental” and “probably to get better efficiency out of the grills” Another author speculates that by using thin paper the company could probably stack and grill a few sheets at a time, which would increase productivity. It is quite a lot thinner than the regular paper and you can easily ID it by flicking the edges and “feeling” the thinness.
7. **PART INDIA PAPER** – This unusual variety is only found on a few denominations of the 1851 issue stamps. India paper will be further discussed in the Essay-Proof category later in this article and it is not known why a part-india paper was used on some printing of the 3c and 12c values, but it was likely experimental in nature.

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1877-1894 ISSUES

From about 1877 onward, the paper type is considered “soft” although the Continental BNCo was still using mostly hard paper, but starting switching over to a more “intermediate” type of wove paper, which is (as the name implies!) neither hard nor soft, but sort of ‘in-between’. It causes many novices and even more experienced collectors significant problems in identification. When the paper is considered truly intermediate, experts have devised a simple, but controversial method of classification – it is considered the lowest-priced variety.

1895-1938 ISSUES

VARIETIES FOUND ON THESE ISSUES

1. **WATERMARKED PAPER** – Although, of course, a watermark is not a TYPE of paper, it seems appropriate and advisable to include some facts about watermarks in this article. A watermark is a translucent impression in paper that allows more light through the affected areas. It is created during the paper-making process by impressing into the moist paper of a molded wire form called a dandy roll. Watermarks are or were used on a great many types of security paper dating back well before the invention of postage stamps. For United States postage stamps, only two forms of watermark were used, the initials “U-S-P-S” (which, of course, represents “United States Postal Service”), which was used in a double-line form beginning with the 1895 regular issue, and a single-line form beginning about 1910. Some Revenue stamps received a “USIR” (“United States Internal Revenue”) watermark. Other watermarks were used on postal cards (“USPOD”) and entires (many types). Watermarks are detected by viewing the stamp from the BACK of the stamp, usually by immersing it in watermark fluid in a tray made of black material, , which aids in revealing the watermark, and if correctly used, will not harm the stamp. Watermarks were used on most United States stamps issued between 1895 and 1917 and were last used in 1938. Watermarks can found in several different positions including normal, reversed, inverted and inverted and reversed. In the issues between 1895 and 1903, the paper was fed through the press so that the watermark letters read horizontally on 400-subject sheets and vertically on 200-subject sheets. While watermark varieties are generally only of interest to the specialist, some are given premium status by catalogers, so the ability of the collector to detect the watermark correctly is important, not only for basic identification when stamps were produced with BOTH types of watermark – as was the case during the period of the Washington-Franklin Issues of 1908-1917 – but also to be able to identify a premium watermark.
 - a. **STITCH WATERMARK** – this is a sub-variety which consists of a row of short parallel lines caused by the stiches which joined the end of the band on which the paper pulp is first formed. They can be found both vertical and

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horizontal on many U.S. Issues beginning from the earliest, and could have been listed in this article starting with the 1847 Issue, but seem more appropriate here, after covering the basic watermarking facts, rather than BEFORE those facts were presented!

2. **BLUISH PAPER** – In 1909 this paper was made with 35 percent rag stock instead of using 100% wood pulp. This paper is actually GRAY, not blue, and I can find no reference to explain WHY it is called “blue” paper, since that term is quite misleading.

Tip – The gray paper can be clearly seen on both sides of stamp. It can be better detected when the stamp is placed on either ORANGE or YELLOW paper, which causes the gray color to “pop” out. Also, for reasons not known to me, but probably owing to the thickness of the paper, the watermark is more prominent and appears heavier than on normal paper.

3. **CHINA CLAY PAPER** – This type of paper, which had previously been listed by catalogs as a separate variety has, through research been shown to not be an “experimental” type of paper as previously believed, but rather was caused by silt in the water used in the paper mills. It has duly been removed from the catalogs and no longer is recognized as a listible type of paper, which is not to say that it is not of interest to specialists.
4. **ROTARY PRESS DOUBLE PAPER** – Differing from the double paper used in the 1870s which was a specifically-patented experimental paper, 20th Century double paper is caused by a break in the web (roll) of paper, which must be continuous. Therefore, a break must be lapped and pasted. This overlapping portion then, when printed on, results in double paper. In some cases the ends are joined with colored or transparent adhesive tape called “splices” or “splice-up”. Rarely, two splices are made (I have seen this on a 1920s coil issue), thus leaving three thicknesses of paper or a “triple splice”. All rotary press stamps may exist on double paper, but they are most commonly found on the 1938 Presidential Issue. These 20th century double papers are considered “freak” collectibles (not “errors”).
5. **LUMINESCENT PAPER , FLUORESCENCE, PHOSPHORESCENCE AND TAGGING-** Here is a subject that could easily deserve its own long article, but since (in many cases) only specialists would care enough to want to read a long article on this subject, it is important that readers be aware of these. In the same way that bluish paper is not a true TYPE of paper, but rather the result of something being added to the paper during the papermaking, so too are the additives we are going to describe here in that same category since they are things that are either added to the paper or to the surface of the paper, either during the papermaking or after, as a

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separate addition. Since the catalogs give separate listings to some of these, particularly if a stamp has been produced using more than one type of additive, thus creating different varieties of the same-appearing stamp or if the additive is omitted in error, thus deserving separate listings. So it is therefore important that collectors who want to obtain these differing varieties understand them. The simplest definition I have seen for this subject is this (from the USSS list of stamp terminology);

“Luminescence - the light given off by fluorescent brighteners and phosphorescent tagging in paper and ink when activated by ultraviolet light.”

HISTORY – The use of fluorescent or phosphorescent-reactive papers started basically c.1950s, to 1. Increase efficiency of mail processing of large quantities of mail and 2. Improve the brightness of papers and the appearance of inks used to print stamps. Up to then, sorting and postmarking of mail was a time-consuming task done mainly by hand, so when businesses began to use larger machines to do repetitive tasks, a private company (Pitney Bowes) developed a process of finding the stamp, flipping the mail, and then applying postmarks. Finding the stamps was the most difficult and that was overcome by applying a virtually invisible substance to the stamps so that the machinery could detect them. Thus the concept of using stamps that gave off light when viewed/irradiated with ultraviolet (UV) light was born. Fortunately, science developed taggants and inks that glow when exposed to UV light and machinery that could emit UV light onto the mail fed into it, thus locating the stamp rapidly. The machinery would then flip the letters so that all the stamps were in the same position then apply the postmarks in just a few seconds each. This resulted in large savings of labor and time.

THE TERMINOLOGY – “LUMINESCENCE” is a substance that glows when exposed to UV light and if it continues to glow for a few seconds after the UV light is shut off, then the coating on the stamp is “PHOSPHORESCENT”. If the stamp stops glowing when the UV light is shut off, it is called “FLUORESCENT” and the luminescent coating applied to the stamp is a “TAGGANT” or “TAGGING”. There are differing types of taggants listed by catalogers, which is explained more in detail in the Introduction section of those catalogs. Also, a much more complete coverage of this subject can be found on the website of the United States Stamp Society, and a special Luminescence Study Group exists as an individual offshoot club which has a very active membership.

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BACK OF BOOK ISSUES, INCLUDING REVENUES

INTRODUCTION – Most of the same paper types used to print 19th century stamps can be found on the counterpart Back of Book material produced by the same Banknote companies during the same time period, so try to implant in your memory the corresponding types made by the same company. In other words, aside from producing the regular issue stamps from 1873-1879, the Continental Banknote Company also produced most of the Official stamps, most of the Newspaper stamps, etc. No useful point is gained to repeat these same papers here, so this section only lists those papers not generally found earlier.

1. **PELURE PAPER** – Is a type of paper which is very thin and semi-transparent. It can be either wove or laid but it is normally seen only on wove paper. Several of the early Newspaper stamps are found on pelure paper (See PR2b, 3b, 4b, for example). They are premium items so worth watching for when examining your stamps.
2. **GLAZED-SURFACE PAPER** – Many Locals were printed on this paper, which can easily be identified by allowing light to reflect off the surface of the stamp, which will be shiny. Sometimes the glazing covers the whole stamp, but most often just the front surface. Adam's Express used a glazed-surface thin card for one of their stamps.
3. **SURFACE COLORED PAPER** – Again, some Locals were printed on paper with a colored surface, though unglazed. Many counterfeit Locals can be found on papers of differing colors from the originals, so pay close attention to the catalog description of the paper colors.
4. **COLORED PAPER** – Some Locals, Carriers, Telegraph Stamps, Revenues and Essays and Proofs are found on colored paper (the first Proprietary Stamp Issues and Beer stamps for example). They are all relatively easy to identify except possibly for the "PINK" paper used for some Private Die ("Match and Medicine") stamps. That pink paper is sometimes rather light and can be confused for ordinary white paper to the untrained eye.

Tip – Sometimes fakers use a pink Easter egg dye to color the ordinary cheaper "old" wove paper to make it into a more expensive pink paper variety. Usually, these can be detected by the fact that the dye used is much darker than the real pink paper, so buy some inexpensive examples of real pink paper to use as your reference copies. Sometimes the dye job is deceptively good, in which case, only trained experts can tell it is not genuine pink paper.

5. **SILK PAPER** – Differing from the 19th century silk paper found in the regular postage issues, the type found on first issue revenue stamps is considered "experimental" silk and only a few fibers, normally in blue, can be seen imbedded in the surface of the paper. The fibers can be located by using a strong (10X-30X) magnifying glass. The fibers can occur on the back or front of the stamp, but are most often more located on the back. The Second Issue revenue series of 1871 was printed on a special "chameleon" patented silk paper which is usually very light

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violet or pinkish in color (though many copies are simply “white” as well). This paper has many silk fibers so differs considerably from the experimental type found on the First revenue issues. The Third revenue issue of 1871-72 was also printed on the same paper as the Second issue.

The silk paper found in the Private Die Proprietary stamps (“Match and Medicine”) is either regular silk paper, which contains numerous silk fibers close to the surface OR experimental silk which only has a few fibers. The regular silk is very easy to identify, while experimental is not, and requires close inspection as suggested for the First revenue issues.

6. **OLD PAPER** – Is a description used exclusively on Match & Medicine stamps, but is misleading in that it is not a “different” type of wove paper than seen on other issues of that period (c. 1870s). In other words, it is ordinary wove paper, nothing special or different, and should not even be included here except that it has caused many novice collectors confusion believing that it is somehow different from other wove papers. It is not. It is used by catalogers only so the reader understands that it differs from another of the M&M paper listings – “watermarked” paper. I suppose the Editors could have chosen “Unwatermarked” instead of “Old”, but either way, the intent is the same.

ESSAYS AND PROOFS

INTRODUCTION

The difference between an essay and a proof is quite simple; an essay is a design that differs from the issued design, while a proof is an item that is the same design of the issued stamp. Different types of each exist, but that subject is beyond the scope of this article which is concerned only with paper types and watermarks. Because companies or individual who submitted proposed designs to the Post Office Department could choose any type of paper they wanted (usually to give the POD a selection of their chosen design as it would appear using different paper types or because a particular paper held ink better than other types so would show the image better as well). In short, essays demonstrated the quality of a firm’s work to the POD.

1. **INDIA PAPER** – plate and die proofs and many essays were printed on this paper, which is a very soft handmade wove paper which holds the impressions very well, so it was widely used for proofs. It can be distinguished from regular wove paper by the softness and the traces of tiny bamboo fibers in the paper which are often evident when dipped in watermark fluid. Sometimes these tiny fibers can also be noted with a strong (10x-30x) magnifier.

Tip – Fake stamps are commonly made from india proofs by adding perforations or gum or rebacking them to appear thicker, or all three. They can be quite deceptive, so look for the fibers as previously described, the usually too-perfect perms which often will not gauge correctly, the fake gum and the superior design image. Among the most often faked are Official stamps (particularly the high value State Department stamps), the Newspaper stamps, and many of the 1875-1880 Special Printings.

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2. **CARDBOARD** – Plain white card of various thicknesses were used to print both issued plate proofs, many trial color proofs as well as some essays. Colored card was also used for some essays, particularly the so-called “Shernikow” essays

Tip – Fake stamps are also made by shaving down the backs of card proofs to try to attain the thickness of wove paper, then adding gum and perfs and sometimes rebacking paper. These fakes can usually be detected in watermark fluid because of the varying thickness which shows up as patterns of light and dark while in the fluid or by holding it to the light and looking through the stamp which again, will reveal big patterns of light and dark area.

3. **TISSUE PAPER, ONIONSKIN OR GOLDBEATER’S SKIN PAPER** – Extremely thin paper used for some essays and proofs. Images printed on these papers are easily damaged, which usually was the exact intent, so as to prevent re-use since any attempt to remove them from an envelope they adhered to would result in their destruction. The 1864 group was printed on this paper and was patented by Henry Lowenberg.
4. **BOND PAPER** – A superior grade of high quality paper made wholly from rag pulp, it was used for many essays. It is so named because it was originally used to print Government bonds. Can be found in both white and colored bond when used for essays
5. **GLAZED PAPER** – Although noted earlier, it was used for many essays, so is worth repeating here. It can be light, or quite heavy, and can be easily identified because it is shiny when viewed across reflected light;
6. **FRANCIS PATENT PAPER** – Is a dark blue experimental thick paper that turns DARK BROWN to BLACK when exposed to an acid. Francis intended it as a re-use prevention.
7. **PROOF PAPER** – is thicker than india or bond and is a handmade rice paper of varying thickness. Many essays were printed on this proof paper;
8. **IVORY PAPER** – Is a glazed surface paper, similar to glazed card, but thinner, and similar to glazed paper.
9. **SAFETY PAPERS** – Were used mostly in the 1860s-1870s to prevent re-use. All are easy to identify.
10. **SAFETY OVERPRINTS OR UNDERPRINTS** – Not a paper type but for the prevention of reuse these patterns were printed over or under the basic stamp design. All are scarce to rare.
11. **CHEMICAL PAPERS** – Similar in intent and use as the Francis Patent listed here, they can be found in different colors and thicknesses;

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PAPERS USED FOR ENTIRES

INTRODUCTION

Describing the colors used for the papers of entires is difficult to do in words, so my suggestion to collectors is to build a reference group of each of the different papers that exist. While this may sound difficult, it actually is rather simple – contact the dealers who sell entires and cut squares and ask them to sell you a cut square of each of the different colors. There are also commercially-available color guides for entires/cut squares, some of which use actual cut-out small examples taken from cut squares or entires. The following, except for “white” are arranged alphabetically.

1. **WHITE** – Both laid paper and wove paper were used for entires. White paper used for entires can be found in many different shades.
2. **BLUE** - Used over a long period and exists in several different shades;
3. **BROWN** – used both glazed and unglazed, mostly in the 1910-30 period;
4. **BUFF** – darker than white, similar to **CREAM** and **ORIENTAL BUFF**, but usually darker. Found in several different shades, particularly in the 1860s issues.
5. **CANARY** – is the same as **LEMON**, a dark yellow shade of paper.
6. **CREAM** – a lighter shade of buff. Used 1870-78.
7. **FAWN** – a darker shade of buff, almost brown in color, used 1874-86.
8. **LEMON** – use only 1873-76 on Post Office Department entires.
9. **MANILA** – a brownish color, used for all wrappers and some entires.
10. **AMBER-MANILA** – a lighter shade of manila, used 1886-98.
11. **ORANGE** – used only 1861-1883.
12. **ORIENTAL BUFF** – a lighter buff shade, lighter also than cream, used 1886-1920.

This concludes our article on papers and watermarks used for United States stamp and entires.