

## Description

<http://youtu.be/bmqnF0EFpP8>

## Test environment

- OSX Yosemite 10.10.2
- Firefox 35.0.1
- Chrome 40.0.2214.111
- Safari 8.0.3

## Step(s) to reproduce

1. Open any drawer
2. Resize the window so that the vertical scrollbar is invisible, i.e. all content can be shown without scrolling
3. Scroll the drawer

## Expected outcome

1. The content is not scrolled

## Actual outcome

1. The content is scrolled to the bottom

## Related file(s)

1. appinventor-sources/appinventor/lib/blockly/src/core/scrollbar.js

## Root cause

In related file 1, Blockly.Scrollbar.prototype.set(value) does not constrain the knob value, leading to a negative value being set to the y attribute of svgKnob\_

The screenshot shows a web browser's developer console with the 'Debugger' tab selected. The console displays a stack trace for an error in the file 'blockly-all.js' at line 7066, where the function 'this.onScroll\_()' is called. The source code for 'blockly-all.js' is visible, showing the 'Blockly.Scrollbar.prototype.set' function. The function is designed to move the scrollbar slider based on a value, but it does not constrain the value to be non-negative. The 'y' attribute of the 'svgKnob\_' element is set to the calculated value, which can be negative. The 'Variables' panel on the right shows the state of the 'this' object, including the 'y' attribute of the 'svgKnob\_' element, which is highlighted with a red box and shows a negative value: 'y: -761.8978102189781'.

```
7031 }
7032 return value;
7033 };
7034
7035 /**
7036  * Called when scrollbar is moved.
7037  * @private
7038  */
7039 Blockly.Scrollbar.prototype.onScroll_ = function() {
7040   var knobValue = parseFloat(
7041     this.svgKnob_.getAttribute(this.horizontal_ ? 'x' : 'y'));
7042   var barLength = parseFloat(
7043     this.svgBackground_.getAttribute(this.horizontal_ ? 'width' : 'height'));
7044   var ratio = knobValue / barLength;
7045   console.log("knobValue = " + knobValue);
7046   console.log("this.horizontal_ = " + this.horizontal_);
7047   if (isNaN(ratio)) {
7048     ratio = 0;
7049   }
7050   var xyRatio = {};
7051   if (this.horizontal_) {
7052     xyRatio.x = ratio;
7053   } else {
7054     xyRatio.y = ratio;
7055   }
7056   this.workspace_.setMetrics(xyRatio);
7057 };
7058
7059 /**
7060  * Set the scrollbar slider's position.
7061  * @param {number} value The distance from the top/left end of the bar.
7062  */
7063 Blockly.Scrollbar.prototype.set = function(value) {
7064   // Move the scrollbar slider.
7065   this.svgKnob_.setAttribute(this.horizontal_ ? 'x' : 'y', value * this.ratio);
7066   this.onScroll_();
7067 };
7068
7069 /**
7070  * Insert a node after a reference node.
7071  * Contrast with node.insertBefore function.
7072  * @param {!Element} newNode New element to insert.
7073  * @param {!Element} refNode Existing element to precede new node.
7074  * @private
```

## Solution

Use the constrainKnob\_() function, which is also used elsewhere in the class to prevent from setting negative value to the x, y attribute of svgKnob\_, to constrain the value