

Stedman for beginners

Beginners like me ...James Thorpe

jfthorpe@gmail.com

History - Single Swaps or “Plain Changes”

In the first half of 1600’s:

Single swaps only on five bells only

1	2	3	4	5
X				
2	1	3	4	5
	X			
2	3	1	4	5

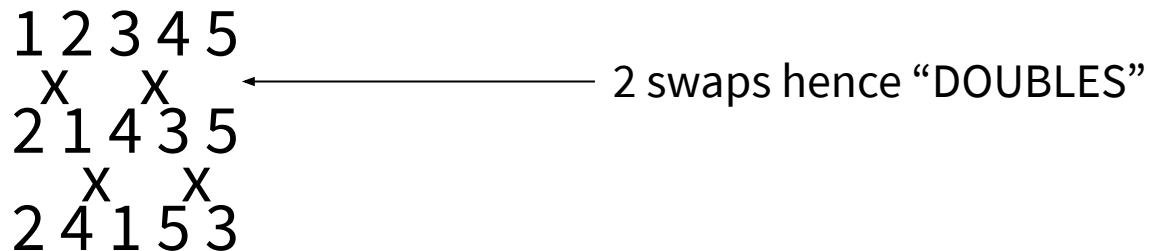
c1642 ASCYs rang a “Plain Six-Score on Five Bells

But that was boring even in 17th century

History - Cross Changes

So “CROSS CHANGES” were invented - more than one change at the same time

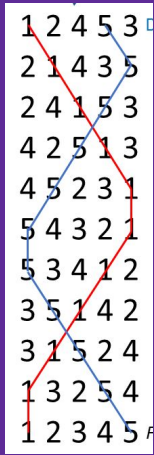
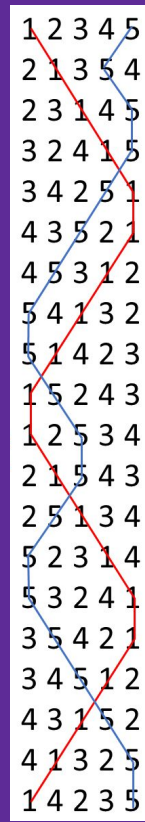
We now think this is NORMAL CHANGE RINGING



The first extent using cross changes

A “Cross Peal” 1650ish

Devised by Robert Roan
In order to generate all 120
changes

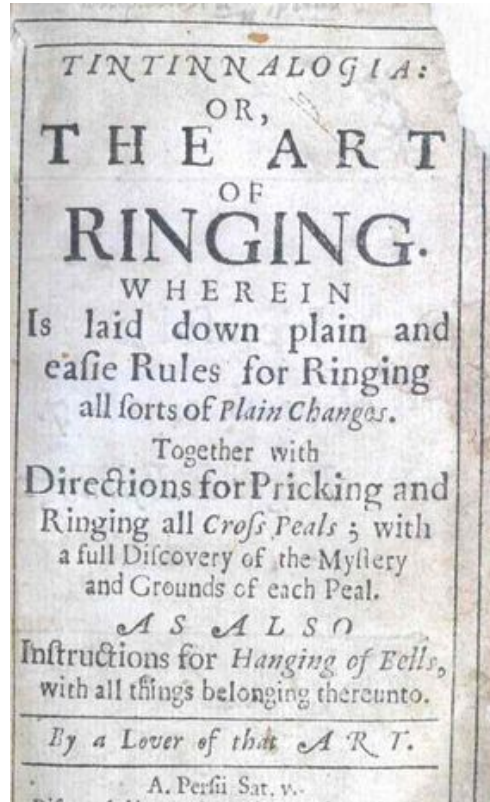


Publication published by Stedman

1668 Tintinnalogia published

Dedicated to "the Noble Society of Colledge-Youths" (Roan is Master in 1652)

*Wherein Is laid down plain and easie Rules for Ringing all sorts of "Plain Changes". Together with Directions for Pricking and Ringing all "**Cross Peals**"; with a full Discovery of the Mystery and Grounds of each Peal.*

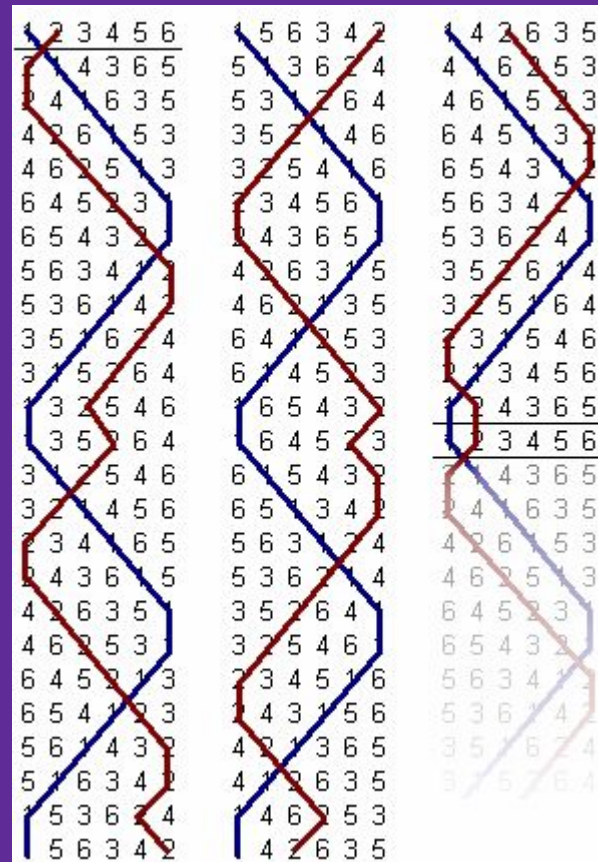


Poem By Roan about his method is reproduced:

*A Gentlemen of the Noble Crew
Of Colledge Youths, there
lately blew A wind, which to
my Noddle flew.....*

*.....And drink good Sack till
Sky looks blew, So "Grandsire"
bids you All adieu.*

Robert Roan also invented
“**Grandsire Bob**” a 720 based on this...
However the name did not stick...

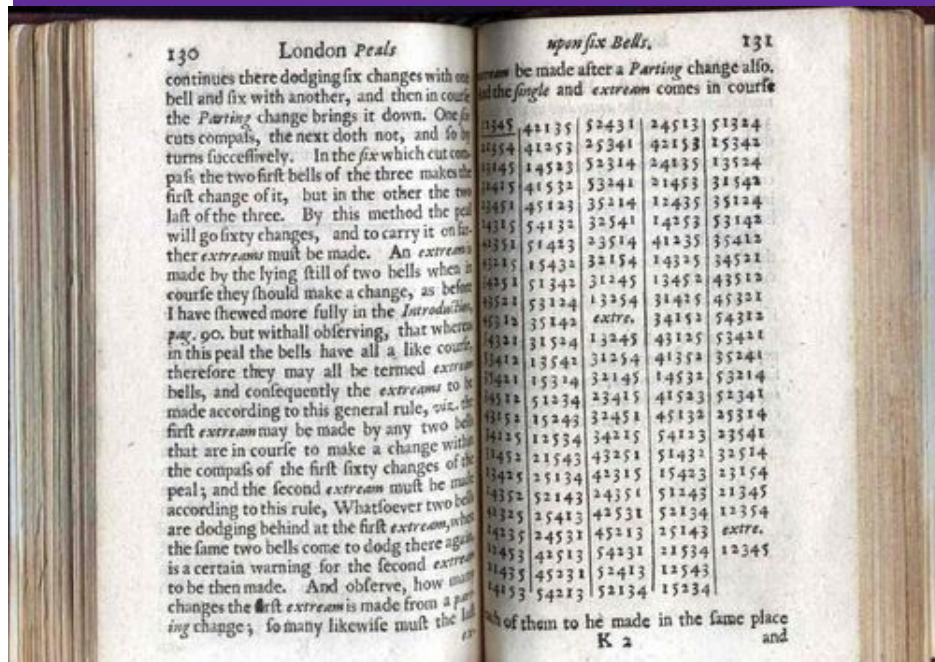


Publication written by Stedman

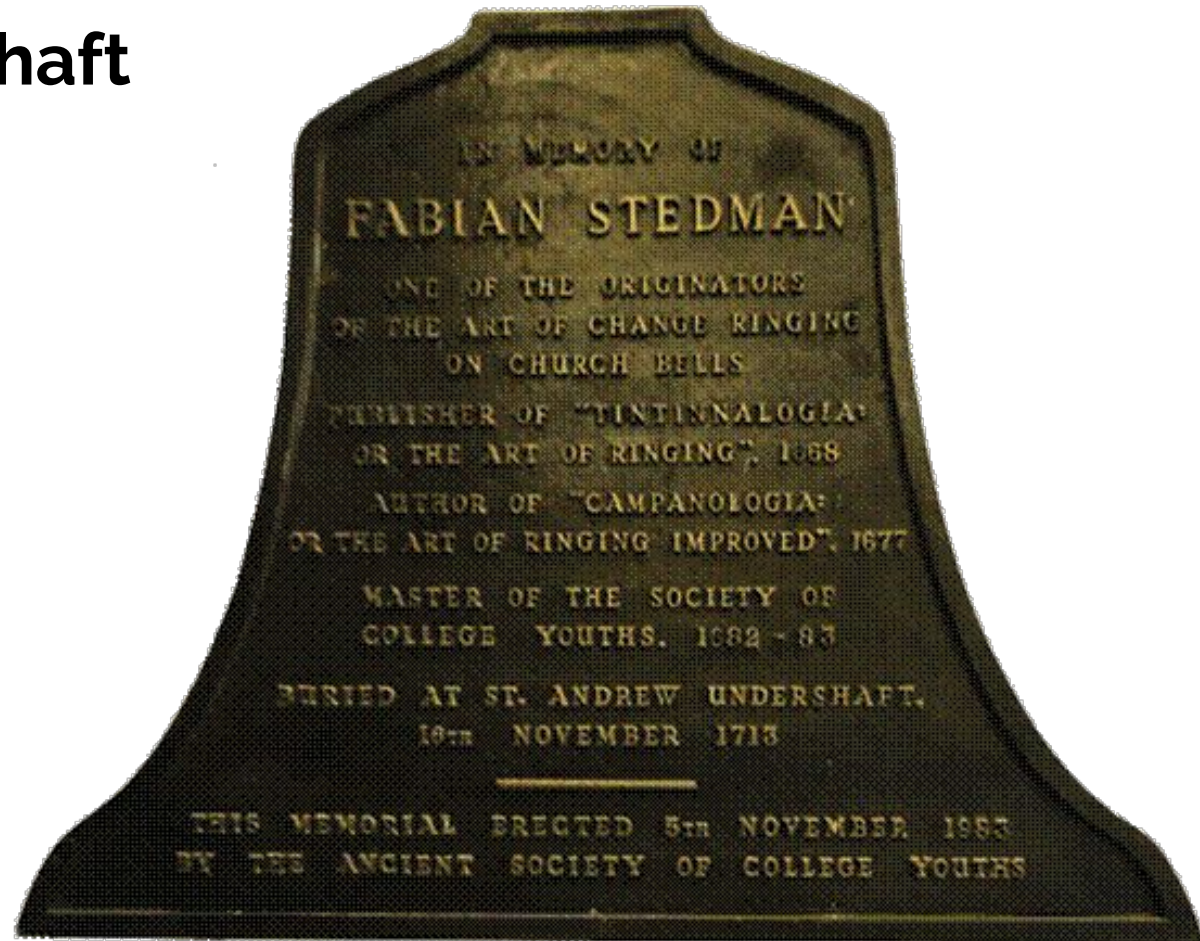
1677 Campanologia published

Containing an alternative method of
generating 120

Stedman's Principle

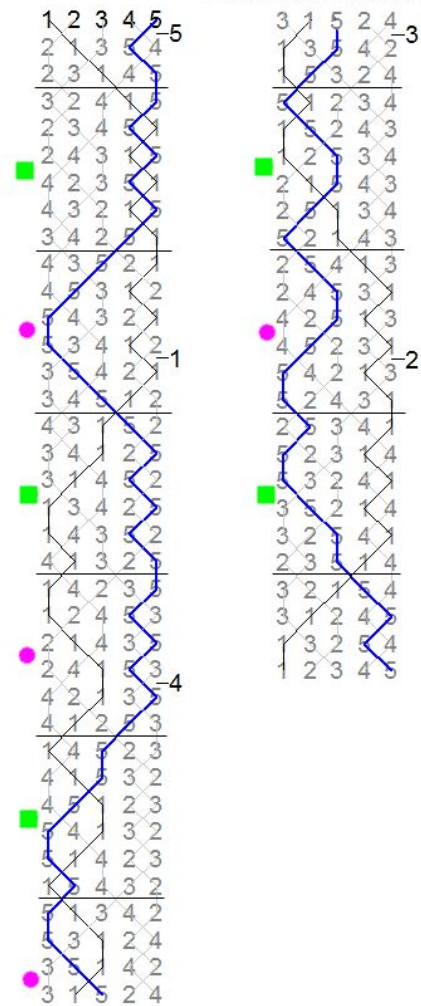


St Andrew Undershaft

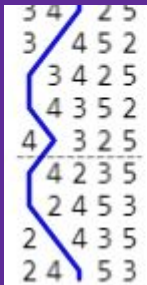


Stedman's Principle or "Stedman"

Principles are methods
Not many methods are principles



Some unfamiliar pieces of work



A 10x5 grid of numbers with a blue path starting at the top right and ending at the bottom left. The path moves vertically down the right edge, then zig-zags horizontally and vertically across the grid. There are horizontal dividers between the 5th and 6th rows, and between the 7th and 8th rows.

3	4	2	5	
3		4	5	2
	3	4	2	5
	4	3	5	2
4		3	2	5
	4	2	3	5
	2	4	5	3
2		4	3	5
2	4		5	3



A 10x5 grid of numbers with a blue path starting at the top right and ending at the bottom left. The path moves vertically down the right edge, then zig-zags horizontally and vertically across the grid. There are horizontal dividers between the 5th and 6th rows, and between the 7th and 8th rows.

2	4		5	3
4	2		3	5
4		2	5	3
	4	5	2	3
4		5	3	2
4	5		2	3
5	4		3	2
5		4	2	3
	5	4	3	2
5		3	4	2
5	3		2	4
3	5		4	2
3		5	2	4



A 10x5 grid of numbers with a blue path starting at the top right and ending at the bottom left. The path moves vertically down the right edge, then zig-zags horizontally and vertically across the grid. There are horizontal dividers between the 5th and 6th rows, and between the 7th and 8th rows.

	2	3	4	5
2		3	5	4
2	3		4	5
3	2	4		5
2	3	4	5	
2	4	3		5
4	2	3	5	
4	3	2		5
3	4	2	5	
4	3	5	2	
4	5	3		2
5	4	3	2	
5	3	4		2

All based on plain hunt 3

Only 6 changes are possible
 $3! = 6$

	<u>B 123</u>	<u>123</u>
3	H 213	132
1	B 231	312
	H 321	321
	B 312	231
	H 132	213
	B 123	123
	—	

Stedman starts to emerge

By alternating the forward and backwards hunting

Forward
Right
Quick

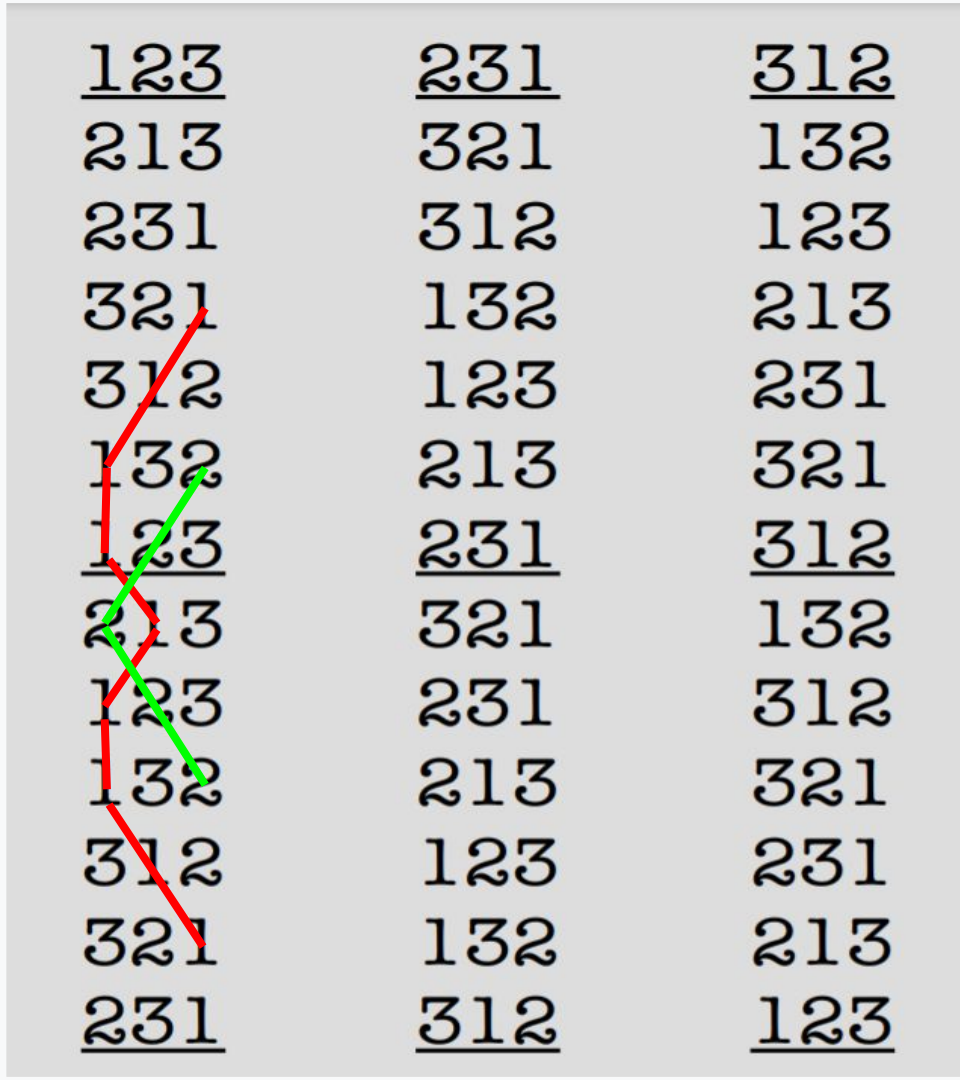
Glued together
with n place
Here $n=3$

Backward
Wrong
Slow

<u>123</u>	<u>231</u>	<u>312</u>
213	321	132
231	312	123
321	132	213
312	123	231
132	213	321
123	<u>231</u>	<u>312</u>
213	321	132
123	231	312
132	213	321
312	123	231
321	132	213
<u>231</u>	<u>312</u>	<u>123</u>

Stedman starts to emerge

By alternating the forward and backwards hunting



Stedman starts to emerge

Stedman is therefore organised
in alternating quick and slow sixes

But where to start?

4th row of a quick six
(happens to give a grandsire start)

<u>123</u>	<u>231</u>	<u>312</u>
213	321	132
231	312	<u>123</u>
321	132	213
312	<u>123</u>	231
132	213	321
<u>123</u>	<u>231</u>	<u>312</u>
213	321	132
<u>123</u>	231	312
132	213	321
312	<u>123</u>	231
321	132	213
<u>231</u>	<u>312</u>	<u>123</u>

Adding Bells to Stedman - beyond 3!

<i>quick</i>	12345
<i>six</i>	21354
	23145
—	32415
	23451
<i>slow</i>	24315
<i>six</i>	42351
	43215
	34251
—	43521
	45312
<i>quick</i>	54321
<i>six</i>	53412
	35421
—	34512

← n place now = 5

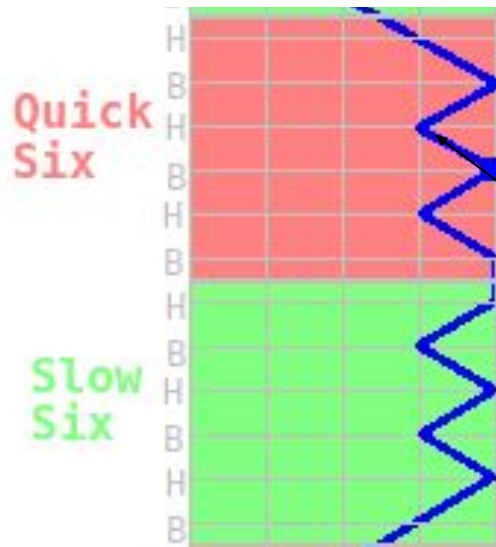
3 bells do a six together on the front

n place introduces some plain hunt 5

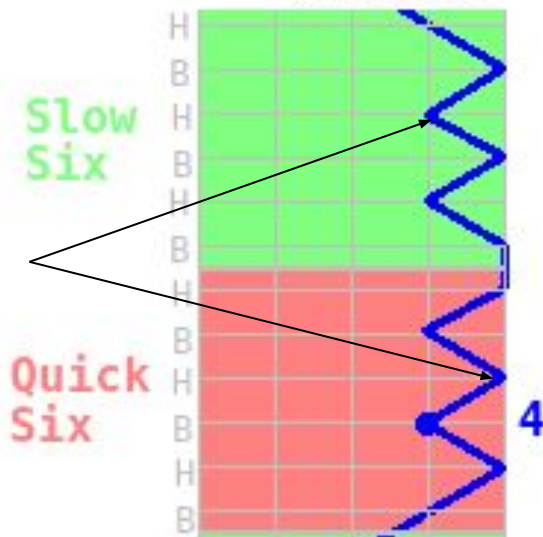
So.....

1 moves away a new bell arrives

Adding Bells - Dodging in 4/5 while waiting (RIGHT PLACE, HANDSTROKE)



Dodging back
at
HANDSTROKE



The Blue Line - overview

Double Dodge up

Double Dodge down

IN

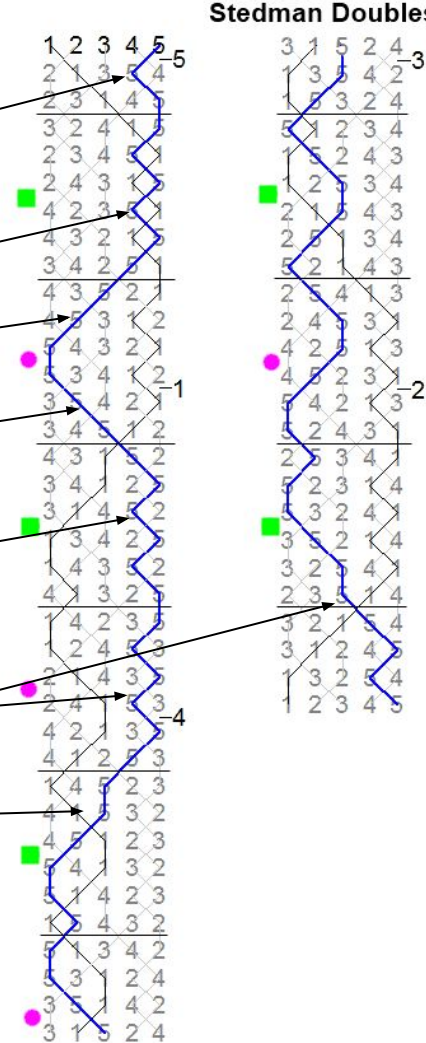
OUT

Double Dodge up

Double Dodge down

IN

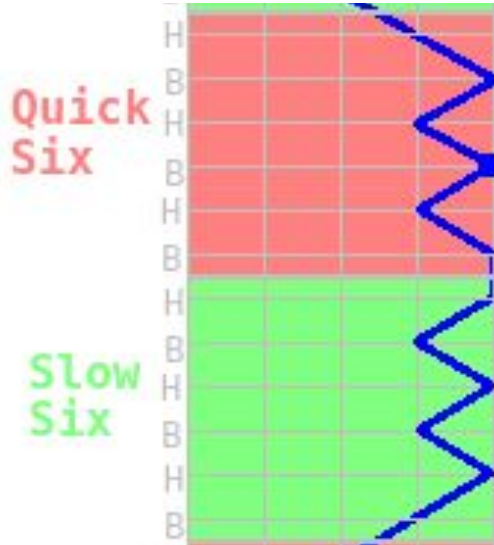
OUT



Dodging in 4/5 while waiting adds sixes

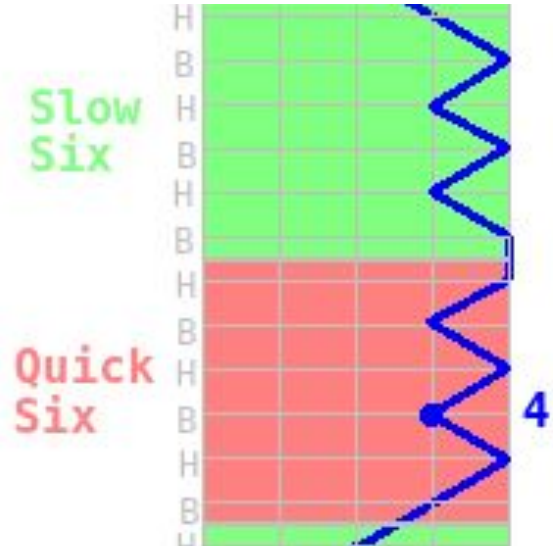
TWO sixes are spent dodging - One six UP then One six DOWN

Just finished a slow 6



Off to do a quick 6

Just finished a quick 6



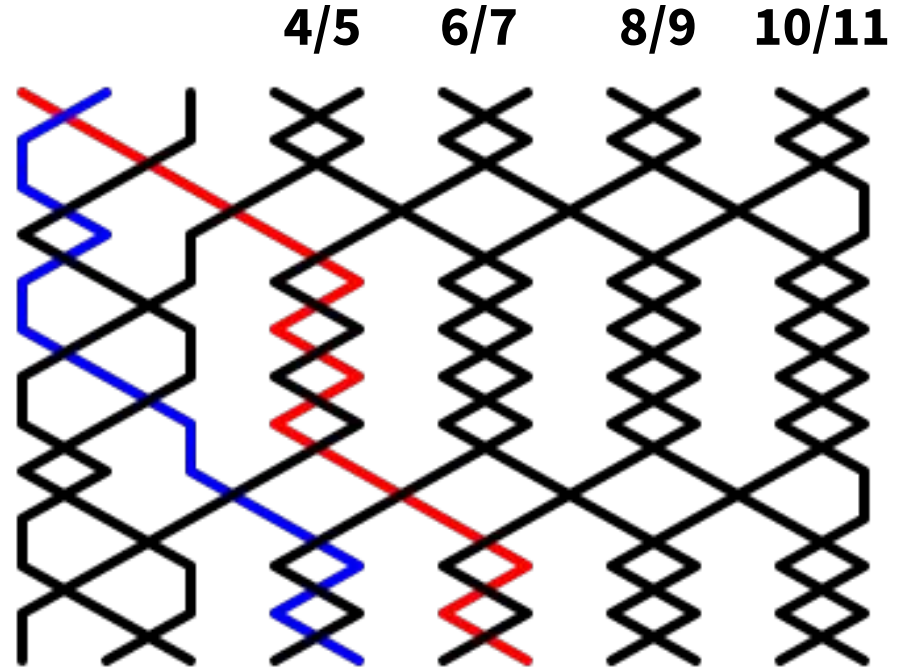
Off to do a slow 6

Adding Bells to Stedman - beyond 5!

More bells = more dodging
positions

Dodge each position **UP** then each
position **DOWN**

Always an **EVEN** number of sixes



Going In

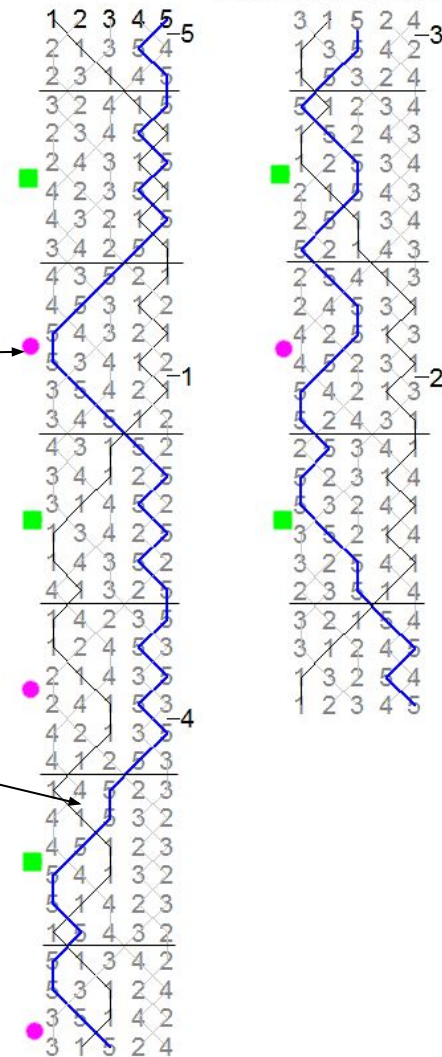
If when you go in it is a **QUICK** six

Then just “**lead quick**”

If when you go in it is a **SLOW** six

Then you do “**THE SLOW**”

Two sixes at the back means
ALTERNATING front work



The Slow work

Make thirds

Stedman whole turn

- lead **wrong**, point, lead **right**

Make thirds

Point at **handstroke**

Make thirds

Point at **backstroke**

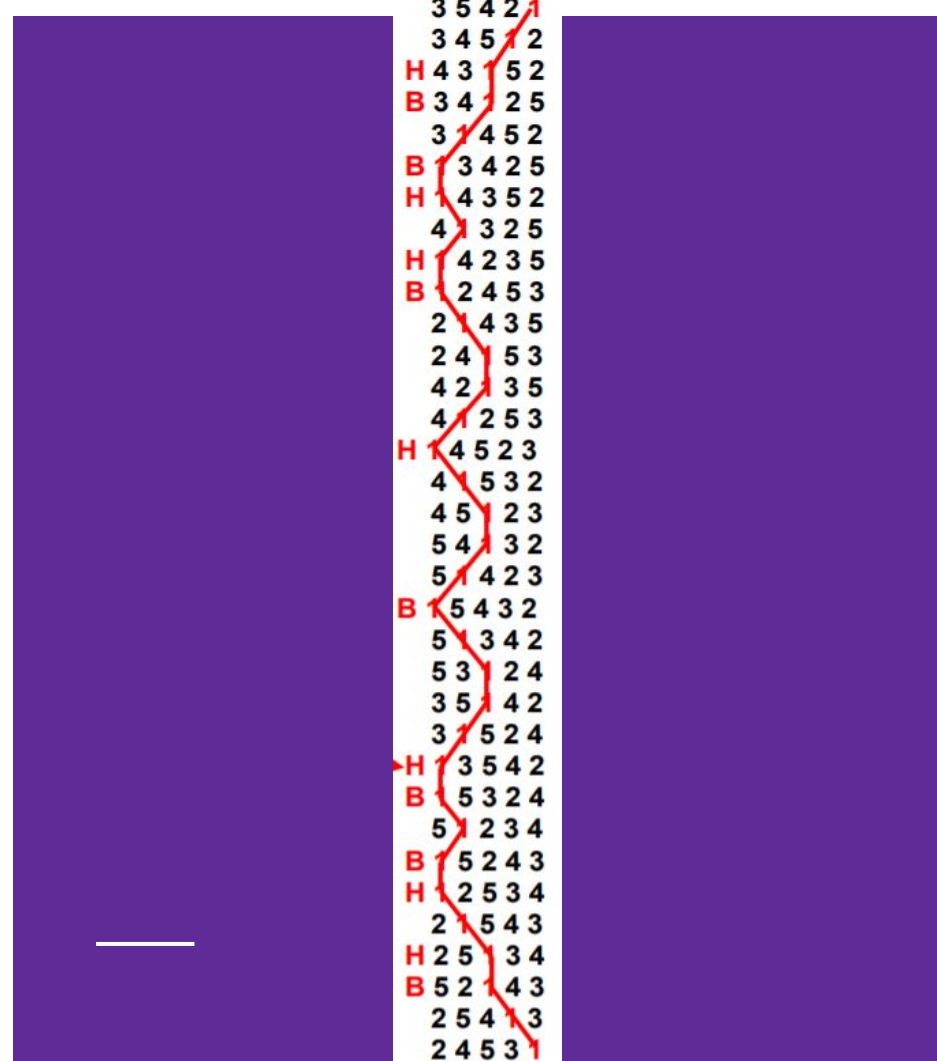
Make thirds

Stedman whole turn

- Lead **right**, point, lead **wrong**

(Remember to finish the whole turn)

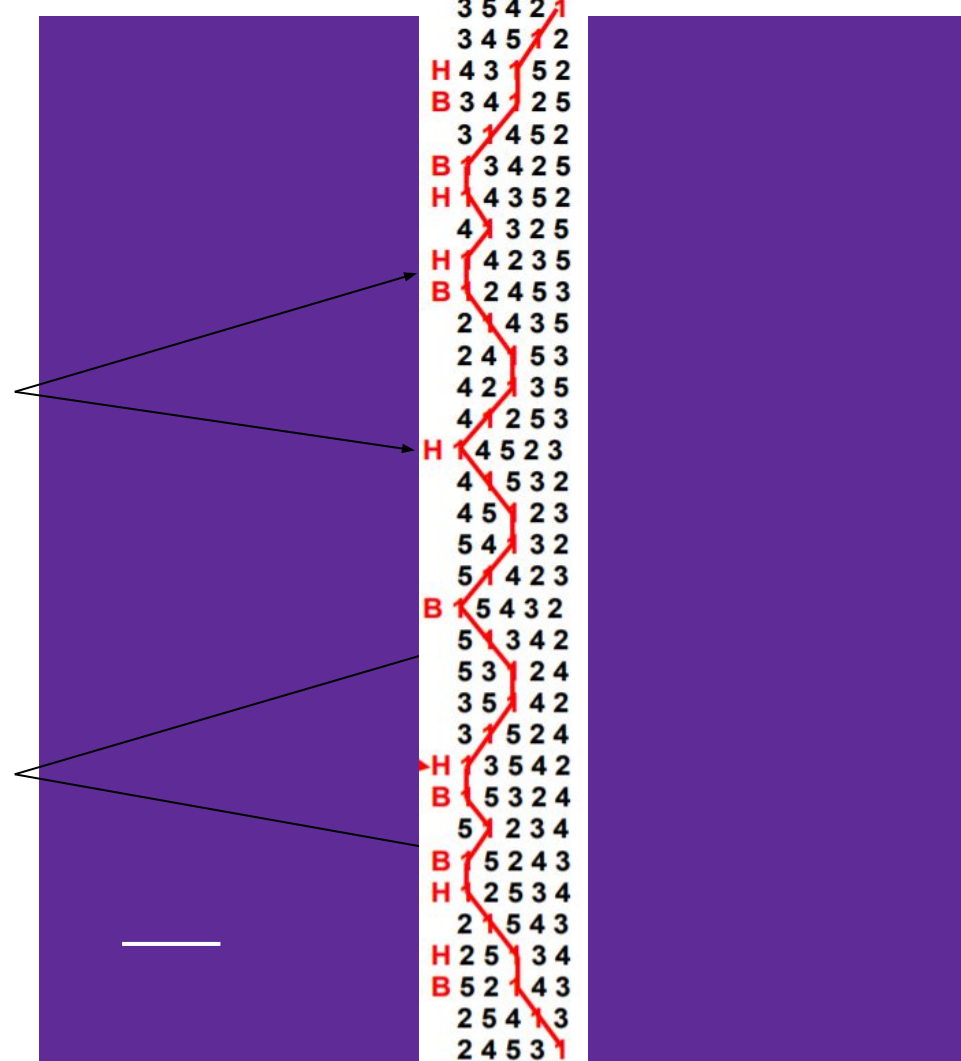
Make thirds



The Slow - half bells

Point with half-bell in whole turn
Point again with it in half-turn
“Point with the 4, point with the 4”

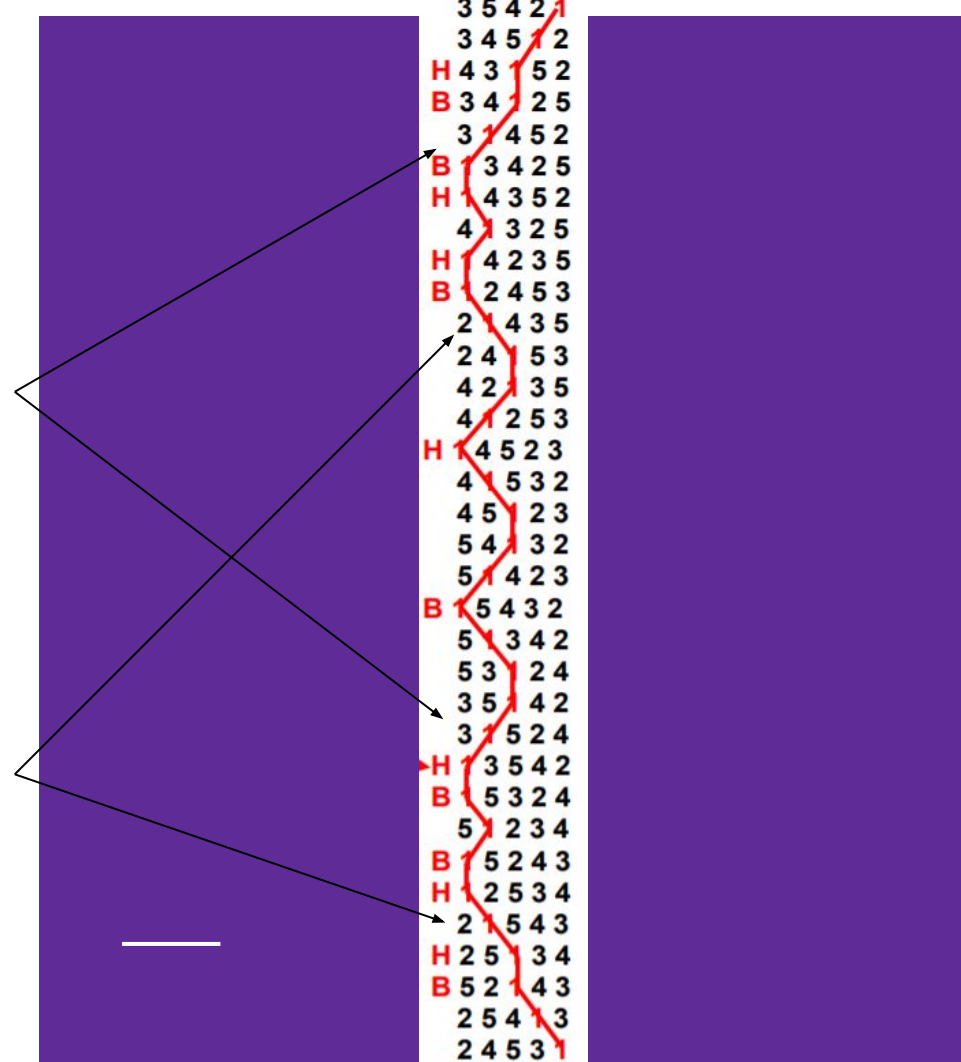
Point with half-bell in half turn
Point again with in in whole turn
“Point with the 5, point with the 5”



The Slow - whole bells doubles only

You take the same bell off lead
every time
“Take the 3 off lead”

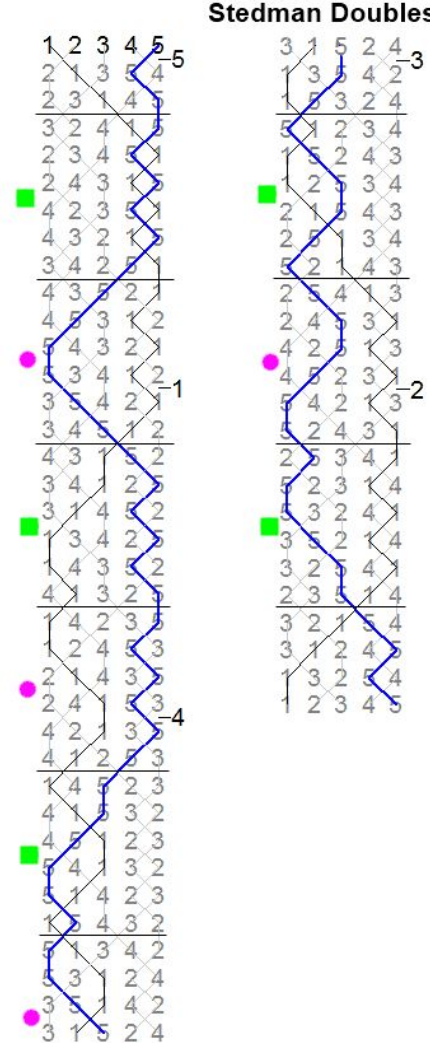
The same bell takes you off lead
every time
“The 2 takes me off”



No bobs in Stedman doubles

Plain Course = 60 changes

So 2 singles are all that is required to
give 120 of doubles



Stedman Calls

Stedman Doubles

Singles Only

2 3 4 5
 3 2 4 5
 2 3 4 5
 2 4 3 5
 2 3 4 5
 2 4 3 5
 4 2 3 5
 2 4 3 5

2 3 1 4
 3 2 4 1
 2 3 4 1
 2 4 3 1
 2 3 4 1
 2 4 3 1
 4 2 3 1
 2 4 1 3

Stedman Triples, Caters, Cinques etc

Bobs

2 3 1 4
 3 2 1 4
 3 1 2 4
 1 3 2 4
 1 2 3 4
 2 1 3 4
 2 3 1 4
 3 2 4 1
 2 3 4 1
 2 4 3 1
 4 2 3 1
 4 3 2 1
 3 4 2 1
 4 3 2 1

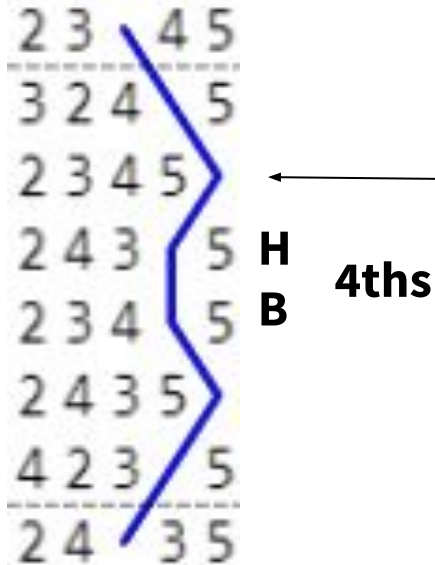
Singles

2 3 1 4
 3 2 1 4
 3 1 2 4
 1 3 2 4
 1 2 3 4
 2 1 3 4
 2 3 1 4
 3 2 4 1
 2 3 4 1
 2 4 3 1
 4 2 3 1
 4 3 2 1
 3 4 2 1
 4 3 2 1

Stedman Doubles Singles - how to ring

Cat's Ears

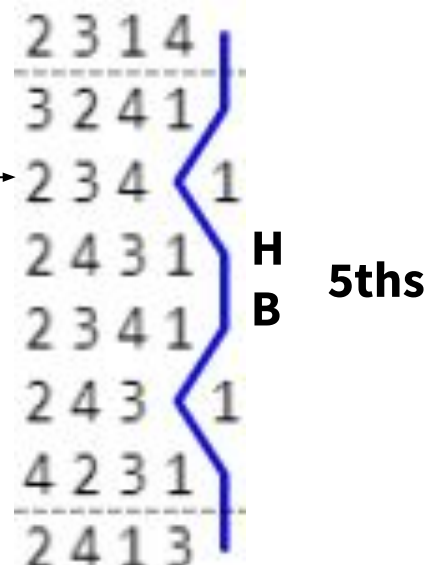
If **arriving** at the back



Call “Single”

Coathangers

If **already** at the back



Stedman Doubles Singles - misnomer

Cat's Ears

The "**SHORT**" work at a single

Point

UP 4th

4 2 1 3 5
2 4 1 5 3
4 2 5 1 3
4 5 2 3 1
5 4 2 1 3

Coathangers

The "**LONG**" work at a single

Lie BH

Point

Both are only one blow!!!

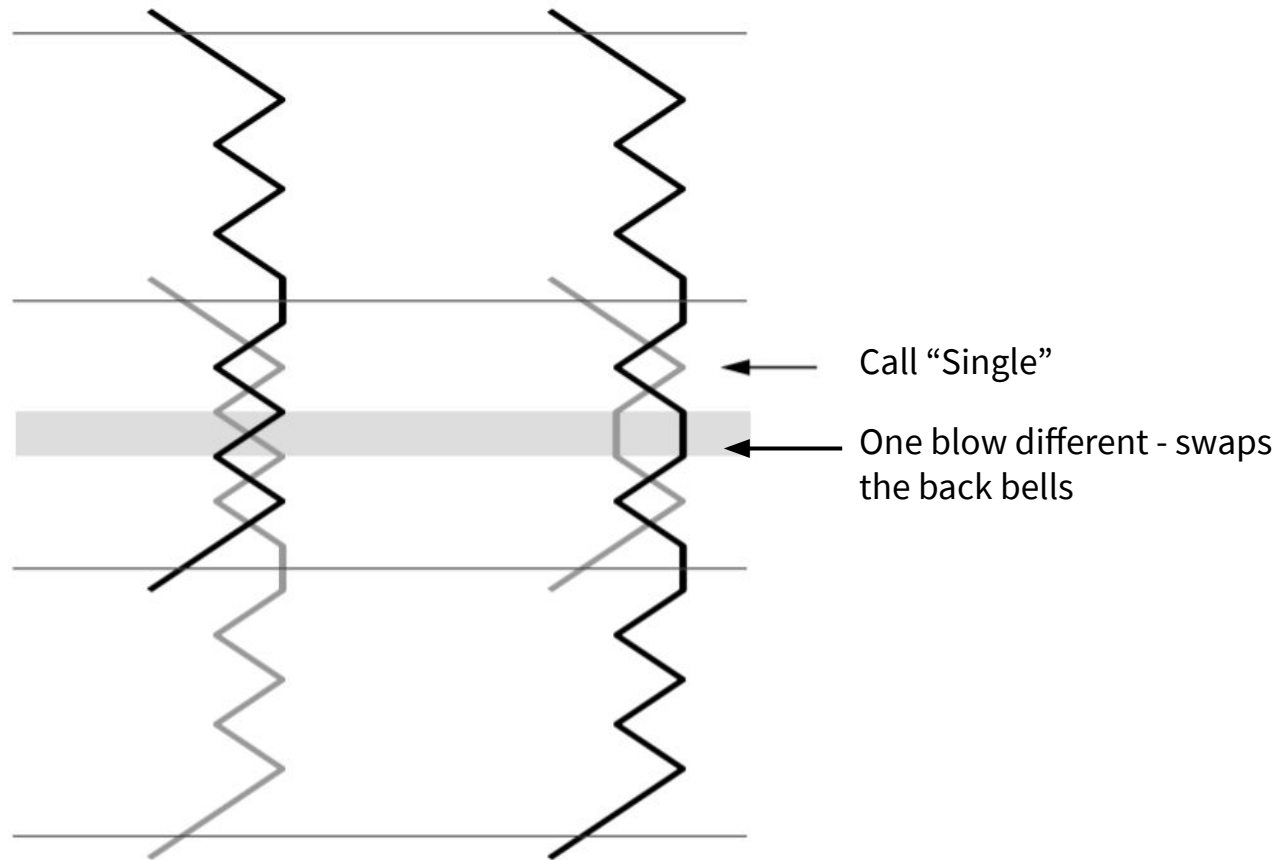
2 3 4 1 5
2 4 5 1 3
4 2 1 5 3
2 4 1 3 5
2 1 4 5 3

Point

Lie BH

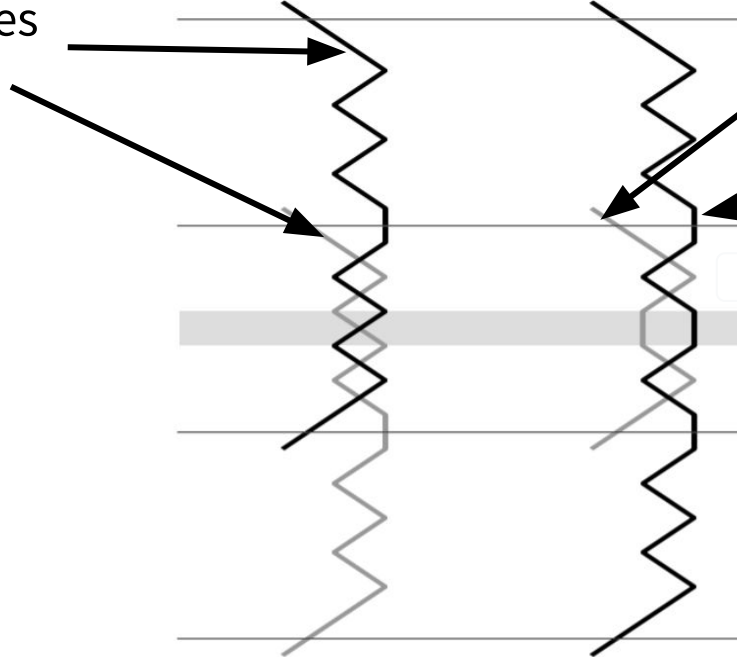
2 dodges

Stedman Doubles Singles - one backstroke different



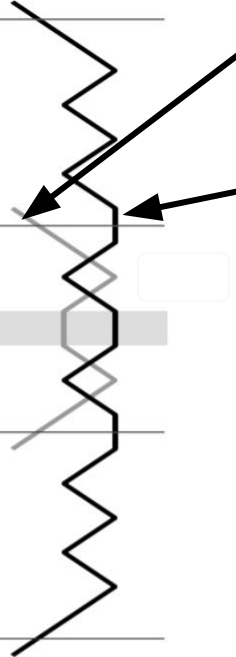
Stedman Doubles Singles

Each bell usually
spends **Two** Sixes
at the back




One Six spent at the
back instead of Two

Three Sixes spent at
the back instead of
Two



Stedman Doubles Singles

Cat's Ears



A diagram showing a sequence of 10 rows of numbers. The first row is 2 3 4 5, followed by a dashed line, then 3 2 4 5, 2 3 4 5, 2 4 3 5, 2 3 4 5, 2 4 3 5, 4 2 3 5, and finally a dashed line followed by 2 4 3 5. A blue line connects the 4s in the first, third, fifth, seventh, and ninth rows, and the 3s in the second, fourth, sixth, eighth, and tenth rows, forming a zigzag pattern.

2 3 4 5

3 2 4 5
2 3 4 5
2 4 3 5
2 3 4 5
2 4 3 5
4 2 3 5

2 4 3 5

One Six spent at the back instead of Two

Coathangers



A diagram showing a sequence of 10 rows of numbers. The first row is 2 3 1 4, followed by a dashed line, then 3 2 4 1, 2 3 4 1, 2 4 3 1, 2 3 4 1, 2 4 3 1, 4 2 3 1, and finally a dashed line followed by 2 4 1 3. A blue line connects the 1s in the first, third, fifth, seventh, and ninth rows, and the 4s in the second, fourth, sixth, eighth, and tenth rows, forming a zigzag pattern.

2 3 1 4

3 2 4 1
2 3 4 1
2 4 3 1
2 3 4 1
2 4 3 1
4 2 3 1

2 4 1 3

Three Sixes spent at the back instead of Two

But why singles and not bobs?

Why not just call it a bob!

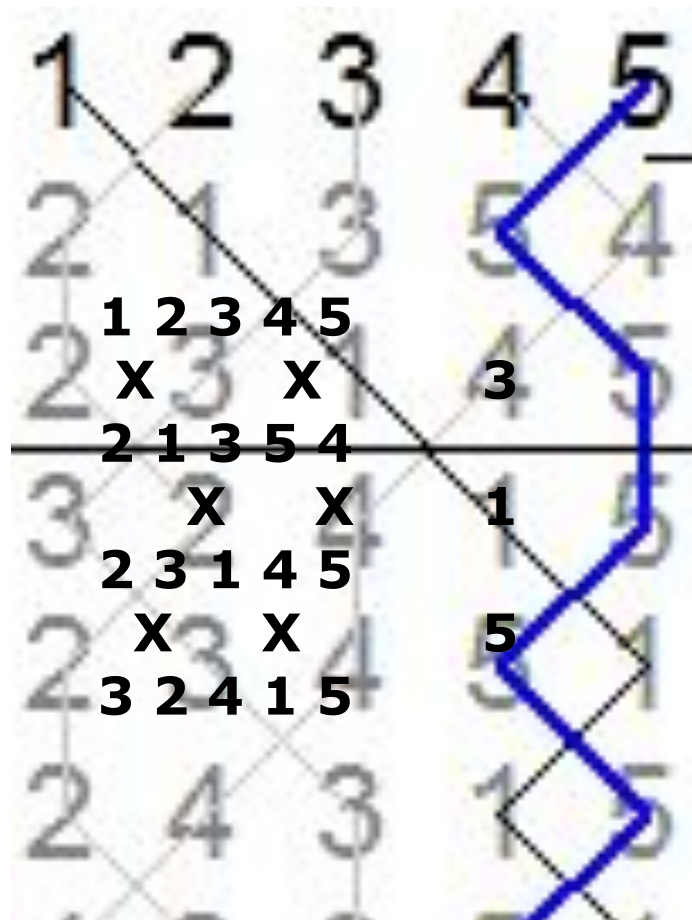
The Nature of Changes

Stedman Doubles: 3.1.5.3.1.3.1.3.5.1.3.1.3.1

Quick Six: n.1.3.1.3.1

Slow Six: n.3.1.3.1.3

All double swaps



The Nature of Changes

How many swaps do you need? (think call changes)

1 2 3 4 5 > 3 1 5 2 4

**Must be contained in a plain
course of Stedman Doubles**

Answer = four

1 2 3 4 5	
X	(3 to 1)
1 3 2 4 5	
X	(3 lead)
3 1 2 4 5	
X	(5 to 2)
3 1 2 5 4	
X	(5 to 1)
3 1 5 2 4	

The Nature of Changes

How many swaps do you need? (think call changes)

1 2 3 4 5 > 1 3 5 2 4

**Cannot be contained in a plain
course of Stedman Doubles**

Answer = three

1 2 3 4 5
 X **(3 to 1)**
1 3 2 4 5
 X **(5 to 2)**
1 3 2 5 4
 X **(5 to 3)**
1 3 5 2 4

The Nature of Changes

In Course Changes (Even)

1 2 3 4 5

2 1 4 3 5

etc...

Total = 60

Out of Course Changes (Odd)

1 3 5 2 4

3 1 2 5 4

etc...

Total = 60

The Nature of Changes

Effect of a SINGLE 15432

51342

Call at backstroke → 53124

35142

31542

13524

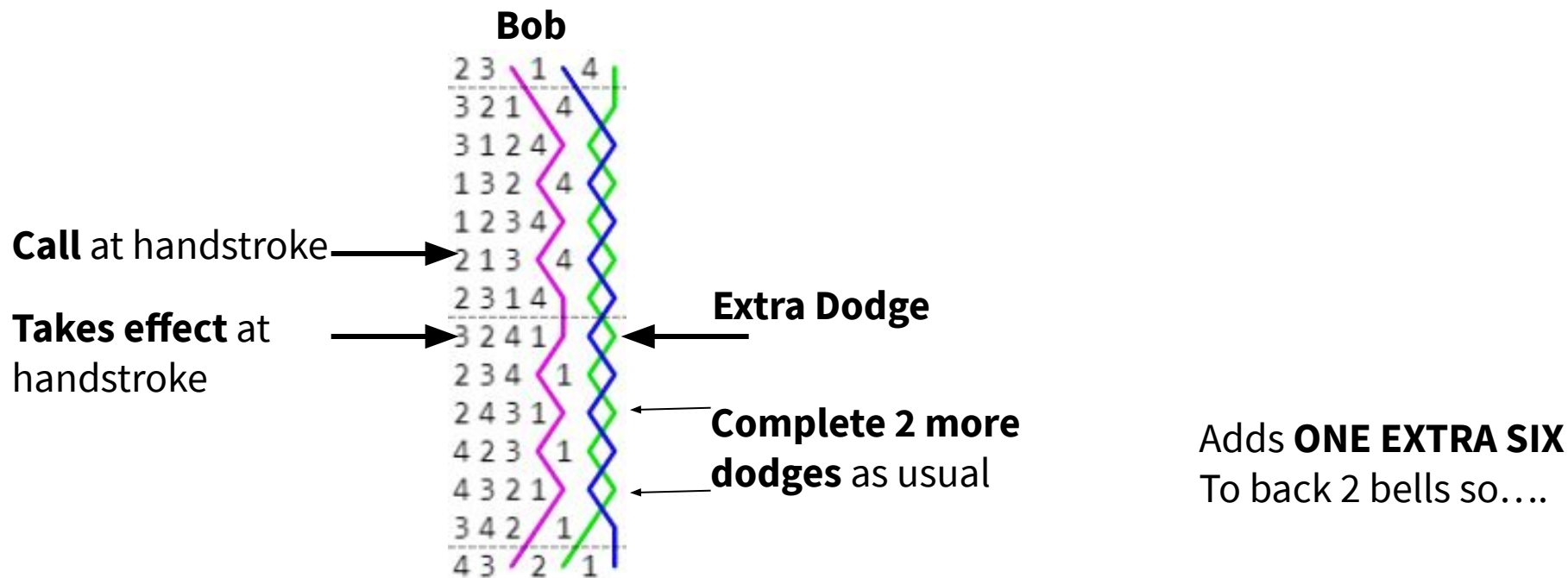
15342

51432

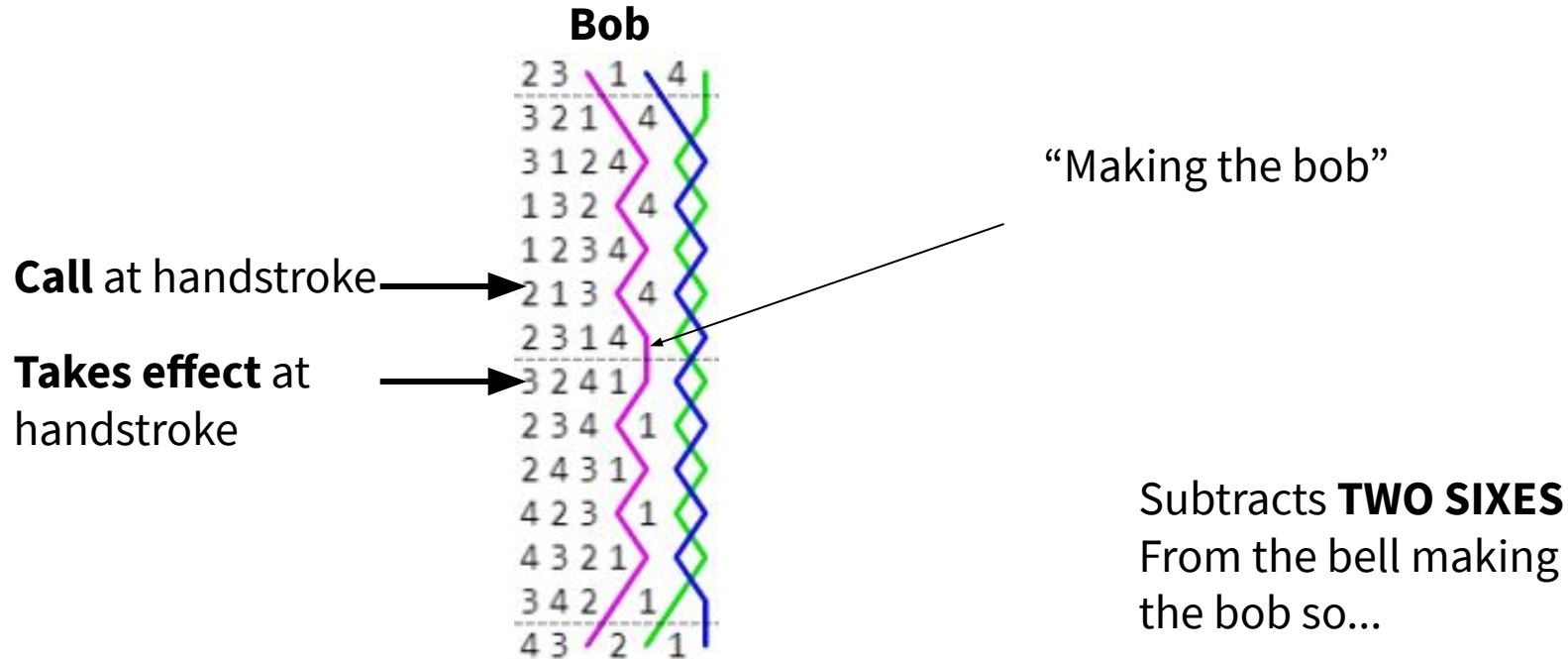
← Takes effect at backstroke

3 5 1 4 2
X 145
3 1 5 4 2

Important differences in triples and above



Important differences in triples and above



A Stedman Doubles single

A Stedman Triples bob at the back

***changes what a bell was going to
do on the front***

IN QUICK or SLOW?



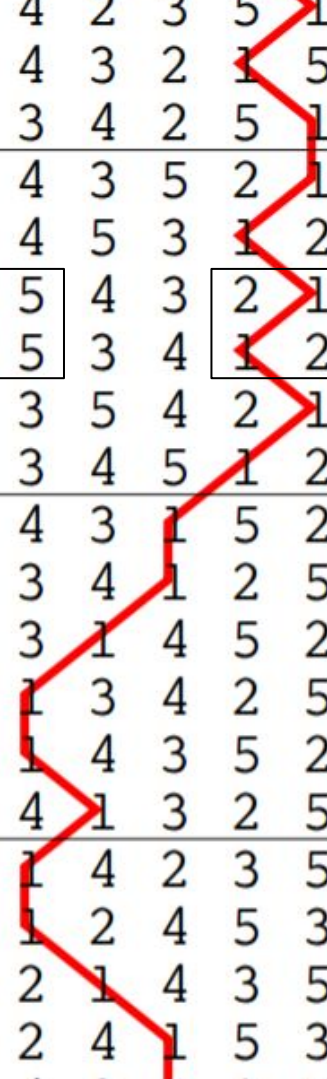
Over the centuries a few tricks have emerged!!!

But which 3 or 4 techniques
are you going to use?

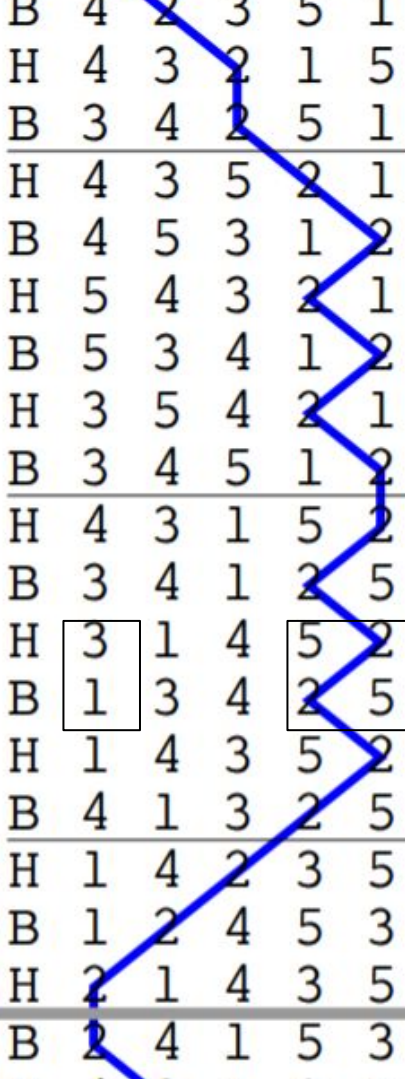
Techniques - Quick or Slow?

- 1) Remember
- 2) Shuffle your feet to remember
- 3) Count Sixes alternately
- 4) When in 4/5 Observe/Listen to what is happening on the front
- 5) Thin Ice: After reaching thirds bell A then bell B
- 6) Thin Ice but using their eyes!
- 7) Crash - Go in quick and if there is a crash go in slow
- 8) Identify your course bell if they are still below you in thirds place - go in quick
- 9) The diary method

4) Observe the front

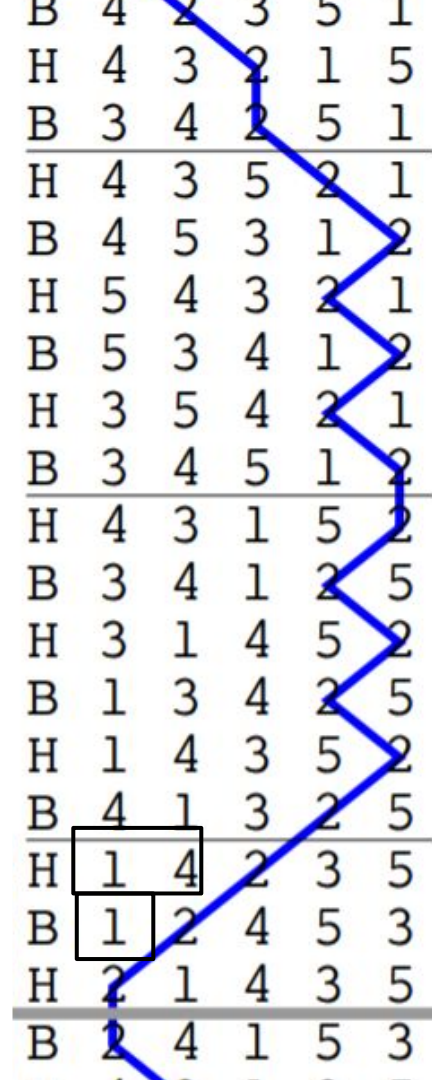
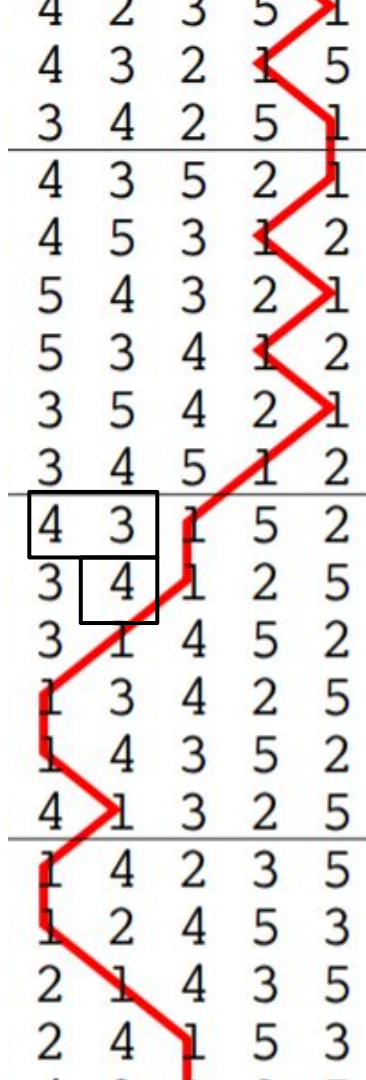


4	2	3	5	1
4	3	2	1	5
3	4	2	5	1
4	3	5	2	1
4	5	3	1	2
5	4	3	2	1
5	3	4	1	2
3	5	4	2	1
3	4	5	1	2
4	3	1	5	2
3	4	1	2	5
3	1	4	5	2
1	3	4	2	5
1	4	3	5	2
4	1	3	2	5
1	4	2	3	5
1	2	4	5	3
2	1	4	3	5
2	4	1	5	3



B	4	2	3	5	1
H	4	3	2	1	5
B	3	4	2	5	1
H	4	3	5	2	1
B	4	5	3	1	2
H	5	4	3	2	1
B	5	3	4	1	2
H	3	5	4	2	1
B	3	4	5	1	2
H	4	3	1	5	2
B	3	4	1	2	5
H	3	1	4	5	2
B	1	3	4	2	5
H	1	4	3	5	2
B	4	1	3	2	5
H	1	4	2	3	5
B	1	2	4	5	3
H	2	1	4	3	5
B	2	4	1	5	3

5) Over bell A then bell B



7) Course bells
 (Singles complicate this)

4	2	3	5	1
4	3	2	1	5
3	4	2	5	1
4	3	5	2	1
4	5	3	1	2
5	4	3	2	1
5	3	4	1	2
3	5	4	2	1
3	4	5	1	2
4	3	1	5	2
3	4	1	2	5
3	1	4	5	2
1	3	4	2	5
1	4	3	5	2
4	1	3	2	5
1	4	2	3	5
1	2	4	5	3
2	1	4	3	5
2	4	1	5	3

B	4	2	3	5	1
H	4	3	2	1	5
B	3	4	2	5	1
H	4	3	5	2	1
B	4	5	3	1	2
H	5	4	3	2	1
B	5	3	4	1	2
H	3	5	4	2	1
B	3	4	5	1	2
H	4	3	1	5	2
B	3	4	1	2	5
H	3	1	4	5	2
B	1	3	4	2	5
H	1	4	3	5	2
B	4	1	3	2	5
H	1	4	2	3	5
B	1	2	4	5	3
H	2	1	4	3	5
B	2	4	1	5	3

8) The diary method

4	2	3	5	1
4	3	2	1	5
3	4	2	5	1
<hr/>				
4	3	5	2	1
4	5	3	1	2
5	4	3	2	1
5	3	4	1	2
3	5	4	2	1
3	4	5	1	2
<hr/>				
4	3	1	5	2
3	4	1	2	5
3	1	4	5	2
1	3	4	2	5
1	4	3	5	2
4	1	3	2	5
<hr/>				
1	4	2	3	5
1	2	4	5	3
2	1	4	3	5
2	4	1	5	3

B	4	2	3	5	1
H	4	3	2	1	5
B	3	4	2	5	1
<hr/>					
H	4	3	5	2	1
B	4	5	3	1	2
H	5	4	3	2	1
B	5	3	4	1	2
H	3	5	4	2	1
B	3	4	5	1	2
<hr/>					
H	4	3	1	5	2
B	3	4	1	2	5
H	3	1	4	5	2
B	1	3	4	2	5
H	1	4	3	5	2
B	4	1	3	2	5
<hr/>					
H	1	4	2	3	5
B	1	2	4	5	3
H	2	1	4	3	5
B	2	4	1	5	3

Questions?

