

Proposal for Identifying Variations of Cast Iron Still Banks^{1,*}

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Introduction

In the mechanical bank hobby variations have been of interest for a long time. Indeed, in Norman's catalog of mechanical banks² nearly half of the American cast iron banks listed are identified as variations. By comparison, in Moore³ a mere twenty-five entries are called variations. Generally speaking, collectors of cast iron still banks have only a budding interest in variations that seems focused on building banks and color variations of common figural banks.

Current interest in still bank variations aside, a significant problem exists: there is no accepted definition of the term. Thus, the mechanical bank variations listed in Norman were identified by a panel of experts whose criteria and selections are not explained. Although it seems generally accepted that variations are banks that closely resemble one another but are not identical, there are no objective criteria that collectors can use to discuss and decide which banks are variations and why.

In the still bank hobby we could follow the same 'selection by experts' path, and without a better idea are doomed to do so. Instead, I propose that variation be defined based on the process used to produce the banks. The production process also can be used to classify variations (that is, to sub-divide them in informative ways). When this approach is followed collectors who understand the production process can identify and classify variations and can form their own opinions about variations identified by others. The approach can be used with cast iron toys, etc., and in addition easily can be extended to banks made using any other production process.

Definitions of "Type" and "Variation"

The production process for cast iron banks is summarized in the Chart at the end of the article. It began with the creation of a design concept and continued through assembly and finishing of banks in large numbers. In this context the following definitions are proposed for the terms Type and Variation (it's not possible to explain Variation without also explaining Type):⁴

"Type" describes all banks derived from given wood and lead master patterns. If new wood and lead master patterns were made, or one or both existing master pattern were modified, then banks made from these patterns are of a new Type.

"Variation" describes banks of the same Type that are different as a result of a change made during any of the production steps that followed completion of the master patterns.

Basing the definitions of Type and Variation on the production process seems to represent a new approach, although I acknowledge the contribution made by F. H. Griffith. In his "new setup

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with respect to 'type' mechanical banks"⁵ he distinguished type and variety. He explained that when banks are separate types the differences "go beyond one (bank) just being a variety of the other." Griffith seemed to believe that when analyzing differences between banks it is important to consider the need to change patterns.⁶ However, he did not define type and variety based on the production process and did not equate a change of master patterns with a new type.

Classification of Variations

Although these definitions are sufficient to identify a Variation, it seems useful to also classify it by specifying where in the production process the change occurred that resulted in the Variation. In the Chart the production steps that followed completion of the master patterns have been grouped under the headings: Tooling, Casting, Assembly, and Finishing. In this way, a Variation of a cast iron bank can be classified as a Pattern Variation, Casting Variation, Assembly Variation, or Finishing Variation. These terms are not unlike Moore's "paint and casting variations" and Norman's "casting and finish variations," although, of course, they include additional classifications.

Examples and Discussion

Several examples of differences between banks are given in Table 1. Note that column 5 indicates whether a given difference points to a Variation or Type, and if a Variation, columns 6 to 9 indicate its classification. A few examples will be discussed in order to illustrate how differences can be analyzed.

Examples 1 and 9

Example 1 concerns banks painted different colors. Of course, this difference resulted during the finishing step when the paint color was changed. Therefore, banks that appear identical except for paint color are Variations, in particular, Finish Variations.

Example 9 is about banks made of different metals. This difference resulted when molten aluminum rather than iron was poured into a sand mold. Therefore, banks that are identical except for the metal used to cast them also are Variations, in particular Casting Variations.

Example 17

It is obvious from looking at the "Santa Claus" and "Santa with Tree" that they are related; except for the tree the two banks appear identical. Still, it seems clear that their production required separate master patterns. Therefore, they are Types.

Example 18

Discussion of the first three examples might make it seem that deciding between Variation and Type is trivial. But the next example is quite challenging. Example 18 describes banks that appear identical except for the fastener. Probably the turn pin came first,⁷ and the switch to screws was made to reduce assembly time. But, regardless which fastener was used first it seems certain that a second lead pattern or changes to the original one had to be made. Therefore the banks with turn pins and screws are separate Types.

Here's how I reached this conclusion. Of course, any bank with a screw fastener requires a "boss" or post inside the bank that can be drilled and tapped to accept the screw. When I inspected a "Elephant with Howdah (small)" with screw fastener (because I don't have a Small Reindeer with screw fastener) I found the post to be carefully formed and positioned exactly opposite the hole for the screw head. If the lead master pattern were originally made without the boss then the boss had to be added to use the screw fastener. On the other hand, if the master pattern originally had the boss, then the boss had to be removed to use the turn pin. Therefore, regardless which fastener was used first the lead pattern would have had to be modified. *If it weren't each working pattern would have required modification separately and the cast iron parts produced would not all be identical.*

Whether the wood master pattern required modification in the change between turn pin and screw fasteners depended on how much detail had been put in the pattern. Potentially, it provided for neither a turn pin nor screw. For example, the wood pattern for the "Lion on Tub" that Bill Robison displayed at the Marietta convention had no holes or even indentations to mark the location of fasteners. On the other hand, Bill has a pattern for a mail box bank with a counter sink for a screw head. (Because the halves of the pattern are glued together it isn't possible to look inside to see if a boss is present.)

It's okay if you're not totally convinced. I can't be 100% certain that the lead master pattern was modified or that the wood pattern wasn't. If I could inspect the patterns for the "Small Reindeer" with turn pin and screw I would know for sure when the changes were made. But I haven't seen them and they may no longer exist. Therefore I have had to consider the information available, weigh the possibilities, and decide which seems most likely.

Examples 13 and 25

Examples 13 and 25 involve pairs of banks in which one is "plain" and the other has an advertising or commemorative message. Although the difference is similar, it seems that the changes necessary to add the messages occurred at different stages of the production process so that in the first case we're dealing with Variations and in the second with separate Types.

The Mulligan both with the slot in the back and slot between legs is known with various advertising messages.⁸ Photo 1 shows part of a collection of such banks. Note the unusual raised area that surrounds the lettering. Bill Robison believes that these banks were made by stamping the advertising message onto sheet metal that then was attached to working patterns. When the sand molds were made the message and the impression of the metal itself were transferred to the mold and hence to the final casting. As Bill notes, when production was finished the message could be removed and the working patterns used again with other messages. I conclude, therefore, that these banks are Variations.

The "GOP" message could have been added to the standard "Art Deco Elephant" in the same way. *But it wasn't.* Photo 2 shows the wood pattern for the GOP bank, which is in Bill Robison's collection. It is clear in this case that a new wood pattern was made or the existing pattern was modified. So these banks are separate Types.

Why were different methods used? Until foundry records are found we only can surmise, but two reasons seem likely. The first was that by adding the message to the working pattern the foundry could profitably fill orders for as few as one gross of banks with a given message (see

ref. 7). On the other hand the GOP bank must have been made in normal production quantities, as evidenced by its "C" scarcity rating in Moore. In the latter case creating master patterns would have allowed making any number of working patterns and also would have yielded a higher quality product.

Example 21

This final example, which was provided by Bill Robison, illustrates that sometimes one can be quite certain of *what* happened although *why* remains anyone's guess. The two specimens of a unlisted "Bank" building in Photo 3 are both 5 5/8" tall and measured just below the roof they are 4 1/4" wide by 3 3/8" deep. Both appear to be old banks.

However, there are many differences between the two specimens. For example, Photo 4 shows how the blocks at the building corners have distinct shapes, and the trim of the windows is detailed differently. In addition, Bill notes that the bank on the right has thinner (finer) lettering, has roof tiles that are shaped differently, and weighs weights 1 lb. 8 ozs., which is 5 ozs. less than the specimen on the left.

These facts make it quite clear that different master patterns were used to make the two specimens, and therefore they are separate Types. The detail and weight also suggest that the bank on the right is the original, with that on the left being a contemporary (old) copy that is well made but not quite so refined. What is not clear is why new patterns would have been made, particularly given that this is a scarce bank (and therefore at the time of manufacture apparently was not a wildly popular item in the stores). One possibility is that the original patterns were damaged or lost. Perhaps a reader can suggest a better explanation?

Catalog Descriptions

The examples make it clear that *information* is crucial to identifying differences between banks and to reaching reasoned conclusions about how these differences occurred. Moore in particular includes a wealth of information. Therefore, I want to briefly suggest how catalog descriptions might be made more complete and how Type and Variation information could be incorporated into existing catalogs. (The content of descriptions in new catalogs is very important but is too complex a subject to be addressed here.)

For example, in the discussion of Example 18 it was concluded that the Small Reindeer bank with turn pin and with screw fastener are separate Types. Moore has only one listing for a Small Reindeer bank and pictures a bank with screw fastener. In an updated edition it would be possible to add a second listing for the turn pin Type. But it might be more practical to expand the current description as follows:

736. Small Reindeer (Elk). CI; 6 1/4" x 4 7/8" x 2 1/8"; slot along spine.

Type 1: Arcade 1913-1932, turn pin; U.S., **A.** Finish Variations⁹: painted gold, red, green, blue or orange. Banks by Arcade may have a decal.

Type 2: A.C. Williams 1910-1935, screw fastener, head to right; U.S., **A.** Finish Variations: painted gold, red, green, or blue.

In the expanded description dimensions include length, height and depth, the finish is specified, and the slot location is noted. Indication of the two Types is accomplished using the "Type 1" and "Type 2" designations introduced by Griffith (see ref. 4). Finally, known Variations are listed and it is noted that a decal may be found on some banks manufactured by Arcade.

Another situation found in existing catalogs is Variations being listed separately. This can be addressed by adding a note in updated editions. For example, in the case of "Bear on Hind Legs AL," Moore 711: the description would note: "A Casting Variation of No. 710."

Conclusions

There is much more that could be said about variations and the definitions that have been proposed, and it would be worthwhile to consider additional examples. But, perhaps what needs to be addressed now is the question: 'So what?' Because the concept of variation is useful in bank collecting and the term is going to be increasingly important in the still bank hobby, the answer is another question: Will variations be what a few experts pronounce them to be, or will Variations be identified using a process that any knowledgeable collector can apply and understand?

It is understood that this system may not be popular with collectors familiar with mechanical bank variations who believe that the only important differences are those in castings. Perhaps these positions can be bridged if everyone agrees that recognition of a variation isn't an endorsement of its value or a recommendation that it be collected.

I will look forward to feedback on this proposal, and am grateful to Bob McCumber, Frank Kidd, and Bill Robison for the input and guidance that they already have provided.

Descriptions of Photos¹⁰

Photo 1: "Mulligan" banks with advertising on backs.

Photo 2: Wood pattern for "Art Deco Elephant ('GOP')," M-450. (Most letters have detached.)

Photo 3: Two specimens of a "Bank" building, both M-N/L.

Photo 4: Details of the banks in Photo 3.

Chart: Production Process for Cast Iron Banks¹¹

Design: The bank's creator conceived of the idea for the bank, prepared drawings, and (if the design was complex) built working models.

Master Patterns: The pattern maker created a wood pattern. If management gave its go-ahead he replicated the wood pattern in lead (or white metal) and perfected the lead pattern. In some cases details or lettering were added to the lead pattern.

Working Patterns: In preparation for mold making at a manufacturing pace, multiple brass (or bronze) working patterns were made by replicating the lead master pattern. Any casting defects were repaired and the finish was refined on each pattern. Working patterns might be machined to provide for turn-pin or threaded fasteners or have details or lettering attached.

Working Pattern Tree: The parts of the working patterns were soldered to brass rods or bars to create working pattern trees. These facilitated handling the working patterns when making production molds.

Match Mold: Match molds complementary to each pattern tree were made of hardened sand.

Production Molds: Molders used the working pattern tree and complementary match molds to make sand molds and prepared them for casting.

Cast Metal: The cupola foreman prepared the molten cast iron and the cupola crew poured it in each mold.

Shake Out: The shake out crew opened the molds, broke the parts off the castings, and placed each kind of part into a separate barrel.

Grinding and Machining: The grinders removed remnants of gate from each cast part and removed flash as necessary. They ground a smooth finish onto parts that were going to be plated. In the machine shop parts were drilled and tapped.

Tumbling (Cleaning): Parts were tumbled with (for example) agate balls or iron stars to clean and lightly polish them in preparation for finishing.

Assembly: Banks were assembled from the cast parts and other parts such as stamped wheels. Assembly might include touching up parts and turn pins in order to achieve desired fit.

Finishing: Each bank would either be painted or plated. Painting involved dipping the bank and also might have included hand brushing to apply details like eyes and mouth. Labels or decals were added. If the bank was painted, finishing occurred last; if the bank was plated, then assembly was last.

TOOLING

CASTING

ASSEMBLY

FINISHING

References

- ¹ Scheduled for publication in *Penny Bank Post*, December 2003.
- ² Bill Norman, "The Bank Book: The Encyclopedia of Mechanical Bank Collecting," p. 15.
- ³ Andy and Susan Moore, "The Penny Bank Book: Collecting Still Banks," Schiffer Publishing Ltd., Exton, Pennsylvania.
- ⁴ In this article, when "Type" or "Variation" are capitalized or within quotation marks they are being used as defined here.
- ⁵ F. H. Griffith, "Bureau Bank...", *HOBBIES Magazine*, November 1967 and "'Type' Mechanical Banks," April 1968. (These articles can be viewed on the MBCA web site.)
- ⁶ For example, in F. H. Griffith, "The Three U.S. Banks," *HOBBIES Magazine*, December 1967, he notes: "these variations, while slight in nature, still required a different pattern in each case, and this is where the main importance lies."
- ⁷ Moore dates the "Give Me a Penny" with turn pin, M-167, as circa 1894, and that with screw, M-166, as 1902-1926. And, Bill Robison has told me that a study of the "Trick Dog" mechanical bank points to the turn pin being used before the screw.
- ⁸ Ralph D. Dye, Jr., "Super Salesman," *Penny Bank Post*, 1984 Summer/Fall, p. 10.
- ⁹ Michael Holz, "Animal Bank Color Variations," *Penny Bank Post*, December 2002, p. 17. Tom Stoddard, "A Kind Word for A and B Banks," *Penny Bank Post*, 1995, No. 2, p. 4.
- ¹⁰ Photos 3 and 4 are used with permission of Bill Robison.
- ¹¹ For more information see: Notes by Fritz Kokesh, "Patterns and the Molding of Cast Iron Banks, Seminar by Bill Robison," *Penny Bank Post*, April 2003, p.5.

Table 1: Examples of Differences When Comparing Cast Iron Still Banks					Var. Classification*				Explanation
Example No.	Difference	Examples	Catalog References	Type or Variation?	Pat	Cas	Asm	Fin	
1	Paint Color	Gold and Blue baseball player Donkey, various colors	M-18 (gold) & M-19 (blue) M-499	Variation				X	In the Appendix in Moore, M-19 is said to be a "Paint variation. Hard to find."
2	Extent of Decoration	Multichromed vs. gold lion on tub	M-753 (multichromed) & M-746 (gold)	Variation				X	
3	Painted vs. Plated Finish	Large lion painted gold vs. nickel plated	M-754 (gold)	Variation				X	
4	Nickel plated vs. Electro-oxidized	"Children's Safe Deposit" safe	ISB-191 (nickel plated)	Variation				X	
5	Component Replaced: Standard Part	Wheeled Lion	M-760	Variation			X		According to Mike Henry six styles of wheels are seen on the wheeled-animal banks. These wheels were used on various toys, not just these banks.
6	Component Replaced: Part Specific to the Bank	Taxis with Rubber Tires vs. Steel Wheels	M-1489 (rubber) & M-1493 (steel) "Yellow Taxi"	Variation?			X?		This is an Assembly Variation if the original master patterns included the wheel for the rubber tire. But, if the steel wheel came first and the master patterns had to be modified to include the wheel rim, then this is a new Type.
7	Component Added	"Japanese Safe" with plain interior vs. with wood dividers	ISB-300	Variation			X		
8	Component Deleted	"State Bank" Buildings with and without cap	M-1081 & PBP April 2002	Variation			X		The length of the turn pin also would need to be adjusted.
9	Cast from Different Metal	"Bear on Hind Legs" iron vs. aluminum	M-710 (iron) & M-711 (aluminum)	Variation		X			
10	Addition of a Clock	"Chandlers Bank" without and with clock	Norman-1720 (plain) & Norman-1730 (with clock)	Variation	X				If the original design anticipated the bank being made with or without a clock or other insert, then modification of the working pattern might have been as simple as removing an insert. If not, the working pattern for the bank without clock could have been machined to make an opening for the clock. However, it also is possible that there were distinct master patterns.
11	Removal of a Design Feature	"New England Church" without cross on steeple vs. with cross	M-986 (without cross)	Variation	X				Regardless which way the bank was made originally, working patterns easily could be modified to delete or add the cross.
12	Location of Turn Pin or Screw	"Lion, Ears Up" -- left vs. right oriented turn pin	M-757 (left) & eBay Lot 1006920023	Variation	X				The existence of right and left hand versions is consistent with working patterns being machined to provide for fasterers. The right-to-left change would have occurred when additional working patterns were made.
13	Different Embedded Lettering-- addition of advertising	"Mulligan" w/o and w/ Advertising "Satchel" "The Keyless" and "Lumberman's" twin dial safes	M-177 (plain) & M-179 (with advertising) M-1268 ISB-122 (Keyless) & ISB-123 (Lumber...)	Variation	X				For smaller production runs with banks that had a suitably flat area, advertising probably was added by stamping the message onto sheet metal and attaching it to a working pattern. It also would be possible to solder individual letters onto a working pattern to create a message.

Example No.	Difference	Examples	Catalog References	Type or Variation?	Var. Classification*				Explanation
					Pat	Cas	Asm	Fin	
14	Different Embedded Lettering--copyright notice misspelling	"Taft and Sherman" (also called "Smiling Jim and Peaceful Bill")	M-109	Variation?	X?				Result of misstamping production pattern? See discussion in <i>PBP</i> 1984 S/F and 1985 No. 1.
15	Size--fractional difference	"Prancing Horse" vs. "Prancing Horse, Canadian"	M-517 (U.S.) & M-518 (Canadian)	Variation	X				Assuming that both banks are based on the same master patterns, is the small difference a result of a different alloy being used for casting working patterns for the Canadian banks? Or was it because working patterns for the Canadian banks were replicated from a working pattern rather the master pattern?
16	Size--obvious difference	Elephant with Howdah Columbia	M-459 (small) & M-474 (large) M-1073 & M-1077	Type					Separate wood and lead master patterns would be used to produce the same design in different sizes. (Note that alignment notches are on different sides for the Elephant banks.)
17	Related but Distinct Designs	"Santa Claus" without tree and "Santa with Tree"	M-59 (w/o tree) & M-61 (w/ tree)	Type					Would clearly involve separate master patterns.
18	Means of Fastening Parts	"Small Reindeer" with turn pin vs. screw	M-736 (with screw)	Type					Probably the lead master pattern was machined to provide for fasteners and had to be modified when fastener style was changed.
19	Coin Slot Location	Mulligan	M-177 (slot in back) & M-178 (slot between legs)	Type					Undoubtedly the slot position was changed in the master patterns. (Perhaps the slot was moved between the legs to allow more room for advertising messages on the back?)
20	Parts Attached vs. Loose	"White City Barrel #1 on Cart", w/ barrel attached vs. separate	M-907 (barrel attached)	Type					A modification of the master pattern for the cart would be necessary to widen the horizontal support for a recessed screw. Note that Moore warns against the "wrong cart."
21	Portions of the Main Body Substituted	"Bank" building Two versions of "Burglarproof Safe"	Both M-N/L ISB-251 (combo and key) & ISB-252 (combo only)	Type					Both "Bank" buildings are 5 5/8" tall but they differ in numerous details such as the style of corner block and trim around the windows.
22	Change in Body Details	White City Safes w/ recess for wing nut	ISB-174	Type					Modification of the lead master pattern would be necessary to create or remove the recess.
23	Coins Removed via Trap vs. by Disassembling Bank	Duck	M-624 (KLT) & M-630 (screw)	Type					Because this modification would require considerable labor, it seems likely that the master patterns would be modified rather than each of many working patterns.
24	Different Embedded Lettering--bank name	"Kodak Bank" and "Coin Bank"	M-875 (Kodak Bank)	Type					It seems likely that the master pattern would have been modified so each of many working patterns would not have to be.
25	Different Embedded Lettering--addition of advertising	"Art Deco Elephant" plain and w/ "GOP"	M-449 (plain) & M-450 (with "GOP")	Type					Bill Robison has the wood master pattern for this bank and it has the lettering.
*Variation Classifications									
Pat = working pattern creation and adjustment									
Cas = casting									
Asm = assembly									
Fin = finishing									



Photo 1. "Mulligan" banks with advertising on backs.



Photo 2. Wood pattern for "Art Deco Elephant ('GOP')," M-450. (Most letters have detached.)



Photo 3. Two specimens of a "Bank" building, both M-N/L.



Photo 4. Details of the banks in Photo 3.