Singer's First ZigZaggers

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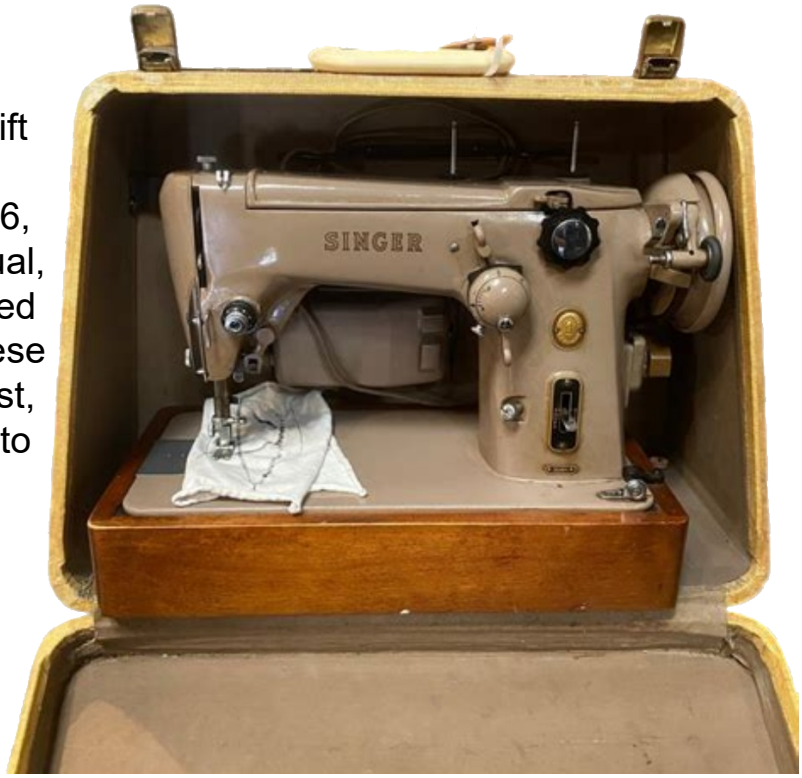
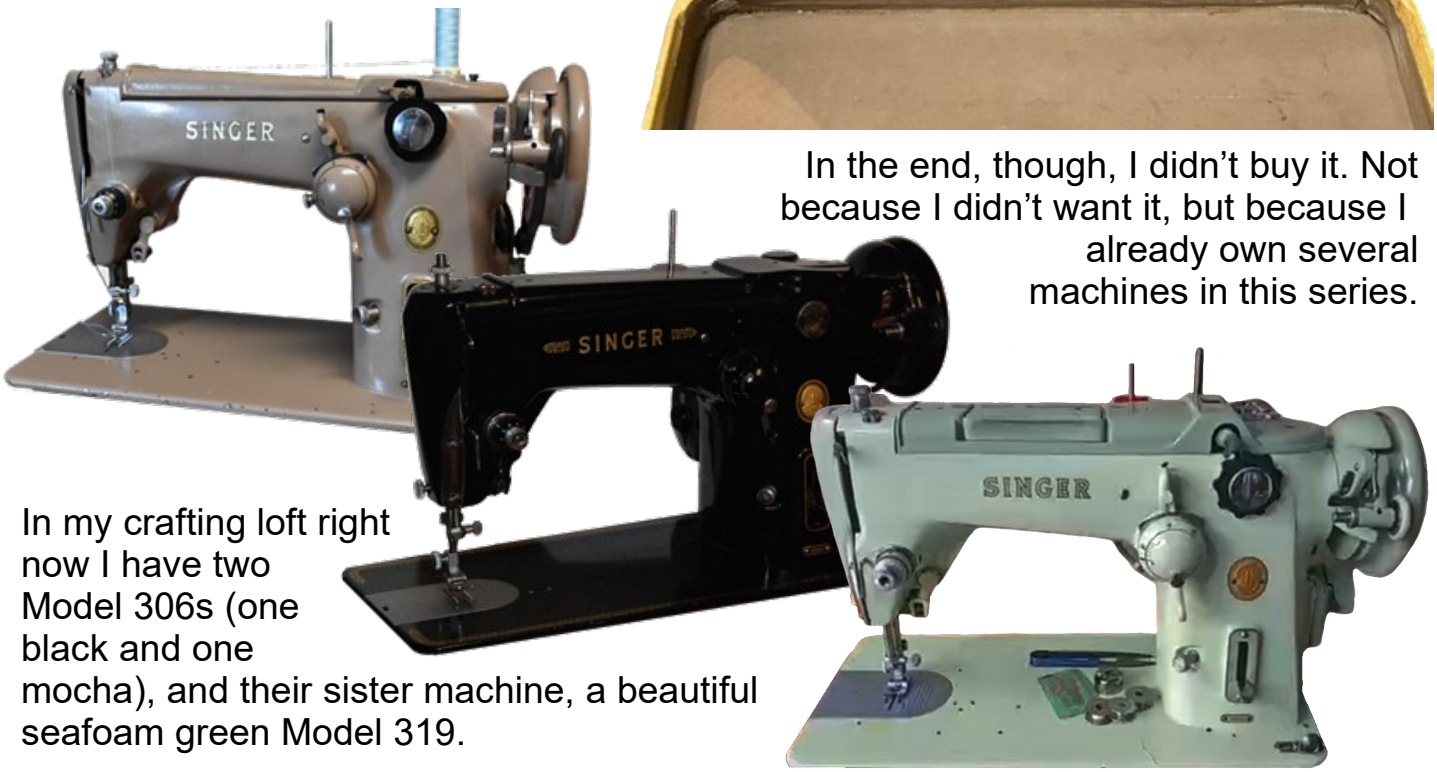
When I stopped in at my favourite thrift store last week, what did I spy but an absolutely stunning mocha Singer 306, complete with attachments and manual, in a grasscloth case. They had it priced at $90, which is not unreasonable these days. The manager, noting my interest, hinted that she might even be willing to drop the price further. Oooh.



I was tempted, because I dearly love this model.

In the end, though, I didn't buy it. Not because I didn't want it, but because I already own several machines in this series.



In my crafting loft right now I have two Model 306s (one black and one mocha), and their sister machine, a beautiful seafoam green Model 319.

And . . . I have a third 306 waiting for me in Halifax, and a second 319 that just arrived in a shipment from my friend's warehouse in Ontario.

In addition to these, the machine shipment from Ontario also includes a rare Model 206 – the predecessor of the 306 and the very first "swing needle" (zigzag) machine Singer ever made.

The 206, introduced in 1936, was very advanced for the time, being the first domestic “swing needle” (zigzag) machine on the market. I can only imagine the excitement it must have caused! I love how it looks like all the other black Singers of the era, but with zigzag capability. Wow.

The early 206 heads were cast iron, while the later ones were aluminum. Both had all steel gears.

In 1954, the 206 \was supplanted by the 306, which, in addition to the basic zigzag, could also produce a range of decorative and utility stitches by way of interchangeable flat cams. Wow again.

Despite its “updated” 1950s styling, the 306 is mechanically almost identical to the 206, with all steel gears inside its aluminum housing.

The 306 was shortly followed into the marketplace by the 319, which is basically the same machine, but with the added feature of several built-in utility stitches. These were engaged by means of small levers on top of the machine – often described as resembling typewriter keys.

All three of these machines can be treadled if the operator so wishes.

I'm still unpacking the machines from the shipment, so I haven't yet tried my 206, but I can say that the 306 and 319 are robust machines, described by some experts as being as close to "semi-industrial" as a domestic machine could be.

Inside the pillar there is a cleated drive belt similar to the one found in the famed Pfaff 130. These are the only Singer machines to have this feature.

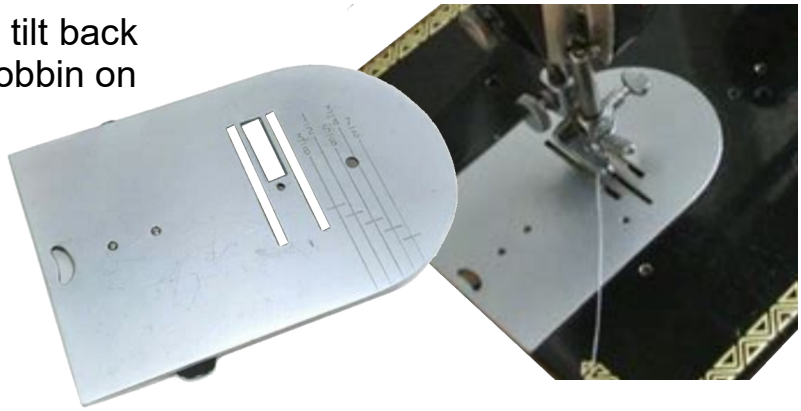
Both the 306 and the 319 are low-shank, centre-homing machines with adjustable needle position. Both use commonly available low-shank presser feet, but unlike most domestic Singers, these machines take a bobbin that was more commonly seen in industrial machines like the 20U.

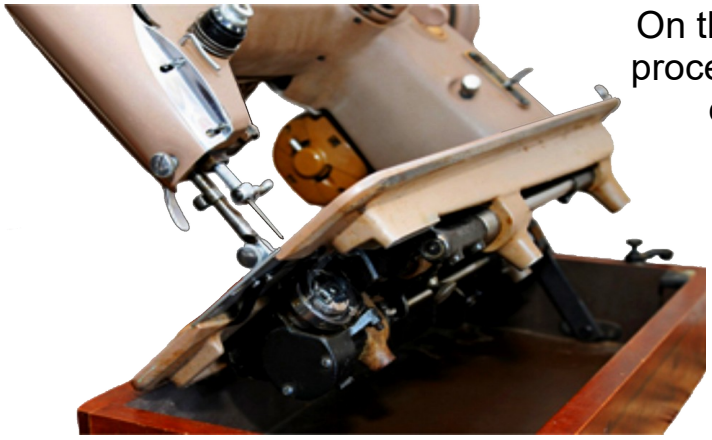
Although this "class L" bobbin is familiar now to embroiderers (it's the one used in Brother's embroidery machines), back in the mid-1950s when these machines were released, it was an unusual bobbin for a domestic machine. Nowadays these are easy to find and reasonably cheap: just over $10 for a pack of 10 metal bobbins.

I love these solidly made machines, and I'm not alone: at least one enthusiast likens them, in stitch quality and durability, to the famed Singer 201. A quick search on youtube will turn up dozens of users who can't wait to show off their 306, 319, and 206 machines.

But it turns out that the these machines also have their detractors. One oft-cited critic in particular has declared that these three models should have been consigned directly to the dump (!). Legions of fans have voiced their disagreement with this assessment, but the dislike – and a lot of misinformation – persists on line. Let's have a look at some of the chief complaints.

The first complaint is that you have to tilt back the head in order to change out the bobbin on these machines, because there's no actual slide plate – only an extended needle plate. Some users say they find this process cumbersome, but it takes only a few seconds to tilt the head back, and once you do, bobbin insertion is easy.





On the portable versions, the bobbin-changing process is simplified by a built-in bracket in the case bottom that supports the machine in the tilted position. And if the machine is mounted in a cabinet or table, the front-facing bobbin area can be readily accessed from below, without tilting the head. Once you get used to this, nothing could be simpler.

Personally, I find changing the bobbin to be no more bother than fiddling a bobbin case through a small slide plate opening, as you have to do on the model 15.

The second, and more controversial, gripe has to do with the needles. And this is where the bulk of the misinformation is centred. When Singer introduced the 206 in the 1930s, for some reason they used a modified version of the 15x1 needle: it was shorter from eye to point, though the length from shaft to eye is identical.

10 Pk. Schmetz 206X13 HPX13 Size 12 Flat Shank Needles for Singer 206, 306, 319

4.8 ★★★★★ (34)

$57.62

They retained this needle configuration for the 306, 319, and 320, but later abandoned it.

These needles are difficult to find now, and very expensive, and the sizes are limited. Schmetz still makes them, but only in sizes 12 and 14, and they can cost well over $50 for a single pack of 10. Yikes!
By comparison, you can purchase name brand 15x1 machine needles for just under $7 per pack of 10; generic needles from China are even cheaper. If only you could use the 15x1s instead . . . . Well, guess what? You can.

10PCS /PACK/SIZE ORGAN FLAT SHANK 15X1 HAX1 130/705H SIZE 8,11,12,14,16,18,21,22 FOR...

4.6 ★★★★½ (284)

$6.44

The most pervasive piece of misinformation out there is that you *must not* use a 15 needle in these machines; it is asserted that doing so will damage both the needle and the bobbin case or even wreck the timing. Based on my own experience, and on the testimony of knowledgeable users, I'd say this is just not so.

Fact is, like many users, I routinely use 15 needles in my two 306s and my 319, and all three sew just fine, on both straight stitch and zigzag settings. Although I dutifully bought the 206 needles when I got the machine, I have actually never had to use them.

My experience is echoed by lots of devotees, such as Andrew Caddle, who wrote so eloquently on the subject (sadly, his blog is no longer available on line). Andrew writes "It amazes me that, even now in the face of voluminous evidence, there are still many people who will declare as gospel, the 'fact' that you can't use standard needles in these machines."

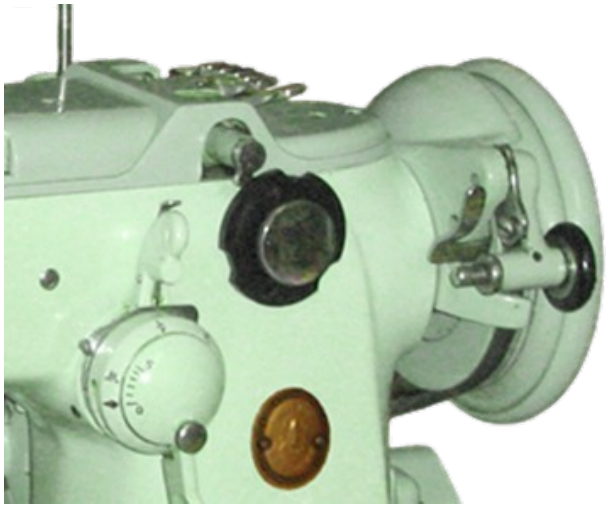
He insists that you can, and his observations are based on extensive experience: he owns, and uses, six of these machines, and all of them with 15x1 needles. The issue seems to have arisen from the original bobbin case, a "closed" design with a solid band of metal across the top. Early on, Andrew proposed grinding out a space in the top of the case to enable the 15 needle to pass through. "That small modification of the original bobbin case," he says, "was all that was ever necessary to enable the swing needle machines to operate with standard 15X1 needles."

Nowadays, you don't even need to do that. "Open" design bobbin cases are readily available, because they are used in many home embroidery machines. (Class L bobbin cases of open design are used in my Brother PR600 and in my new Halo X, and also in my Singer 20U semi-industrial machine.) With one of these cases installed, my 306 and 319 accept regular 15 needles.

Indeed, my 319 and one of my 306s came with open bobbin cases already installed. One bore the same part number as the original closed case. Andrew suggests that "it's fair to assume that this solution to the 'standard needle' incompatibility was solved very early on. I can easily imagine new bobbin cases, of a design that accommodated standard needles but bearing the original part #, might well have been produced in some parts of the world."

So why did the 206 needle exist at all? Andrew speculates that it was "an abortive attempt by Singer to claw back a larger share of the sewing machine needle market" in the face of increased competition from Japan and elsewhere. Makes sense. After this series of machines, Singer went back to installing the 15x1 needle in all its machines, probably due to customer pressure. The 206 needle was never again standard in any subsequent Singer.

When I first encountered Andrew's blog entries on the subject, I shared them with my own sewing machine guru, Rob, who had this to say: "I removed the 206 needle from my 306K and popped in a 15x1. I ran the machine fast and at full ZZ width and it stitched like one would expect: no difference between the 206 needle and the 15 one. Knowing there are alternative bobbin cases that will work kind of puts to bed the question about using 15x1 needles. Though I know this topic will always arise on the groups and the debate will be rehashed over and over, it really is a no brainer." Indeed.



Critics of these machines also complain that the machines are noisy. I'm not sure what they might be hearing with their machines, but I honestly have found my 306-319 machines to be significantly quieter than some of my other all-metal Singers, like the 401 and the 500 Rocketeer. With the 306 and the 319, all I hear is just a little click of the external cam follower. It's actually a lovely satisfying mechanical sound, and – geek that I am – I love the fact that the cam is on the outside where I can see it turn as the machine sews.

And speaking of cams, the flat "fashion disc" cams used in these machines (and also in a few later Singers, such as models 328 and 338) make beautiful crisp decorative stitches. I'm lucky enough to have a full set, which I acquired along with my 319.

As you might have guessed, I'm a sucker for these old-style sewing cams, especially when they make such great quality of stitches.

A third gripe frequently voiced by those who hate the 206-306-319 series is just plain silly. It involves the external mechanics of the machine: the cam follower and the swing bar that makes the machine zigzag are both on the outside of the machine.

Both of these move in rhythm when the machine is sewing; I love watching them as I sew, but I guess not everyone does.

The most prominent critic of the machine series actually claimed that an operator is in danger of getting long hair caught in them . . . seriously?

I have been sewing for nearly 60 years, with long hair and short, on a host of different machines, and I have to say that this scenario strikes me as not only unlikely, but actually ridiculous.

Maybe if you tried *really* hard, you might manage to get your hair entangled, but . . . wouldn't you be just as likely – moreso, even – to get your hair caught in the take-up lever or the bobbin winder? (I remember years ago, leaning in to get a better view of a tiny item I was sewing, I got close enough to get smacked in the forehead by the take-up lever. But even then I never got my hair caught). Come to think of it, just how long would your hair have to be for this to be a realistic concern? And in that case, wouldn't you equally be in danger from *any* mechanical device with moving parts: a kitchen mixer, a fan, a pencil sharpener, a drill? And if your hair is so long as to present this kind of hazard, why wouldn't you just tie it back? As I said: silly.

Lastly, critics expressed a reasonable concern about the availability of replacements for the cleated drive belt: should it fail, the machine is useless. (I don't know how frequently these actually do fail).

Fortunately, new toothed belts are now available specifically for these machines. I guess that means there must be enough enthusiasts out there who actually want to keep these lovely machines *out* of the landfill.

Whatever your viewpoint, there's no denying that these most controversial of vintage machines are used every day by people who love sewing on them, and who can confirm their successful use of 15x1 needles.
I'm delighted to count myself among them.