



# Southampton Society of Model Engineers Ltd

*Member of Southern Federation of Model Engineering Societies*

## NEWS LETTER

Vol. No 177 December 2003

### Club Corner

Thurs 1<sup>st</sup> Jan 2004 'FROSTBITE'  
Sat 24<sup>th</sup> Jan 'COACH TRIP' London Exhibition (see item in newsletter)  
Weds 14<sup>th</sup> Jan 'BITS and PIECES' Bring along those projects (see later in newsletter  
Merlin Mumblings)  
Weds 11<sup>th</sup> Feb VIDEO EVENING. Ron Blizzard, Society events on film old and new.  
WEDS 10<sup>th</sup> MARCH AGM STARTS 7.30 PROMPT.  
Sat Sun 12<sup>th</sup>/13<sup>th</sup> June 'OPEN WEEKEND'

All meetings are normally held at the Royal British Legion, Manor Branch, Bullar Road, Bitterne Park, Southampton on the second Wednesday of each month at 8:00pm.

### Subscriptions 2004

Subscriptions will be due on the 1<sup>st</sup> January 2004 for the coming year, and will be collected until 28<sup>th</sup> February 2004, after which date an additional £1.00 will need to be paid as technically membership would have ceased on that date.

Subscription Rate is £10.00 (ten) per annum and £5.00 (five) pounds for junior membership.

Personal Insurance of £1.50 is also due for those members requiring to be thus covered.

Subscriptions (Cheques or Cash, but cheques preferred – made payable to 'Southampton Society of Model Engineers Ltd'). Can be Paid at Riverside Park on January the 1<sup>st</sup> 2004 (Frost Bite) or the general meetings on January 14<sup>th</sup> and February 11<sup>th</sup>; otherwise send to the membership secretary.

Mrs M, Giles, 158 Athelstan Road, Bitterne Park, Southampton. SO19 4DJ

### Subscriptions are due on the 1<sup>st</sup> January 2004

### Notice of Annual General Meeting 2004

The AGM will be held on Wednesday 10<sup>th</sup> March 2004 at the Royal British Legion, Manor Branch, Bullar Road, Southampton. Commencing 7:30pm

### Agenda

- 1/ Chairman to open meeting and receive apologies.
- 2/ Minutes of last AGM
- 3/ Matters arising.
- 4/ Chairman's report.
- 5/ Treasurer's report.
- 6/ The President.
- 7/ Life members.
- 8/ Election of officers.
- 9/ Election of Auditors.
- 10/ Items raised by members.

Any member wishing to raise a question at the AGM must do so in writing. The letter to be with the secretary no later than 21 (Twenty one) days before the meeting.

## Boiler Tests

### Paul Clarke

Whilst reading through the minutes of the Southern Federation AGM, I came across a paragraph in the Safety Report (page8 S.F.M.E.S. Newsletter September2003) which states. "Hydrostatic tests were valid for two years for copper boilers and one year for steel boilers; if it then took a further three years to complete the model, then it would be necessary to undertake a further hydrostatic test, to the 'retest' pressure, to comply with the Federation's minimum requirements and allow a valid certificate to be issued".

To clarify the above statement. If you are building a new project the boiler should be tested off the frames 'blanked off' too twice the working pressure unless a professional certificate can be shown. Once the engine is complete with all its fittings in place, it can be steam tested within the two years of the 'initial test's' life. If you take more than two years to complete your master piece the boiler will be required to under go a 'retest' at one and a half times working pressure before the steam test can take place, and a certificate issued.

The 'initial' test tests the structural soundness of the boiler. The 'retest' in essence confirms that the fittings are sound. I personally would recommend doing a 'working pressure' test after changing any fitting which is fitted to live steam pressure, that is to say fill the boiler and hydraulic the boiler until the safety valves lift, just to be sure that the attachment is sound before steaming the boiler. Some societies are insisting on a full 'retest' if you change any part of the engine that can effect the steaming rate of the boiler, drafting, ash pan even grate spacing. This may seem extreme, but if we are not vigilant in these matters will we all suffer. Remember that if you lower or raise the boiler safety valve setting you will change the dynamics of the gas flow through the safety valve and a valve that released enough steam at one hundred pounds may not be as efficient at ninety pounds. It will also of course void your certificate as the certificate states the pressure that the engine will be used at, and tested to.

## Obituary

G.E.C. Webb. - Godfrey Webb, 1914 – 2003.  
Well Known Author Dies, Aged 89

Southampton has lost one of the area's most creative men with the passing of Godfrey Webb last Saturday.

Godfrey was the author of three books on the history and lifestyle of the Gypsies – true Romany that is, not the modern so-called Travellers. His books sold for many years both here in Britain and over the Atlantic in America. There was even talk of making a film version of one of them, but nothing came of this.

His knowledge of the local area was truly amazing. He wrote for many years for Hampshire Magazine and other similar publications.

Beside his books and interest in folklore and local history, Godfrey was much respected for his model engineering skills. He could often be seen at the narrow gauge track at Riverside Park where he ran his three working locos. These were not just miniaturised models of full scale engines, but working examples of entirely original mechanical systems which he invented and perfected himself. Two of these engines can still be seen running there, although operated by others now.

Steam engines and local history books were still not enough for Godfrey. In his younger days he was a well-known musician, playing piano, drums, trumpet, banjo and saxophone in local dance bands.

Godfrey retired from the Ordnance Survey nearly thirty years ago. He was a cartographer, writing in by hand the place names on maps of the whole country. This sometimes involved working in from the far side of the plate and writing the name not only immaculately neatly but upside down as well!

A remarkable man and a true gentleman, Godfrey was one of a kind. He will be sadly missed, yet widely remembered for his many and varied accomplishments. The funeral will be on 4<sup>th</sup> November at 1.00p.m Southampton Crematorium, East Chapel.

### Chairman

Mr Tony Hoile.  
1 Beverley Gardens,  
Romsey,  
Hants.  
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### Secretary

Mrs Mollie Giles.  
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SO19 4DJ

### Editor

Mr Paul Clarke.  
28 Conifer Road,  
Coxford,  
Hants.  
SO16 5FX

## Peggy Hoile

It is with some sadness that I have to inform you of the passing of Peggy Hoile. Peggy had been ill for some time, and had given a great fight to the very end. She leaves Jim and two sons Tony, Roger, Nigel.

We feel for them at this time, and hope that the camaraderie of the Society can help to fill the void left by her passing in some small way. She will be missed by all who knew her, particularly at open days etc where her culinary skills were brought to the fore. Again our thoughts are with you and your families at this time.

## Poppy Day – 9<sup>th</sup> – November 2003

Ron Bray

This annual event was well attended by members. 15 Loco's were on site with 13 running (9 X 5", 1 X 3½", 5 X 7¼"). This from the Society point of view was quite an entertaining turn-out.

During the two minutes silence the rain started to fall, but not sufficiently so as to dampen the spirits of the members. Rain did keep falling till the finish at 3pm, and whilst the amounts collected over the years have gradually increased, this years total for the Royal British Legion is obviously going to show a drop, and this will be communicated to the Society at a later date.

*Editor: - (I have received the total from the Secretary and I am very pleased with the amount collected £129.87p thank you all for all the effort put in)*

Notwithstanding that this is a charitable event, I think everyone enjoyed themselves and it was nice to see the president with his 'Lion' as well as one or two old faces. In view of the damp the hot soup, rolls and sausage rolls were very welcome, as well as the constant supply of tea. Well done the ladies of the Society and many thanks. This also to the collectors on the station platforms.

In view of this turnout it would be nice to see more members with their locomotives during the summer. It is not necessary for those members who do not wish to, to carry passengers, because they can always join in and run light.

*Editor again:- I must point out rule 1.8. in the track operation rules, No testing/experimenting during passenger hauling hours.*

## 'Steam in the Gardens' – 4<sup>th</sup> 5<sup>th</sup> October 20003

Ron Bray

This was held in Exbury Gardens, and whilst nominally a traction engine event which hopefully will be reported on by one of the participants, the society was also represented by the 7¼" gauge portable track.

The team arrived perhaps a little later than the organised time, but as the track does not take long to to lay this was no matter. The site was on the lawn alongside the carriageway to Exbury House. But the house was still the proverbial half mile away. John was raising steam in his Bagnal whilst the track was being laid. So we managed to get organised and then waited... and waited... But not a passenger was to be seen. That is a first time ever.

The car park was full, so punters were out there lurking somewhere. Meanwhile we were visited by the traction engines and Ron's (very silent) Scammell, and they must have travelled quite a distance. Young Daniel excused himself and was soon enjoying himself with the road vehicles – both large and miniature. At the end of the day we upped stakes and moved the track to behind the engine shed of the garden railway (12¼" gauge) in readiness for the next day, when hopefully pickings would be better.

So the track was laid on the Sunday morning along a gravel path, where again a first was obtained – the track was laid to a gentle curve, set between the trees, with the station in a glade – a very attractive site indeed yes, some passengers were carried, but not that many. A member of the Worthing Society was visiting, and we did enjoy ourselves chatting.

At the end of the day all the participants were treated to a trip around the gardens on the 12¼" gauge railway. A double header was put on and David was at the controls of the train engine.

The club would like to say 'thank you' to all those who helped out in what ever way over the weekend.

## Opening of Chandlersford Railway Station – 19<sup>th</sup> October 2003

Ron Bray

Now this event was entirely different. Full Trains went out all day and a queue formed at the station end. Judging by the financial total at the end of the day, somewhere about 500 passengers were carried.

Again the track was laid to a curve. The specified site was on the footpath at the side of the old goods yard. This occasion more members participated and three 7¼" gauge locomotives were in steam. Batty Bailey's 0-4-2 'Lizzie', Dick Dore's Hunslet and Jesse Moody's Class 4 Tank, whose new owners came from the Bristol area, and who came especially for the day. On the 'mainline' as well as the normal service trains – the station has been in use since May – Class A4 'Union of South Africa' was pulling the steam shuttle service from Salisbury to Eastleigh, and with a 'Chandlersford Phoenix' headboard.

The Class 4 was first steamed and did most of the passenger hauling. Later in the day the other locomotives were steamed and they followed each other independently to the end of the track and back – which is another first event.

After speeches the railway station was opened by the television personality Charlie Dimmock, who afterwards came to pay us a visit and was given ride behind the Class 4 which had been left in steam at the far end of the track whilst the other two locomotives were being worked. Many photographs were taken by the public for there was not many bystanders without a camera.

So the day came to an end. Thanks are expressed to station master Bill and other members of the Society, not forgetting the ladies that were present.

## Merlin Mumblings

Just a few comments on the September meeting. Paul Clarke put forward some ideas for the members to think about as to how the future of the Society could evolve. This meeting was not advertised in the newsletter for several reasons, due I believe to one month with no meeting, still no Social Secretary and everything being left hoping someone might come up with something. However I understand the next few meetings have been arranged.

### "More Comments"

We have around one hundred and forty members make allowances for some members being quite a distance away, shift work and various commitments etc, only twenty turned up for this meeting not as far as I can see a very good turnout. Look at the contents of the newsletters how many members contribute articles, surely a few members from a hundred and forty could manage to submit something. Paul, editor Paul that is has requested many times for content can we not keep him quite for once. The railway and meetings are the only active events both of these could be much better supported so can I suggest you write to Secretary Mollie with ideas for the committee to talk about and perhaps implement, it does make me wonder what the membership are doing. How about a good old fashioned "Bits and Pieces" evening with tools, jigs and fixtures, boats, stationary engines finished or part finished even bits of part finished items. It does not have to be exhibition finish. How about a 3½" loco event an electric day, or diesel day etc.

That's about all the comments for now so get out the writing implements and paper and send them to either Mollie or Paul.

## Society Visit to London ME Exhibition 24<sup>th</sup> Jan 2004

It is proposed as in previous years, to hire a coach for members and friends to visit the exhibition at Wembley on Saturday 24<sup>th</sup> January.

In view of comments concerning the smaller coach hired in 2002 for this event, it is further proposed to hire a larger more comfortable coach which if the numbers were the same would make the cost £12 each. As a thought there is the possibility that if the numbers could reach 40 then this would be £10 per person.

The coach will be leaving Riverside Park at 8am, and will return at approximately 6:00/6:30pm in the evening. There will be a stop at 'Fleet Services' on the way there.

Names please to Mike Rackett, or the Secretary at the British Legion, or at Frostbite on January 1<sup>st</sup> 2004. There is already a growing list of names on the notice board at the clubhouse in Riverside Park.

## A Horizontal Disk and Crossbar Signal.

Robin Wallace-Sims

### Introduction

A few years ago Doug Hewson described (in Engineering in Miniature) the activities of the GL5 society. They take a holistic approach to 5" gauge railway modelling which includes infrastructure and rolling stock as well as locomotives. Thus a 5" gauge track would be more like a giant 00 gauge layout than the average ME society raised track.

This inspired me to disguise parts of my very unrealistic ground level garden railway, which runs in a circuit right around our house, as the GWR mixed gauge railway of the late 19th c.. This combined Brunel's 7' broad gauge with Stephenson's 4' 8 1/2" standard gauge. These gauges are represented, in 3/4" scale, by the 5" and 3 1/2" gauges. Thus my 5" broad gauge (ride on) rolling stock is to the same scale as my 3 1/2" gauge locomotives.

I have recently extended the railway by adding a loop line which passes through a yard with sidings, a turntable, a signal box and hopefully one day an engine shed and a transfer shed (used to transfer goods between wagons of different gauges). The loop line required a set of points at the two junctions with the main line.

These points (and I am sure that Brunel could not have imagined it) can be radio controlled from the train, so the driver not only has to fire but is also the signalman! If a signalman is available these and other points can be controlled from the signal box.

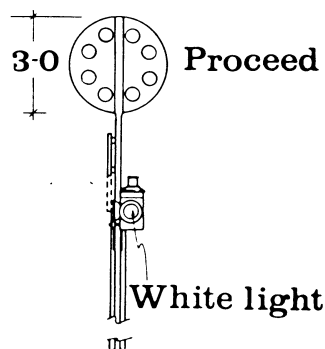
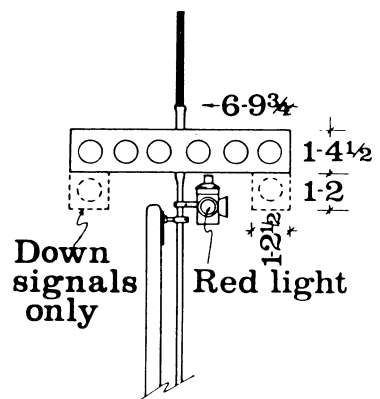
For safety a driver/signalman has to be sure that the selected route has been set. To achieve this there is a signalling system controlled by point detectors through an electrical interlocking system.

(If there is sufficient interest I could give a talk on this system.)

For bidirectional running each junction has to be protected by four signals, making a total of eight. One of these is a full size motor operated LSWR lower quadrant semaphore signal, others are GWR and WR style colour lights.

In the yard area I am, as far as is possible with a passenger carrying railway, trying to model the GWR Mixed Gauge infrastructure. Towards this ideal I have made two disk and crossbar signals. One of these is a conventional vertically pivoted type (fig 1) which protects the up (anticlockwise) main line junction beyond the yard. The crossbar, when facing a train, signals stop (on) and the disk line clear (off).

To protect the down junction (clockwise) I decided to model an unusual horizontal disk and crossbar signal which appears in several of the plates in the Broad Gauge Society's publication "Taunton in the 1880s" (fig 2). These signals were a speciality of the Bristol and Exeter Railway which had by the 1880s been absorbed into the GWR.



**Fig 1**

I enquired in vain as to the existence of any drawings of this type of signal. However my attention was drawn to the balance weight at the top of the signal which would appear to load the signal to the "off" position.

I did wonder if the weight moved over the top rather than up and down. It would then have held the signal firmly against a stop in either position. However, I have since decided that the weight was, after all, intended to pull the signal "off". This was not of course a fail safe design, however signalling engineers of the time accepted slotted post semaphore signals which, without a weight further down the post, would also fall to the "off" position.

Thus the signal as seen in fig 2 would have to rotate clockwise to show 'off'. The weight would then be down.

#### Operation

Further study of other plates in the Taunton book led me to the following conclusions about how the signal operated.

Two of the plates show a single (presumably red) spectacle on the station side of the lamp. Note that signals showed white for "off" (line clear) in the 19th c.. Thus the signal must have been a station starter.

The arm behind the lamp would have been a backlight blind which obscured the backlight when the signal was "off".

Fig 2 shows that the signal pivoted on a horizontal shaft mounted on bearings supported by rectangular brackets. Other plates show that the brackets were of a T cross section.

Presumably they were iron castings.

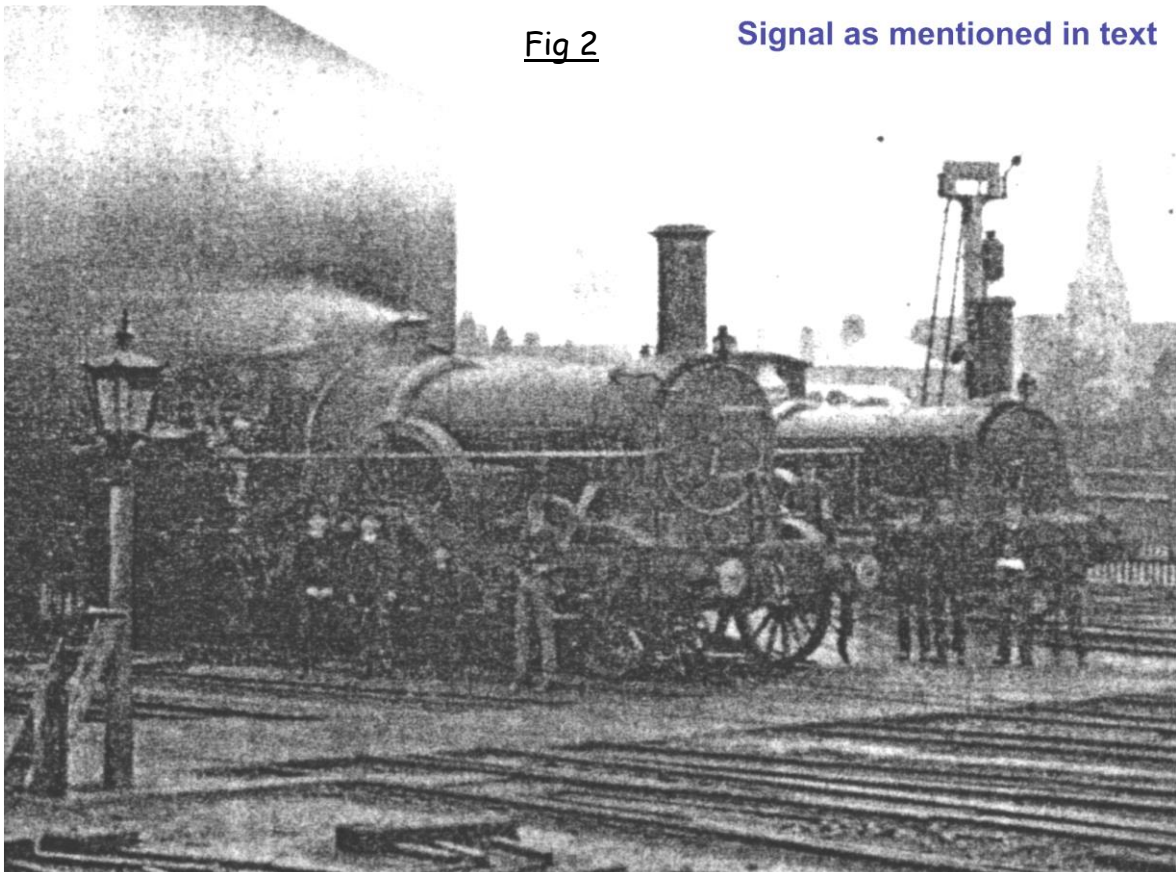
The top weight would have held the signal "off". To hold it on there would have been a lever on the front of the shaft which connected it through an operating rod to the weighted arm of a bell crank near ground level. By connecting the other arm of the bell crank to a cable from the signal box the signal could be pulled "off" in the normal manner. The operating rod can be seen in fig 2 slightly to the right of and above the post. The rod would have also been connected to the red spectacle to make it move with the signal.

#### Dimensions.

To get these I marked the estimated camera viewpoint in fig 2 onto a plan of the station. From this I marked the position and angle of the signal in relation to the chimney of the "Hawthorn" class locomotive adjacent to the signal.

A drawing of the Hawthorn class shows that the chimney was 1' 5" in diameter and the top was 13' 3" above the track. From these dimensions and relationships I was able to work out the dimensions of the signal. These in turn enabled me to make the model (Fig 3) and produce the drawings (Fig 4). They are not perfect, a few fuzzy photographs made of dots are not a lot to go on!

I was surprised at the small size of the boards when this signal is compared with the vertical version. However an engine in a bay platform would have to be close to the signal.



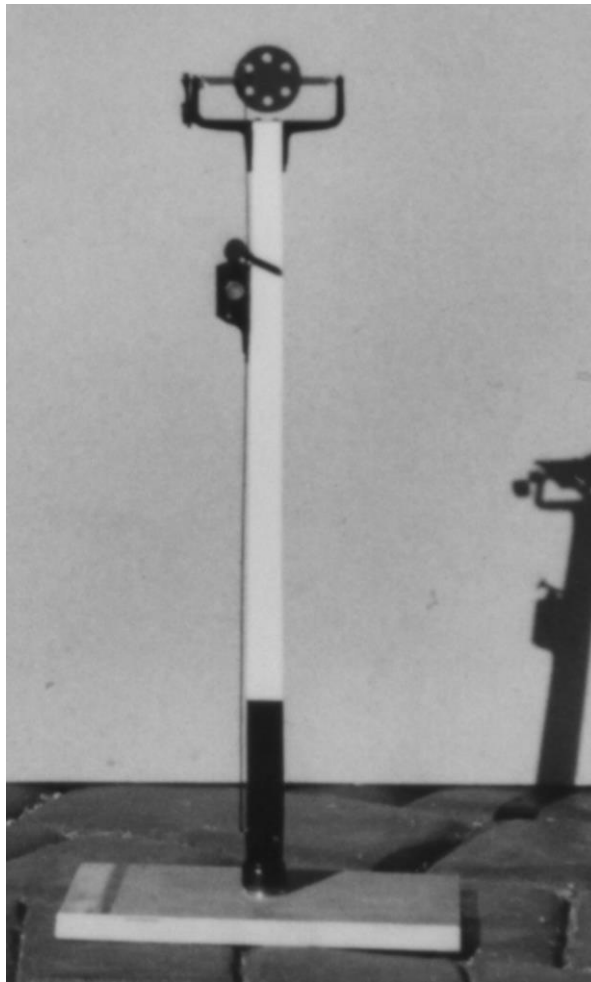


Fig 3

#### The Model.

The post is made from beech with a hollow steel section at the bottom. The brackets supporting the shaft are cut out, bent and silver soldered together from a piece of I section brass curtain rail. The split bearing blocks at each end of the brackets have a 1/16" bore and are closed with 16BA nuts and bolts-

The disk ("off") and crossbar ("on") boards are made from 1/32" ply and are Araldited to a flat filed on a 3/32" shaft which pivots in the bearings.

The weight is a composite of wood and lead. It had to be adjusted carefully to get reliable operation.

The lamp has a 12V bulb fed by wires inside the post.

The signal is operated by a small solenoid recovered from an old cassette player. (These also contain a useful motor and reed switch.) The solenoid is concealed in the steel bottom part of the post. The weight of the armature acting on a lever is sufficient to hold the signal "on". When the solenoid is energised the armature lifts and the signal moves to "off".

All of my signals are controlled by a 12V supply. +12V for "on" and -12V for "off". The lamp is connected directly to the supply and so remains illuminated. The solenoid has a series diode so that it can only be energised by a negative supply. (This arrangement also operates the colour light signals where a diode in series with each lamp allows the red one to illuminate from a positive supply and the green from negative.)

As the railway is very much part of the garden it has to withstand being walked on, crossed by mowers and wheelbarrows, being swept and occasionally pressure washed. Thus it has to be robust so all of the signals are removable. They are mounted on a plug which screws into a permanent socket in the ground- These plugs and sockets are coaxial fittings, home made from 15mm compression pipe fittings (1/2"BSP) and the pins from an old car - trailer lighting plug! When not in use a 15mm blank union nut protects the socket. The overall height of the model is 17½".

The whole signal was primed and painted using aerosol cellulose spray paints. The post is white with a black bottom (not the dance tune!) and ironwork is black. The front of the boards are red and the backs are white.

The finished signal operates reliably and gives a clear indication at a good stopping distance.

Robin Wallace-Sims

