

The term "English" is used in this article, rather than "British", as England appears to be the main source of the wholesale clock movements under discussion, and none are known to have come from Scotland, Wales, or Ireland. Figure 1 shows some of the locations of English towns mentioned here.

### Thirty-Hour Movements Complete Movements

It should be noted that only 8-day movements are likely to have been imported into America from England. English 30-hour movements (Scotland and Ireland did not have a tradition of 30-hour clocks and so can be ignored in this respect) normally used count wheel striking, whereas Pennsylvanian 30-hour tall clocks usually used rack striking. Count wheel striking was used in New England in the eighteenth century but the demand for 30-hour movements in New England had died out by the time movements were being imported from England. In any event, 30-hour clocks, which were popular in the country areas, were replaced at the turn of the nineteenth century by very inexpensive wooden movements. Hence, there would be little demand in the USA for English 30-hour movements.<sup>1</sup>

### Castings and Forgings

However, many Pennsylvania 30-hour clocks, which were particularly popular in the German-settled areas, while not of the usual English type, appear to use imported castings and forgings. Many of these movements are of the same high quality and uniform finish seen on 8-day movements by many local makers of the 1820s and 1830s, which are thought to be either imported movements or made from imported parts. Since there was apparently sufficient demand for rack-striking 30-hour clocks, it may well be that sets of cast and forged work for these movements were made in England specially for export, but at the moment there is little documentary evidence.<sup>2</sup>

Apart from one example discussed in the next section, the remainder of this article mainly concentrates on 8-

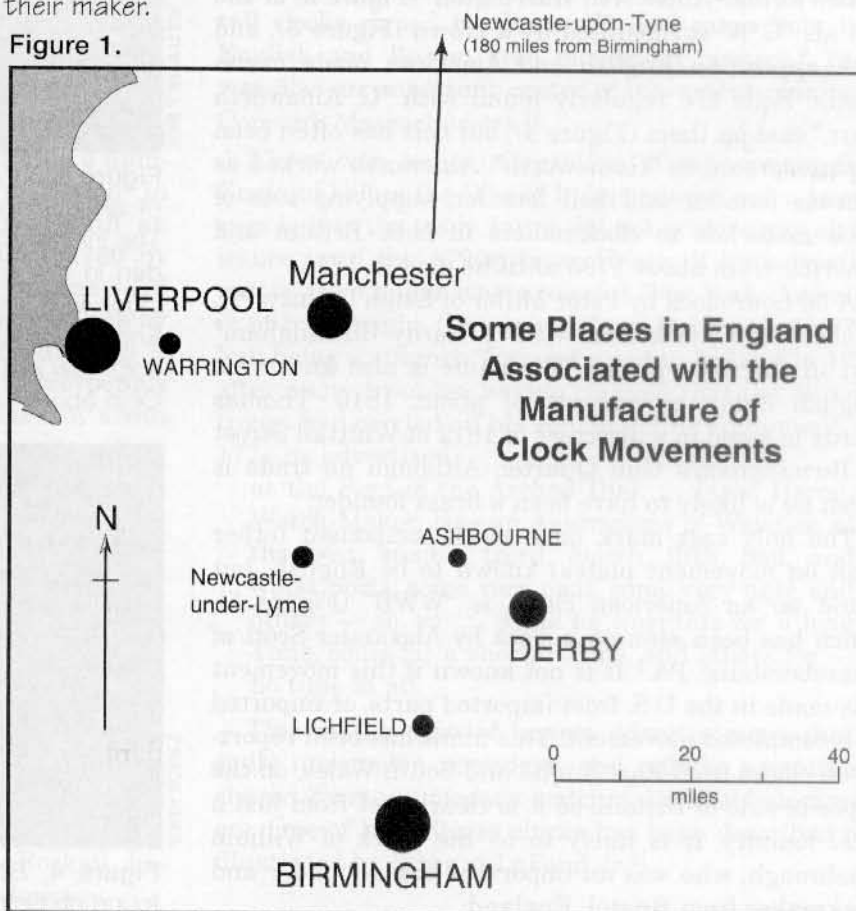
# English Movements & American Tallcase Clocks

by John Robey (England)

This article identifies some of the English movements that were exported to America and incorporated into tallcase clocks with locally made cases. The emphasis will be on the painted dial era when off-the-shelf movements became more readily available from wholesale suppliers.

The change from clockmakers handcrafting their own movements to using movements made by specialists was a gradual process, brought about by a social and economic shift from actual "makers" to retailers and repairs. The introduction of the painted dial in England in 1772 merely accelerated a process that had already begun. The War of Independence delayed export of the new-style painted white dials to America until 1784-5, followed by slit pinions about 1787-8, kits of castings and other parts a couple of years later, and complete movements by the mid-1790s. However, the majority of imported movements on American tall clocks appear to be of the 1810-30 period.

Some movement identification is possible as a few have an English name stamped on them (although this may not be the name of the actual manufacturer), while others have characteristics that identify their maker.



day movements, and only English names or initials, rather than American, such as John Wilbank of Philadelphia.

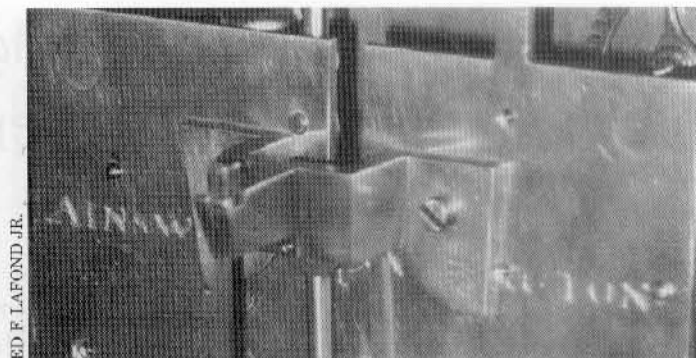
### Stamped and Cast Names

It is important to recognize and appreciate the difference between names stamped on movements, and names or initials cast into the plates or other components. The latter are less clearly defined than stamped names; cast names are coarser with less clarity and show traces of the sand used to make the mold into which the molten metal was poured. They have often been almost obliterated by subsequent filing and smoothing. While names stamped on movements are those of the maker or supplier, those cast are of the founder of the parts, not the manufacturer of the movement. Cast (but not stamped) initials or other marks are occasionally found on clock wheels, bells, and other components,<sup>3</sup> but any casting marks found on American movements will normally be found on the plates.

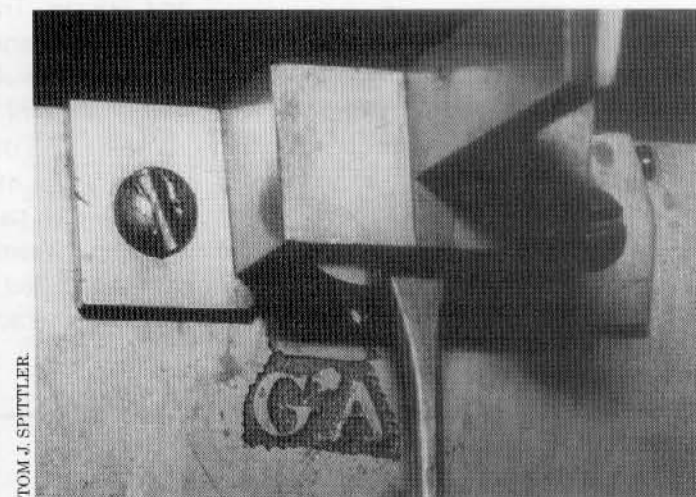
The most regularly found cast name (although it is not particularly common) is that of George Ainsworth of Warrington (then in southern Lancashire, but now Cheshire, due to relatively recent boundary changes), between Liverpool and Manchester. This name appears in two forms: "Ainsworth Warrington" (Figure 2) or the initials "G\*A" surmounted by a crown (Figure 3), and both appear on English and American made movements. Bells are regularly found with "G. Ainsworth Warr." cast on them (Figure 4), but this has often been misinterpreted as "Gainsworth". Ainsworth worked as a brass founder and bell founder, supplying sets of clock materials to clockmakers in both Britain and America, from about 1795 until he died in 1815.

A 30-hour clock by Peter Miller of Leigh County, PA, of about 1800, is known with "T Hardy Birmingham" cast in the front plate.<sup>4</sup> This name is also known on English 8-day movements of about 1810. Thomas Hardy is listed in a directory of 1812 at Whittall Street in Birmingham's Gun Quarter. Although no trade is given he is likely to have been a brass founder.

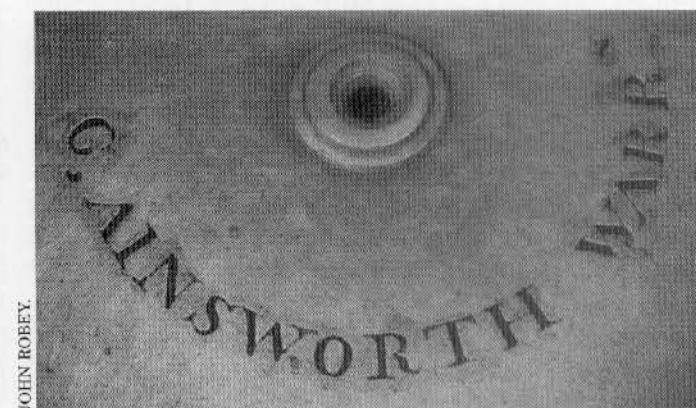
The only cast mark on a clock component (other than on movement plates) known to be English, but found on an American clock, is "WWB" (Figure 5), which has been seen on a clock by Alexander Scott of Chambersburg, PA.<sup>5</sup> It is not known if this movement was made in the U.S. from imported parts, or imported as a completed movement. This mark has been reported on clocks from East Anglia and South Wales, on the opposite side of Britain, so it is clearly not from just a local foundry. It is likely to be the mark of William Wasbrough, who was an important brass founder and clockmaker from Bristol, England.



**Figure 2.** "Ainsworth Warrington" cast in the back plate of an unsigned clock with a dial by Osborne, Birmingham, about 1800. The unusual American-made movement has center-seconds with a French-style pin-wheel escapement, and a center calendar.

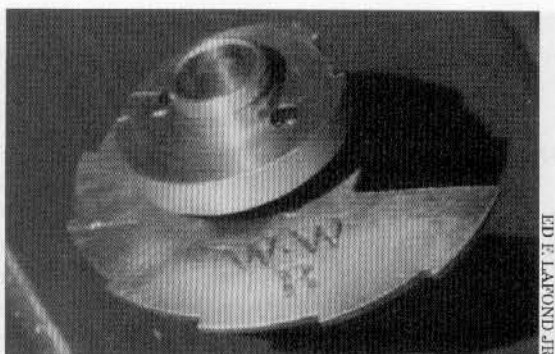


**Figure 3.** "G\*A" mark cast into the front and back plates of an unsigned American-made tall-clock movement. The initials are surmounted by a crown, but this is hidden in the shadow of the back cock. The bell of this clock was also cast by Ainsworth. This clock, with an English painted dial by Osborne of Birmingham, was sold new in 1805 in Maysville, Kentucky, was moved to Ohio about 1878, and then back to Maysville.



**Figure 4.** Bell by George Ainsworth of Warrington, as found on both English and American clocks.





**Figure 5.** "W.W.B" cast into the rear of the snail of a clock by Alexander Scott of Chambersburg, PA, who died in 1822. This mark has also been reported on English clocks, and may be by William Wasbrough of Bristol, England.

Names found on the iron falseplates of clocks with painted dials, are, of course, those of the dial maker, not the maker of the movement.

#### *Imported 8-Day Movements with Dials*

During the brass dial era in the eighteenth century, most American clockmakers made their own movements, but some English movements together with their dials were exported to America, where they were fitted into locally made tall cases. These were clearly named on the dials by the English clockmakers, and there was no intention to market them as any other than what they were. In particular, a group of English Quaker clockmakers supplied dials and movements to other Quakers in Pennsylvania. Thomas Wagstaffe of London had a fair trade with Philadelphia, and a number of his dials and movements are known in Philadelphia cases. A movement and dial (with an unusual solid silver chapter ring) of about 1760 by Samuel Whichcoate, also of London, is in a fine solid walnut case from Germantown, PA. There is a clock by Isaac Hadwen of Sedbergh, North Yorkshire, in a Philadelphia case. Hadwen was from a prosperous Quaker family, and set up as a clockmaker in about 1710. In 1718 and 1737 he traveled to America, where he probably had relatives, to spread the Quaker faith, but he died of fever during his second visit. William Clark of Kendal, Westmorland, was an apprentice of Hadwen, and one of his clocks is also known in an original Philadelphia case.<sup>6</sup>

A mahogany standing regulator with a silvered brass dial signed "J. H. Chedell, Auburn, NY" and dated 1835, has a high quality jeweled movement stamped "J. Condliff – Liverpool".<sup>7</sup> It was normal for regulators to have the name of a clockmaker/watchmaker/retailer on the dial, rather than the maker of the movement, which would have been made by a specialist manufacturer in London or Liverpool. Condliff (like Roskell, discussed later) was noted for his regulator clocks.

#### *Movement Makers and Exporters*

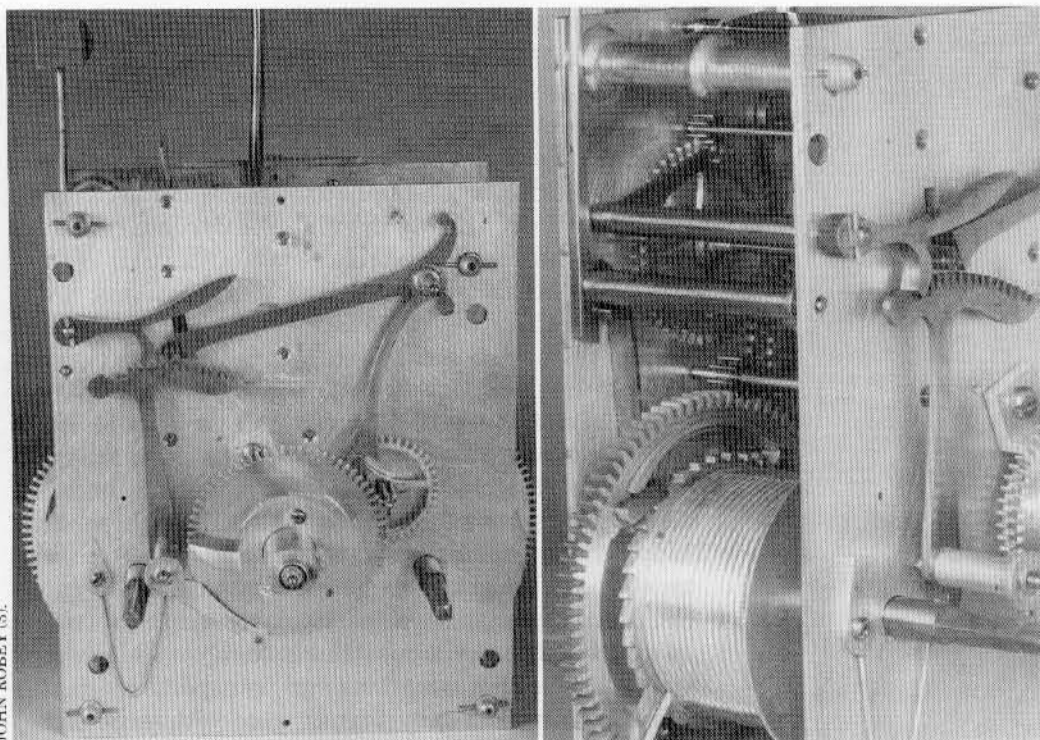
In the eighteenth century many British clockmakers made their own movements, usually from bought-in sets of brass castings, steel pinions, and forgings, such as those discussed and illustrated by Tom Spittler.<sup>8</sup> Other "clockmakers" simply used movements actually made by others. During the nineteenth century, ready-made movements became more widely available from both the actual manufacturer and specialist merchants, so these were increasingly used. Despite this, some clockmakers made their own movements right to the end of the longcase era (which in England was about 1870, some 40 or 50 years after the demise of the American tallcase clock, and in Scotland much later still). The situation in America was broadly similar, although there was a greater self-sufficiency, particularly in the earlier years, with clockmakers making much more for themselves, even casting and forging their own parts. This was particularly so in those areas away from the main coastal settlements, due to the lack of easy communications and transport.

Later, complete movements were either imported from England or made in places such as Boston, MA, by tradesmen who specialized in supplying movements to "clockmakers", who added dials bearing their own name and fitted them into cases for retail to the public. There is evidence that some of the movements found in tall clocks signed by Simon Willard came from both English and Boston area movement makers.<sup>9</sup> There was also an important center of movement making at Concord, Massachusetts.<sup>10</sup>

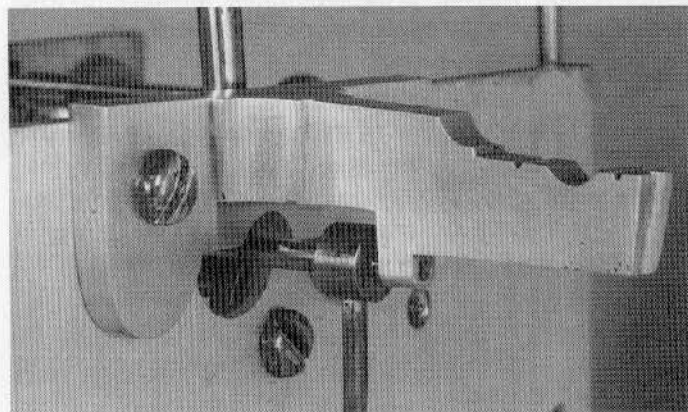
There was some importation of movements from England before the War of Independence put a temporary halt to the trade, but it did not achieve any significance until the 1790s. Isaac Heron, if his advertisements are a guide, was a colorful New York clockmaker of Irish origin. (He arrived from Dublin about 1763, but, being a staunch Tory, returned to Ireland in 1778, after many troubles, having claimed that the Hessian troops had carried off his watchmaking equipment.) In 1771 he advertised:

at the Sign of the Arched Dial, ... Isaac Heron, Watch-Maker, Has an Assortment of Watches, of the best, second, third, fourth, fifth, bad, and worst Sorts; some very neat, some very ugly, and others — so, so .... Some he warrants for a long Time, some for a shorter Time, and others for — no time at all.

This is the type of honest advertisement that is sadly uncommon nowadays, and reflects a sentiment shared by many modern watchmakers and clockmakers. One of his tallcase clocks has been described and illustrated by Edward LaFond Jr.<sup>11</sup>



**Figure 6, above left.** English longcase movement by Whitehurst, Derby, about 1810, identical to one in a clock by Isaac Heron of New York, about 1770. Note the shape of the iron lifting piece, rack, and rack hook. **Figure 7, above right.** The strike train of the Whitehurst movement locks with an internal detent and pin on the locking wheel, rather than a pallet tail locking on a pin on the rack. This photograph has an uncanny similarity to that of the movement of Isaac Heron's clock.



**Figure 8.** The sturdy T-shaped back cock is also identical to the Heron movement.

#### Identifiable but Unmarked English Movements John Whitehurst, Derby

The recent restoration by the author of a clock of about 1810, shown here in Figures 6-8, by John Whitehurst's nephew and successor, also named John, has shown that the movement of Heron's tallcase clock, is identical to those made in England by Whitehurst of Derby.<sup>12</sup> The distinguishing features are the shape of the rack hook, rack, curved lifting piece of iron (rather than the usual brass) and the warning piece. The back cock is quite distinctive, and although sometimes used by other English clockmakers, it was regularly, but not

exclusively, used by Whitehurst. Instead of the usual U-shape, the Whitehurst back cock is T-shaped when viewed from above (see *The Longcase Clock Reference Book* for details of the different types of back cock<sup>13</sup>). Another similarity is the type of locking for the strike. Instead of a pallet tail locking against a pin on the rack, when the rack is fully gathered the rack hook falls into a deep tooth and an internal detent arrests a pin on the locking wheel (Figure 7).

John Whitehurst moved to Derby in the 1730s, and while his early 8-day longcase movements used count wheel striking, by the 1760s they were of the type illustrated here. They were sturdily made and of high quality, and the design continued unaltered until at least about 1810. He built up an important clockmaking business, in particular making turret clocks, but also developed many other

interests, devoting much time to scientific pursuits, especially geology. Much of his work laid the foundations for others to follow. He provided ideas for many of the leading innovators of the eighteenth century, such as James Watt, the steam engine engineer, Matthew Boulton, the Birmingham industrialist, and Josiah Wedgwood, the potter, while his unassuming nature allowed others to claim much of the credit. He was a close friend of, and a correspondent with, Benjamin Franklin, and it may have been this connection that facilitated the exportation of his clock movements to America. It would not be surprising to find other American tallcase clocks with Whitehurst movements, but none have yet been identified or reported.

#### Harlow, Ashbourne

We are on firmer ground with the movements made by Samuel Harlow and his successors. Although the traditional view has been that in the nineteenth century longcase movements were made in Birmingham "factories", current opinion is that this town was only one of a number of places that produced movements.



One of the most important concerns was founded by Harlow in Ashbourne, a small Derbyshire town about 14 miles northwest of Derby and 40 miles north of Birmingham. It is on the edge of the scenic Peak District, which is noted for the palace of Chatsworth House. Ashbourne had a number of clockmakers from the early eighteenth century, but Samuel Harlow developed it into a local industry, and the trade still survives there today. Samuel Harlow was born in 1751 to a family of builders, and after being apprenticed to a local clockmaker he began trading on his own behalf by about 1773.<sup>14</sup> Although by the time he commenced business the painted dial had already been introduced (first advertised in 1772 by Osborne & Wilson of Birmingham), many of his early clocks have dials of brass in the local round, single-sheet style, first introduced by John Whitehurst in 1760. This emphasizes that there was considerable overlap in the use of brass and painted dials.

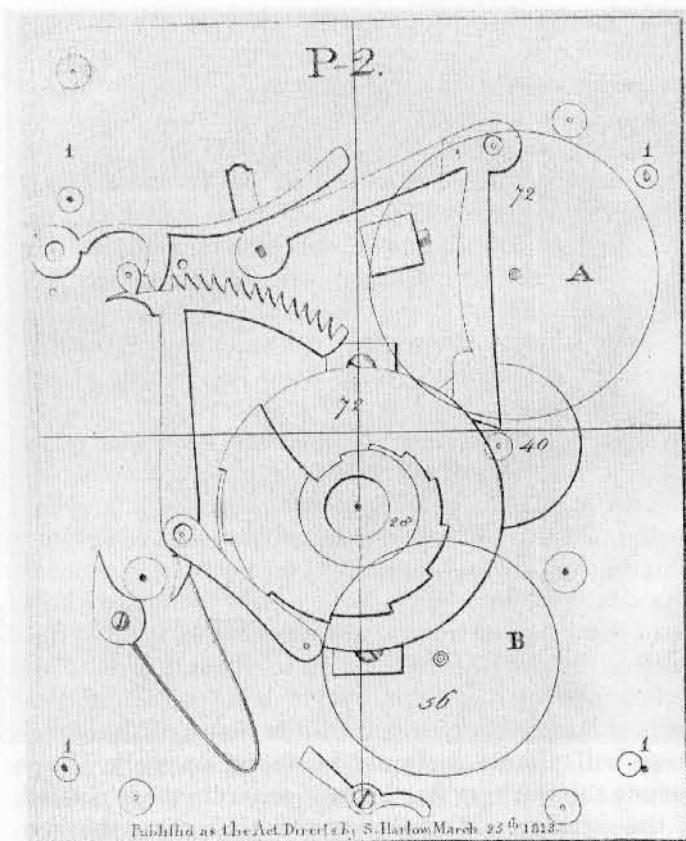
Samuel Harlow possessed both technical and commercial acumen, so that while his two younger brothers also became clockmakers — one in Ashbourne, and the other in one of the towns of the Staffordshire Potteries — Samuel developed his business into a thriving concern, selling movements to most parts of mainland Britain, as well as to America. After Samuel's death, ca. 1820-1825, the business passed through several generations until it was sold in 1851 to another local clockmaker, William Davenport, who continued until the twentieth century. Despite the virtual absence of contemporary documents there are enough scraps of evidence to show that up to about 1820 most of Samuel Harlow's movements were sold by his son-in-law John Masgreave (or Masgrove) in Birmingham. Masgreave supplied Harlow's movements either directly to clockmakers or to wholesalers, including Peter Stubs of Warrington (who was Britain's main clock parts wholesaler and exporter), who then supplied hardware dealers or clockmakers. Later other merchants wholesaled Harlow's movements. With this supply chain it would normally be difficult, if not impossible, to identify the actual manufacturer of any particular movement.

Fortunately, in 1813 Samuel Harlow published *The Clock Maker's Guide*, a now very rare 17-page booklet, illustrated with engravings, of his movements and parts.<sup>15</sup> This pamphlet is virtually the only contemporary publication that details actual longcase movements. It was ostensibly written to encourage the standardization of movement layout, so that they could be fitted with greater ease to off-the-shelf Birmingham-made painted dials. In practice, it may have been used more as a sales brochure for Harlow's movements. Rather than showing just generalized views of a typical movement, as had been assumed until recently, these illustrations are very close representations of the actual movements

made by the firm. In particular they have some very characteristic and easily recognizable features. Confirmation that the engravings do show an actual Harlow movement may be seen by comparing the booklet's engraving of an 8-day front plate (Figure 9) with a movement having a dial signed by Robert Harlow, Samuel's eldest son (Figure 10). This can be dated accurately to 1808-11, as the dial was made by Walker & Finnemore of Birmingham, who, although very prolific dial makers, only worked as a partnership for these four years. Hence, this movement predates *The Clock Maker's Guide* by only a few years, five at the most. The layout and components are virtually identical, especially the shape of the rack hook and other parts of the striking work. Note especially the elegant C-curve at the left-hand end of the rack hook, and the double point to the hook. Although the latter is rather insignificant in the engraving, on actual movements this double hook — which is purely decorative, the extra point having no practical purpose — is quite distinctive. It is Harlow's "signature" and was used throughout the life of the firm. If the C-curve and double hook are present, then the other distinguishing features will almost certainly be found as well. These include the warning flag being a separate piece riveted to the circular end of the arm, rather than the end being forged at right angles, as done by many other makers (e.g., Figures 6, 12, 14, 16). The brass lifting piece is usually curved on the left-hand side, rather than straight. Other features not shown in the engravings, but normally found on Harlow movements, include the bell stand passing through the back cock to the left of the pallet arbor and screwed to the outside of the rear plate, also the hammer is usually at the rear of the arbor with a combined hammer spring and stop. The alternative arrangement with a central hammer and a separate stop screwed to the top pillar has been seen, but it is not usual. These movements are sturdy, well made, and neatly finished. For other details and further examples, see the article in *Antiquarian Horology*<sup>16</sup> and *The Longcase Clock Reference Book*.<sup>17</sup>

Note that the free end of the rack hook can take various forms: narrow, wide, slightly curved, steeply upswept, etc. The rack is often as shown in Harlow's engraving, especially on early movements, but the shape of this can also vary. It is important to be aware that these movements were not factory-made with interchangeable parts. Rather they were made individually, or in small batches, to a common design, so even movements from the same workshop are rarely identical in all respects.

Although movements that can be safely attributed to Harlow's workshop usually have no names on them, some are known with stamped names. These include "H. Knight", "O&J", "Oughton", and "E. Scales, Manchester", the first two being stamped on the lower

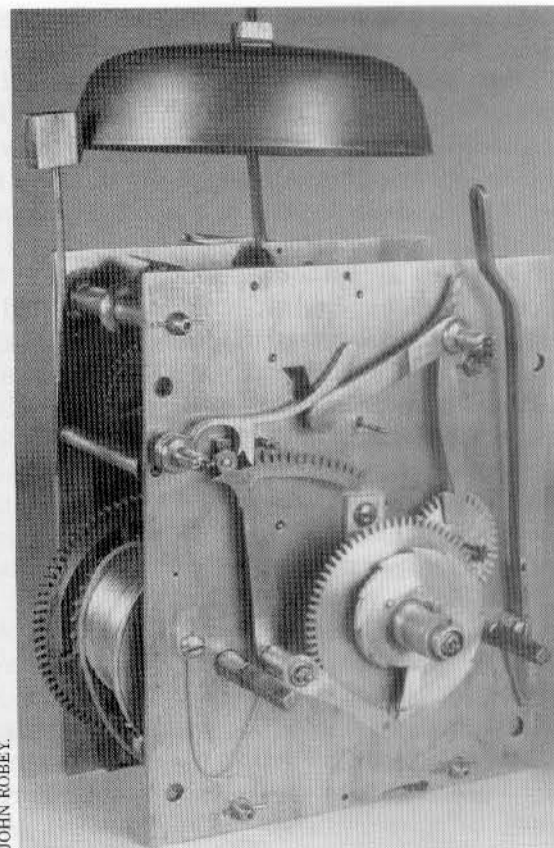


**Figure 9, left.** Layout of the front plate of an 8-day longcase clock movement, illustrated in Samuel Harlow's *The Clock Maker's Guide*, 1813. A and B are optional wheels for a moon drive and calendar respectively.

**Figure 10, right.** A movement fitted with a dial made by the Birmingham dial makers Walker & Finemore (1808-1811) and signed Robert Harlow, Ashbourne. Note the similarity of this movement to the engraving in his father's booklet, especially the C curve and the double hook to the rack hook. This double hook is a Harlow "signature". The warning flag is riveted to the disk-shaped end of the warning piece, rather than the end being forged at right angles. Although the rack can vary in detail, this shape is typical, and the locking pin is usually on a raised section. A repeat spring is fitted, but the upper end of the lifting piece has been broken off.

or top edges of the plates respectively. Henry Knight was a Birmingham clockmaker, who, like Edward Scales, found it more convenient and profitable to wholesale Harlow movements than make his own. Scales advertised that he was a manufacturer of a wide range of items, including clocks, and this emphasizes that such claims should never be taken at face value. The identities of O&J and Oughton (possibly connected) remain unknown. Although to date these names have only been found on English clocks, they may be discovered in the future on American tall clocks, while other names have only been reported on Harlow movements exported to America (see below).

An unmarked Harlow movement was used on at least one clock by George Jones of Wilmington, Delaware, about 1820, with a dial by the unrelated William Jones of Philadelphia.<sup>18</sup> It is not known if George Jones used Harlow movements on a regular basis, so it is hoped that the owners of such clocks will examine the movements and report their findings.



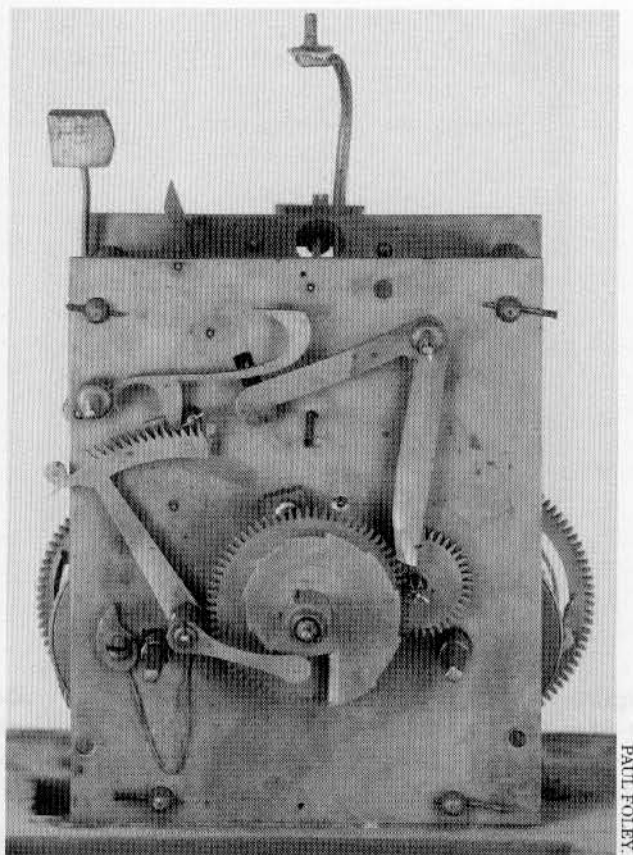
An unmarked Harlow movement was also used by John Whitehead of Norristown, PA, about 1831-3.<sup>19</sup>

An unsigned clock with a 13" painted moon dial, attributed to the Philadelphia dial maker William Jones, about 1820-5, in a Pennsylvania cherry and mahogany case has a movement by Harlow of Ashbourne (Figure 11).<sup>20</sup> This movement emphasizes the point made earlier that each of these movements is slightly different. Despite the end of the rack hook and the lifting piece being of a shape not seen before by the author on Harlow movements, it is clearly from their workshop.

#### English Movements with Stamped Names on American Clocks

Other American tallcase clocks have been reported with the names of English "clockmakers" stamped on the movements. Some have now been recognized as Harlow movements, while others remain unidentified. As these names appear only on exported movements, their study is crucial for identifying the origin of move-





**Figure 11.** A movement by Harlow of Ashbourne, Derbyshire, England, from an unsigned Pennsylvania clock of about 1820-25. While the very prominent curve to the end of the rack hook, and the shape of the lifting piece replaced are not typical, the rest of the movement has all the expected Harlow features.

ments in both English and American clocks. Named Harlow movements are listed below, followed by movements from other identifiable makers, then named movements that have been reported, but not to date identified.

#### J. E. Bagnall

This was James Eustace Bagnall, a clock and clock movement maker and bellfounder working in Birmingham from 1837 to 1855.<sup>21</sup> In 1849 he was a "manufacturer of spring, skeleton and weight clocks, movements and clock materials of every description, bell founder, caster and lock manufacturer", but by 1855 he appears in directories only as a brass founder. Movements stamped with Bagnall's name have been reported on clocks by the Pennsylvania makers Anthony Wayne Carpenter and John Esterle, both of New Holland, Joseph Eberman of Lancaster, John Kunkle of Ephrata,<sup>22</sup> and Isaac D. Custer of Norristown.<sup>23</sup> The only movement illustrated is that fitted to the Custer clock, and it is clearly by Harlow.

#### Wainwright

Movements stamped "Wainwright No 1" have been reported on a number of American tallcase clocks. There were a number of clockmakers of this name (including a family of clockmakers in Nottingham), but the only one likely in Birmingham is James Wainwright. He was a "factor" (i.e., a merchant selling goods made by others) in 1829-33, but a wine and brandy factor the following year. If this is the correct man, he may have been one of the many merchants willing to sell virtually anything, but he may have found that it was more profitable to sell wine than clock movements.

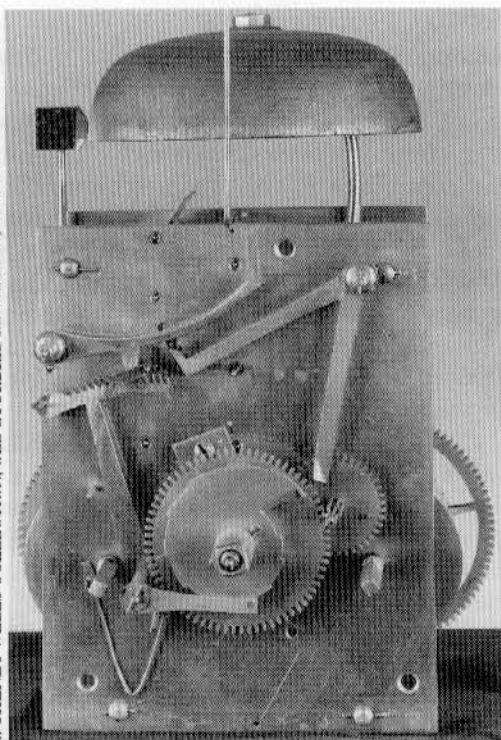
A tall clock by James Hansell of Philadelphia, about 1830, has a movement stamped "Wainwright No 1", which is clearly a Harlow movement.<sup>24</sup> This same stamp has been reported on clocks by Martin Shreiner of Lancaster and George Eby of Manheim, both with conventional seconds. A center seconds clock by George Eby has a movement stamped "Wainwright No 3". Two other Lancaster County, PA, clocks with standard seconds, one by Anthony Wayne Carpenter of New Holland, the other by Joseph Eberman of Lancaster, have movements stamped "Wainwright", but no number.<sup>25</sup> These are likely to be Harlow movements, but photographic confirmation is awaited.

No movements are known marked "No 2," but if any exist they might indicate a 30-hour movement. For the reasons stated earlier it is unlikely they were used on American clocks.

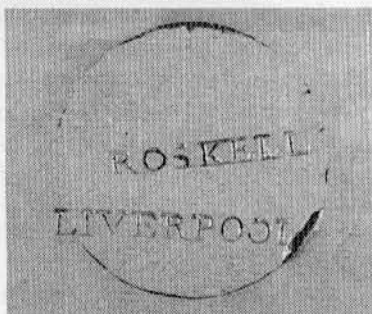
#### Roskell, Liverpool

A tall clock by Aaron Willard of Boston, Massachusetts, is known with "Roskell, Liverpool" stamped on the rear plate of the movement across where a pillar is riveted (Figures 12-13).<sup>26</sup> As the pillars would have been riveted to the back plate only when the movement was almost completed, the name must have been stamped on a completed movement, not the partially finished plates. A clock by George Fix, Berks County, PA, has also been reported with a movement by Robert Roskell.<sup>27</sup> Presumably this was stamped on the plates, but as there is no illustration, nothing further can be deduced.

Figures 14 and 15 show another movement stamped "Roskell, Liverpool". Although the broad feel of the movement is similar — the rack hooks, for instance, are similar — there are noticeable differences. These include one movement having a solid reverse minute, compared to the other with crossings, and a square-ended hour-wheel bridge compared to a rounded end. Also the hammer and its tail are fitted to the arbor with collets, whereas the Roskell movement on the Willard clock does not.<sup>28</sup> As Roskell was a well known firm specializing in quality watches, chronometers, and regulator clocks, it is feasible that "ordinary" longcase



**Figure 12, above.**  
Movement of an Aaron Willard of Boston tall clock made about 1800. The movement is stamped "Roskell/Liverpool".



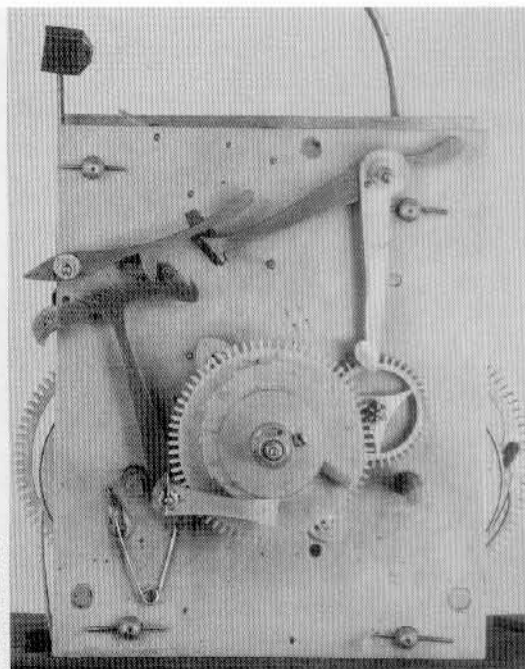
**Figure 13, above right.** The Roskell stamp on the rear plate of the movement of the Aaron Willard clock.

movements were not actually made by them, but came from one of the many manufacturers in nearby southern Lancashire. This might explain the difference between the two movements, but more examples need to be examined before any firm conclusions can be drawn.

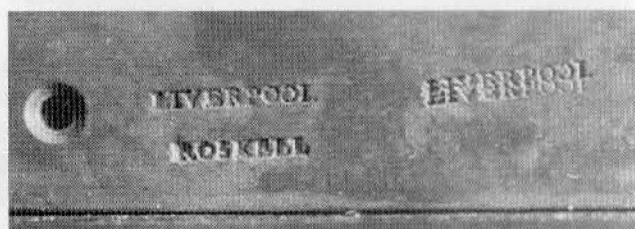
Roskell acquired the Whitehurst firm when it closed, but soon moved production from Derby to Liverpool. The Roskell factory was destroyed by enemy bombing in World War II, when any possible surviving early Whitehurst or Roskell records were lost.

James Hawthorn, Newcastle-upon-Tyne

An 8-day tall clock with an Osborne of Birmingham dial, signed for Asa Whitney of New York is known with a movement stamped "Hawthorn & Ferguson, Newcastle",<sup>29</sup> while Pennsylvania clocks by George Beatty, Harrisburg, and Abraham Corl of East Nantmeal, have movements marked "James Hawthorn, Newcastle upon Tyne".<sup>30</sup> Hawthorn was a



**Figure 14.** A Roskell movement from an English clock of about 1810 with an unsigned dial. The bell is by Ainsworth, but, unusually, it has the size  $4\frac{3}{4}$ " also cast into it, although it is actually  $4\frac{5}{8}$ " in diameter.

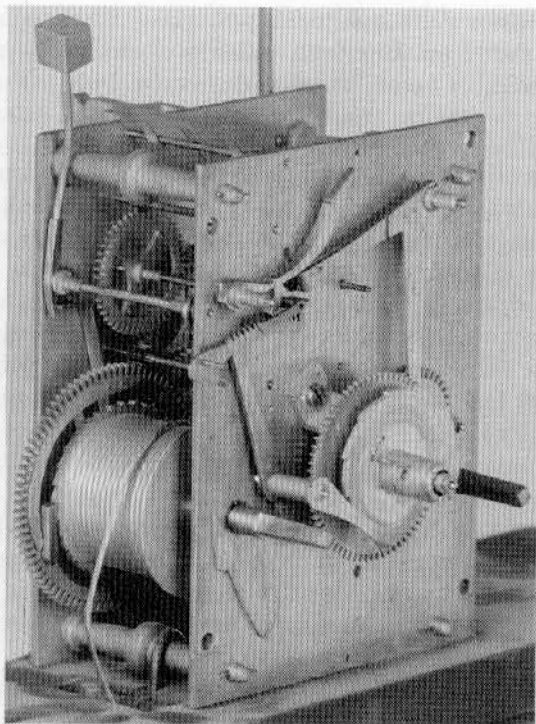


**Figure 15.** The "Roskell/Liverpool" name stamped near the bottom of the rear plate.

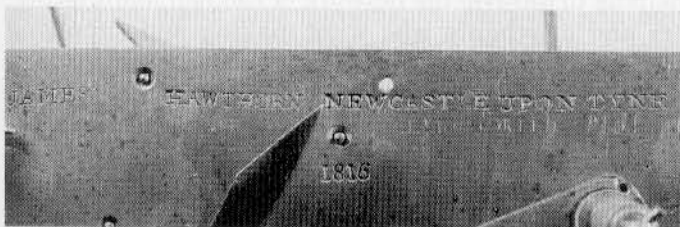
clockmaker, brass founder, and a watch and clock tool dealer. He went into business with Ralph Beilby, watch and clock tool dealer, in 1797, and in 1804-13 was in partnership with Robert Ferguson, another brass-founder and clock manufacturer. Hawthorn was in business until 1831. (Newcastle-upon-Tyne, in the northeast of England, should not be confused with Newcastle-under-Lyme, close to the Staffordshire Potteries. The Staffordshire Newcastle was a major center for the manufacture of clock movements, with many workshops, but none of their products has been positively identified to date.)

Figures 16 and 17 show a movement by James Hawthorn, dated 1816, from a clock having a dial by Nolen & Curtis, Boston, signed for Martin Shreiner, Lancaster, PA. This movement is quite unlike one made by Harlow. Features that differentiate it are: rack hook with a step on the upper edge (with no practical purpose and possibly a "signature", in a similar manner to the Harlow double hook), tapering brass lifting piece,





**Figure 16.** Movement by James Hawthorn, Newcastle-upon-Tyne, dated 1816, on a clock with a dial by Nolen & Curtis of Boston signed for Martin Shreiner, Lancaster, PA. Note the step in the rack hook, the hour-wheel bridge at about 45 degrees to the vertical, with the hammer and its tail fitted to the arbor with collets.



**Figure 17.** Hawthorn's name and date stamped into the front plate.

bridge for the hour wheel set at 45 degrees (Harlow's are just a few degrees off vertical), and bell stand towards the top corner of the back plate (Harlow's invariably pass through the backcock). The most distinguishing feature is that the hammer and the hammer tail are fitted to the arbor with brass collets, similar to those used to fit wheels to arbors. This has also been seen on an unmarked movement in a clock from Gateshead, close to Newcastle-upon-Tyne, which is likely to have been made by Hawthorn or Ferguson.<sup>31</sup>

Baker

A clock by Joseph Eberman of Lancaster, PA,<sup>32</sup> and a tallcase clock by J. Weiss of Allentown, PA, dated 1836 on the seatboard, have been reported with English-style movements stamped "Baker".<sup>33</sup> The only photographs available are rear and side views of the

Weiss clock. These are not sufficient to give a positive identification, although the bell stand does pass through the back cock and to the left of the pallet arbor. This arrangement was used on all the Harlow movements seen by the author, and on this rather flimsy evidence it may be tentatively attributed to the Ashbourne workshop.

This is likely to be Thomas Baker, who is listed in Birmingham directories at three different addresses from 1839 to 1854. In 1846 he advertised:

Rolled Brass, Clock Brass, and Bells, Forged Work, pinions, and General caster in brass & iron, house bells, church Turret and house clock maker, spring clock, timepiece, eight-day & thirty-hour movements, bottle-jack maker, clock hands, clock cases, and pendulum balls, dealer in watch materials, clock & watch makers' files.

In the 1851 census he was a clockmaker aged 50, employing seven men.<sup>34</sup> The stamped name is unlikely to refer to William Baker, a clock case and clock manufacturer working in Birmingham after 1852, who advertised Anglo-American clocks (i.e., American spring movements in English-made cases).<sup>35</sup> Nor is it likely to be Samuel Baker of Birmingham (working 1823-37) and his son Richard (working 1837-54), dial makers whose names appear on false plates.<sup>36</sup>

Again, further evidence, in particular photographs of movements with his name, is necessary before any firm conclusions can be made.

Joseph Spencer, Birmingham

Two movements with "J. Spencer, Warranted, Birmingham" stamped on the front plate have been reported on clocks by Jacob Burg, Lancaster, PA.<sup>37</sup> Joseph Spencer was a clock and bottle-jack maker, working in Birmingham in 1818-20. His trade card (Figure 18) indicates that he supplied movements, clock brass, pinions, forge work and bells "Wholesale,



**Figure 18.** Trade card of Joseph Spencer of Birmingham 1818-20.

Retail & for Exportation". Illustrations of his movements have not been seen, so it is not known if they were made by him, by Harlow, or by another manufacturer.

William Vale, Lichfield

At least three clocks by Martin Shreiner, and one by Joseph Eberman, both of Lancaster, PA, have been reported having movements marked "Wm Vale Lichfield".<sup>38</sup> This name may have been cast, rather than stamped, in which case Vale may have only supplied the brass plates, rather than complete movements. Stacy B. C. Wood has informed the author that Shreiner's movements were his own. A clock by Henry Ober of Elizabethtown, PA, is also known with a movement marked "Wm Vale Lichfield",<sup>39</sup> as well as an unsigned painted dial clock from the Connecticut River Valley.<sup>40</sup> The name on the latter is said to be cast on the front plate, whereas several other movements are reported with the name deeply stamped in small letters, with the corresponding bruising visible on the reverse.<sup>41</sup>

The Vales were a complicated family, whose details, despite recent research,<sup>42</sup> have not yet been fully clarified. A William Vale was a "clockmaker, wholesale" in Birmingham in 1770, while the man of interest here was a "brass and bell founder and clock manufacturer" in Lichfield, Staffordshire (about 15 miles north of Birmingham). In 1818 he advertised "Merchants and Factors supplied with watch and clock movements", and he is listed in directories until 1864. Another Vale family included noted Coventry watch manufacturers, who eventually became the well known firm of Rotherhams.

As William Vale was in a position to supply either cast plates or finished clock movements, this point remains unresolved until detailed photographs are available of both the movements and the names on them. It may well be that Vale exported unfinished plate castings (and possibly other cast clockwork) as well as finished movements.

The known makers or suppliers of English movements found on American tallcase clocks are summarized in Table 1.

### Conclusions

As well as making their own tallcase movements and dials (often using imported sets of brass clock castings, pinions, and forged ironwork), American clockmakers also imported completed movements from England to fit into cases made locally. In many instances this was done simply because there were not enough skilled clockmakers in America to satisfy the demand for movements. This problem was eventually solved by the mass production in Connecticut of shelf clocks, initially with wooden movements, later of brass.

It is now known that tallcase movements that were exported to the U.S. in the era of the painted dial (i.e., after 1772) were not mass-produced in Birmingham factories, as has previously been supposed, but were made in numerous small workshops. These were not necessarily in Birmingham, in fact many were in much smaller towns, but sold via Birmingham merchants and factors. As movements sometimes have the names of these merchants (some of whom were clockmakers in their own right, or at least claimed to be) stamped on the plates, the notion has arisen that they were all made in Birmingham.

A detailed examination of movements on both American tall clocks and English longcase clocks is helping to unravel the network of English manufacturers and merchants who were making and supplying the home and overseas markets. It is now clear that the firm started by Samuel Harlow in Ashbourne, Derbyshire, was a key player in this trade. As Harlow movements are so readily identifiable it has been possible to show that some movements were not made by those whose names are stamped on them. Another exporter to America was James Hawthorn of Newcastle-upon-Tyne, and his movements are also recognizable.

It is worth noting that movements stamped with the names of Bagnall, Baker, Spencer, Wainwright, Vale,

**TABLE 1. Known Tallcase Movements with Stamped Names**

Stamped Name	Movement Manufacturer	Notes
J E Bagnall	Harlow, Ashbourne	James Eustace Bagnall, Birmingham
Baker	? Harlow, Ashbourne	probably Thomas Baker, Birmingham
Hawthorn & Ferguson, Newcastle	Hawthorn & Ferguson	clockmakers & brass founders
James Hawthorn, Newcastle upon Tyne	Hawthorn	
Roskell, Liverpool	Robert Roskell?	Noted maker of watches, chronometers and regulators
J Spencer, Birmingham	not known	Joseph Spencer
Wm Vale, Lichfield	not known	brass founder & clock manufacturer, possibly supplier of movements and/or cast plates
Wainwright	Harlow, Ashbourne	possibly James Wainwright, Birmingham, factor



and Hawthorn have only been reported on American clocks, not British longcase clocks. Perhaps the manufacturers and wholesalers were keen to have their products specified for future export orders, whereas at home the sources of supply were already well established. None of these merchants/wholesalers appears to have advertised in American newspapers (it was after all a very specialized field and their customers were clockmakers/retailers, not the general public). They may not have exported movements themselves, but supplied them via Peter Stubs of Warrington, or other exporters.

It is hoped that this preliminary study will also contribute towards the broader picture, and help to determine whether most tallcase clocks had American-made or imported movements. Many of these imported movements have been reported on Pennsylvania clocks, maybe because Philadelphia was a major center for imported clock materials, and tall clocks continued to be made in the state long after their production ceased in New England.

Many questions remain unanswered: were all the movements supplied by Bagnall and Wainwright made by Harlow, or did they sell movements from several different manufacturers? Were the movements stamped with the names of Baker, Spencer, and Vale actually made by them, or did they come from Harlow, or perhaps another manufacturer? They may have even only supplied the unfinished cast plates for American clockmakers to make into movements. Answers will only come with the examination of more movements, especially those with names on the plates.

All collectors and restorers of tallcase clocks are urged to look closely at the movements and take photographs. These should show the front plate with the dial removed and also the hammer arrangement (unfortunately photographs taken with the dial in position rarely show enough detail of the striking work to give a positive identification), as well as a close-up of any name. Even if the movement cannot be identified as having been made by Harlow or Hawthorn, or has no name on it (which is usually the case), comparison with the author's collection of movement photographs may one day identify the actual maker.

The author is also interested in information or photographs of any name, mark, or initials found stamped or cast on American tallcase or British longcase clock movements or their components, for inclusion in a future revised edition of *The Longcase Clock Reference Book*. These marks are gradually widening our knowledge on the clock trade, especially who made and supplied movements as well as the parts.

#### Acknowledgements

In research like this, comparing movements in America with those from Britain, the author had been

dependent on information from across the Atlantic, and without the generous supply of details and illustrations this article would not have been possible. Tom Spittler's regular transatlantic telephone calls have kept me abreast of horological developments and discoveries in the USA, while his information, advice and encouragement have helped to interpret new discoveries. Special thanks are due to Paul J. Foley, whose information has been invaluable, particularly his excellent photographs of the Hawthorn and Harlow movements, which have filled a notable gap in our knowledge. Grateful thanks are also due to Chris H. Bailey of the American Clock & Watch Museum, Robert C. Cheney, Bruce R. Forman, J. Carter Harris, William Jones, Edward LaFond Jr., and Stacey B. C. Wood Jr., who have all provided information and/or photographs. Many of them have also made useful comments and additions to an early draft of this article.

#### Addendum

Since this article was written two additional tallcase clocks have been reported with English movements. Figure 19 shows the movement of a tall clock by Joseph Eberman of Lancaster, PA, which is stamped "J. E. Bagnall" near the bottom of the front plate. The

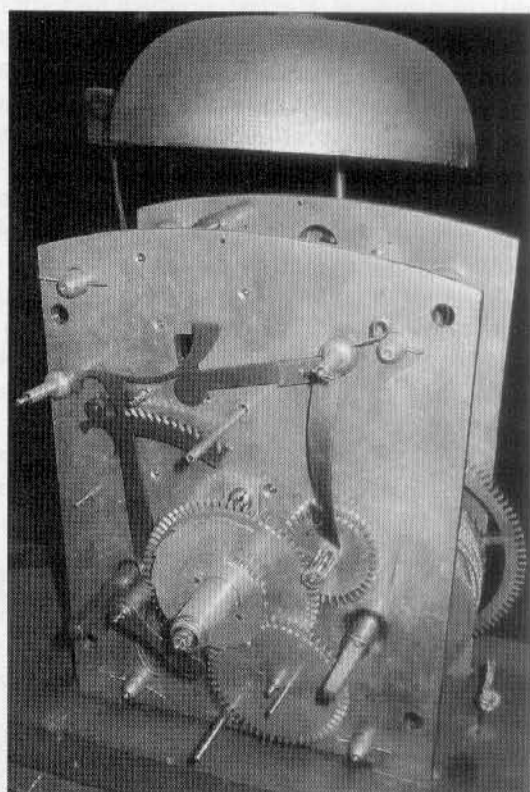
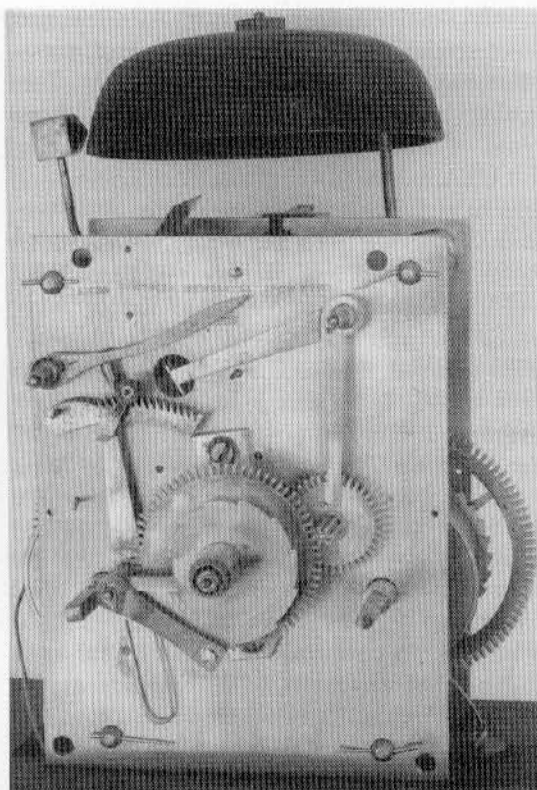
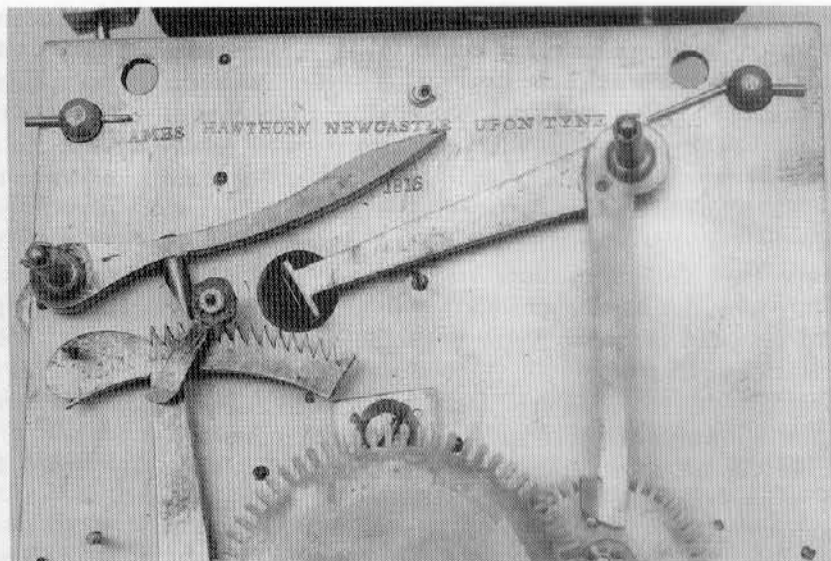


Figure 19. Movement of a tall clock by Joseph Eberman, Lancaster, PA, with a movement stamped with the name of J. E. Bagnall. Apart from the very unusual curved top edges of the plates, it is typical of the movements made by the Harlow workshops in Ashbourne.



RALPH POKLUDA (2)



**Figure 20, left.** Movement by James Hawthorn of Newcastle upon Tyne from a tall-case clock with an unsigned Boston dial. The hour bridge is nearly vertical.

**Figure 21, above.** Detail showing the Hawthorn name stamped into the front plate and the date 1816. The rack hook and gathering pallet have been repaired or replaced.

movement is a typical Harlow product and confirms that movements sold by Bagnall of Birmingham came from Harlow of Ashbourne. The curved top edges of the plates are unusual on longcase movements from any maker, and this is the only example known to the author.

Figures 20 and 21 are of a movement from a tall clock with an unsigned Boston dial. The top of the movement is signed "James Hawthorn Newcastle upon Tyne" in a similar manner to Figures 16 and 17. Despite being also dated 1816 there are some similarities, but also differences. The hour bridge is almost vertical, rather than at 45 degrees, and there is no step on the top of the rack hook. As the hook itself has been repaired, the whole of the component may be a replacement, so firm conclusions cannot be made about its shape. Although not visible in the photographs, the hammer shaft and tail are fitted to their arbor with brass collets, as in Figure 16, confirming this as a Hawthorn feature. Comparison of Figures 16 and 21 emphasizes that longcase movements are rarely identical in all respects, even when from the same workshop and of the same date.

The author would like to thank Ralph Ferone and Ralph Pokluda for the details and photographs of these two movements.

### Notes

- <sup>1</sup> Information from Robert C. Cheney.
- <sup>2</sup> Information from J. Carter Harris.
- <sup>3</sup> Examples on English longcase clocks are shown in John Robey, *The Longcase Clock Reference Book*, 2001, pp. 80-5.

- <sup>4</sup> Information from J. Carter Harris.
- <sup>5</sup> Information from Edward F. LaFond Jr.
- <sup>6</sup> Information from Chris H. Bailey.
- <sup>7</sup> Information from Paul J. Foley.
- <sup>8</sup> Tom Spittler, "The Myth of Mass Production", *NAWCC BULLETIN* (February 2002): pp. 86-92. These castings and forgings probably came from the workshop of the Dover, Ohio, clockmaker Israel Ricksecker, and are likely to have been imported from England. They have been donated to the American Clock & Watch Museum, Bristol, CT, by Jim Christian.
- <sup>9</sup> Robert C. Cheney, "Roxbury Eight-Day Movements", *The Magazine Antiques* (April 2000): pp. 606-615.
- <sup>10</sup> David F. Wood, "Concord Massachusetts, Clockmakers, 1789-17", *The Magazine Antiques* (May 2000): pp. 760-9.
- <sup>11</sup> Edward F. LaFond Jr., "Isaac Heron: The Outspoken Clockmaker", *NAWCC BULLETIN*, No. 200 (June 1979): pp. 291-307.
- <sup>12</sup> John Whitehurst (1713-88), as well as being a noted clockmaker, was a scientist, one of the founders of modern geology, and the father figure of the "Lunar Society". This was an informal group of leading scientists and industrialists, which included the Birmingham manufacturer Matthew Boulton, the potter Josiah Wedgwood, and the steam engine engineer James Watt. Whitehurst's clockmaking concern was continued by his successors until 1862, and many domestic and turret clocks were produced. See Maxwell Craven, *John Whitehurst of Derby, Clockmaker & Scientist 1713-88* (1996).
- <sup>13</sup> John Robey, *The Longcase Clock Reference Book* (England: Mayfield Books, 2001): pp. 171-7.
- <sup>14</sup> John Robey, "Samuel Harlow of Ashbourne and his Longcase Movements," *Antiquarian Horology* (March 2002): pp. 527-45.



- <sup>15</sup> Samuel Harlow, *The Clock Maker's Guide*, 1813. Only two original copies of this booklet are known. It was reprinted in 1978, with a commentary by Charles Aked and Rita Shenton, but unfortunately all the illustrations were redrawn, thereby losing the period character of the original engravings and some important details were omitted. All the original engravings are reproduced full size in *The Longcase Clock Reference Book*.
- <sup>16</sup> John Robey, *Antiquarian Horology* (March 2002): pp. 534-41.
- <sup>17</sup> John Robey, *The Longcase Clock Reference Book* (England: Mayfield Books, 2001): pp. 392-8.
- <sup>18</sup> Information from William Jones.
- <sup>19</sup> Bruce R. Forman, *Clockmakers of Montgomery County* (Norristown, PA: The Historical Society of Montgomery County, 2000): p. 282. Bruce Forman has informed the author that in his opinion this is a Pennsylvania movement, but from the evidence of the photograph it has most of the attributes of one made by Harlow.
- <sup>20</sup> Information from Paul J. Foley.
- <sup>21</sup> Joseph McKenna, *Clockmakers & Watchmakers of Central England* (Derbyshire England: Mayfield Books, 2002): p. 125-6.
- <sup>22</sup> Stacy B. C. Wood Jr., *Clockmakers and Watchmakers of Lancaster County* (Lancaster, PA: Lancaster County Historical Society, 1995): pp. 28, 32, 35, and 50.
- <sup>23</sup> Forman, p. 218.
- <sup>24</sup> J. Carter Harris, *Pennsylvania Clocks 1750-1850*, A Special Exhibition of the National Watch and Clock Museum, 2002, pp. 12-13.
- <sup>25</sup> Harris, p. 12 and Wood, p. 28.
- <sup>26</sup> Philip Zea and Robert C. Cheney, *Clockmaking in New England 1725-1825* (Sturbridge, MA: Old Sturbridge Village, 1992): p. 39.
- <sup>27</sup> Richard S. and Rosemarie B. Machmer, *Berks County Tall-Case Clocks 1750-1850* (Reading, PA: Historical Society Press of Berks County, 1995): pp. 73-74. Catalog of an exhibition, text by Edward F. LaFond Jr. and John J. Snyder Jr.
- <sup>28</sup> Information from Robert C. Cheney.
- <sup>29</sup> Bull NAWCC, Feb. 1988, No 252, p. 82.
- <sup>30</sup> Bull NAWCC, Oct. 1983, No 226, p. 623.
- <sup>31</sup> Robey, Figure 5.146, p. 258.
- <sup>32</sup> Wood, p. 32.
- <sup>33</sup> Information from Bruce R. Forman.
- <sup>34</sup> McKenna, pp. 127 and 129.
- <sup>35</sup> McKenna, pp. 128-9.
- <sup>36</sup> McKenna, p. 30.
- <sup>37</sup> Wood, p. 26.
- <sup>38</sup> Harris, p. 26 and Wood, pp. 32 and 54.
- <sup>39</sup> Harris, p. 30.
- <sup>40</sup> Information from Robert C. Cheney.
- <sup>41</sup> Information from Edward F. LaFond Jr.
- <sup>42</sup> McKenna, p. 310.

### The Author

Dr. John Robey was born in Nottingham, England, and trained as a physicist at the University of Leeds. After research at the University of Sheffield and in the electrical power industry, he moved into nonfiction publishing, until the purchase of a longcase clock steered him towards horology and an indepth study of the subject. This resulted in the publication of the acclaimed two-volume *Longcase Clock Reference Book*, which he hopes will be revised sometime in the future with additional information. He owns Mayfield Books, which specializes in publishing high quality books on horology, and divides his time between editing and designing books in the morning and restoring clocks in the afternoon. He lives near Ashbourne, Derbyshire, but it was not until he started to research the clock trade did he appreciate that the town had been an important clockmaking center, supplying movements to most parts of Britain and also to America.

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