

# Two-Pair Inventions

Tamara P Duvall

LEXINGTON, VIRGINIA, USA 2004

Two-Pair Inventions Part I (Centers)
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Two-Pair Inventions Part II (Snowflakes)

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Wire Variation (Center #4)

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### INTRODUCTION

The 2-Pair - and now also 2-Part - "Inventions" have originally been designed in 1991/4 as 2-Pair Snowflakes.

At the time, I wanted to see how far a single line (albeit constructed of 4 individual strands) could be "pushed" in Bobbin Lace terms, and small items (the "ornaments" are 1" in diameter, the full snowflakes 4") were an obvious path to test without suffering from terminal boredom. Snowflakes as a format were another obvious choice; built on the same grid but with totally different appearance, they posed more of a challenge than "one of a kind" designs. And, if the results were pleasing to the eye, they could also be useful; one could hang them on a Christmas tree, or in the window. After a while, having "composed" 10 different centres and 7 different "flakes", I lost interest in the experiment and abandoned it.

In 2000, I was asked to contribute a pattern for the "goodie bag" to be given to the attendees of the Lace Day organized by the Land House Lacers in Norfolk, Virginia, which is my adoptive State. I decided to give them 8 of the "ornaments" (the centres of the original "flakes") and they put them together into a booklet format. The booklet pleased, the pleasure spilled into the lace-making e-list Arachne, and, since there was a demand, the Land House Lacers printed off some more, and sold them, with the profits going to the guild's library.

2+ years passed, and a copy of the original booklet found its way to E-Bay (the way of all trash?)... The interest in it was revived, and I thought it would be a good opportunity to add back what I had removed in the first place – the remaining 2 centres and the outer parts which make the Snowflakes. It took almost two more years of revisions, drawing of diagrams for the flakes (to match the ones for centres) and re-making of samples (some were missing, some not good enough for publishing) before I was able to complete the expanded booklet. A baker's dozen of years since the first experiment!

I hope you will enjoy making the little lace "Inventions".

Tamara P. Duvall, Lexington, Virginia, USA May 2004 Two-Pair Inventions; Part I (centers)

All the little circle ornaments operate on the same principle: each is a <u>continuous</u> piece of lace, each uses only two pairs of bobbins, and each begins and ends at the same pinhole — the one marked

Most of the samples have been worked in Fresia linen 80/2, but any linen in the range of 60/2 to 140/2 would work; you can use up whatever extra bits of thread you have. The circles without leaves use about 18-24" of thread per bobbin, the ones with leaves about 1-1.5 yard. Thicker thread produces quicker results and uses shorter lengths. Cotton of the cord type (3-6 ply) can be used instead of linen, though it might require extra care in shaping and stiffening. Two-ply cotton should be avoided. Metallic threads would work well, though the size of the pricking might have to be adjusted.

With the exception of #6, the outer rims are not a structural part of the ornaments; they've been marked with a broken line on the pricking and could be omitted, leaving one with just a star. However, #s 4, 5 and 10 do not keep their shape well without the outer circle to stabilize them. Additionally, both 4 and 5 look lopsided if hung from the starting/ending point. For those, an extra loop has been provided for hanging. It, too, can be omitted, if the ornament is not to be hung (the ornaments would make nice key-chain "fillers" for example).

### Diagram markings and abbreviations

- 1) "square one"; marks the beginning and the end of the ornament.
- 2) 
  O -- picot; a small arrow points to it.
- 3) x -- a temporary pin, used to provide tension for sewings. No sewings are made into that pinhole.
- 4) <-> -- false plait; made with a single pair, it starts and ends at the same pinhole.
- 5) m -- zig-zagging lines mark the path of a single, twisted, pair.
- 6) ssi -- single sewing into (a pinhole)
- 7) DSI -- double sewing into (a pinhole). Each pair is used as a single bobbin.
- 8) DSO -- double sewing over (a plait). Each pair is used as a single bobbin but, instead of <u>into</u> the pinhole, the sewing is made <u>over the plait</u>, at the temporary pin x.
- 9) Arrows -- The small, open ones point towards the picots, starting from the plait on which the picot originates. The bigger, filled in, arrows, ususually continuous, show the direction of work, pointing to the pinholes where the sewings are made.

10) Leaf talies -- Outlines are marked with a thicker line, with the directional arrow within.

### Technique tips

- 1) All plaits are made in the open method, that is: TCTC; the tensioning is done when the pairs are untwisted. Note: after a sewing, whether single or double, the initial twist is omited the pair/s enter and leave the sewing untwisted, which allows the pairs to "nestle" closer to the pinhole. However, when making the single sewings forming the inner or the outer circle, the pair which isn't involved in the sewing does get twisted, to maintain a crisper line.
- 2) Pinholes. Allow at least one extra twist on each pair for every pinhole into which a sewing will be made. The beginning/ending pinhole needs two extra twists (ie, hang the two pairs open on a pin, twist each pair 3x, then CTC).
- 3) Sewings. The last "sewing into" of every round is <u>always</u> a double (DSI), even if all other corresponding sewings in that round are single.
- 4) The direction of work in each round is opposite to that in the rounds immediately next to it. That is done so that the correct side of the pinhole is left exposed for the final sewing of that round.
- 5) Picots. All picots are single, knotted.
- 6) "Bulging" loops. Ordinarily, a plait forms a straight line; one plaits only to the point where a pin needs to be placed. Indeed, if the plait goes a little past the pinhole, it is common practice to undo a half stitch (TC), leaving the plait short, and hoping it will "relax" and cover the area correctly the arms of all the stars are made on that principle. That rule is broken, on purpose, when making the loops.

The loops are made as follows (see Diag. "Bulging Loop"): plait to the pinhole A (marked x on the diagram). Place the pin between the two pairs, as usual, but do not make an extra twist; there will be no sewing into that pinhole. Continue plaiting towards the pinhole C (directly under A). When you've reached it, make an extra TC to go past the pinhole. Place a pin at B, to the side of the plait and angled out, to support the slack. Place a pin at C, and give an extra twist to both pairs since a sewing will be made into that pinhole later. Plait back towards and past A. Place pin D to support the slack on that side. Remove the pin from A and make a double sewing over the plait (DSO) making sure that it's positioned exactly over the pinhole and well-snugged to the plait. Plait to E. It is

not necessary to to replace the pin at A but, should one chose to do so, it ought to be placed under the DSO, within the loop, like the pins at B and D.

Free-hanging loops (#s 4,5,6) are made in the same way, except that there is no extra twist at C. After the DSO at A, that pin is removed and replaced within the loop (like pins B and D).

### Ornament #1- 4 rounds

Hang two pairs on  $\Box$ , twist each pair 3 times and plait to A making a picot as indicated by the small arrow.

Note: working with linen, which tends to be slubby as well as have thinner/thicker sections, it is not always possible to maintain the same number of stitches in similiar elements of the same ornament. It is, however, worth trying to do so; pencil in, on the diagram, the number of stitches it took to reach A, and try not to vary it by more than a single TC (either way) on all subsequest "arms" (A->G, G->H, etc).

### Round 1:

Place a pin at A between the two pairs, gve an extra twist to each pair establishing a sewing pinhole. Plait to B making a picot (mark the number of stitches), establish a sewing pinhole (ie, extra twist on both pairs). Keep plaiting – to C, D, etc, making the picots and the sewing pinholes – until you reach E. At E, establish the pinhole but do not finish the round by plaiting back to A. Instead, reverse the direction of work and start

### Round 2:

Plait from E to F. At F, make a single sewing into the pinhole. Continue – with plaits and sewings – around the circle, until you come back to E. At E, make a double sewing into the pinhole (the last sewing of Round 2). Plait to A (with a picot), make a double sewing into A (the last sewing of Round 1). Round 3:

Plait from A to G (making a picot) and establish a pinhole (if there's to be no circle surrounding the star, omit the extra twists). Plait from G to H, make a single sewing into H. Continue plaiting around, establishing pinholes at the outer tips of the star and making single sewings into the points of Round 1. Make a double sewing into (the last sewing of Round 3).

### Round 4:

Plait from  $\Box$  to x and to J; make a single sewing into J. Continue plaiting around the circle making single sewings into the tips of the star's arms. The plaits between the pins  $\Box$  to x, x to J, etc ought to be either precisely the length required, or slightly longer; if they're too short, they'll push the star arms out of shape. Make the final (double) sewing of the round into  $\Box$ .

### **Finishing**

I have simply knotted the two pairs, then knotted again, some distance away; it provides a loop through which a hanging hook can be threaded. A neater finish would be to make a plaited loop, then work each of the 4 threads back into the plaits (each thread into a different plait) for about 1/4".

### Ornament #2 - 4 rounds

As #1, but with leaf-shaped tallies instead of plaits in Round 1.

### Ornament #3 - 3 rounds

Round 1: star arms and the "bulging loops"

Round 2: the inner circle Round 3: the outer circle

### Ornament #4 - 3 rounds

Round 1: all "bulging loops" and connecting plaits

Round 2: the inner circle Round 3: the outer circle

Since the ornament looks lopsided if hanging from the starting/finishing point, an extra loop for hanging "straight" has been made in the sample, with the thread ends worked back into the ornament. The pinholes for that loop are not marked on the pricking; it is, however, made just like all the other free-hanging "bulging loops".

### Ornament #5 - 3 rounds

As #4, but with leaf-tallies instead of "bulging loops" in the middle section. Extra loop for hanging if desired.

### Ornament #6 - 3 rounds

Round 1: plaits and leaf-tallies (arms of the star and flower petals)

Round 2: inner circle

Round 3: outer circle and free-hanging "bulging loops"

### Ornament # 7 - 4 rounds

Round 1: the flower petals and plaits for part of the middle circle

Round 2: the inner circle

Round 3: arms of the star and plaits for the rest of the middle circle

Round 4: the outer circle. If the outer circle is omitted, the picots can either be omitted also, or else can be made starting from the star arms

### Ornament #8 - 4 rounds

Plait from ( to A (with a picot)

### Round 1:

At A, T2 both pairs, place a pin, CTC to close it. Twist one of the two pairs to the centre, place a pin, make a false plait back to A, making sure that there's a sizeable loop left around the central pin — all subsequent false plaits will be sewn into it. Make the last sewing of the the false plait into the pinhole at A. Plait to B (with a picot), twist one pair to the centre, sew into the centre loop, make a false plait back ending with a sewing into B. Plait to C, make a false plait as at B, etc. Continue to D. At D, establish the sewing pinhole, twist one pair to the centre and sew in as before, but do not make the flase plait back. Instead, reverse the direction of work and:

### Round 2:

T1, make a sewing over the previous "spoke" of the spiderweb, T1, make a sewing over the next one, etc, till you come to the starting point. Make as many such rounds as seems pleasing, increasing the number of twists between the sewings as the web spreads outwards. When the web is as big as you want it, finish the false plait to D, make a sewing into D and plait to A. Double sewing into A, it being the last of the round. Reverse the direction of work.

### Round 3:

Plait to E (with a picot), establish the pinhole, plait to D (with a picot), make a single sewing into D etc, as in the previous ornaments.

### Round 4:

The outer circle, as in the the previous ornaments.

### Ornament #9 - 3 rounds

Round 1: leaf-tallies and "bulging loops"

Round 2: the inner circle Round 3: the outer circle

### Ornament #10 - 3 rounds

Round 1: plaited "diamonds" with picots, small star arms, and "spoked"

hexagon

Round 2: the inner circle

Round 3: the outer circle

Two-Pair Inventions; Part II (Snowflakes)

Snowflakes are the outer layers of the "ornaments" of the Part I of the "Two-Pair Inventions"; they pick up where the ornaments leave off, to make bigger ornaments. That is, the same two pairs, beginning and ending at the same pinhole and working continuously, make both the inner and the outer layers (centre and "flake"). They share with the "ornaments" the same general principles of working, as specified in "Technique tips" of Part I; all picots are "single, knotted", for example, all "bulging loops" are overlong plaits supported by temporary pins, the direction of work changes with every round so that you work clock-wise, counter-clock-wise, clock-wise, etc.

At the same time, since the Snowflakes are far more complex, some things are different.

### **Thread**

The same range of threads can be used for "full flakes" as had been used for the centres; most (but not all) samples have been made in 80/2 or 100/2 linen. Where a finer or a coarser thread is a better choice, it will be mentioned in the notes for a specific pattern.

Where the "ornaments" #1-10 (centres) happily used up short lengths of thread left over from other projects, the Snowflakes tend to require fully-loaded bobbins – they're full-sized projects. Again, the ones with leaf-tallies require more thread than those which have only plaits (like Airpuff) but there are six segments to each "flake", and each of the segments requires at least as much thread as a centre. I usually load each bobbin with about 5 yards (4.5 metres) of thread for Snowflakes with leaf-tallies. Fortunately, if I miscalculate it's not a great problem: thread is easy to add in plaits if I run short and, if I end up with extra, it can be used up on centre "ornaments".

### **Diagrams and Prickings**

I was unable to make the diagrams for Part II as comprehensive as those for the centres; the Snowflakes are more complex than the centres, so full diagrams would have been huge. Therefore, only a section of each Round has been diagrammed properly. The diagrams do, however, show at least one full repeat of every Round.

Those markings which first appeared in Part I, continue to mean the same thing

in Part II (ie x is still a temporary support pin into which no sewings are made, is still "square one", representing the beginning/ending pinhole of the entire project, etc). But three new markings are introduced in Part II:

- 1) a very thick, black arrow showing where a Round changes direction (Turn 1, Turn 2, etc).
- 2) a slightly paler thick arrow, showing the path from the final Round back to the centre (and the starting point), connecting all the previous Rounds of the Snowflake.
- 3) two parallel plaits, with slashes through both (plain parallel lines in the prickings). These represent "double false plaits" a term I've invented to describe a "practical solution" which I seem to have invented also; I've not seen it anywhere else (see "Working Notes").

Also because of lack of space, I was no longer able to mark, on the diagrams, the kind of sewing (single or double, into or over the plait) needed in each particular situation. Therefore, I recommend that anyone wanting to make a full "flake", should first make at least one or two centres (beginning with #1, which is described in most detail) simply to get the feel of the whole process; you'll be better able then, to determine which sewing will look best where.

Hanging loops have not been provided on either the prickings or the diagrams. Sometimes, they're not necessary; a piece of cord or a hook for hanging can be "threaded" directly through an element of the Snowflake itself. If you feel the need for a hanging loop, it should be made during the final Round. Establish the top pinhole of any of the 6 "spikes" by making an extra twist. Then: plait (TCx10), put a pin to support it, TCx10 to come back, make a double sewing into the pinhole, and resume the pattern. It is best if the hanging loop is not in direct line of vision with the pinhole; ie neither directly above nor directly below it.

<u>Design your own</u>. I have included – at the end of the Prickings section – polar grid graph paper. This was the "skeleton" on which all the centres and "flakes" in this booklet had been built. I've marked the "dead centre", the 12 points (pinholes) of the "rim" (the outer limits of the centres), and the 12 outermost points of a Snowflake. Please note that the marked pin–dots are not <u>on</u> the lines; they're on the <u>outer perimeter</u> of the relevant circle, making the prickings just slightly bigger. The finished product shrinks; it's "the way of all lace"... Where you place the remaining pin–dots is up to you, and I hope you'll have a lot of fun doodling.

### **Working Notes**

All full "flakes" are worked in the same way: hang two pairs on the (square one") pin, work the centre first, then, without cutting off the pairs, move on to the outer layers of the "flake proper". On completing all six segments of the "flake, come back – following the path of the thick pale arrow on the diagram – to the starting pinhole (), make a double sewing into it, make a single flat (reef) knot using each pair as a single bobbin, then cut the threads, leaving about 8" (20cm) tails. Off the pillow, work each of the 4 threads into different plaits/tallies which are near that pinhole.

The photos of the full "flakes" include the centres; the prickings do not. That is because the centres are – mostly – interchangeable; every centre will fit in every "flake" and it's up to the lacemaker to decide which combination she likes best. The diagrams of the "flakes" do not show any of the centres either, for the same reason. Please note that, because of their increased complexity, the diagrams for the Snowflakes take precedence over those for the centres, when it comes to the direction of work. Therefore, if it looks as if your chosen centre will end with a clockwise direction and your Snowflake starts with it, then reverse/mirror the diagram for the centre, so as to be in the correct position to start the Snowflake according to directional arrows shown in the Snowflake diagram.

Both the prickings of the centres and the prickings of the "flakes" show the "rim" (outer circle in the case of the "ornaments" and inner in the case of "flakes") – it is the same circle, which divides/unites the centre and the Snowflake. It needs to be made only once, if at all. It's not a structural part of 9 out of 10 centres and it's not a structural part of any of the flakes. Theoretically, one could omit it entirely most of the time. Whether it can be omitted in fact, depends on which centre is joined with which Snowflake. Additionally, although not a structural part, the "rim" provides stability to the whole piece, so it has been used in all the samples.

Note: in several of the centres' diagrams, every second pinhole is marked x, meaning that no sewing will be made into it and, therefore, no extra twist is needed to establish it. Depending on the Snowflake you select, that may not be true when making the whole project. Please be careful when making the "rim", adding twists at those pins, if a sewing from the Snowflake will be made into them.

### Combining the prickings.

1) I usually do it the oldfashioned way: copy the pricking of the Snowflake I want

to make onto tracing paper, then lay the tracing over various prickings of the centres, aligning the pinholes on both, to decide which one suits my mood the best. I then copy the chosen centre into the Snowflake and prick the whole. It is, however, quite a lot of trouble, and it produces an "immutable" pricking, which doesn't allow for a different match-up between the centre and the "flake".

- 2) Another way is to photocopy the chosen snowflake and several centres, then trim the centres so that the pinholes can be aligned on both prickings. Once a suitable one is chosen, the centre is glued (use a re-positionable, dry, gluestick such as "3M Scotch"). This method is simpler and faster, but it still produces an "immutable" pricking.
- 3) The third way of combining the Snowflake with a centre is to make separate prickings of each. First make the centre, and either starch it on the pricking, or let it "set" overnight. If starching, do not starch the "rim"; you'll need its pinholes open for later work. Un-pin the centre, and move it to the pricking of the Snowflake. Re-pin the "rim", matching the last-made pinhole to the of the Snowflake pricking. The move is extremely easy, since there are only 2 pairs involved. This method, which leaves the centre of the Snowflake unpricked, allows for re-making the same "flake" but using a different centre the next time around. The downside is that, once you've made the centre, you're committed: your 2 pairs are fully loaded with thread, your Snowflake pricking is prepared, and it's difficult to see until you've finished the whole project that the two together don't look "quite the thing" ...

I suspect that, to people who are more computer-literate than I am, another option might be open: that of "marrying" method 1 with method 3, taking the best features of both. I think that could be achieved by scanning, then viewing/matching on the screen, then printing out only the chosen centres and "flakes". But, since I was unable to test that theory myself, I'll leave the experimentation to others.

### Personalized Snowflakes.

Snowflakes can be personalized by substituting an initial for any of the geometric centres. Since the initials are not made with just two pairs, they do have – unlike the Snowflakes themselves – the right and the wrong side, and should be worked "wrong side up".

Copy just the "rim" onto a piece of tracing paper, then draw the initial you want, making sure that it either touches, or is near the "rim" pinholes at 3-6 points. Turn the tracing over, and position it within the selected Snowflake (use dry glue stick). Make the initial, using whichever technique you're most comfortable with -

Russian Tape, Honiton, Duchesse – and working "upside down" (i.e. in opposite direction then you did the drawing). I use 6 pairs: 3 passives in cloth stitch, and 3 workers for making the footsides.

Finish the initial, and cut off all threads. Wind 2 pairs, and start the Snowflake, beginning with the rim. While making the rim, make single sewings into the initial – tight ones where the initial touches the rim, and longer, twisted, ones where it's some distance removed.

That is the correct, and annoyingly labour-intensive way of doing it. It is usually possible (I have not tested all the leters of alphabet) to simplify the process, <u>as long as</u> the initials are in cursive and have loops and curlicues. I used the lazy way out in making the "Tulips for Danek" (my son) Snowflake shown on the front cover.

Draw your initial directly onto the Snowflake pricking, making sure that the last stroke of it feeds – as a thin, curlicued line – into the pinhole. Hang in your pairs at the beggining of the initial (if it happens to coincide with a pinhole on the rim, all the better) and work the same way you drew; no need to reverse or mirror anything, because you're working right side up. As you near the end, begin to taper the tape by throwing out the passive pairs – one by one – entering the last curlicue with only the 3 work pairs. Plait those 3 pairs for about half the curlicue, then throw out one of them. Finish the curlicue with a 2-pair plait at pinhole , ready to start the "rim" and the rest of the Snowflake.

You don't have to struggle too hard to match the end of the initial to the beginning ( ) pinhole of the Snowflake, either; wherever is placed on the pricking, it has 5 other equivalents along the "rim". The only thing you have to consider is where to place the "hanging loop" (if you decide on having one) in relationship to the initial; you do want the initial to be, more or less, upright.

### Double false plait

Is the result of making lemonade from the lemons one has been given. I have not seen the "technique" used anywhere else in plaited laces, so felt free to give it a name of my own.

A "false plait" is a "cheat"; when a plait can't come back to its point of origin with any grace, you "send" a single twisted pair in its stead, making sewings over itself on return, to fake the appearance of a real plait. Double false plait is a similar cheat, made when a real (not false) plait has to be used, but a single

line, instead of two parallel ones, is required in the return path. Double false plaits are used in all the Snowflakes, for one reason or another. Mostly, it is to firm up the top pinhole of a "spike" and make it look more "spiky"; at other times, it is to make a part of another Round less obtrusive, or more substantial.

To make: plait as usual, pin. On coming back, TCTC, then make a single sewing over the plait. Repeat as many times as there are slashes on the diagram.

### **Snowflakes**

Starflowers Sample in Bockens 80/2. 1 Round.

A lopsided-start flake, so centres #4 and #5 are the most suitable ones for it. It is shown with a variant of the centre #5, where, instead of hanging loops, the plait sews into the inner circle, between the petals. That variant is difficult to make, and it doesn't look especially pretty, so I have abandoned it later on. Starflowers Snowflake also looks pretty without the "rim", but, if made that way, requires much heavier starching.

The spiderwebs in the "spikes" are made as in the centre #8. The starflowers are similiar to the flower in the centre #5 but: end the leaf tally about 1/16" (2mm) before the pinhole, plait to the pinhole, pin. Close the pin with TCTC, make a (single) sewing over the plait. TCTC, make another sewing over the plait. Then plait to the centre of the flower, establish the pinhole (ie add an extra T), make a new tally, etc.

Christmas Trees Sample in Fresia 120/2. 1 Round.

Shown with centre #1. The finer end of the thread range is recommended (100/2 to 140/2), because the smallest leaf-tallies are difficult to shape otherwise. Make the tally up to the inner pin, double false plait back, ending with a picot "candle". Overlong plait to the next pinhole. On the other side of the tree, the overlong plait and the picot "candle" are made first, followed by the double false plait and the tally. Doesn't require starching except, perhaps, in the "candle" picots.

<u>Tulips</u> Sample in Fresia 60/2; personalized sample (front cover) in Fresia 80/2. 3 Rounds.

Shown with centre #9 and personalized (front cover). All "bulging loops" are closed with a DSO. This is a strong and smooth join, which supports the arms of the "spikes" well. When made in 60/2 linen, the petals of the tulips are harder to shape, but less starching is required.

### Airpuff Sample in Bouc 80/2. 2 Rounds

Lopsided start so, as in the case of Starflowers, centres #4 and #5 are the most suitable ones. Shown with centre #4. The "bulging loop" flower petals at the base of the spike sew into the centre with a DSI. The four upper petals close with a DSO, as in Tulips Snowflake. Little or no starching required, especially if made in thicker thread (80 or 60).

### Lilies Sample in Bockens 80/2. 3 Rounds

Shown with centre #10. The most ornate of the Snowflakes; the design would have, probably, shown to better advantage if finer thread had been used. Also, the "bulging loop" flowers join in the centre with ssi; in retrospect, DSI would have been a better choice, producing a more uniform central hole. Requires fairly heavy starching: the arms of the "spikes" do not provide enough support for the heavy tops, and the false plait "stamens" between the petals need starch to remain in position.

### Maple Leaf Sample in Bouc 100/2. 3 Rounds

Shown with centre #3 made without picots. The loops in the centre of each "maple leaf" (spike head) in Round 2 are made as follows: twist one pair to the centre, place a pin, return to the pin of origin, rejoin with the second pair, and make the two tallies. The next 4 loops are made the same way, all being supported by the same central pin. The last loop: twist to the pin, make a sewing through all the previous loops, twist back to the pin of origin, rejoin with its plaiting pair. The matching single-pair loops in the tips of the leaf are sewn into the pinhole between the tallies. Requires fairly heavy starching; although the spiderweb star (made in Round 2) holds its shape well without, as do the individual spike heads (the "maple leaves"), the structure holding the heads is not sturdy enough to support them.

Gaslights Sample (back cover) in Bouc 120/2; sample (front cover) in Bockens

### 80/20. 5 Rounds

Back cover sample shown with centre #8, front cover with centre #1. The single-pair loops within the "gaslights" (spike heads) are made and joined the same way as those in the centres of the Maple Leaf.

### **BONUS PATTERN**

A few months after the original booklet of 2-Pair Inventions came out, Paula Harten of Morgan Hill, California remade the "Ornament #4", adapting it to the special requirements of wire-work. The result is, in my opinion, prettier than the original, and more useful besides, since it can be worn as a pendant. I am grateful, that she has permitted me to use her revised pattern in this booklet.

### The Wire Variation

I have enlarged the pattern to 140% (the diameter ought to be 1 and 3/8" or 35mm) so a yard per bobbin is better. I found that the pattern was not so easy to do in wire with the little center ring being sewn in at the end, so I figured out a different manner to do the loops which does not require sewing into any pinholes.

I used a single strand of size 28 and/or 30 wire originally, but have also used more strands of a finer wire with the same pattern.

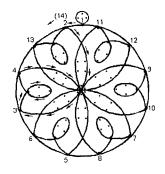
Use 4 continental type bobbins with a small wire loop attached to the side or a hook screwed into the end to serve as a wire guide instead of the usual hitch. A small hole drilled into the thread area of the bobbin serves to anchor the wire before winding it on. The lace is made totally of plaits. None of the pins are enclosed by the plait except pins 1 and 2.

Start at the pin marked 1, hang 2 pairs on this pin. Plait, following the arrows and setting support pins to retain the curved shape, to pin #2. Continue to follow numbered pins, crossing over the plaits in the very center. When pin 2 is reached again, the outer ring is worked back around the circle to pin 1 and then a hanging loop is made. Sewings over the plait are done at the crossing of the larger loops, once when the center is crossed for the last time, and at each pinhole around the outer ring.

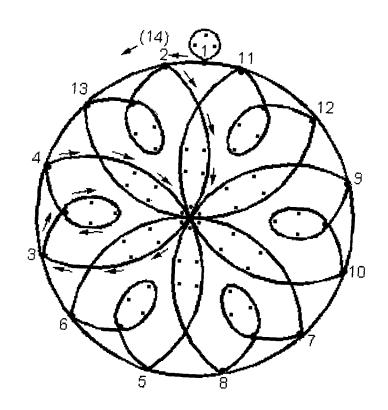
Sewings in wire are done carefully so as not to bend the wire and cause it to break. Pins can be removed and braids lifted to make it easier, since the braid retains its shape.

A bead sewn over the center crossing is also a nice touch.

## **WIRE VARIATION**







14









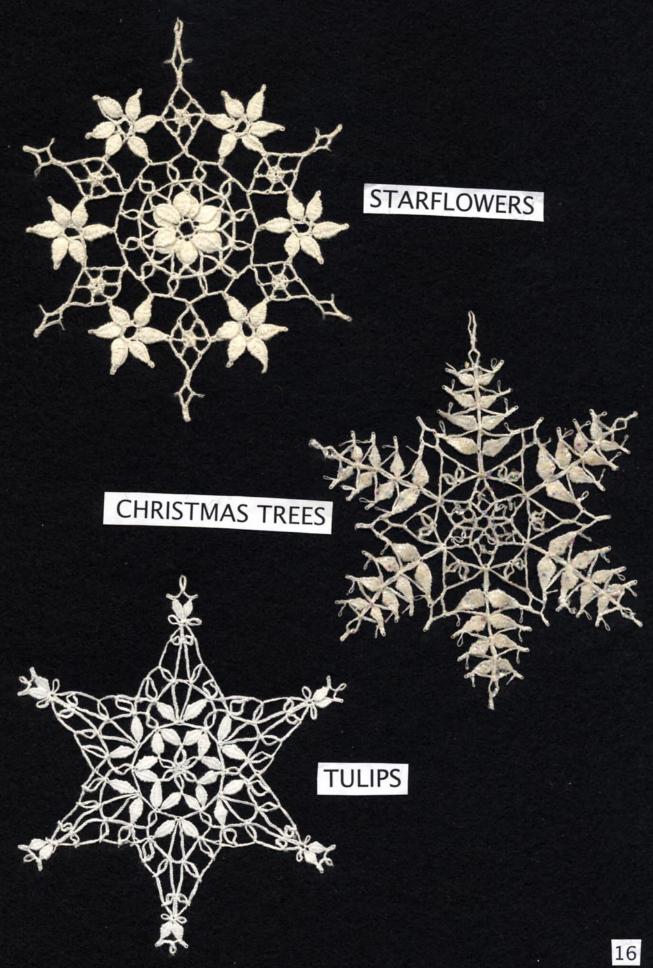


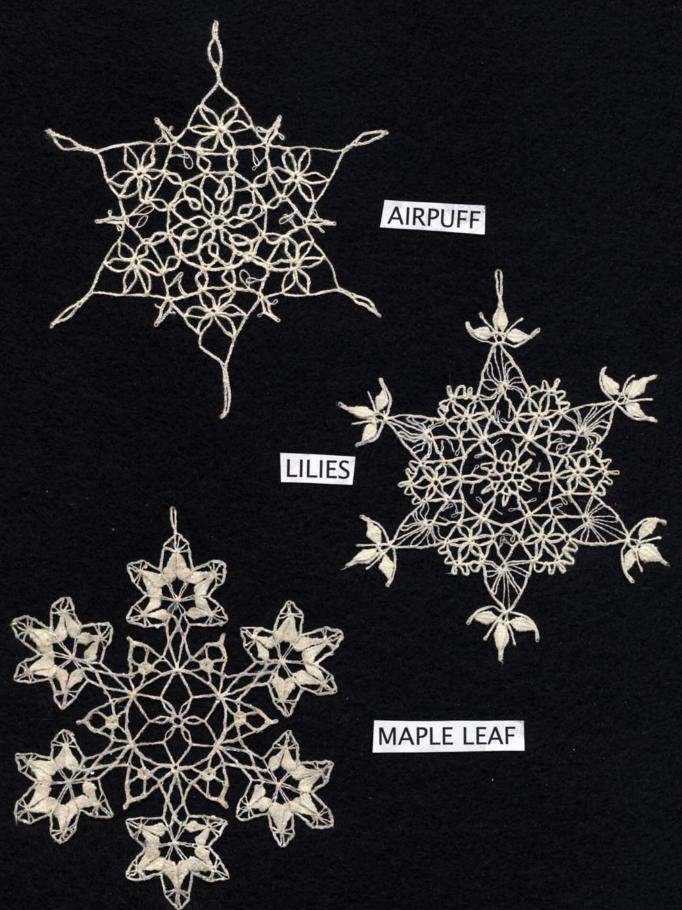


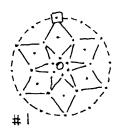
#3



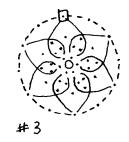






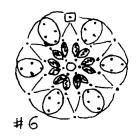






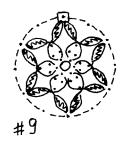


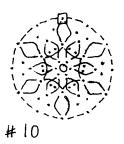


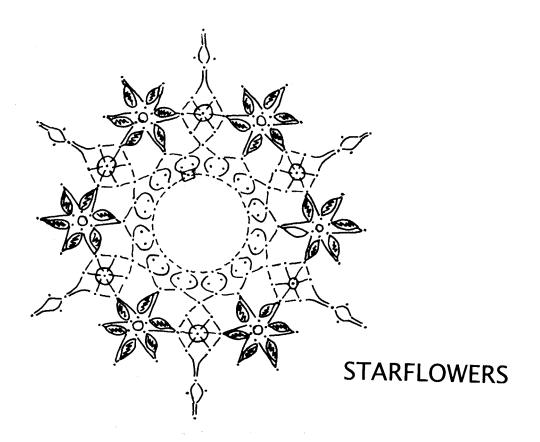




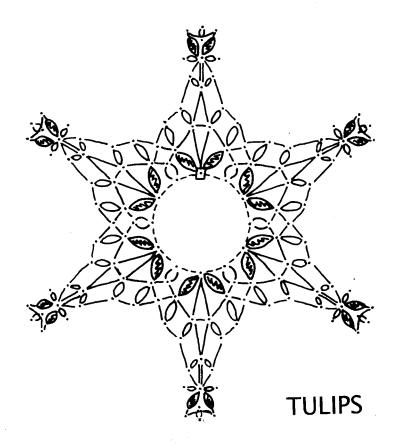


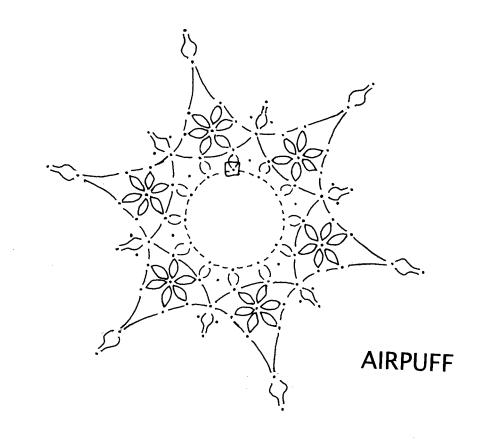


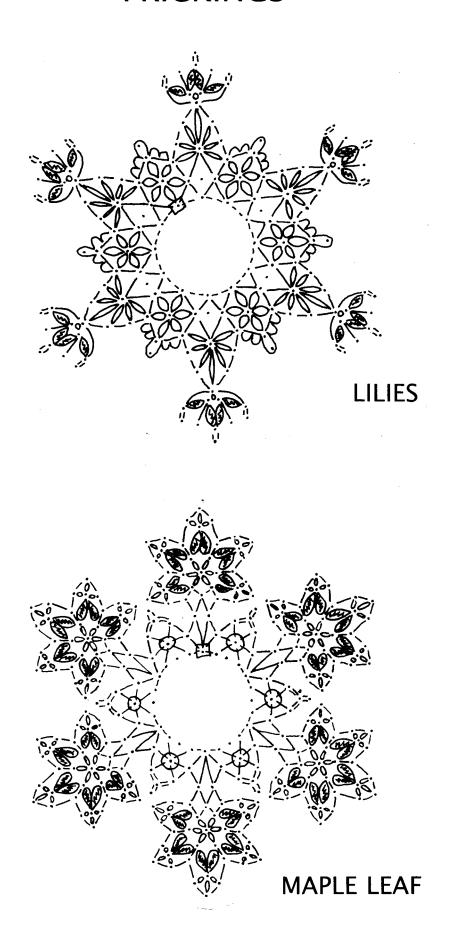


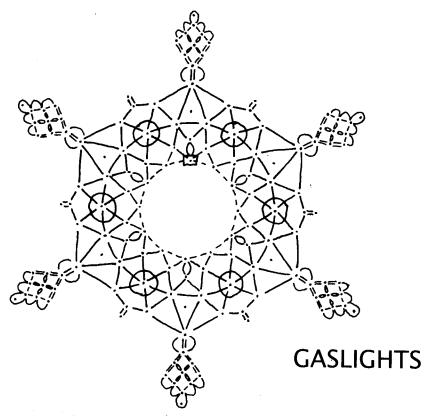


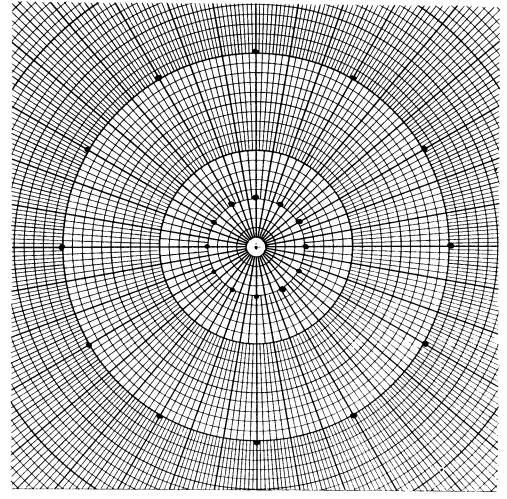


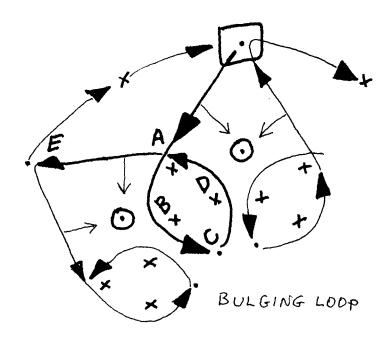


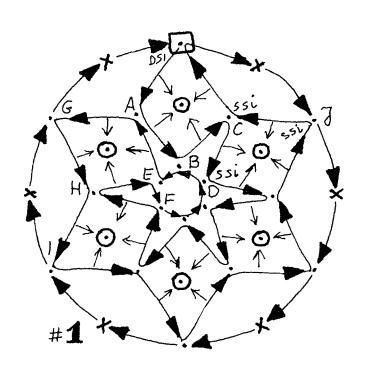


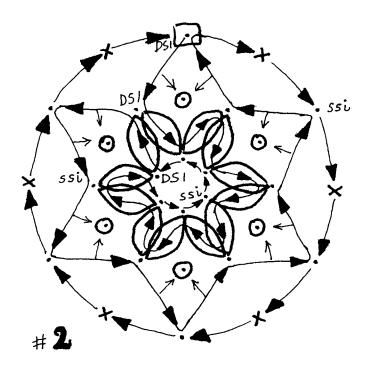


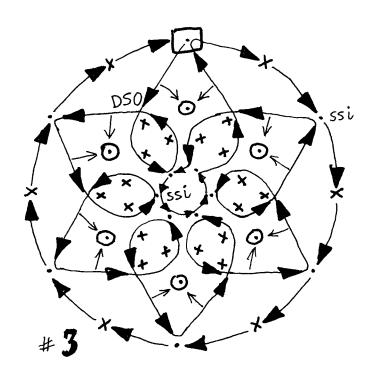


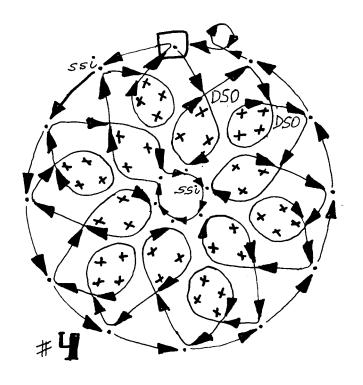


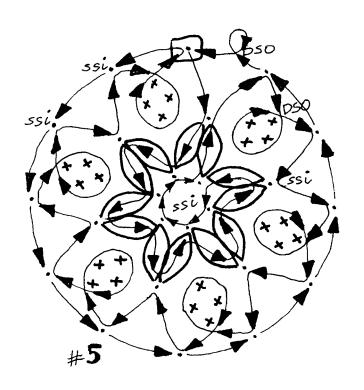


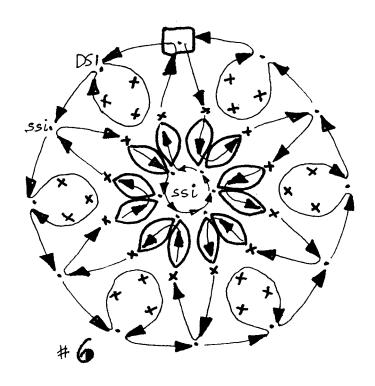


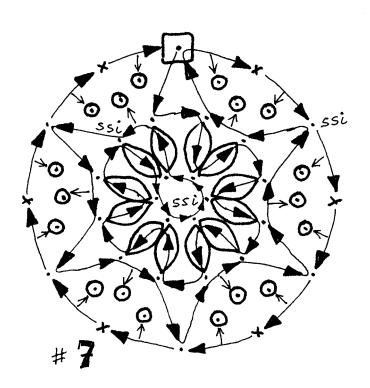


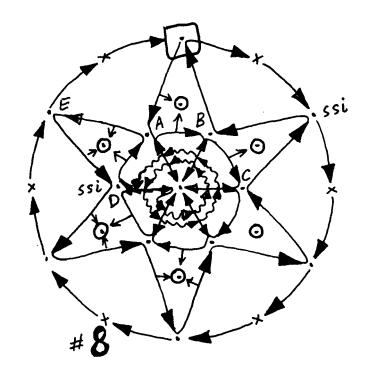


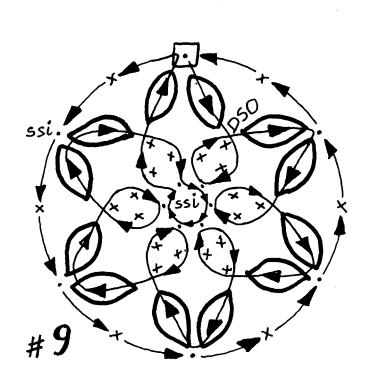


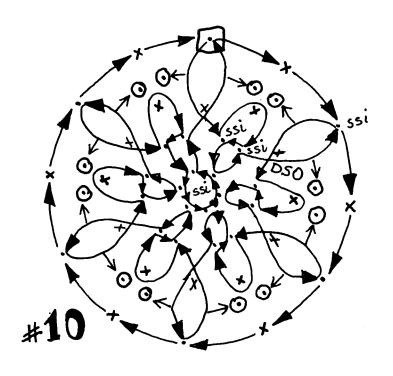


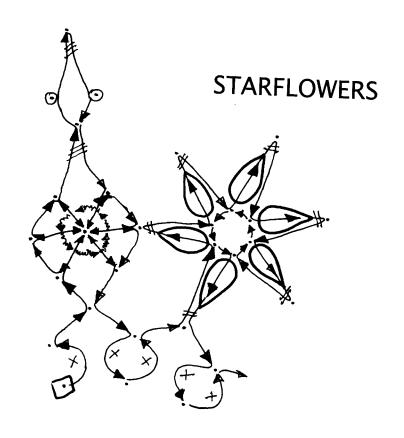




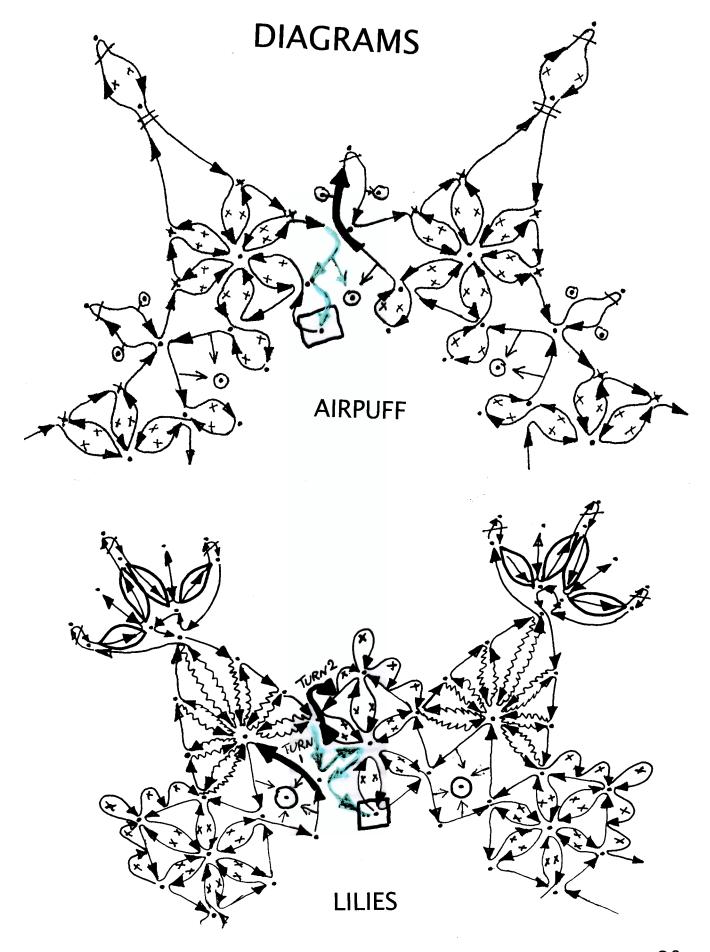


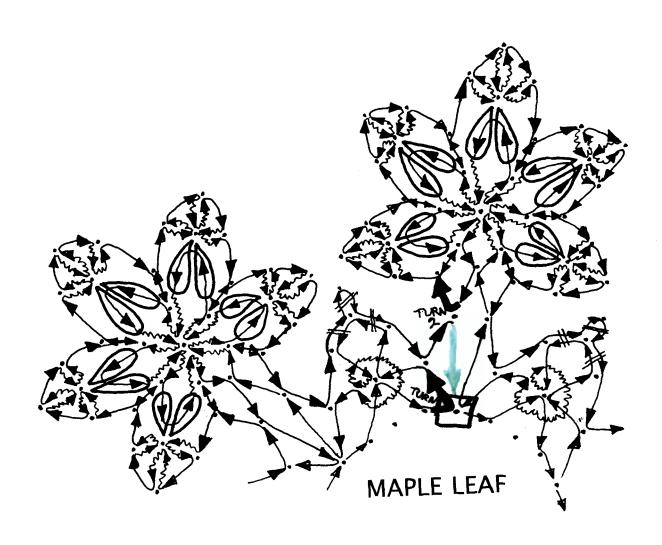


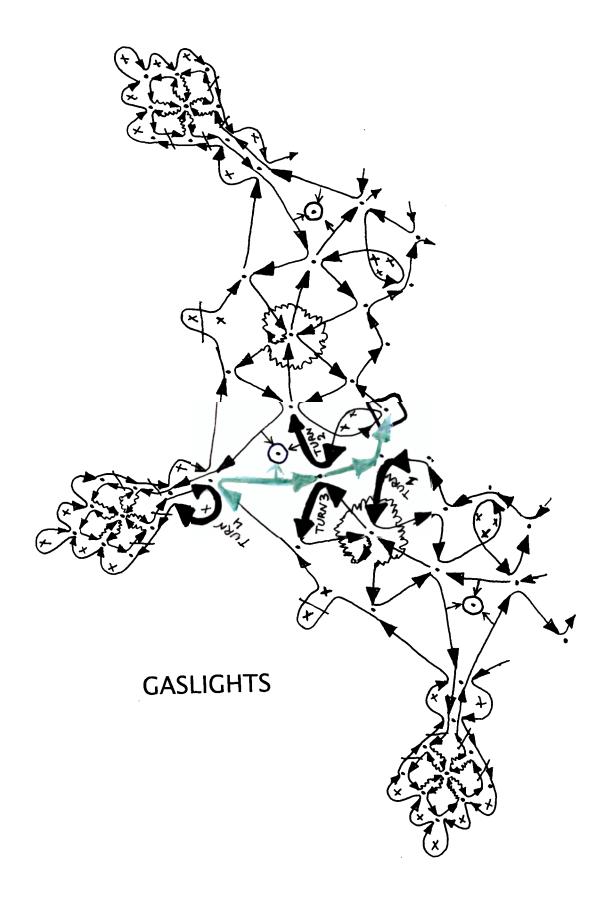


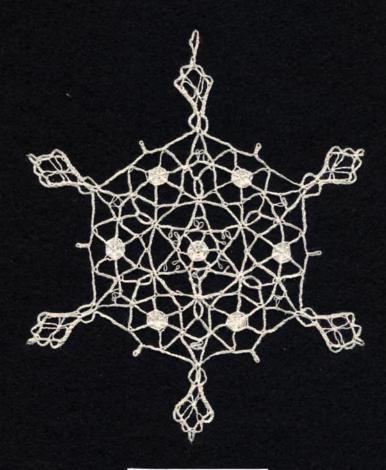












GASLIGHTS