

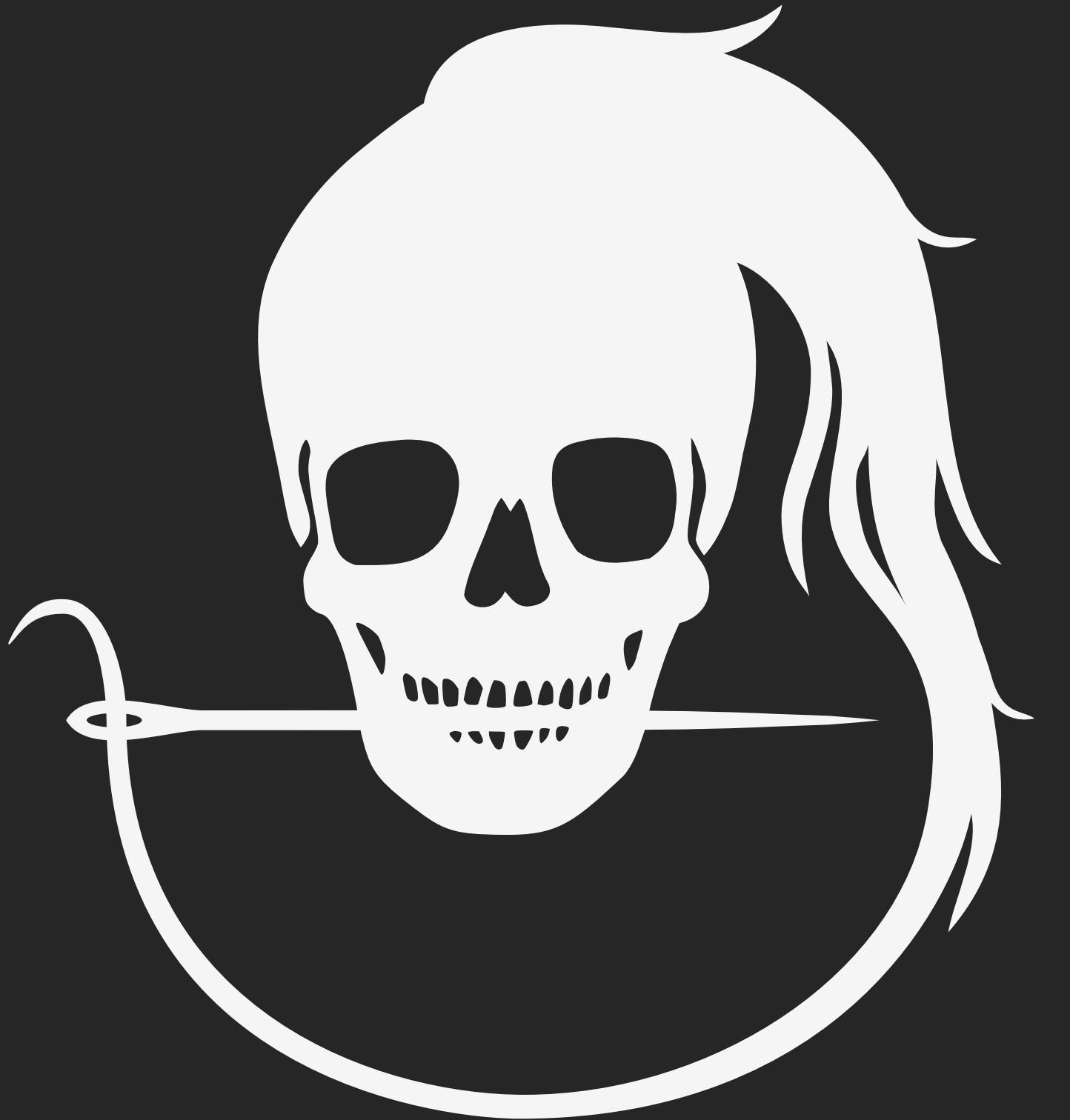
How to:
Buy Less
Create More

And feel great about it

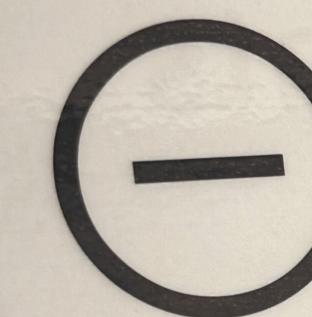


Welcome
FOSDEM 2026





FreeSewing.*eu*



**Sorry, this room is
full!**



Watch the live stream on
fosdem.org/schedule/streaming!

Find other rooms on
nav.fosdem.org.

H2.213
197485

ROMAN
ÉM
RE, PHILOSOPHE
STE BELGE
EN PHILOSOPHIE



Don't Panic



How it started



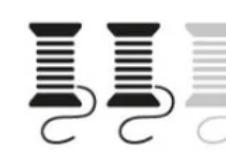


This is
(the cover of)
a sewing
pattern

burda
style

6933

Hose
Pantalon
Pants
Pantalón



mittel
moins facile
average
dificultad media

Größen Tailles Sizes Tallas

EUR 44-54
US 34-44



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I made these
(2 years later)



New Year's resolution 2011:
I will stop buying clothes
and instead
make everything* myself

* not everything



The honeymoon



Not me



Craft

Sewing
as a
hobby

Fashion



Style

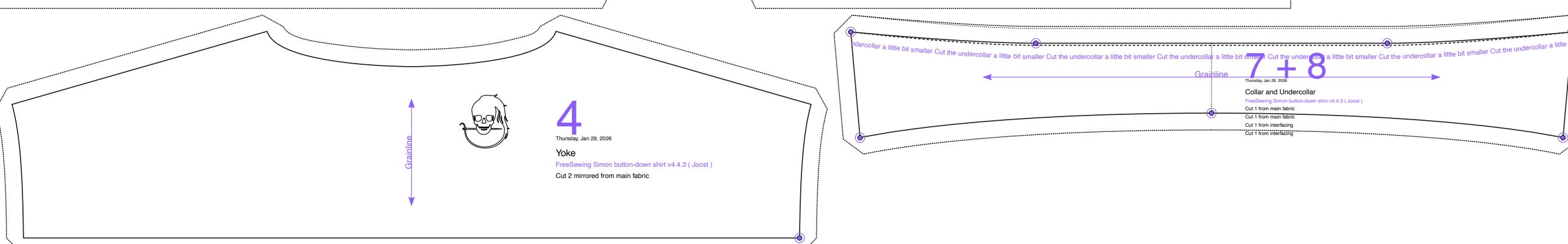
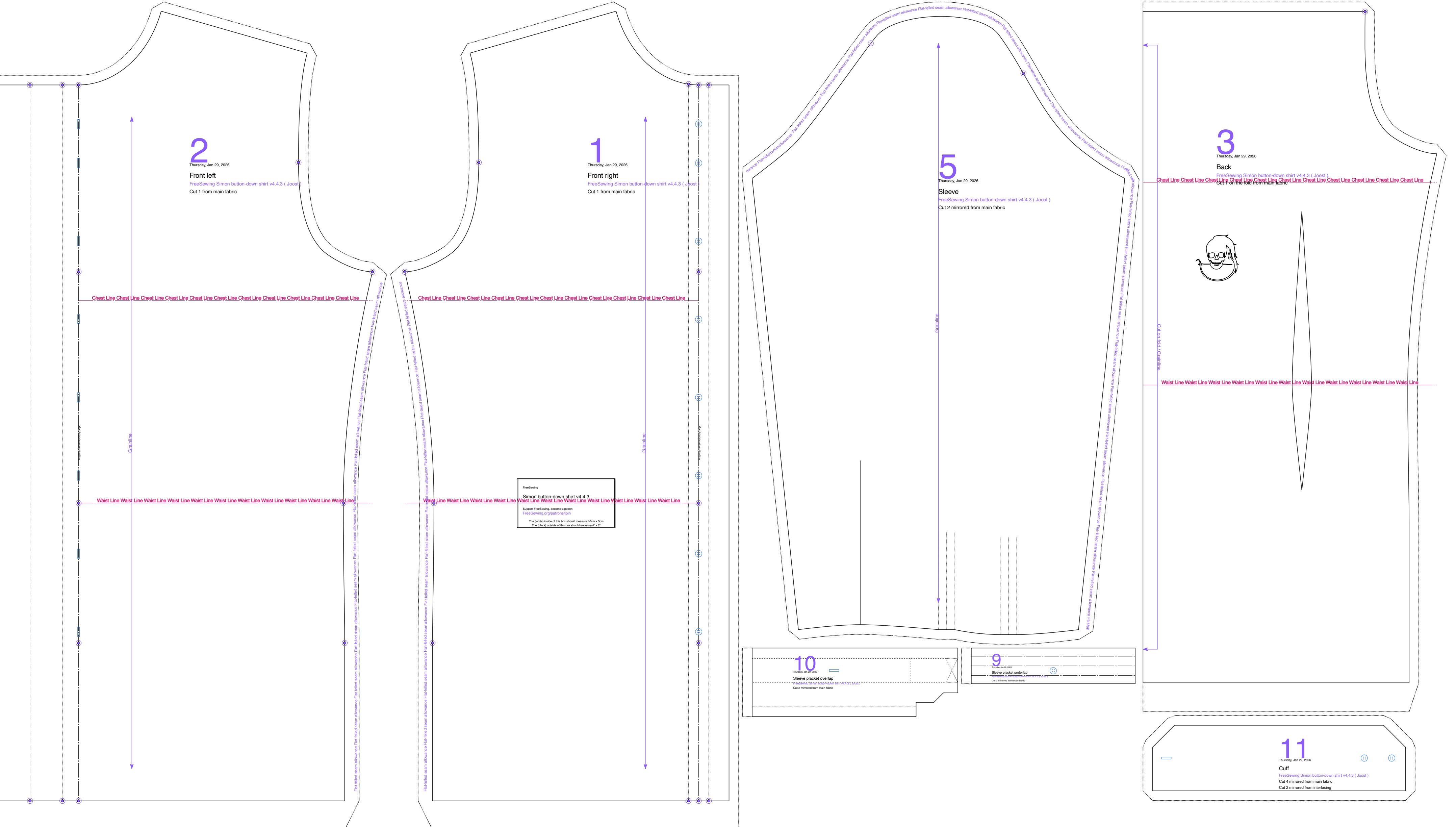


Sewing
Pitch over



About Sewing Patterns





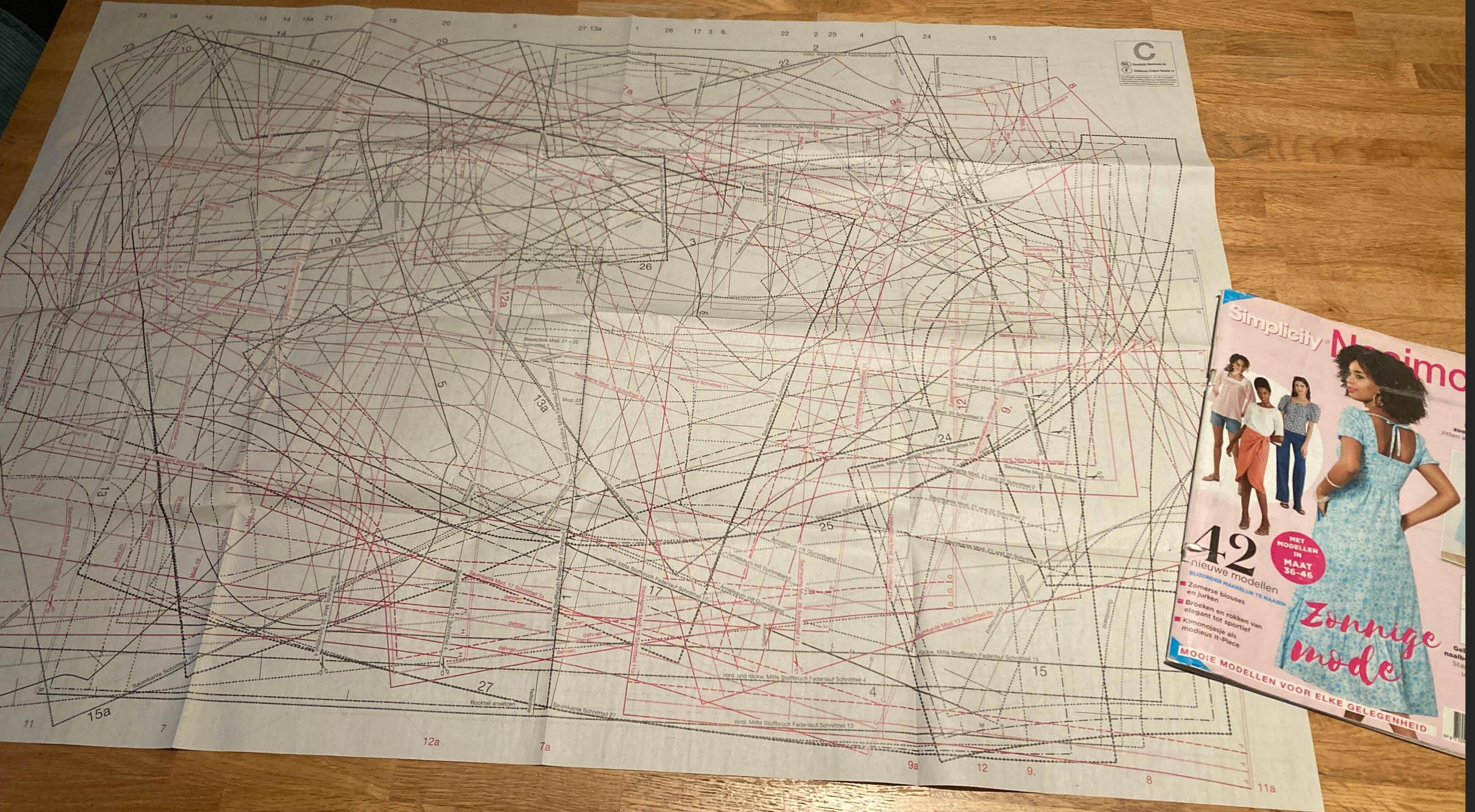




Photo by Dang Hong



Tailor & Cutter



The Tailor AND CUTTER, A TRADE JOURNAL AND INDEX OF FASHION.

VOL. III. No 69.]

SATURDAY, FEBRUARY 1.

[PRICE THREE-HALFPENCE.

IMPORTANT TO COUNTRY TAILORS.

ASHBY, DARK, & Co.
61 & 62, HIGH ST., BOROUGH, LONDON.

Are determined, in order to secure an increase in their Country Trade, to offer greater inducement to cash buyers. Their Stock consists of all the new and fashionable patterns for Winter, both in Overcoatings, Fancy Coatings and Trouserings, also Black Cloths and Douskins, especially suited for Country Trades to select from, where extra strength is required. Trimmings of every description. Their Warehouse being so near all the principal booking-offices enables them to forward parcels without delay. Patterns free. Terms, two and a half per cent.

Also Woollen, Bedford, and Cotton Cords.

PANTHEON WOOLLEN WAREHOUSE.

Tailors who buy with Ready Money, will at all times find the best Value in BLACK CLOTHS, DOWSKINS, New FANCY GOODS, WOOLLEN and COTTON CORDES, TRIMMINGS, &c., at the above House, Established 1832, on Ready Money System, 40s. Parcels Carriage paid to any Ry. Station.

JAMES KELL & CO.
357, OXFORD STREET, W. LONDON.

IMPORTANT NOTICE TO TAILORS.

ENTERED AT STATIONERS' HALL.

"The Tailors' Infallible Guide." Containing Original Systems for Cutting every Garment now worn, applicable to every form and position. No division of the Breast measure or Trying-on required. Complete, £1 2s. 6d. First Part, 31 stamps. Eighty references and Circular, Post Free, Address.—HANGER and CO., Practical Tailors, Weymouth.

TESTIMONIAL.

Sirs,—I have thoroughly perused your Work, and I have no hesitation in stating that it is the simplest and most correct method that I have met with in my experience of thirty years practice.

I remain, sirs, yours truly, WILLIAM CHRISTIE,
Master Tailor, Duke of York School, Chelsea.

TO TAILORS,

The best System extant and Cutting taught, including every garment as now worn. Style defined, with instructions how to produce it. Pupils thoroughly prepared for the Cutting Room. Terms, Five Guineas, evening tuition, Day Pupils, Ten Guineas.

By James Oocks, 189, Regent Street.

(Late) Cornhill and St. James's Street.
N.B.—Patterns cut for the Trade. Coat, 1s. 6d.; Trousers, 1s. 3d.; Vesta, 1s. Stamps received.

THE BEST SEWING MACHINES.

FOR TAILORS,
FOR DRESSMAKERS,
FOR FAMILIES.

GROVER & BAKER,

SEWING MACHINE COMPANY,
150, REGENT STREET, London, W.
59, BOLD STREET, Liverpool.



Willcox and Gibbs Sewing Machine Company.
135, REGENT STREET, LONDON, W.

At the Grand Trial of Sewing Machines of 1865, (the only one ever held at which Thorough Practical Tests of the capabilities of the competing machines were made) the jury awarded the WILLCOX & GIBBS the precedence in thirty-five distinct particulars.

In regard to the decisions of the judges upon the several points, it may be remarked that during the entire trial there was scarcely an instance of difference of opinion—as, indeed, it was hardly possible there could be, for the plan adopted was itself a surety both of unanimity and a just decision; the latter being, in such a plan, neither more nor less than the practical solution of a mathematical problem. For, by separating the respective merits of each machine into elements, or "points," and subjecting each point separately to the test of practical work done on each machine in presence of the judges, their decision upon each point was reduced to the simple act of recording the facts developed.

For instance, each contestant claims the most elastic stitch. Then each is required to sew a seam, side by side, on the "bias" of a piece of elastic goods; and the judge takes the piece, and stretches it lengthwise of the seams, till one seam breaks; he still continues the stretching, but the other seam refuses to break at all. However disappointed his expectations, the judge will hardly enter on the record that the broken seam is the more elastic.

Such were the tests and such the inevitable decisions. After a contest of nearly seven hours the WILLCOX AND GIBBS was declared to be the best Sewing Machine.—*From the Report of the Grand Trial.*

SAMPLES OF WORK and price list sent free.

UNLIMITED INSTRUCTION FREE TO ALL, whether buyers or not, and every facility afforded for judging of the machine before purchase.

ALL ARE INVITED to come and try our machine.

The public are cautioned against imitations of our machine in the form of the letter G, our Trade Mark.

1 February
1868
(158 years ago)



Hadfield.
 THE
TAILOR'S PRECEPTOR;
 OR, THE
ART OF CUTTING
GARMENTS
 TO FIT THE HUMAN FORM WITH EASE
 AND
 WITH Elegance.
 ILLUSTRATED WITH
TWELVE COPPER-PLATE ENGRAVINGS,
 CONTAINING
Upwards of THIRTY Models of different GARMENTS.
 TO WHICH IS ADDED,
TWENTY-SIX TABLES,
 SHOWING THE NECESSARY QUANTITY OF CLOTH REQUIRED FOR
 EACH GARMENT;
 AND
A RECEIPT
 FOR MAKING A COMPOUND TO MARK BRAIDING DESIGNS ON
 CLOTH.

—♦♦♦♦—
 BY H. HADFIELD.
 —♦♦♦♦—


London:
 SOLD BY LONGMAN AND CO. PATERNOSTER-ROW; AND IN
 MANCHESTER BY T. SOWLER, ST. ANN'S SQUARE.
 Also may be had of the Author, No. 130, Deansgate, Knott-Mill, Manchester.

1826.
 Price 12s. and 6d.

1826
 (200 years ago)





PATTERNMAKING FOR MENSWEAR

Gareth Kershaw

2013



Draw a vertical line, mark the top as point A

From point A, square out to the right measuring
one quarter of the circumference of the chest

Add 2 inches

Mark this point as point B

Typical drafting
instructions







Timeline



started
sewing

December 2010

registered
makemypattern.com

February 2012

launched
makemypattern.com
(not FOSS)

September 2012

Pre-FOSS



January 2014

August 2017

September 2012

New Users

50

Started
makemypattern.com
(not FOSS)
(16 September 2012)

40

FreeSewing User Account Registrations Over Time

30

20

10

0

Early access
becomes available

Created mine and
some test accounts

8

7

6

5

4

3

2

1

0

0

2014-01 2014-03 2014-05 2014-07 2014-09 2014-11 2015-01 2015-03 2015-05 2015-07 2015-09 2015-11 2016-01 2016-03 2016-05 2016-07 2016-09 2016-11 2017-01 2017-03 2017-05 2017-07

Early adopters

Launched
FreeSewing.org
(25 August 2017)

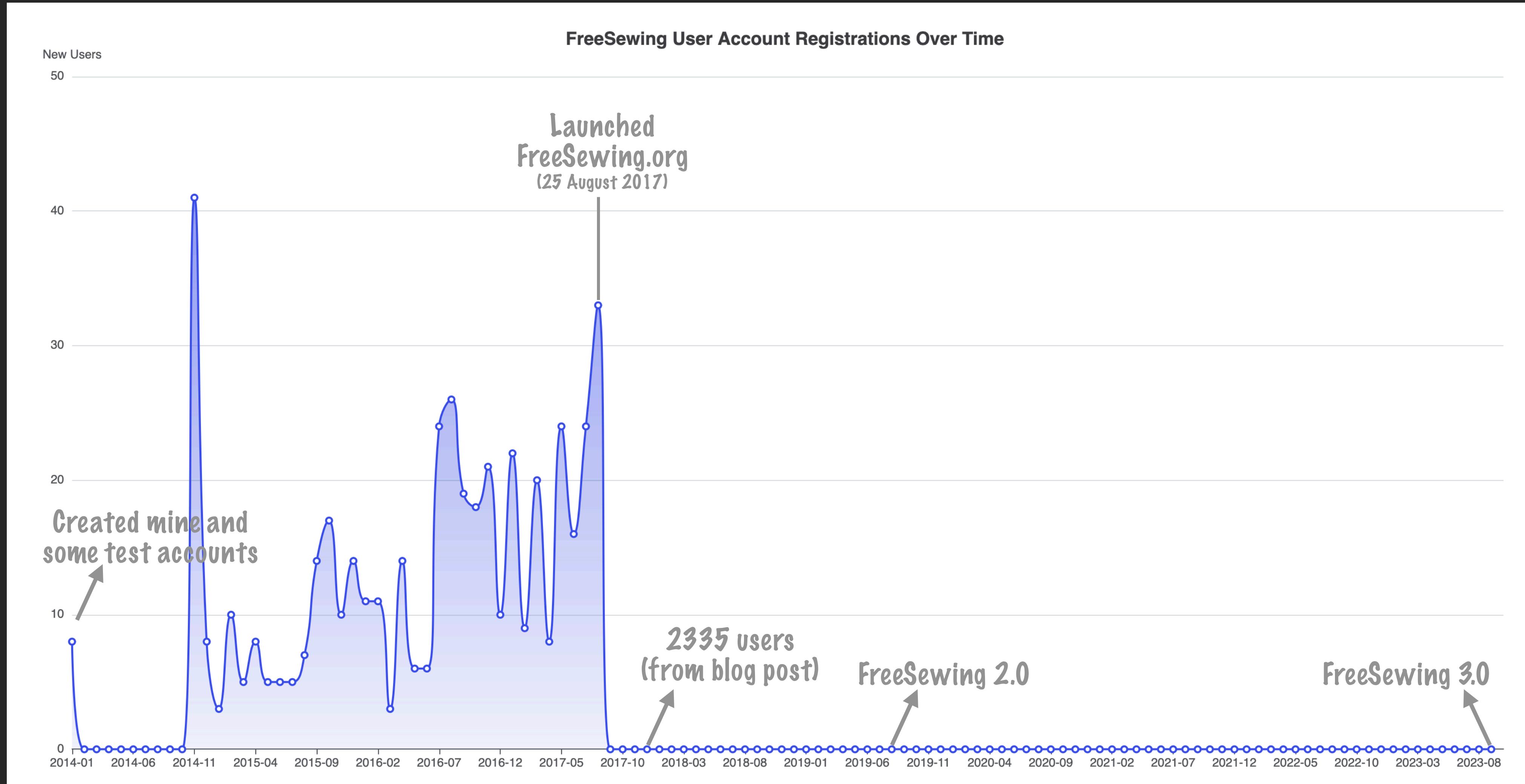
Released
FreeSewing
core v1.0.0
(24 march 2017)

485 users 💪



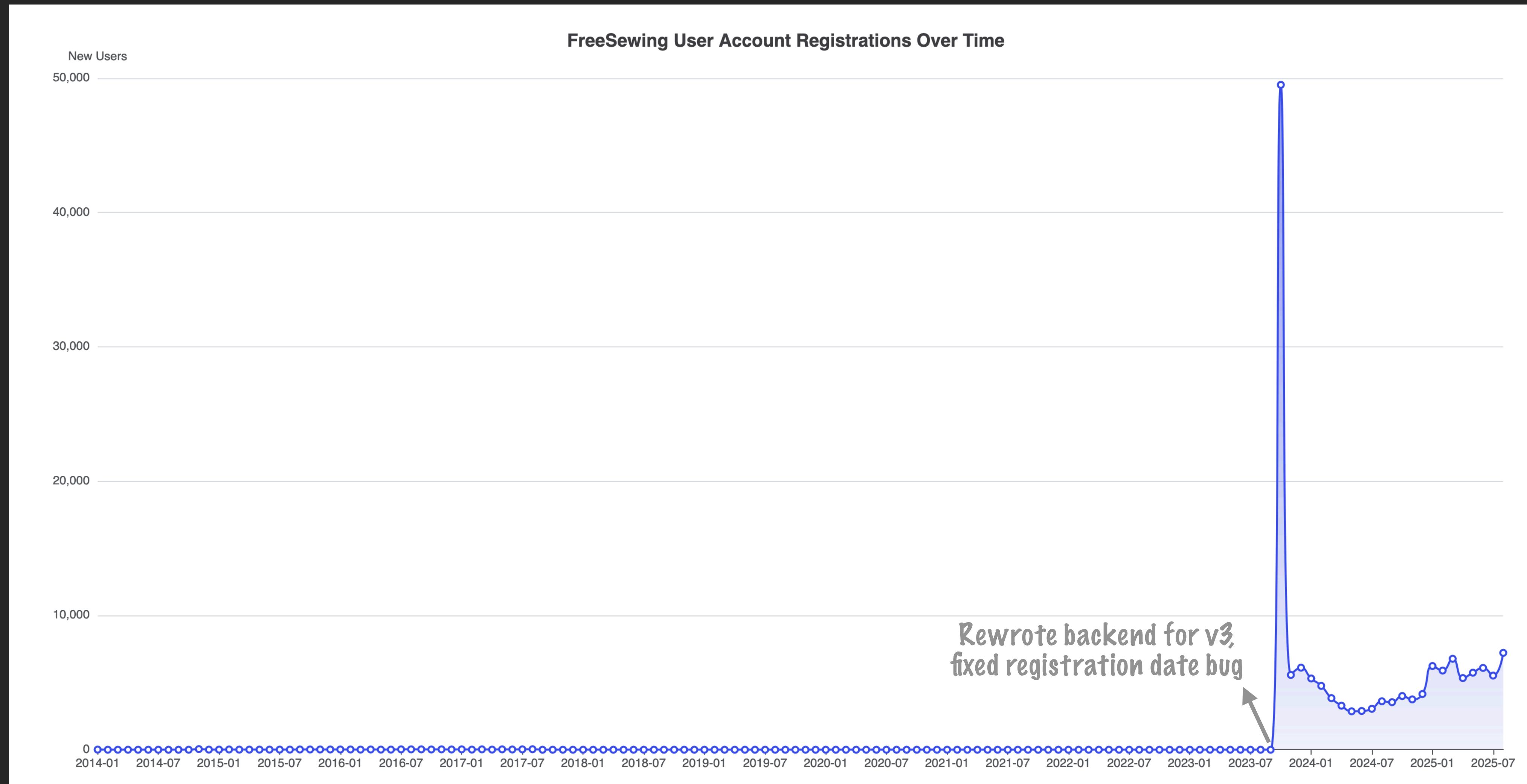
January 2014

September 2023



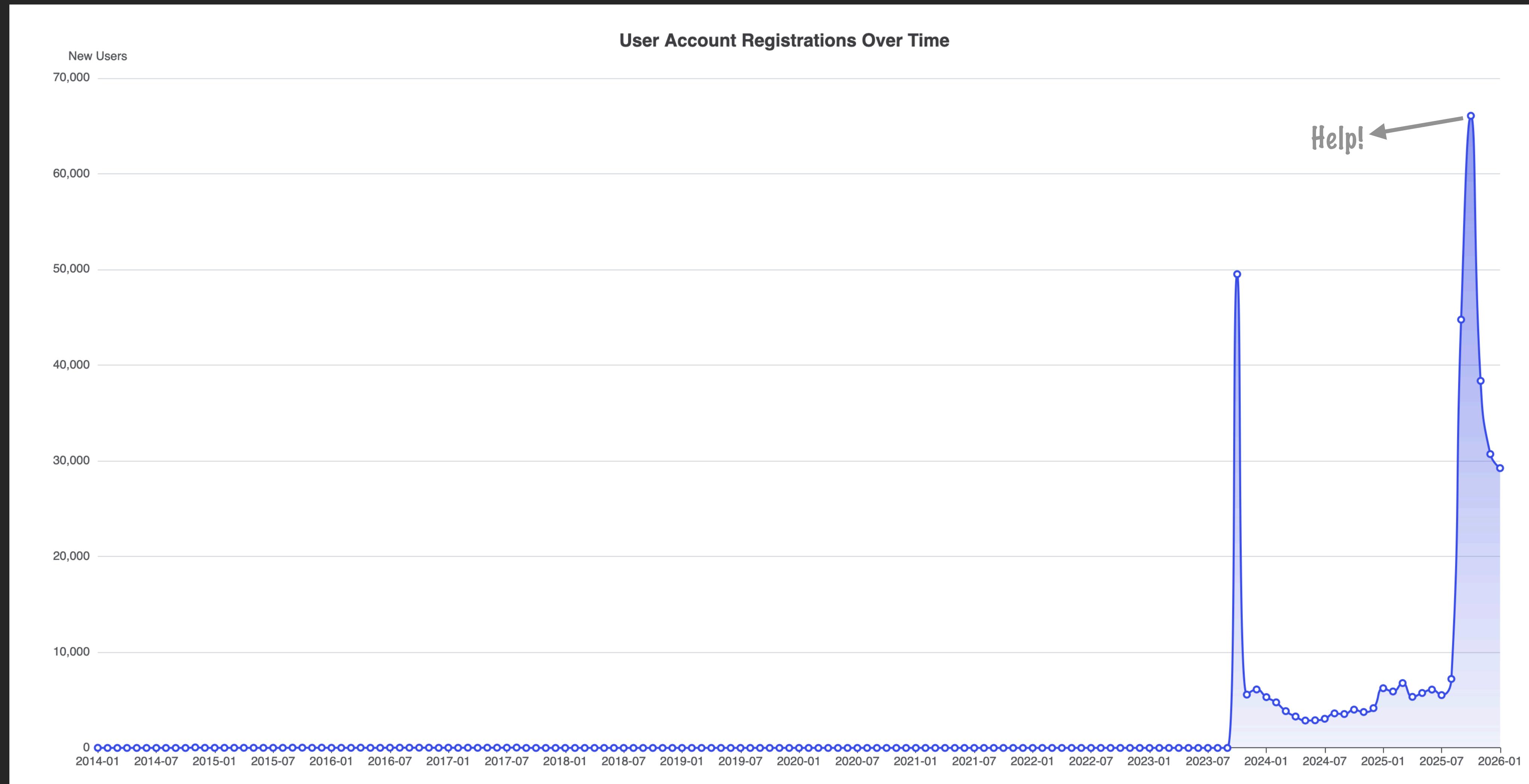
January 2014

August 2025



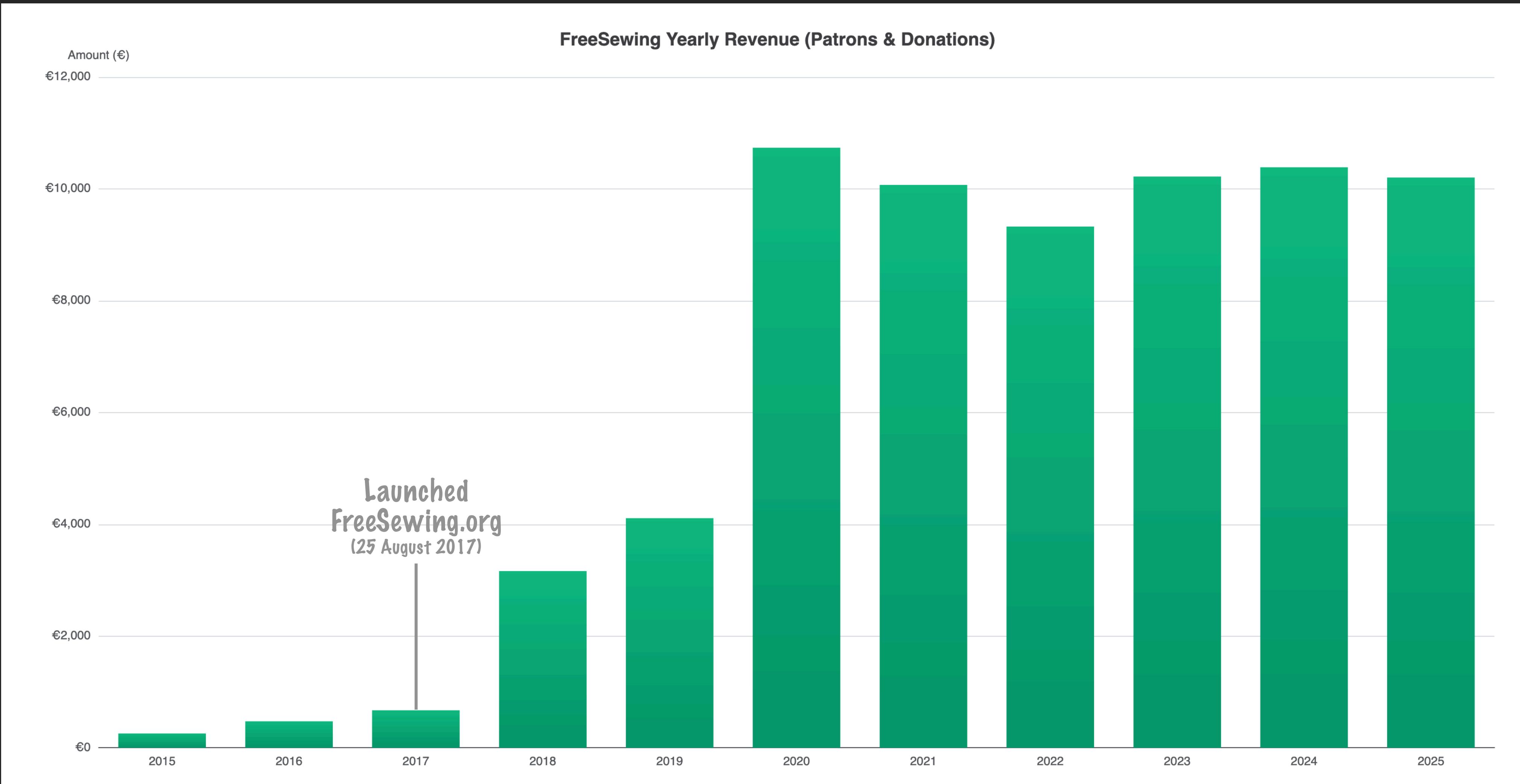
January 2014

January 2026



2015

2025



Live Demo?

What could go wrong?



What is Parametric Design



Draw a vertical line, mark the top as point A

From point A, square out to the right measuring
one quarter of the circumference of the chest

Add 2 inches

Mark this point as point B

We're not hard-coding
that, right?





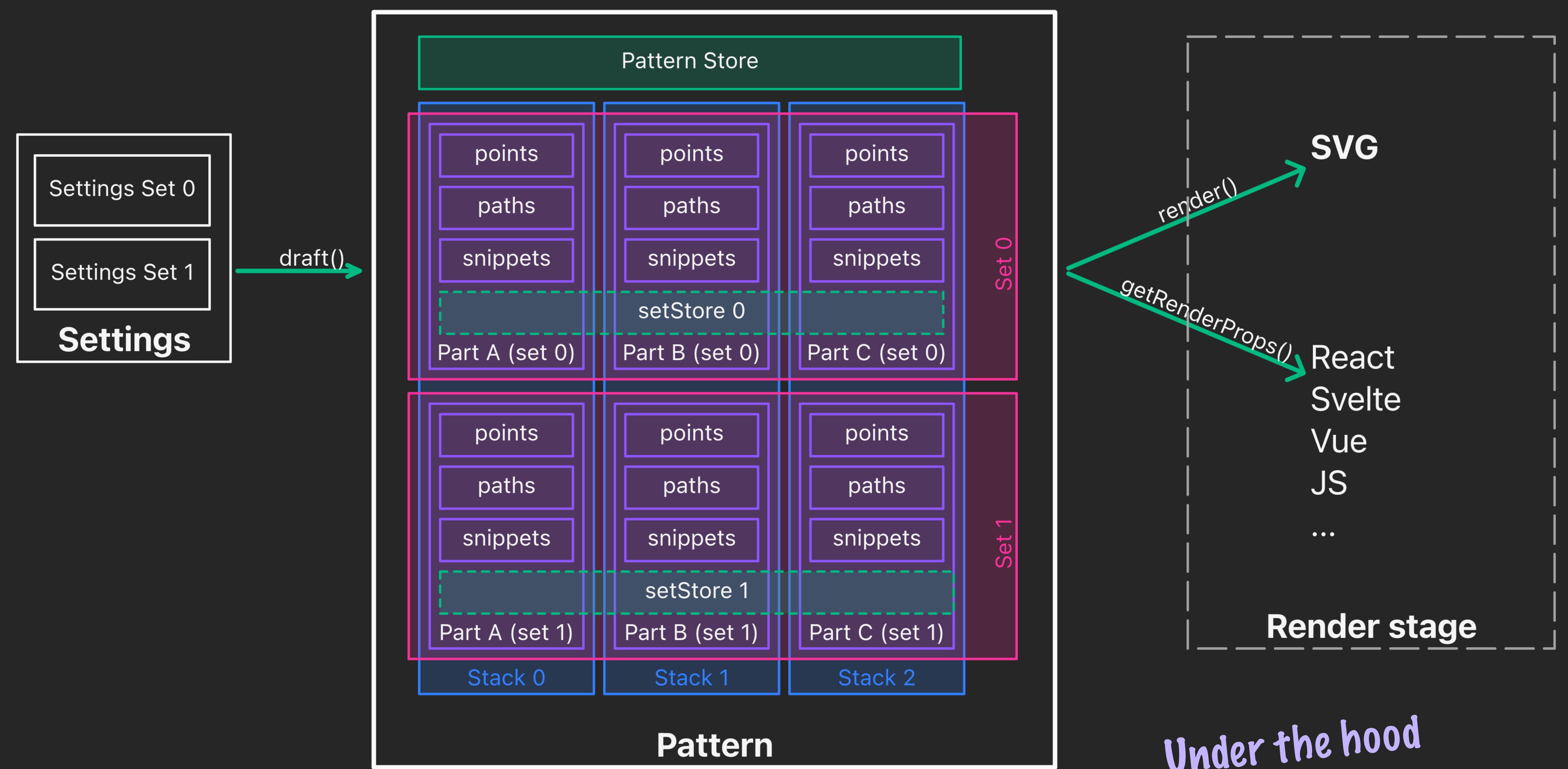
```
// Static design
const pattern = {
    // A digital representation of
    // a sewing pattern
}

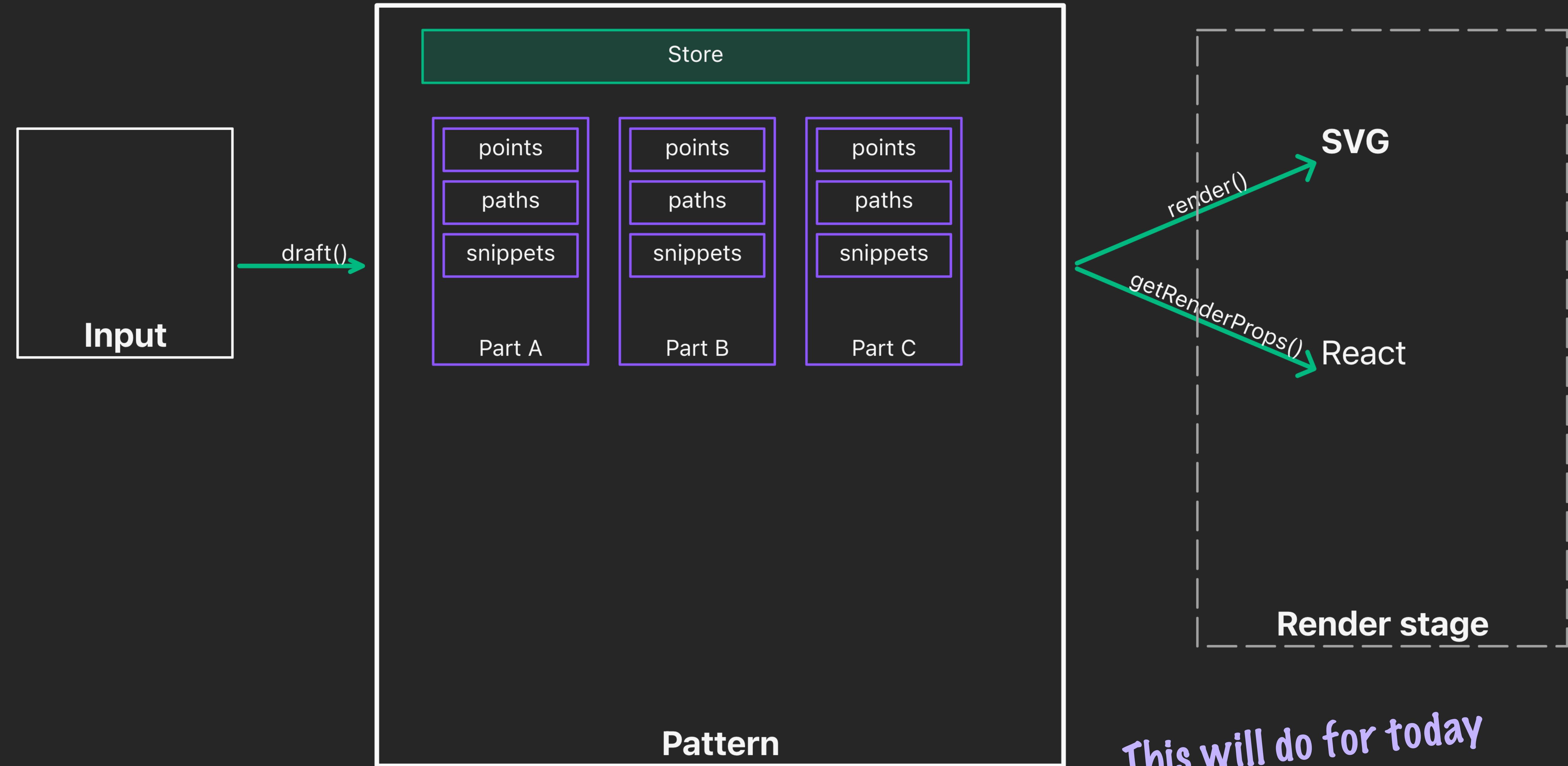
// Parametric design
function pattern(parameters) {
    return {
        // A digital representation of a
        // sewing pattern that takes our
        // input into account
    }
}
```



Parametric Sewing Patterns

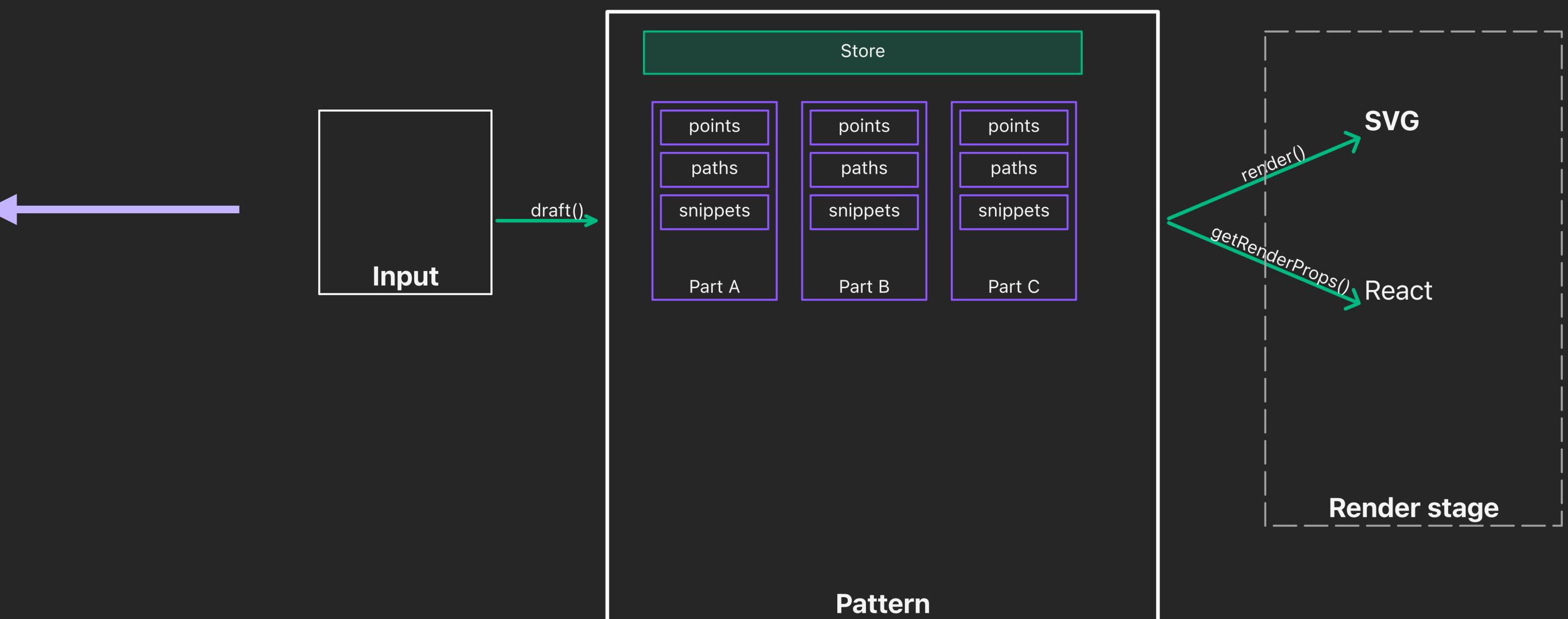
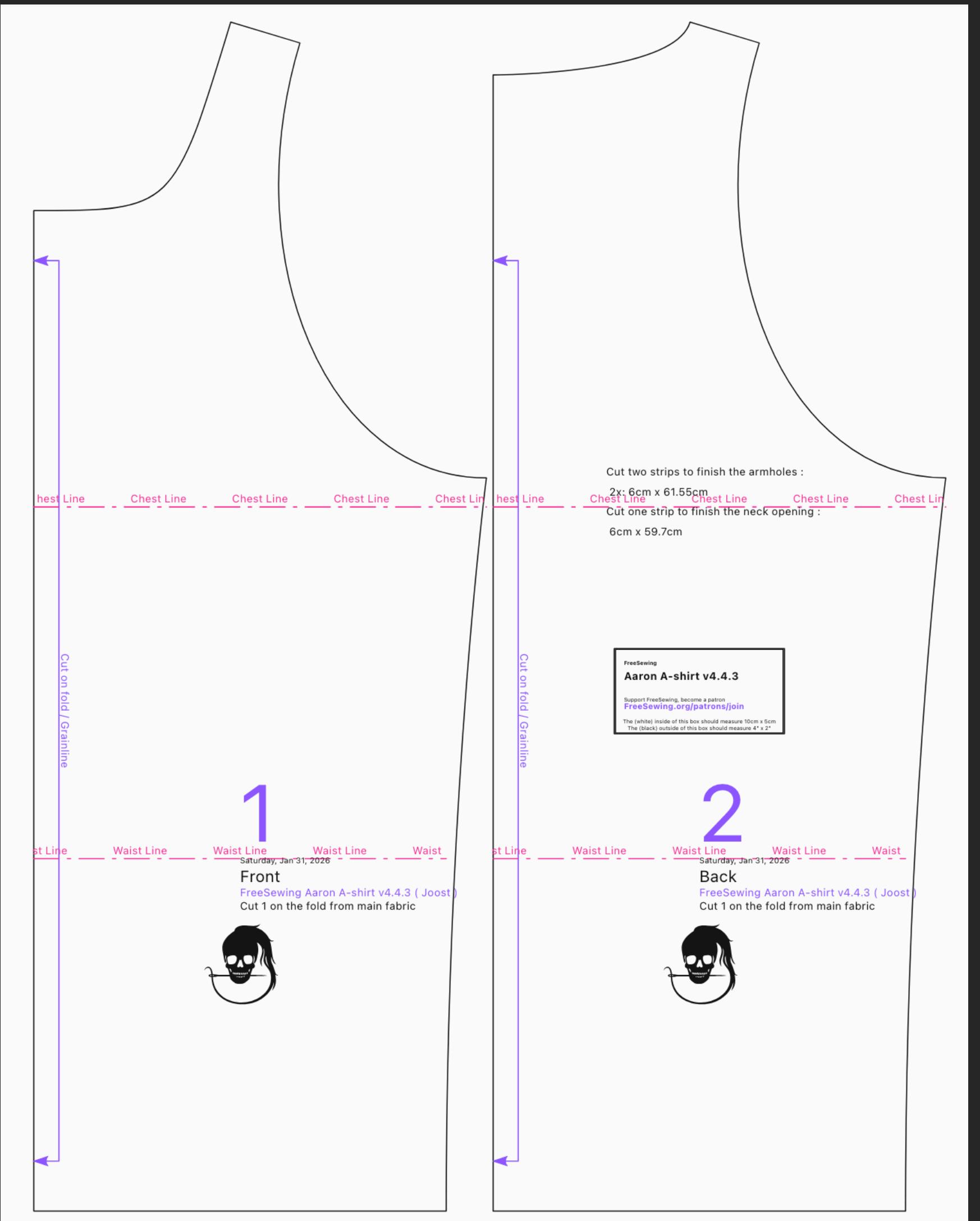






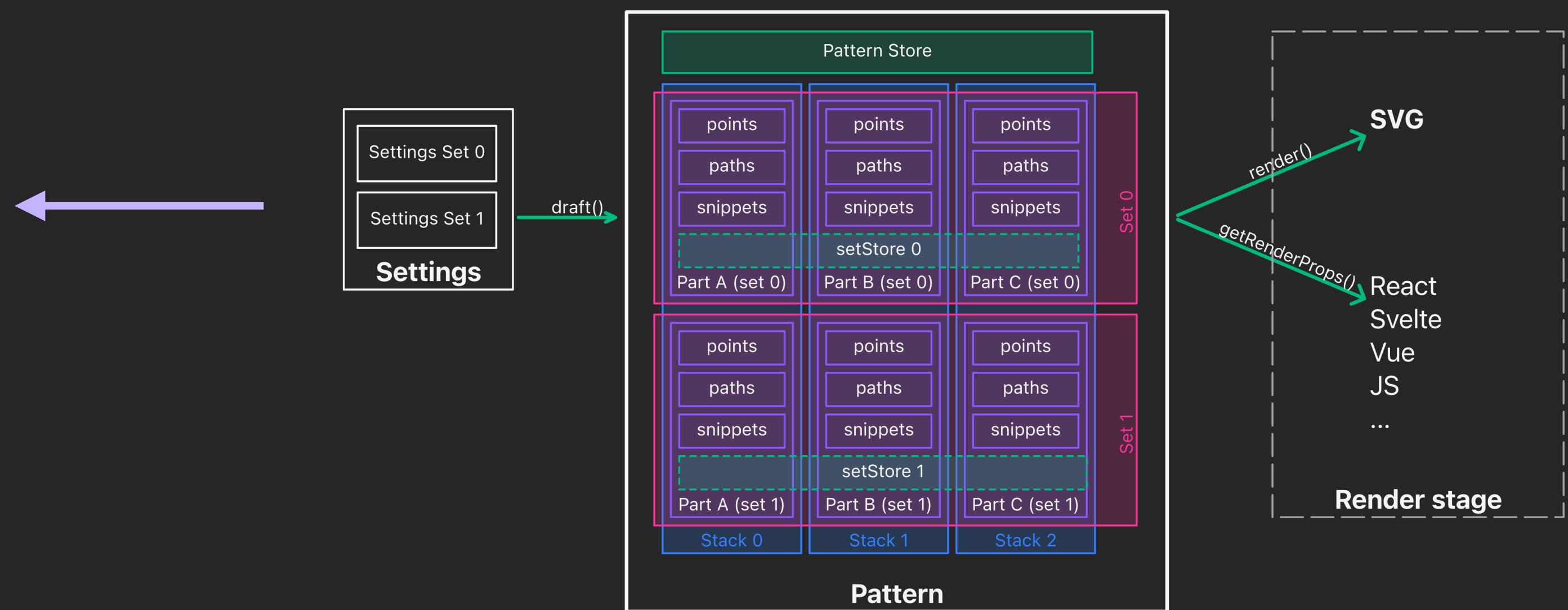
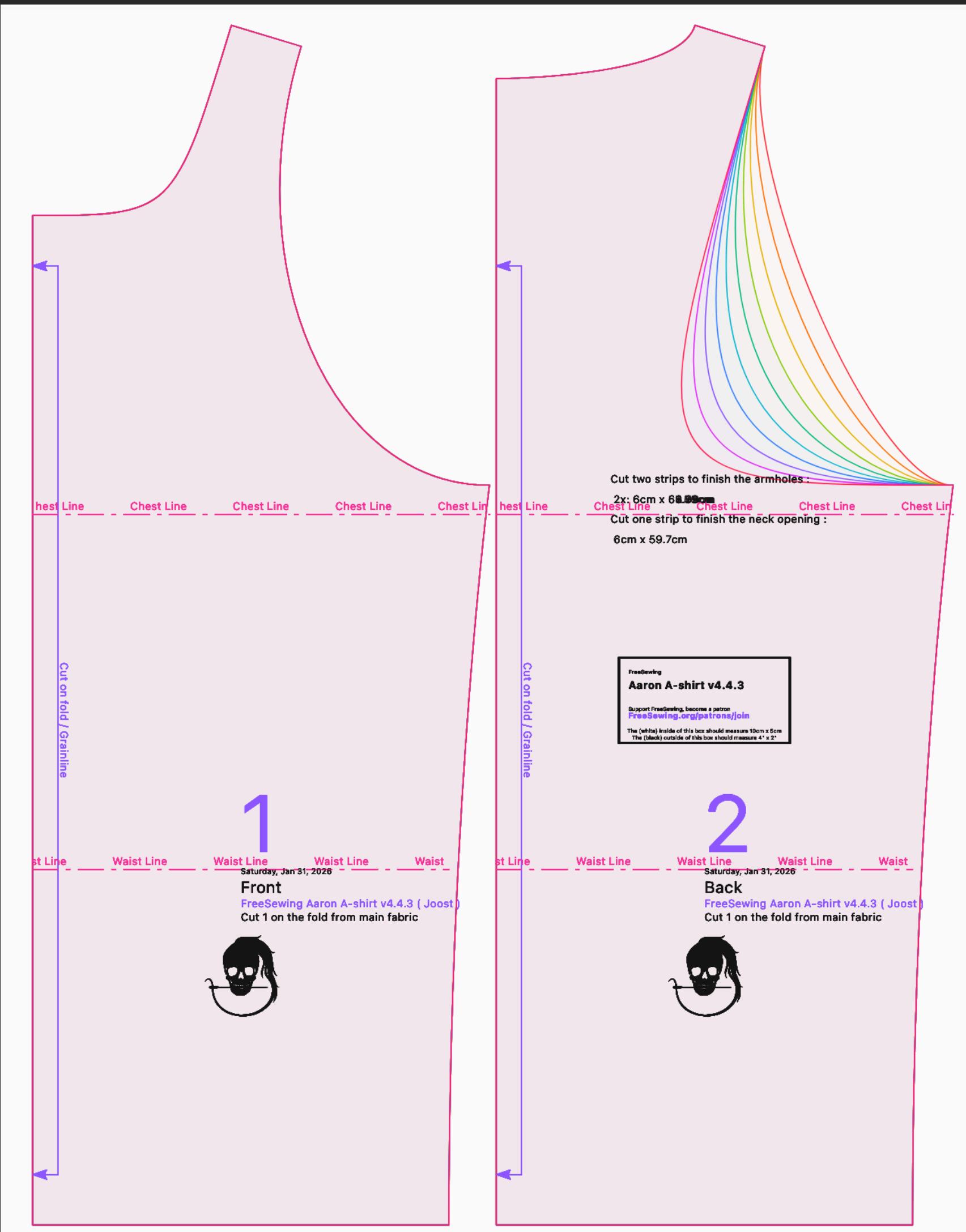
This will do for today





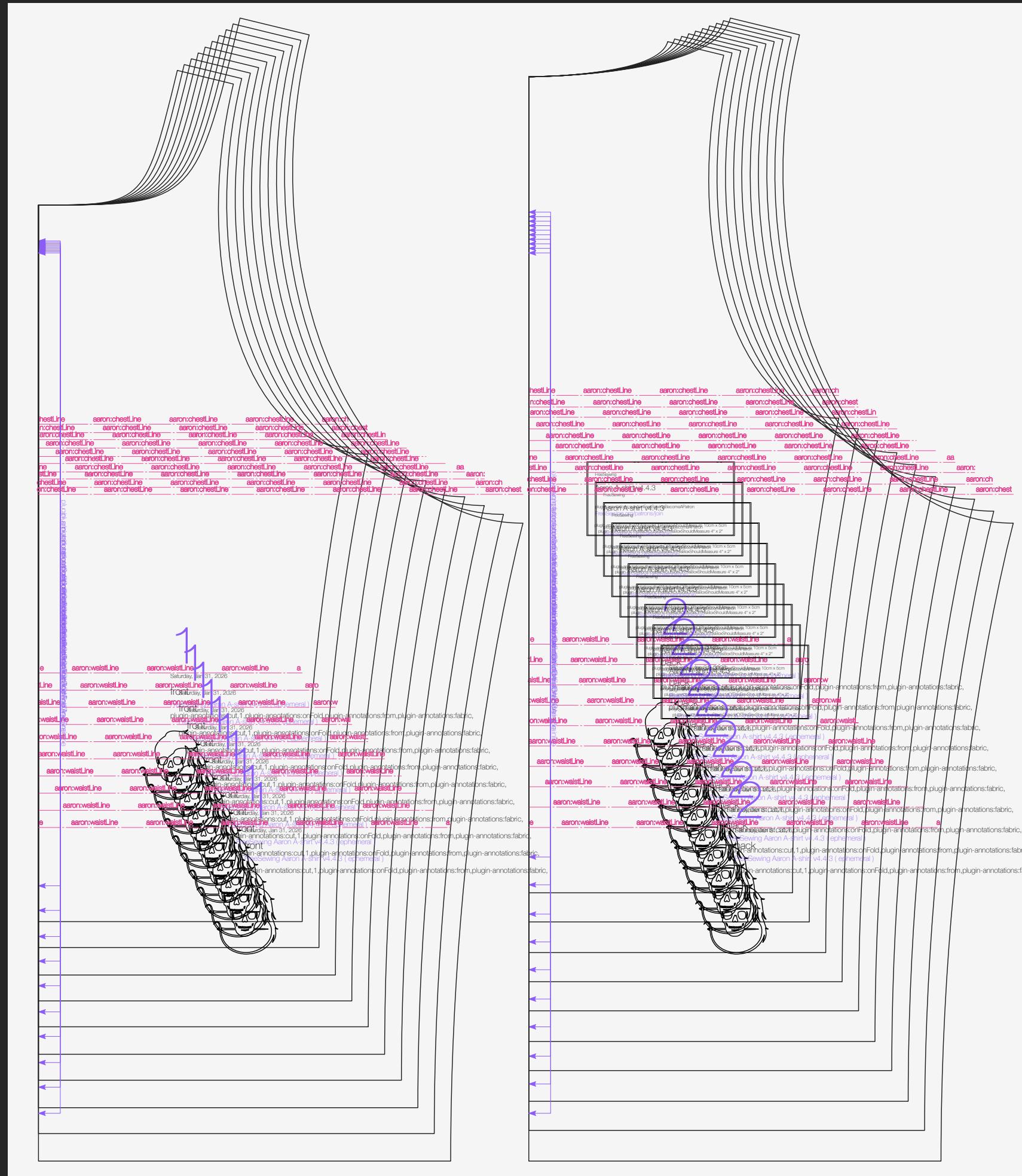
for 'just a pattern'
this is all we need



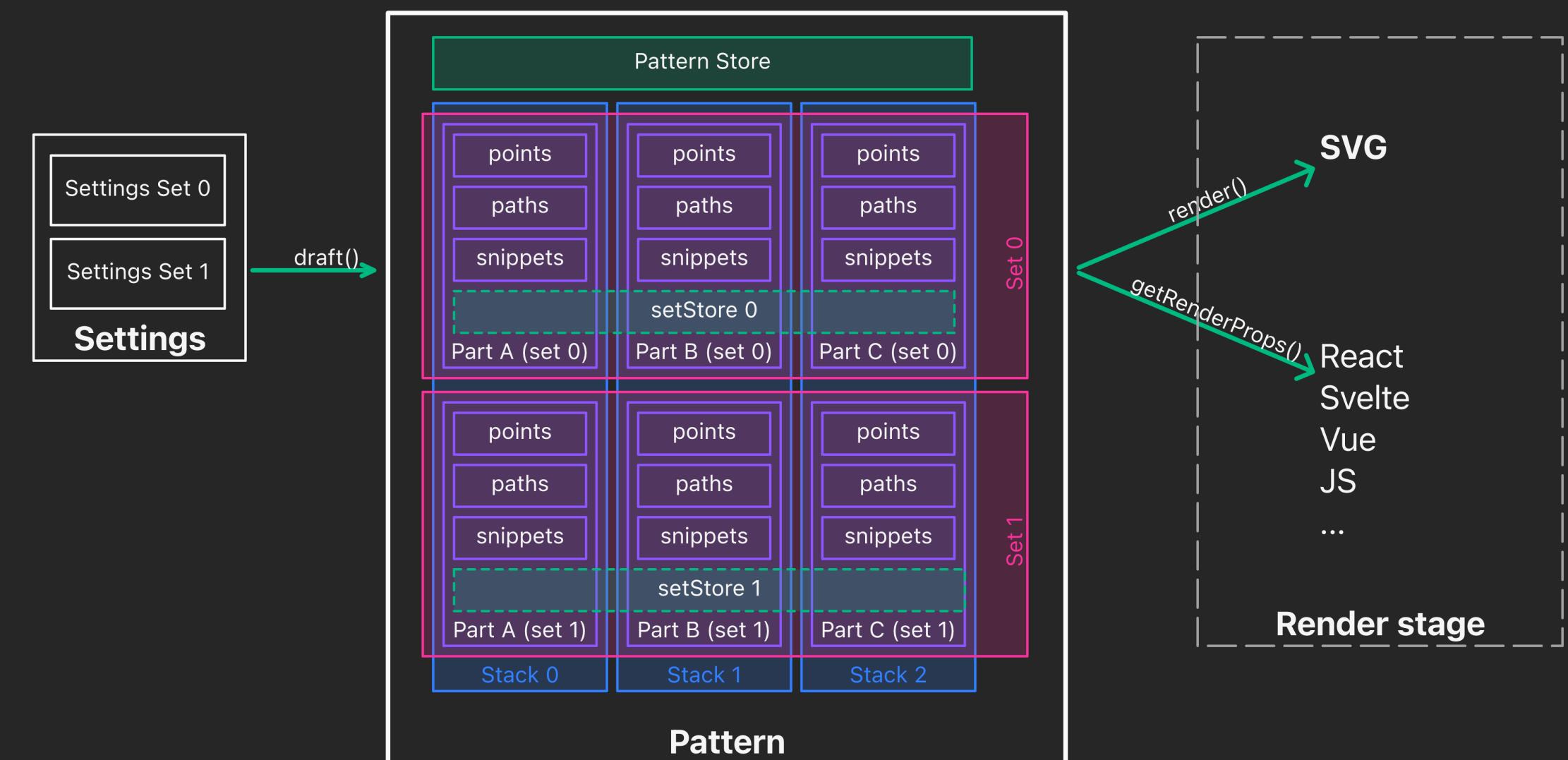


the rest is required
for advanced use-cases



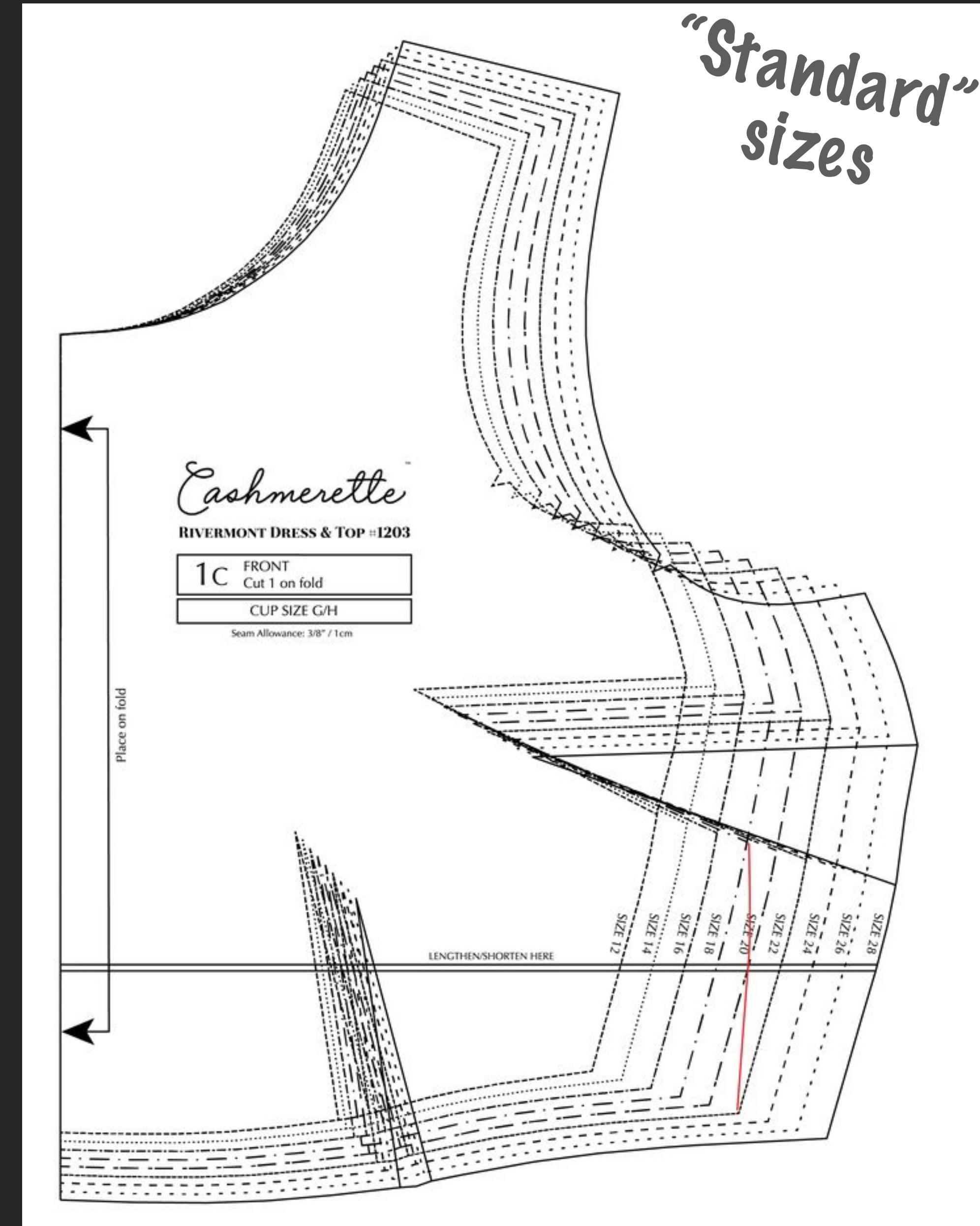
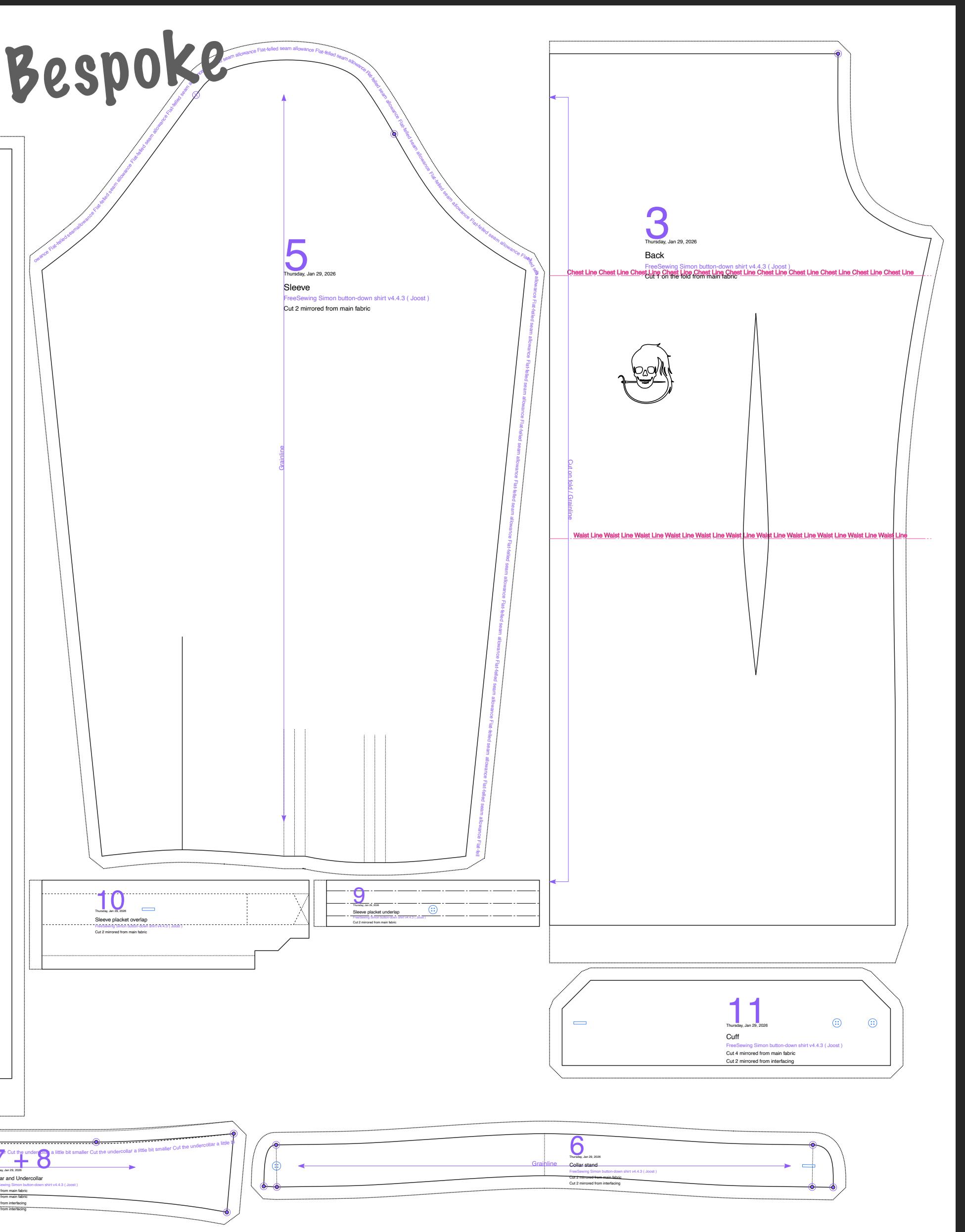


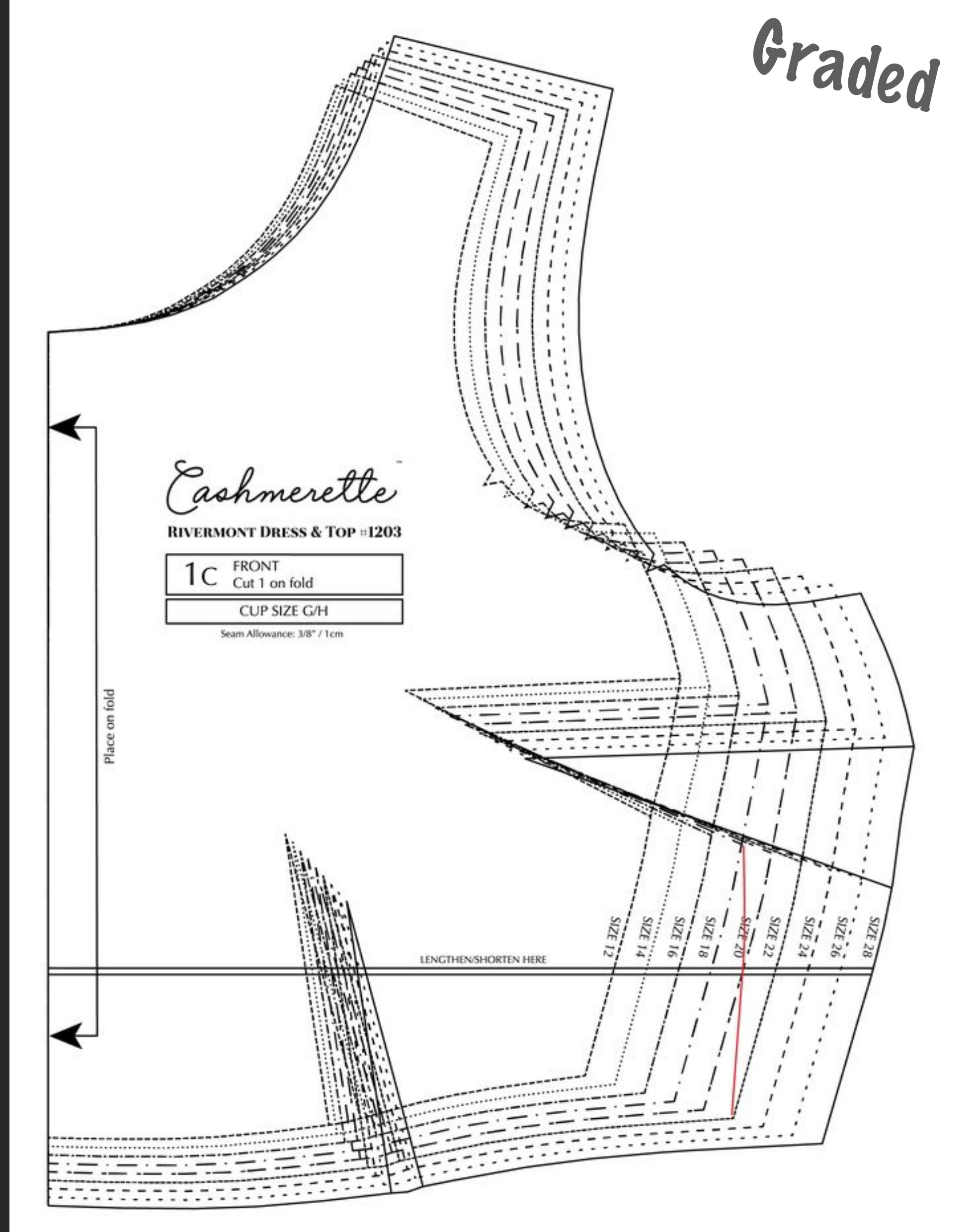
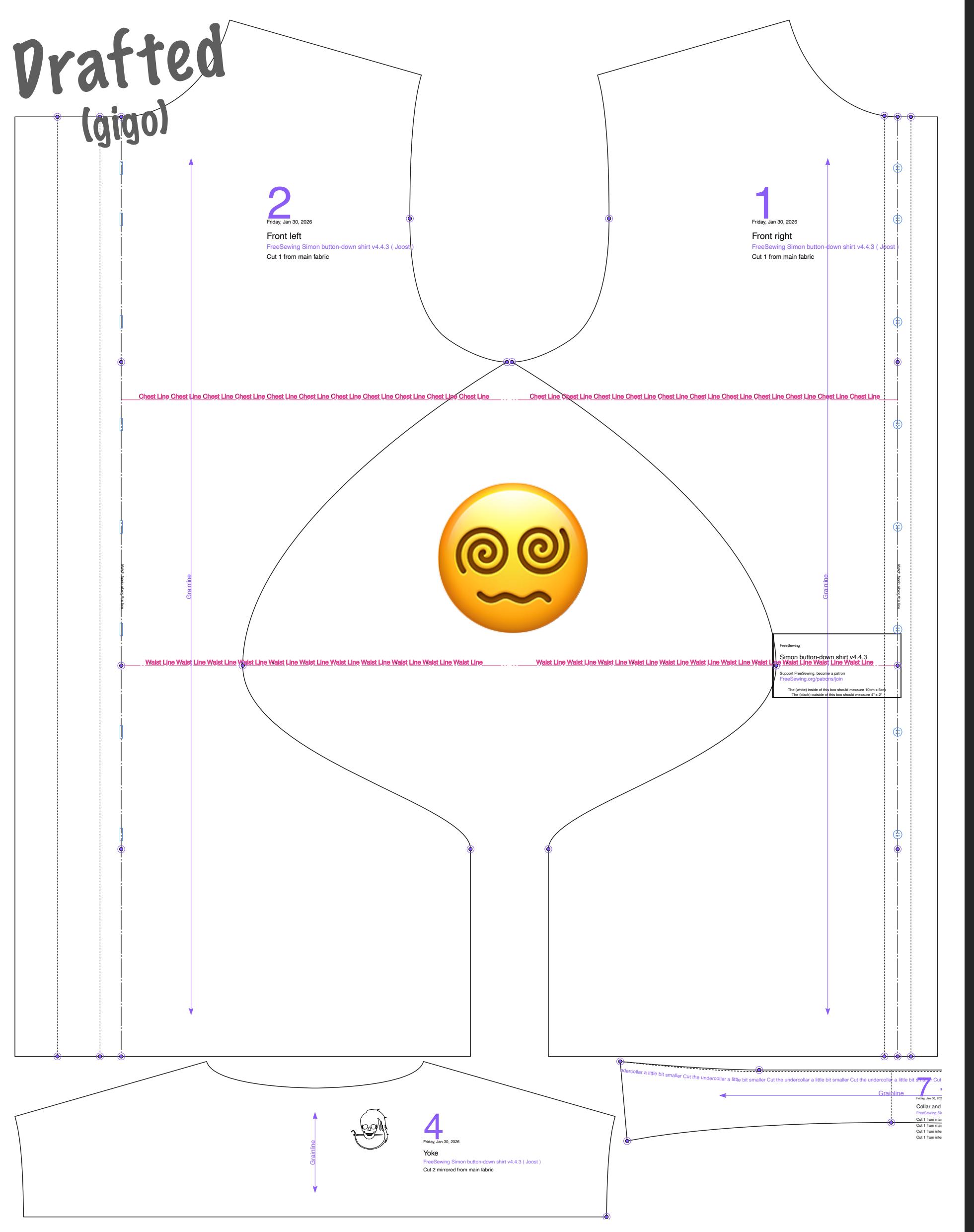
we use this
to test patterns



Drafting vs Grading







Patterns as code



Pattern code

Instructions

Draw a vertical line,
mark the top as point A

From point A, square out
to the right measuring
one quarter of the
circumference of the chest

Add 2 inches

Mark this point as point B



```
// Parametric design
function pattern (parameters) {
    return {
        // A digital representation of a
        // sewing pattern that takes our
        // input into account
    }
}
```



Instructions

Draw a vertical line,
mark the top as point A

From point A, square out
to the right measuring
one quarter of the
circumference of the chest

Add 2 inches

Mark this point as point B

Part code



```
/*
 * A FreeSewing pattern is a container
 * for FreeSewing parts that stand alone
 */
function pattern (parameters) {
    return {
        // A digital representation of a
        // sewing part that takes our
        // input into account
    }
}
```



Instructions

Draw a vertical line,
mark the top as point A

From point A, square out
to the right measuring
one quarter of the
circumference of the chest

Add 2 inches

Mark this point as point B



```
/*
 * A FreeSewing pattern is a container
 * for FreeSewing parts that stand alone
 */
const front = (
  part // Destructure the input
) => {
  // Do design things here
  return part
}
```

Part code



Instructions

Draw a vertical line,
mark the top as point A

From point A, square out
to the right measuring
one quarter of the
circumference of the chest

Add 2 inches

Mark this point as point B

Part code

```
● ● ●  
/*  
 * Your method gets a single object that you  
 * can destructure to access what you need  
 */  
const front = ({  
  part // We'll mutate this and return it  
}) => {  
  // Do design things  
  
  // Then return the part object  
  return part  
}
```



Instructions

Draw a vertical line,
mark the top as point A

From point A, square out
to the right measuring
one quarter of the
circumference of the chest

Add 2 inches

Mark this point as point B



```
const front = ({  
    part,  
    points, // Holds all points of the part  
    Point, // Point constructor  
}) => {  
    // Points takes a X and Y coordinate  
    points.A = new Point(0,0)  
  
    return part  
}
```

Part code



Instructions

Draw a vertical line,
mark the top as point A

From point A, square out
to the right measuring
one quarter of the
circumference of the chest

Add 2 inches

Mark this point as point B



```
const front = ({  
    part,  
    points,  
    Point,  
    measurements, // Holds measurements in mm  
) => {  
    points.A = new Point(0,0)  
    points.B = new Point(  
        measurements.chest / 4,  
        0  
)  
  
    return part  
}
```

Part code



Instructions

Draw a vertical line,
mark the top as point A

From point A, square out
to the right measuring
one quarter of the
circumference of the chest

Add 2 inches
This is ease

Mark this point as point B

Part code



```
const front = ({  
  part,  
  points,  
  Point,  
  measurements,  
  options, // Holds design options  
}) => {  
  points.A = new Point(0,0)  
  points.B = new Point(  
    measurements.chest / 4 + 🤔,  
    0  
  )  
  return part  
}
```

How do we add ease?



What is Ease



Functional Ease



Design Ease



Negative Ease



Goooo Mathieu



Instructions

Draw a vertical line,
mark the top as point A

From point A, square out
to the right measuring
one quarter of the
circumference of the chest

Add 2 inches

Mark this point as point B

Part code

```
● ● ●  
const front = ({  
  part,  
  points,  
  Point,  
  measurements,  
  options, // Holds design options  
}) => {  
  points.A = new Point(0,0)  
  points.B = new Point(  
    measurements.chest * options.chestEase / 4,  
    0  
  )  
  return part  
}
```



Paths



```
● ● ●  
const front = ({  
    part,  
    points,  
    Point,  
    measurements,  
    paths, // Holds all paths of the part  
    Path, // Path constructor  
}) => {  
    points.A = new Point(0,0)  
    points.B = new Point(measurements.chest / 4, 0)  
    //...  
    paths.example = new Path()  
        .move(points.A)  
        .line(points.B)  
        .curve(points.Bcp, points.Ccp, points.C)  
  
    return part  
}
```





```
const front = ({  
    part, points, Point, measurements, paths, Path  
) => {  
    points.A = new Point(0,0)  
    points.B = new Point(measurements.chest / 4, 0)  
    points.C = points.A.shiftFractionTowards(  
        points.B  
        0.5  
    )  
    paths.example = new Path()  
        .move(points.A)  
        .line(points.B)  
        .curve(points.Bcp, points.Ccp, points.C)  
        .addText("Hello FOSDEM")  
        .addClass("fabric")  
    return part  
}
```



Point API

Point.addCircle()
Point.addText()
Point.angle()
Point.asRenderProps()
Point.attr()
Point.clone()
Point.copy()
Point.dist()
Point.dx()
Point.dy()
Point.flipX()
Point.flipY()
Point.rotate()
Point.setCircle()
Point.setText()
Point.shift()
Point.shiftFractionTowards()
Point.shiftOutwards()
Point.shiftTowards()
Point.sitsOn()
Point.sitsRoughlyOn()
Point.slope()
Point.translate()

Path API

Path.addClass
Path.addText
Path.angleAt
Path.asPathString
Path.asRenderProps
Path.attr
Path.bbox
Path.circleSegment
Path.clean
Path.clone
Path.close
Path.combine
Path.curve
Path.curve_
Path.divide
Path.edge
Path.end
Path.hide
Path.insop
Path.intersects
Path.intersectsBeam
Path.intersectsX
Path.intersectsY
Path.join
Path.length
Path.line
Path.move
Path.noop
Path.offset
Path.reverse
Path.rotate
Path.roughLength
Path.setClass
Path setHidden
Path.setText
Path.shiftAlong
Path.shiftFractionAlong
Path.smurve
Path.smurve_
Path.split
Path.start
Path.translate
Path.trim
Path._curve
Path.unhide

API

freesewing.dev/reference/api



Complete Example





index.mjs

```
import { Design } from '@freesewing/core'
import { i18n } from '../i18n/index.mjs'
import about from '../about.json' with { type: 'json' }
import { front } from './front.mjs'

// Setup our new design
const Fosdem = new Design({
  data: about,
  parts: [ front ],
})

// Named exports
export { front, Fosdem, i18n, about }
```





```
export const i18n = {  
    en: {  
        t: "FOSDEM Example Design",  
        d: "This is just an example design for FOSDEM 2026",  
        p: {  
            front: "Front"  
        },  
        s: {  
            helloFosdem: "Hello FOSDEM"  
        },  
        o: {  
            chestEase: {  
                t: "Chest ease",  
                d: "The amount of ease at your chest"  
            }  
        }  
    }  
}
```

i18n/index.mjs





about.json

```
{  
  "id": "fosdem",  
  "name": "Fosdem example",  
  "code": "Joost De Cock",  
  "description": "A complete FreeSewing example design",  
  "design": "Joost De Cock",  
  "difficulty": 2,  
  "tags": [ "tops" ],  
  "techniques": [ "flat-sleeve" ],  
  "block": false,  
  "version": "4.4.3",  
  "pkg": "@freesewing/fosdem",  
  "collection": true  
}
```





```
export const front = {
  name: "fosdem.front",
  measurements: [ "chest" ],
  options: {
    chestEase: { pct: 8, min: 2, max: 20 }
  },
  draft: ({ part, points, Point, measurements, paths, Path }) => {
    points.A = new Point(0,0)
    points.B = new Point(measurements.chest / 4, 0)
    // ... add other points
    paths.example = new Path()
      .move(points.A)
      .line(points.B)
      .curve(points.Bcp, points.Ccp, points.C)
      .addText("helloFosdem").addClass("fabric")

    return part
  }
}
```



aaron	huey	skully
albert	hugo	sophie
bee	jaeger	sunny
bella	jane	sven
benjamin	jett	tamiko
bent	lily	teagan
bibi	lucy	tiberius
bob	lumina	titan
breanna	lumira	trayvon
brian	lunetius	tristan
bruce	noble	uma
carlita	octoplushy	umbra
carlton	onyx	wahid
cathrin	opal	walburga
charlie	otis	waralee
cornelius	paco	yuri
devon	penelope	
diana	percy	
florence	sabrina	
florent	sandy	
fosdem	sarah	
gozer	shelly	
hi	shin	
holmes	simon	
hortensia	simone	

the
FreeSewing
collection

Design Done



**But how do I get a
Pattern**



```
// Load our FreeSewing Design
import { Fosdem } from '@freesewing/fosdem'
// Load the SVG theme
import { pluginTheme as theme } from '@freesewing/plugin-theme'

const pattern = new Fosdem({
  sa: 10, // This is an example of a Core setting
  options: {
    chestEase: 0.05, // This is our design option
  },
  measurements: {
    chest: 1050 // Measurements always in mm
  },
}).use(theme).draft()

const svg = pattern.render()
```

Or use
FreeSewing.eu



**How do I
Start**





npx @freesewing/studio

stand-alone
development
environment



```
git clone ...
cd freesewing
npm run kickstart
```

(fork of our)
monorepo



Code vs Design





```
{  
  "id": "carlton",  
  "name": "Carlton coat",  
  "code": "Joost De Cock",  
  "description": "A FreeSewing pattern for...",  
  "design": [  
    "Anneke Caramin",  
    "Joost De Cock",  
  ],  
  "difficulty": 5,  
  "tags": [ "tops", "coats" ],  
  // ... and so on  
}
```

Code + Design



Where can you use FreeSewing

NodeJS
Bun
Deno
On the backend
In the browser
Inside a serverless function
On FreeSewing.eu
...



Software Developers vs Website Users



Software developers (aka tech people)

NPM
SemVer
CHANGELOG
API docs
DX
Issues
...

Website users (aka sewing people)

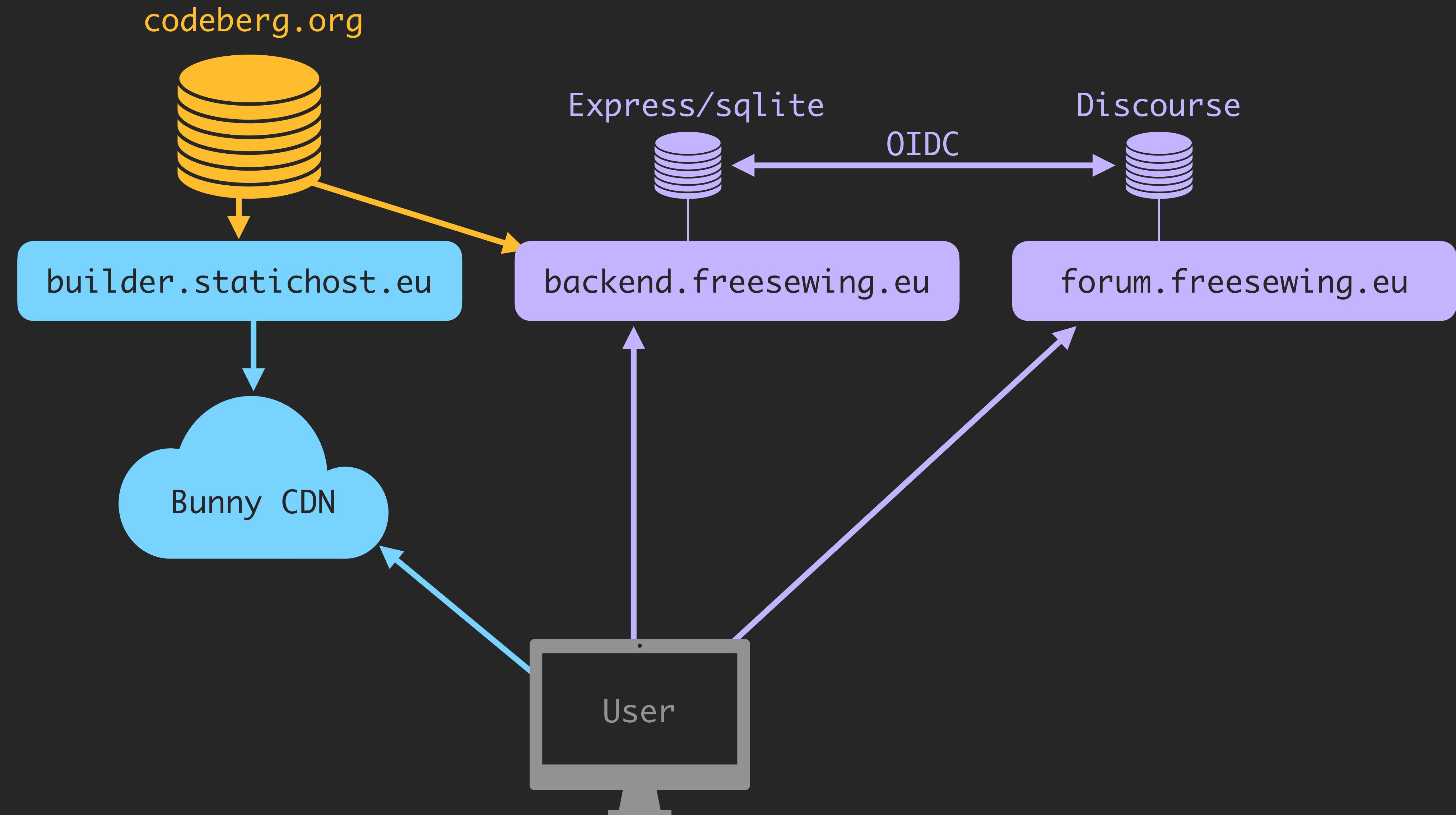
UX
PDF & Tiling
Layout
Backend
Sewing Instructions
Website Docs
Account stuff
Showcase, Blog, Forum
Support
...

Try to explain everything to people who don't know FOSS



Infrastructure





Lessons learned as a Maintainer

3 tips



Touch
grass



People Come & Go



Retire Prepare to



The life-changing magic of Interdisciplinary FOSS



**Do you have any
Questions**



Websites

FreeSewing.eu

FreeSewing.dev

FreeSewing.social

forum.FreeSewing.eu

FreeSewing

Codeberg: [freesewing](https://freesewing.codeberg.org)

Mastodon: freesewing@freesewing.social

Bluesky: @freesewing.eu

Email: support@freesewing.eu

Joost

Codeberg: [joostdecock](https://joostdecock.codeberg.org)

Mastodon: joost@freesewing.social

Bluesky: @joost.at

Email: joost@joost.at

Thank you

