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Throughout the years there are numerous striking styles associated with clocks. I'll try to reference as many of these styles as I can. If you can think of any more or find a mistake in this file, then feel free to E-mail me at [Mike@atmos-man.com](mailto:Mike@atmos-man.com).

#### A.) Angelus striking

The Angelus clock contains a modified Seth Thomas movement that strikes only three times a day: 6 am, noon, and 6 pm. The Angelus strike is a series of 18 strikes in the following sequence: 3 strikes followed by a 5.5 sec pause, 3 more strikes followed by a 5.5 sec pause, 3 more strikes followed by a 5.5 sec pause, and then 9 more strikes. The total strike sequence takes about 53 seconds during which Roman Catholics say the Angelus prayer.

The Angelus Clock Co. was incorporated in 1874 and only made these clocks for one year. The wooden cases had a faux marble finish and resembled a cathedral church.

#### B.) Bim-Bam or (Ting-Tang) a variation is called Normandy chimes

Bim-Bam is the most ancient form of chime on two bells, sometimes struck by two quarter boys giving one blow on each at quarter past, doing this twice at half past, three times at a quarter to, and four before the hour. The first bell has a higher note.

Another reference states it this way. A clock that sounds on two gongs or bells (one of lower tone than the first as a rule) in ding-dong fashion at the quarter and at the hours. Two blows indicate the first quarter; four the half-hour; six at the quarter to the hour and eight at the hours, followed by the number of hours struck in the usual manner of a striking clock.

For Normandy chimes as presented by the Wm. L. Gilbert Clock Company is a Bim-Bam which is the same progression as mentioned above for all three quarter hours but the hour is struck by only one hammer and counts the appropriate number.

Normandy chimes is also represented as a three rod or bell system where three notes are played on the 1st quarter, six notes of the 1/2 hour, 9 notes on the 3/4 hour and then the hour is struck by only one hammer and counts the appropriate number.

### C.) Cuckoo Striking

The hours and half hours are sounded on a gong and by two bellows blowing pipes, which imitates the call of the cuckoo. The first bellow sound is usually higher pitched than the second.

### D.) Dutch Striking

Dutch striking starts with an hour sounding the hour on the low pitched bell, then the next half hour strikes the next hour on the high pitched bell.

Another reference puts it this way. Where the clocks strikes the hours at the preceding half hour on a high toned bell and at the hour in a low toned bell.

Yet another reference puts it this way. As well as striking ordinarily at the hour, the clock strikes the next hour on a higher-toned bell every half hour.

For example:

	Low bell	High bell
11:30pm		XXXXXXXXXXXXX
12:00am	XXXXXXXXXXXXX	
12:30am		X
1:00am	X	
1:30am		XX
2:00am	XX	
2:30am		XXX
3:00am	XXX	
and so on.		

This system was mainly used on Friesland Stoelklokken, the famous Dutch bracket clocks made in the Frisian area in the 18th century.

## E.) Grande Sonnerie

A full or grand strike. Refers to a clock or watch that strikes the hours and the quarters at each quarter. For instance, at 7:15, the 7 hours will be struck and the one for the quarter. At 7:30, the 7 hours and 2 quarters. At 7:45, 7 hours and 3 quarters. And at 8:00, 8 hours and 4 quarters.

Another reference puts it this way. A clock or watch which strikes the hour before chiming each quarter of an hour, e.g. at 3:30 it would strike three, then two quarters.

Another variation is the Viennese "style" which differs in that their Grande Sonnerie leads with the quarter indication on 2 gongs, followed by the hour. They are unique in that the hour gives a 4-quarter warning, before striking the new hour.

Still another variation is found in French carriage clocks. In some carriage clocks, at the hour, only the hour is struck. There is a mechanism in them called the surprise piece, which by design locks out the quarters at the hour.

## F). Japanese Striking

The Japanese divided the day into six (6) night hours and six (6) day hours, with the hours being longer or shorter depending on the amount of daylight and darkness.

These clocks made until the 1870's and used two foliots. Therefore the clock would go one rate during the day and another rate at night. A foliot is a swinging bar with adjustable weights on each end. This bar would twist back and forth in a circular motion and is an extension of the verge much in the same way a pendulum is today. This type of escapement is called a verge escapement.

If you have seen the extremely simple "rope" wall clocks where you use a rock for the weight and the rock is tied to a rope running through the main wheel, you should know what I mean. A "rope" clock uses a foliot as its pendulum. Again, this

is called a verge escapement.

The hour divisions could be adjusted by hand, or by dials which were replaced by other dials during different times of the year and usually monthly.

Each six (6) hour period was numbered backwards with 9, 8, 7, 6, 5, and 4. One six (6) hour period started at 12 noon and the other at midnight.

Clocks using the above would strike each half hour and the half hour strike would alternate between single and double "strikes".

For example:

Time	Strikes
12:00pm	9
12:30pm	1
1:00pm	8
1:30pm	2
2:00pm	7
2:30pm	1
3:00pm	6
3:30pm	2
4:00pm	5
4:30pm	1
5:00pm	4
5:30pm	2

Don't forget the this is a complete six (6) hour cycle, so the next cycle would repeat the above and indicate night time from midnight to daylight.

#### H.) Petite Sonnerie

A clock or watch that strikes the quarters and half-hour but does not strike the hours at each quarter as does Grande Sonnerie. The first quarter would strike one, the second would strike two, the third quarter would strike three, and the hour would strike the number for that hour.

#### I.) Quail (Cuckoo) Striking

A cuckoo clock that strikes each quarter hour with

the sound of a quail. This striking is a set of three high pitch notes. The notes are exactly the same with the exception of their speed or frequency. The first note is followed by two of the same note but in a more rapid succession. Like pump, pa-pump.

The interesting thing is that the quail cuckoo can be both a Petite and Grand Sonnerie. In the Grande Sonnerie the first quarter hour is the set of three notes followed by the "regular" cuckoo sound and for the number of that hour. The second quarter is two sets of three notes followed by the hour. The third quarter is three set of three notes followed by the hour. At the hour, four sets of three notes sounds followed by the new hour.

In the Petite Sonnerie the quarter striking is the same except only the hour counts that hour with the traditional cuckoo sound after the quail sound.

J). Roman striking

Roman striking was invented by Joseph Knibb to reduce winding. A high-pitched bell represented 1, a low pitched bell for V (five), and two low-pitched "blows" for X (ten).

Therefore the 4, IV, or IIII sounded one high pitched followed by one low pitched. The striking really had nothing to do with the numerals on the dial because it followed the actual Roman numerals.

An example: (There are only two bells total; the following is for illustration)

	High bell	Low bell	High bell
1	X		
2	XX		
3	XXX		
4	X	X	
5		X	
6		X	X
7		X	XX
8		X	XXX
9	X	XX	
10		XX	

11	XX	X
12	XX	XX

### K.) Ship's Bells

On board ships, a sailor's day is reckoned from noon and divided into a series of "watches". Each watch is of four hours except the two "Dog Watches" of two hours each. During a watch the ship's bell is struck once at the end of the first half hour, twice at the second, up to eight times at the end of four hours.

Another reference puts it this way. A ship's bell clock strikes according to a system similar to that used on board ship where a bell is struck manually to denote "watches", or a period of duty. A Ship's Bell Clock may not necessarily agree with the nautical time since the majority of "domestic" ship's bell clocks strike the series of blows up to eight, starting at 12:30 pm with one bell and adding a blow at each half hour up to 4 pm when eight bells are sounded. Then the same sequence is repeated, whereas true nautical time strikes one bell at 6:30 pm to denote the Dog Watches (where the domestic clock would strike five bells) 7 pm two bells, 7:30 pm, three bells, and 8 pm eight bells, as noted in the table of nautical times.

For example (domestic ship's bells):

Time	Bell Strikes
12:30 am	X
1:00 am	XX
1:30 am	XX X
2:00 am	XX XX
2:30 am	XX XX X
3:00 am	XX XX XX
3:30 am	XX XX XX X
4:00 am	XX XX XX XX
4:30 am	X
5:00 am	XX
5:30 am	XX X
6:00 am	XX XX
6:30 am	XX XX X
7:00 am	XX XX XX
7:30 am	XX XX XX X

8:00 am	XX XX XX XX
8:30 am	X
9:00 am	XX
9:30 am	XX X
10:00 am	XX XX
10:30 am	XX XX X
11:00 am	XX XX XX
11:30 am	XX XX XX X
12:00 pm	XX XX XX XX

And so on.

#### L.) Simple or Regular striking

Most striking clock strike the number of hours for each particular hour on a gong or bell. Others have additionally one count on each half-hour.

#### M.) Tolling Clock

I encountered this servicing a Revere electric from 1936 (serial # 285,932).

What happens is, every 1/2 hour, it strikes 34 times (on 2 notes) for 6 + minutes and then chimes the first 4 notes of Westminster.

I've been told that this represented "Tolling" for the souls of the people at a funeral service.

Most of the above information is my rewritten version of Eric Bruton's book "Dictionary of Clock and Watches" Copyright in 1963 & Donald De Carle book "Watch & Clock Encyclopedia" Copyright in 1950.

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A specialist in Atmos and 400-day clock repair.  
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