

US Meccano, 1922 – 1929

by Kendrick Bisset

The second chapter of Meccano in the US starts in 1922, when the Meccano Company, Inc. (the United States company) opened their own factory in Elizabeth, New Jersey. That city is not far from New York City; it was about a 22 minute ride by the Pennsylvania Railroad from Penn Station in New York City to the Elizabeth station. Elizabeth had (and still has) a seaport. Being west of the Hudson River, it has easy access to railroad service to the rest of the country. (From Bush Terminal, railroad cars need to be moved by car float across the Hudson River.)

The first chapter of US Meccano history involved a number of intertwined threads. This chapter is pretty tame in comparison; it ‘only’ involves the new factory and the parts it produced, the people, and the Meccano Magazine.

Frank Hornby arrived in New York on June 5, 1922, presumably to formally open the new factory, which had been announced in the March-April 1922 issue of the English *Meccano Magazine*, and in the April-May 1922 issue of the US *Meccano Magazine*. The new address was 1004 Elizabeth Avenue, Elizabeth, New Jersey.

The British *Meccano Magazine* for September 1922 had the start of an article on the visit of Frank Hornby and the “Editor” to both the new factory and to Canada. That article was concluded in the October 1922 issue. The US *Meccano Magazine* did not mention that Frank Hornby had visited. I had searched ship’s manifests for Frank Hornby’s visits to the US, but there were, of course, no searches for “the Editor”. By 1922, Ellison Hawks had become the editor of the Meccano Magazine, but that name did not appear in any of the ship’s manifests of the time. The British MM articles included the dates of departure, dates of arrival, and ship’s names for Frank Hornby’s trip with “the Editor” to the US, so it was fairly easy to find the original manifest for Mr. Hornby’s visit. One line below Frank Hornby’s name is George Jones – the person who opened the New York office and formed the Meccano Company, Inc. The record for Mr. Jones

included the notation that he had previously visited the US in 1913/1914. Presumably, George Jones served as “The Editor” for these British MM articles.

A side event was reported when Frank Hornby visited the Elizabeth factory and personnel. A radio receiver had been constructed at the factory using Meccano parts. This enthralled Mr. Hornby, and not only was the radio put into production in the US, but he took one back to England where Meccano introduced a radio set (not the same as the US version) for the British market. There were some difficulties with the licensing in England, so the design had to be changed, but radio became a big topic in both *Meccano Magazines*. The US version of the radio is only listed in 1922 manuals and catalogs, so apparently not many radios were made. At this writing, no original US radio outfits have been seen.

The Meccano outfits continued to be Numbers 0 through 6, with “accessory” outfits 0a through 5a. These latter would provide the parts to increase the size of an outfit to the next larger set. Thus, if one owned a No. 3 outfit, for example, combining it with a 3a outfit would provide all of the parts in a No. 4 outfit. The outfits were progressive; that is, each outfit contained all of the parts in the next smaller outfit, plus some additional parts. In 1922 in England, outfit No. 7 was added, along with 6a. In the US, though, the No. 7 and 6a were not sold. The Electrical Outfit, and the Inventors Outfits A and B (the former not labeled as “A” in the US) were apparently not sold after 1922. Outfits 1x, 2x, and 3x continued to be sold with electric motors included, alongside the motorless 1, 2, and 3 outfits. In 1928, an “x” was added to the number of the 4, 5, and 6 outfits, presumably so that all outfits with motors had an “x” in the outfit number. Remember, though, that a 5x outfit had been sold from 1917 through 1923, with the “x” designating that the outfit contained Inventors Accessory outfit parts in addition to the usual No. 5 parts.

I suspect that most US manuals before around 1920 were printed in England, except for two identified in the previous chapter. The picture is less clear from 1920 through 1923. Around 1918, a print code started appearing on British manuals. This took the form of Month Year / Quantity (in thousands); at first, a

forward slash separated the month and year, but that slash soon disappeared. US manuals did not have print codes until 1921, when “3-21/80” appeared on the front cover. In 1923, a code of “C 0232.5” (yes, that number is what is printed) appeared on a No. 4-6 Outfit manual, and “B-052340” appeared on a 0-3 Outfit manual. From that time, US manuals carried this form of print code, sometimes with a “C”, “Bd”, or “Bn” at the beginning. This leads me to suspect that manuals were now being printed in the US. These manuals were different from the British manuals, though the models were the same. A side note, Meccano (Hornby) trains were shown from 1922 in British manuals, but not mentioned in US manuals until 1928.

How was the factory equipped? As far as I know, there are no records which would provide a clear answer. The parts produced offer some clues. It seems that the production capabilities at Elizabeth slowly increased over the years. As an example, eccentrics (part 130) were originally nickel plated, and presumably from England. Later, they were tin plated, so probably made in the new factory.

In the 1925 “*The Jackie Coogan Book*”, a visit to the Meccano factory is described. The letters from Jackie and his father are addressed to the Elizabeth factory, and it states that “Jackie was in New York and that he wanted to come over to Elizabeth to inspect the Meccano factory” with Frank Hornby. The description of the visit in the British *Meccano Magazine* is headlined “Jackie Coogan’s visit to the American Meccano Factory” (Vol. XI No. 12, February 1926, pp. 102 ff.). This makes it almost certain that the visit took place in Elizabeth. An article also appeared in the November-December 1925 US *Meccano Magazine*, titled “When Jackie Coogan Visited Me”. The booklet (and the nearly identical articles in both MMs) describes, among other things, a visit to the nickel plating department. This would imply that Elizabeth could do such plating, but all of the strips, etc., seem to be tin plated. A strong suggestion that both tin and nickel plating was done in the US lies in the angle bracket, part # 12. As described below, US parts seem to have different rounding on the ends than Liverpool production, and this appears in the angle bracket as well. In US outfits shortly after 1922, these are tin

plated, but later they appear in nickel, with the same distinctive corners as the tin plated parts. The same variants appear in part # 10, the flat bracket or fishplate.

The tin plating on most of the parts inspected has turned to a smooth thin dark gray finish. This tarnish looks very even on many parts, mottled on some, and on a few is non-existent. On the latter, the tin can be seen in its original shining finish. Clean tin has a slightly cooler color than nickel plating, and the difference can be seen when the two are compared directly. It is hard to describe the difference in words well enough to allow identification of a lone part.

The question remains whether Frank Hornby actually visited with Jackie Coogan, or if someone else stood in for Mr. Hornby. The letters from the Coogans were dated late March, 1925, but Frank Hornby did not visit the US until 21 September through very late October, 1925 (the exact date of his departure is not known, but was probably around 30 October 1925; he arrived in England 8 November). Did Jackie’s visit actually occur in the fall of 1925 when Frank Hornby was in the US, or did another person meet with Jackie and his father for the visit?

US Meccano Parts

The Elizabeth factory did make Meccano parts very similar to those from England, but there were differences.

Bosses: Until about 1927, all parts which fastened to axles (pulleys, gears, wheels, etc.) except couplings were threaded on one side only for the set screw. This is known as “single tapped”, because there is only one hole tapped to accept the screw. In English production from around 1927 onward, the hole was drilled and tapped completely through the boss, making two holes, and known as “double tapped”. It appears that the only US part to receive double tapping was the coupling (Part 63). The coupling needed to be double tapped for several models and standard mechanisms; examples from US outfits are double tapped #7-32. All other US bosses are single tapped #7-32.

Parts 1 – 6, 10 – 12, 44 – 48: Strips and angle brackets had been coming from Structo since 1920, and it is possible that some Structo tooling had been moved to Bush Terminal after Meccano bought the Structo construction toy line in December 1919. This move might have included the tin plating equipment, too, since a large portion of subsequent US production was tin plated. Structo and US Meccano strips were made from 1/2" wide strap steel. In British production, strips 5-1/2" (11 hole) and shorter were stamped from a sheet. This latter method allowed the ends of the strips to be fully rounded, with a 1/4" radius. The larger strips (7-1/2", 9-1/2", and 12-1/2") were made from strap steel (incidentally, thicker than the sheet used for smaller strips), so the ends could not easily be fully rounded. The radius of the end of these longer strips was 9/32", leaving a small 'corner' between the rounding and the edge of the strip. Since US strips were all made from strap, a similar 'corner' is present on all US made strips, including the shorter strips. Many parts are made from strips, most apparently Double Angle Strips and Double Bent Strips. US Meccano versions of the derivative parts, as well as Flat Brackets (Fishplates) and Angle Brackets (with a slotted hole) also were made from strap steel, and so also exhibit the 'corners'. Another distinguishing detail is that strips made in the US were not stamped with any writing; in fact, most (but not all) US manufactured parts are not stamped. Nearly all British production was stamped if possible after around 1919. Meccanoindex.co.uk has a description of the stampings under "Meccano Parts Drectory".

Part 19b: The 3" pulley, part 19b was introduced in 1917 as a stamped metal assembly with four spokes. In England it had been replaced around 1920 by a more solid version with holes and slots. However, US outfits continued using the four spoke version through 1927, long after the four spoke version was obsolete in England. It is very tempting to suggest that the old tooling from Liverpool were sent over to the US factory. This probably occurred very early in the life of the Elizabeth factory. These US parts can be identified by the tapping in the boss; US production is all tapped #7-32 instead of 5/32" BSW.

That is not the end of the story on the 3" pulley. US manufacture changed to the slotted version in 1928.

Again, the design had changed in England around 1928, but the change was very subtle. The design includes "rivets" to keep the two plates tight together, so that string will not slip between the two plates of the pulley when a load is applied. The "rivets" are formed by pressing a bit of a tube around the hole on one side, and providing a slightly larger hole on the other plate. Once the plates are assembled, the tube is then pressed over the plate to form a rivet, or perhaps more accurately a grommet. The 'old' design had four tubes on one plate, and four oversize holes on the other. The 'new' (circa 1928) design in England changed this to two tubes and two oversize holes on each plate, which meant that both plates could be made from the same tooling. This change requires close examination to determine which version was used on a particular pulley. US versions perpetuated the older, 'non symmetrical' version, even through the Gilbert production after 1930. The suspicion is that the old tooling from England was sent to the US, shortly before Gilbert took over. It appears that the tooling included the "Meccano" stamping; even during Gilbert production, these wheels were stamped "Meccano".

Part 20b: The 3/4" flanged wheel, part 20b, was introduced in 1927, a few years before the Elizabeth plant was closed. Its existence continued into the Gilbert-Meccano era. All examples of this part seen in US outfits are single-tapped #7-32, hence made in the US. Double tapping was introduced on many parts around 1927 in England, just at the time this part was introduced; all British examples of this part are double tapped 5/32" BSW.

Parts 25, 26, 31, and 32 gears: The smaller gears (usually called pinions) have 1/4" wide faces in normal production. At some point, US production reduced the width of these gears to about 3/16". This was not universal, but not very uncommon. The No. 32 worm gear was also produced in a shorter version in the US. The set screw holes in all gears were single tapped #7-32, which feature can identify US production.

Part No. 34 spanner: Very early spanners (commonly



called wrenches in the US) were flat with hex shaped cutouts to fit the square nuts. By about 1912, the spanner was re-designed, adding a square hole in the middle, tapering the wider section around the hole to a narrow width near the ends, and adding two bends (“cranked”). This is the upper version in the picture. Perhaps as early as 1916, the spanner was again re-designed to remove the taper, and to make the cutouts square, as seen in the lower version. This newer design was used in US outfits by 1921, as produced in England. The earlier design started appearing again in US outfits in 1922, suggesting that the (now long) obsolete tooling may have been sent from England for use in the Elizabeth factory. This design continued into Gilbert production after 1929.

Part No. 37 nuts and bolts: Meccano had been making nuts and bolts in the US (or had been having them made by others) since about 1920. These were US ‘standard’ #7-32 instead of the British standard 5/32” BSW. This size continued through Elizabeth production. It only faded away when Gilbert took over and started using Gilbert standard #8-23 or #6-32. A 5/32” BSW bolt will enter a #7-32 tapped hole perhaps a turn, and then will stop (unless significant force is used). A #7-32 bolt will easily enter a hole tapped 5/32” BSW.

Part 41, propeller: This part was introduced in 1909 as a rather strange almost spoon shaped part. In England, a second mounting hole was added by 1927, but US versions seem to have continued with only one hole. In 1927, a new version looking more like an airplane propeller was introduced in England. The older

version continued in US outfits after the change in England. This may be another example of old tooling being used in the US.

Part 52: The flanged plate had slots for making a saw table added in 1928, but the slots disappeared in the US by 1929, though English versions kept the slot until the ‘30s. English versions also had four flanges after the end of 1927; four flanges did not appear in US production until 1937. It is tempting to guess that the slotted plates were made in England for the US outfits in 1928, but the old tooling was used in the US after 1929.

Part 54: The sector plate was introduced in 1911, and was 4 inches long with one row of holes along the length. Note that it was tin plated in England for a short period around 1911, so tin plating does not mean that it was made in the US. It does appear that this part was eventually made in the US Elizabeth factory, but apparently it was nickel plated (and later painted red). In 1927, two more rows of holes were added, and this design did appear in US outfits in 1928. However, the 1929 and later Gilbert outfits reverted to the single row of holes. This suggests that the Elizabeth factory was equipped with the tooling for the single row of holes, and that the parts for the 1928 outfits were sent from England, but the new tooling was not sent to the US (or was sent and used only for the one year).

Parts 126, 126a: The trunnion and flat trunnion (126 and 126a, respectively) were introduced in 1921, shortly before the US Meccano factory opened. They were not included in any sets until about 1923, so they are listed in this period. These parts are made from the same flat piece; the trunnion is bent to form a flange at what is called here (for convenience) the base. There are two four-sided cutouts in these pieces. In the parts produced in England, there is a visible small radius in the lower corners of these cutouts; but the US versions all seem to have quite sharp corners nearest the base.

Part 159, the circular saw was imported from England, as it is not supplied in any but the largest outfits (4, 5, and 6) and only in 1928 and 1929. The example seen in a 1928 US No. 6x outfit is double tapped, 5/32” BSW. The circular saw does not seem to have been included in the 1930 Gilbert Meccano outfits.

Parts 154, 154a and 154b Corner Angle Brackets are very uncommon parts, even in England. When originally introduced in England in October 1927, only part 154 was produced (the lower one in the picture). It had two slotted holes. In December 1927, it was



announced that the design was changed to make one round and one slotted hole in the end portions, and to make the mirror image part as well (the upper one in the picture). The new part was 154b left hand, and the earlier design but with one round and one slotted hole became 154a right hand. 154a and 154b were sold in the US, but both versions had two slotted holes (like the 154 in the picture). The US sold versions have no stamping, and are nickel plated. Either the obsolete blanks from UK part 154 were sent to the US, or (probably less likely) the obsolete tooling was sent over.

Part 162, Boiler: US made boilers seem to be the same as the second UK version, with one row of holes slotted for the overlapping edge holes. However, the boiler ends were made with no holes in the flanges; these were the same as in the UK until 1929 and Gilbert production.

Part 169, Digger Bucket: This part was introduced in the UK in early 1928 and the design changed by the end of 1928. All US digger buckets are of the early design, but are painted green instead of the UK versions in grey. The assumption is that the original UK tooling was sent to the US factory.

The Meccano Organization

Frank Hornby continued his visits to the US after his 1922 trip described at the beginning of this chapter. He arrived eight more times through 1928, though at least one was not for business. He arrived in New York on the following dates:

- 19 February 1923;
- 2 October 1923;
- 29 September 1924;
- 21 September 1925;
- 9 March 1926;
- 11 October 1926 (first leg of around the world trip with his wife Clara);
- 30 May 1927
- 5 December 1927 (with Clara; away from England for 83 days, returned 17 February 1928);

George Jones also visited the US after his trip accompanying Frank Hornby in 1922. He arrived in New York on 23 April 1928, and again 12 November 1928. I wonder if this latter visit had something to do with the sale of Meccano Co., Inc.

The US version of the Meccano Magazine continued to be published, but a bit erratically. The number of issues printed in each year was not consistent, and it apparently was not published in 1924. The last known issue is August 1927. There are several possible issues which have not been seen; these are guesses based on issue number or volume and number. The magazine listed the personnel of the Meccano Co., Inc. through 1921, but none are listed after.

This period of the history of Meccano in the US closes when A. C. Gilbert, of Erector fame, purchased the Meccano Company, Inc., apparently in January of 1929. At least that is the one date I have found documented in a 1938 listing of Treasury [Department] Decisions.

Thanks to MAR Online (Model Auto Review), we know that H. Hudson Dobson continued working for Meccano Co., Inc. through at least 1928, and possibly a bit later. In the 1930 census, though, he was associated with a pottery works in Tonawanda, New

Section 3, 1922 – 1929

York, but shortly returned to Meccano under Gilbert.
More on Mr. Dobson in the chapters after 1929.

James P. Porteus is listed in the 1930 census as a self-employed chemist, living in Elizabeth, New Jersey in a rented house. His wife and three children are still with him. It appears that he also is no longer associated with Meccano.

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