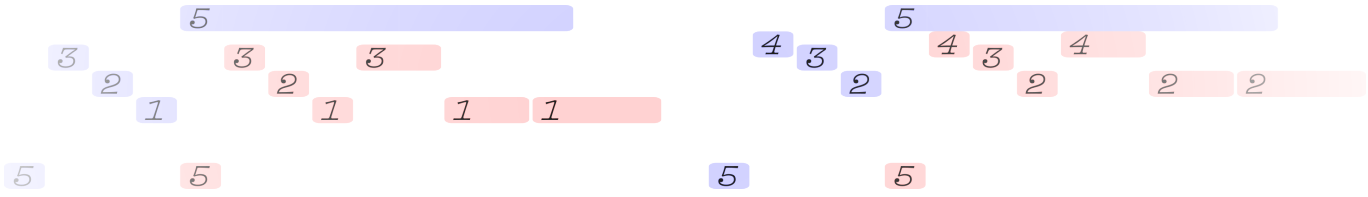
Integerbook

Christmas edition

by

Jesse van Oostrum



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Introduction

The latest version of this book can be downloaded from: `https://integerbook.com`

the philosophy

"Understand the music you hear, play the music you imagine."

The above slogan[1] summarises succinctly the goal of my musical journey. In order to accomplish this goal, we need an easy way to translate the feeling that music generates when we hear or imagine it, to theoretical symbols we can use to understand and play the music.

The problem with conventional symbols like F# or C is that they don't correspond to one particular feeling, since an F# will generate a very different feeling in a melody in D major (happy / uplifting) compared to a melody in G major (tension). However, an F# in G major does generate a very similar feeling to a B in C major. This is because they are both the 7th of their respective scales. This holds true for any relative position in the scale: e.g. E in A major and G# in C# major (both the 5th) or Eb in C major and Bb in G major (both the b3th).

Therefore, if we think about and write down melodies in terms of their relative position in the scale, it gets very easy to translate the feeling the music generates to their corresponding theoretical symbol (a number). And together with the key of the song, this also gives us all the information we need to find the right note on our instrument.

the method

The songs in this book are represented using numbers. Each number refers to a location within the major scale. For example, if the song is in D major, the 3 would refer to the F#. The numbers in the melody refer to single tones. The numbers of the chords refer to the chord corresponding to the tone. Again, in D major, the 6- chord would be B-D-F#.

the name

A Real Book is a compilation of lead sheets for jazz standards. The name is derived from "fake books", so called because they contained only rough outlines of music pieces rather than fully notated scores.[2] In mathematics the real numbers are a collection containing all numbers with a possibly infinite decimal expansion. A subset of these are the integer numbers, which can be written without the use of decimals. Since these are the only numbers we use to represent the music in this book, it is called Integerbook.

the code

The code to produce these visualisations can be viewed on: `https://github.com/jessevoostrum/music-visualisation`. If you would like to contribute to the code or have questions, you can send me an email: jessevoostrum@gmail.com.

[1] This is the slogan from the musical education platform "Improvise for Real". I can highly recommend checking out their resources at `https://improviseforreal.com/`

[2] source: `https://en.wikipedia.org/wiki/Real_Book`

acknowledgements

I would like to thank Dick Schmitt, Olivier Flatrès, and the contributors to the Jazz Standards Lead Sheets group on musescore for providing high quality sheet music. Furthermore, I would like to thank Michael Scott Cuthbert and collaborators for providing the excellent Python library music21.

donate

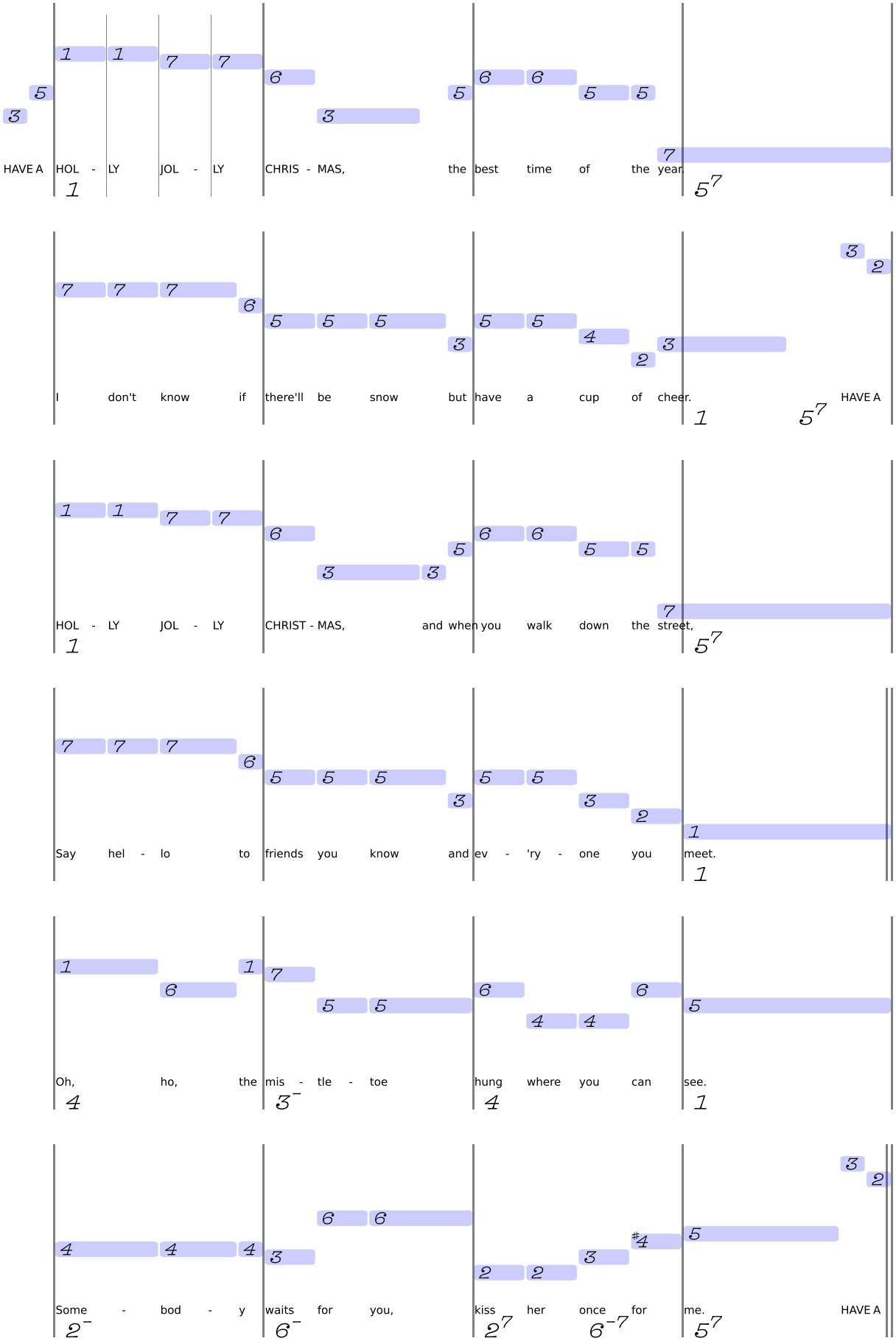
If you feel that you are benefiting from these visualisations and would like to show your appreciation through a financial donation, you can send it using this link.[3]

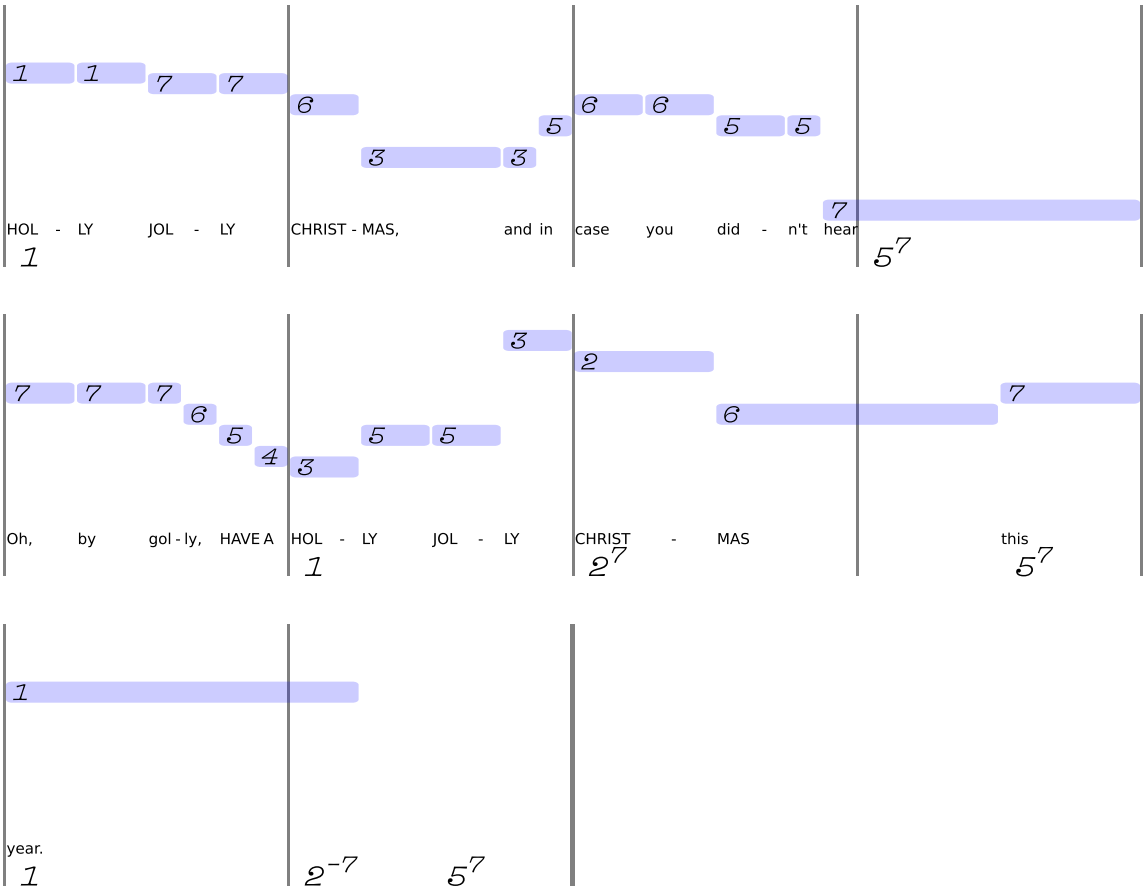
[3] https://www.paypal.com/cgi-bin/webscr?cmd=_donations&business=jessevoostrum@gmail.com&no_shipping=1&no_note=1&tax=0&currency_code=EUR&lc=US&bn=PP_DonationsBF

A Holly Jolly Christmas

1 = C

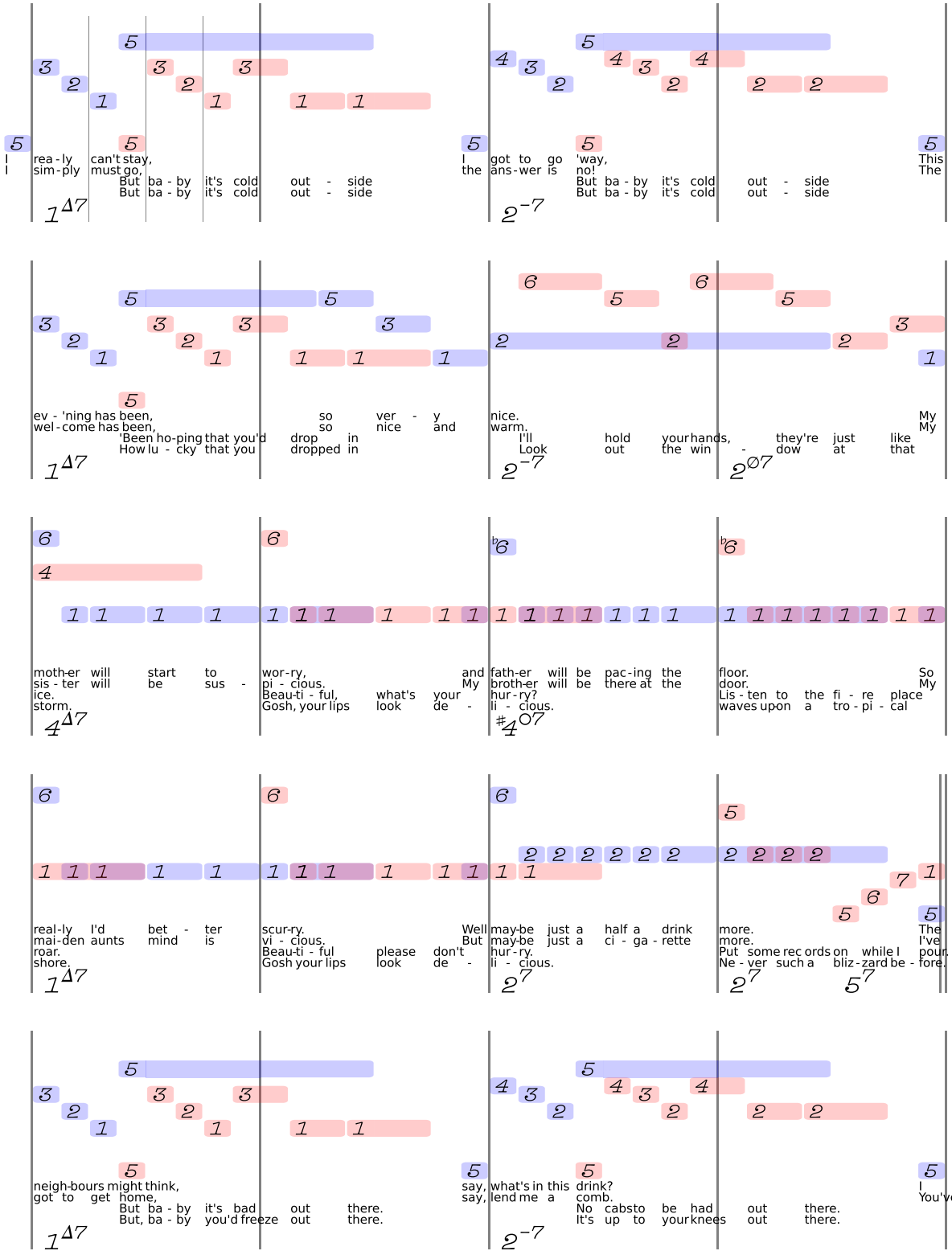
Johnny Marks

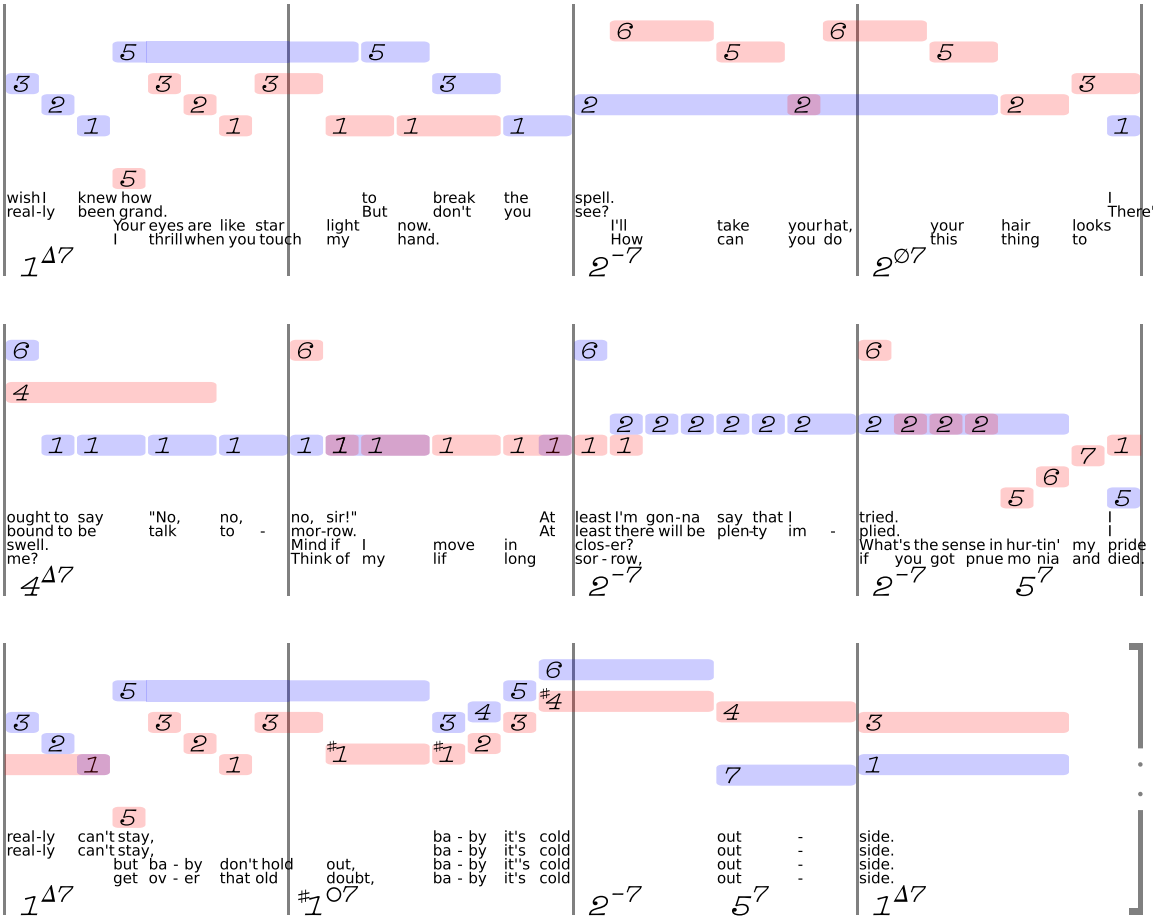



HOL - LY JOL - LY
CHRIST - MAS, and in
case you did - n't hear
Oh, by gol - ly, HAVE A
HOL - LY JOL - LY
CHRIST - MAS
this
year.

Baby It's Cold Outside

1 = C

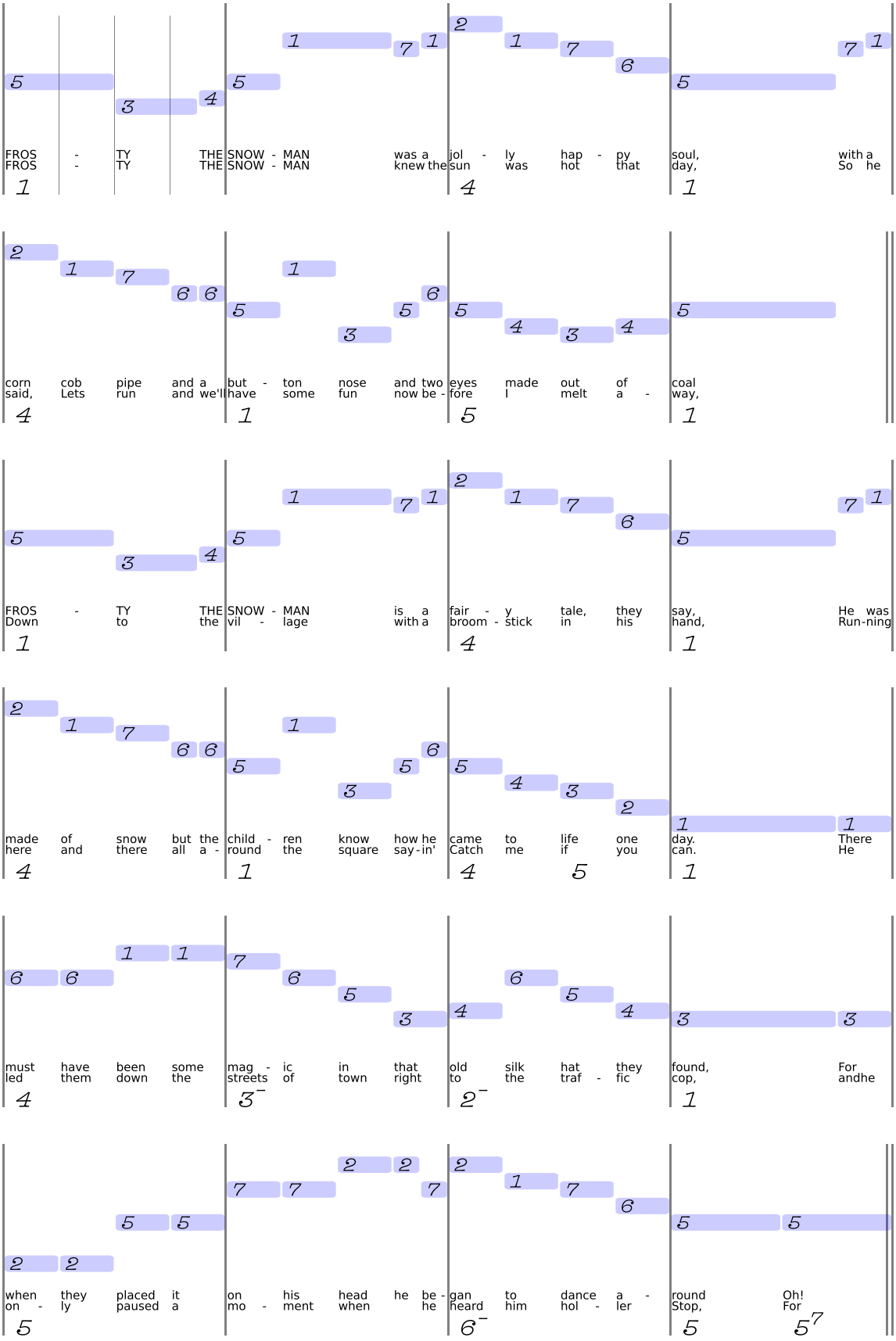


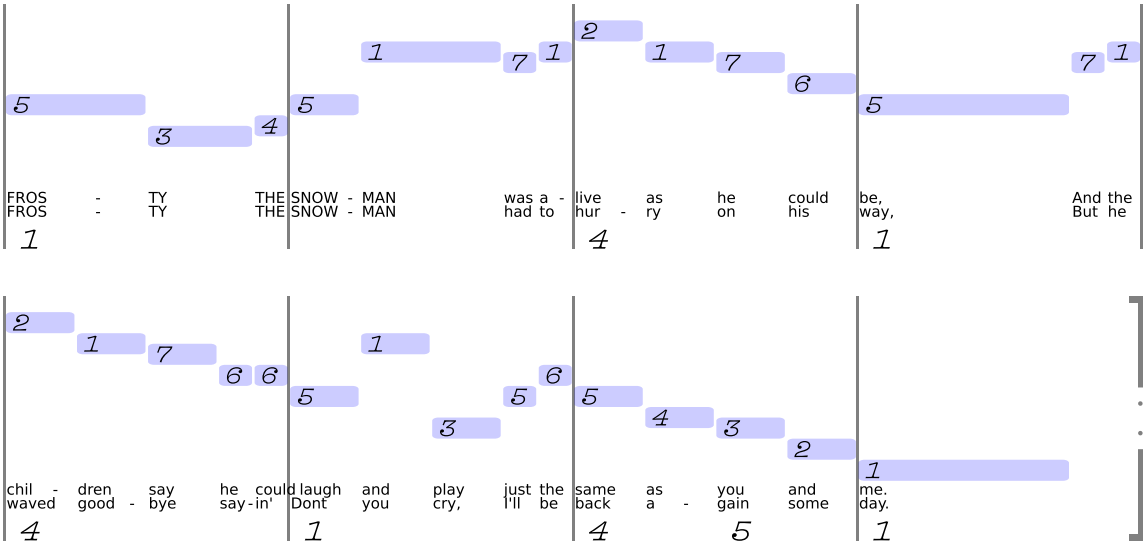

wish I knew how to break the spell. I
real-ly been grand. But don't you see? There's
Your eyes are like star light now. I'll take your hat, your hair looks
I thrill when you touch my hand. How can you do this thing to
1Δ7
2−7
2ø7
ought to say "No, no, At least I'm gon-na say that I tried. I
bound to be talk to - no, sir!" At least there will be plen-ty im - plied. I
swell. Mind if I move in At clos-er? What's the sense in hur-tin' my pride
me? Think of my lif long sor - row, if you got pnue mo nia and died.
4Δ7
2−7
2−7
5 7
real-ly can't stay, ba - by it's cold out - side.
real-ly can't stay, ba - by it's cold out - side.
but ba - by don't hold out, ba - by it''s cold out - side.
get ov - er that old doubt, ba - by it's cold out - side.
1Δ7
♯1ø7
2−7
5 7
1Δ7

Frosty The Snowman

1 = C

Jack Rollins, Steve Nelson



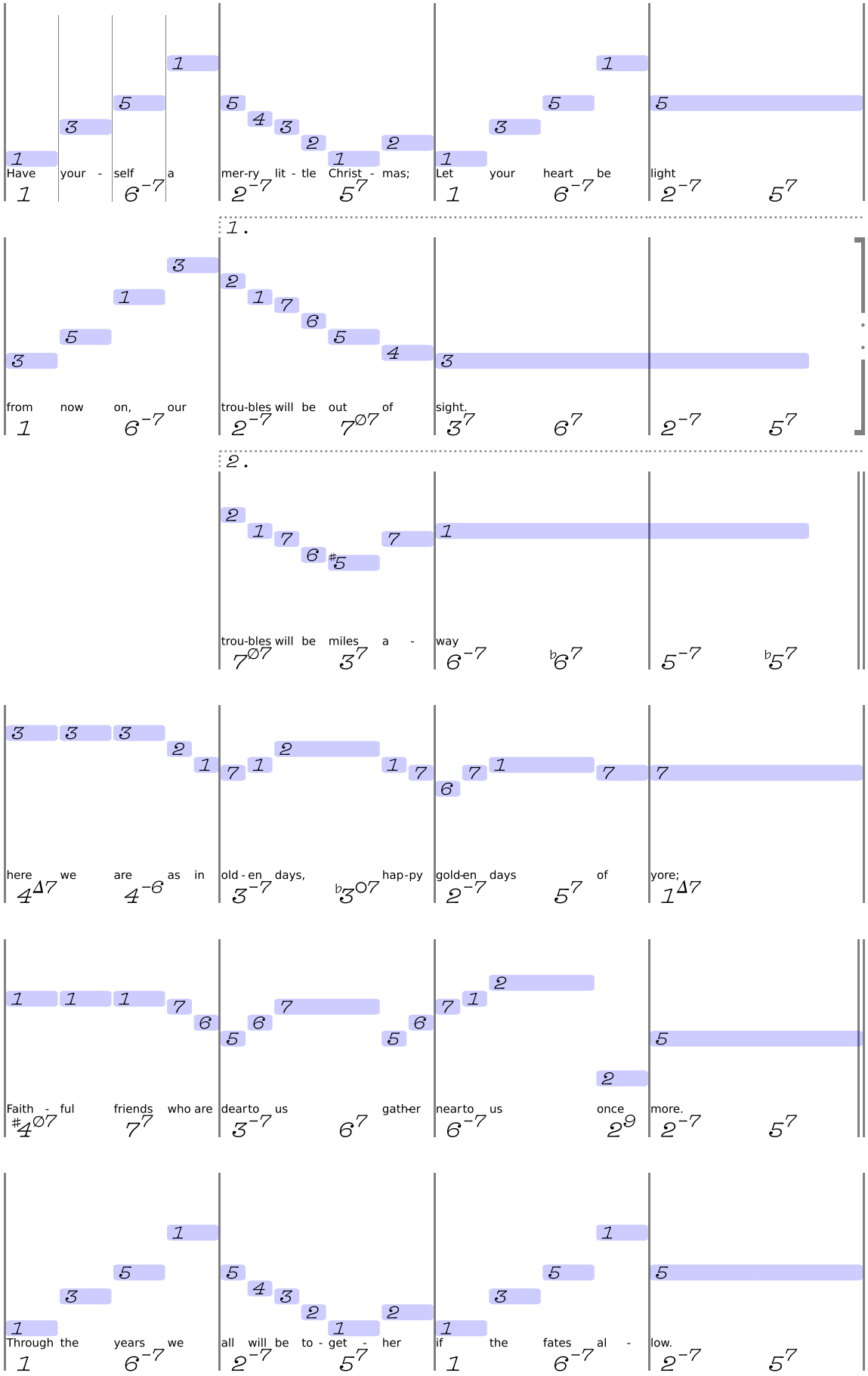

FROS - TY THE SNOW - MAN was a - live as he could be, And the
FROS - TY THE SNOW - MAN had to hur - ry on his way, But he

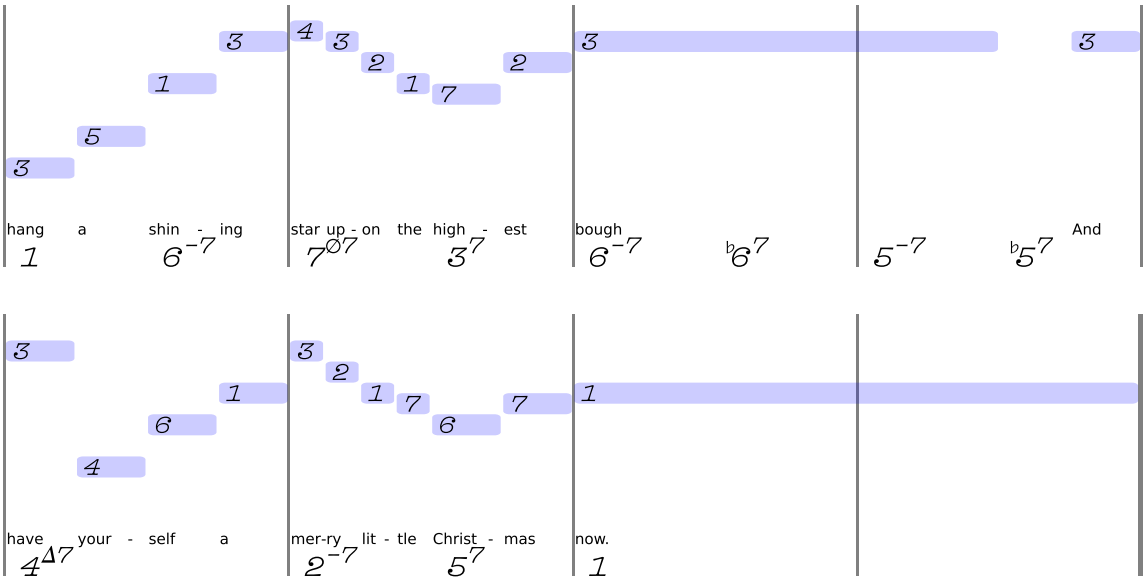
chil - dren say he could laugh and play just the same as you and me.
waved good - bye say-in' Dont you cry, I'll be back a - gain some day.

Have Yourself a Merry Little Christmas

1 = C

Hugh Martin and Ralph Blane



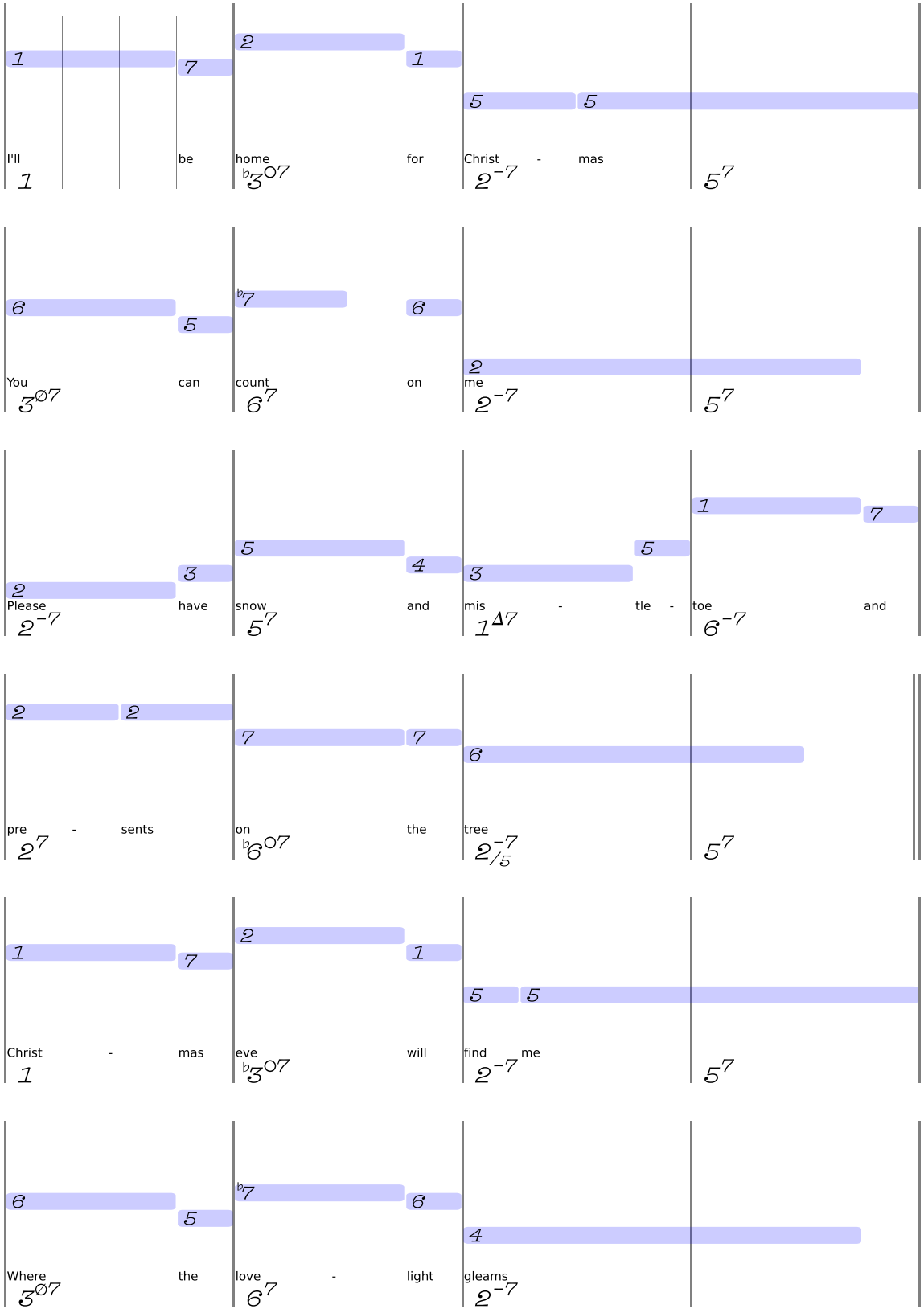

hang a shin - ing
1 6-7
star up - on the high - est
7Ø7 37
bough
6-7 b67
5-7 b57
And

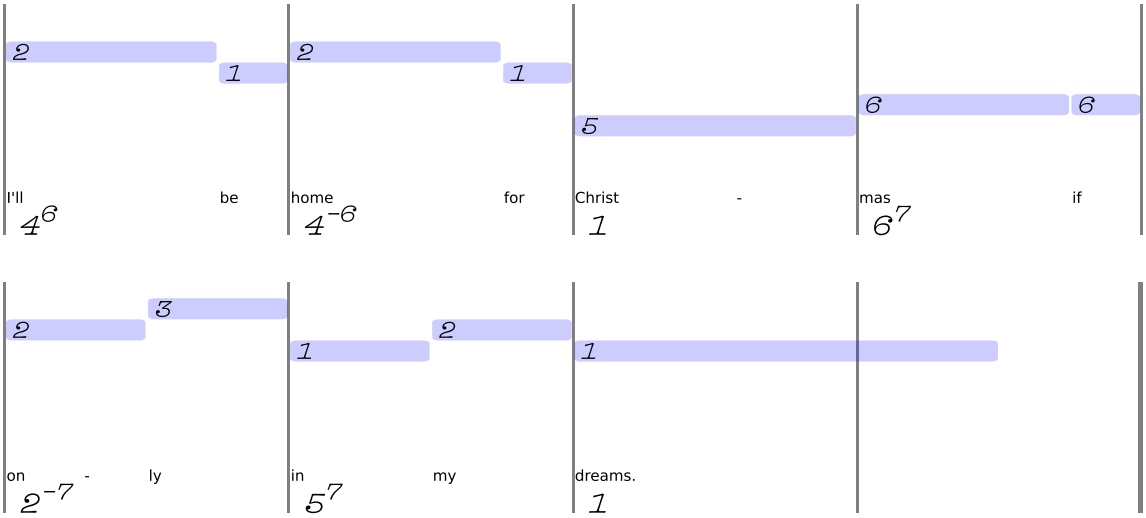
have your - self a
4 47
mer-ry lit - tle Christ - mas
2-7 57
now.
1

I'll Be Home For Christmas

1 = G

Kim Gannon and Walter Kent

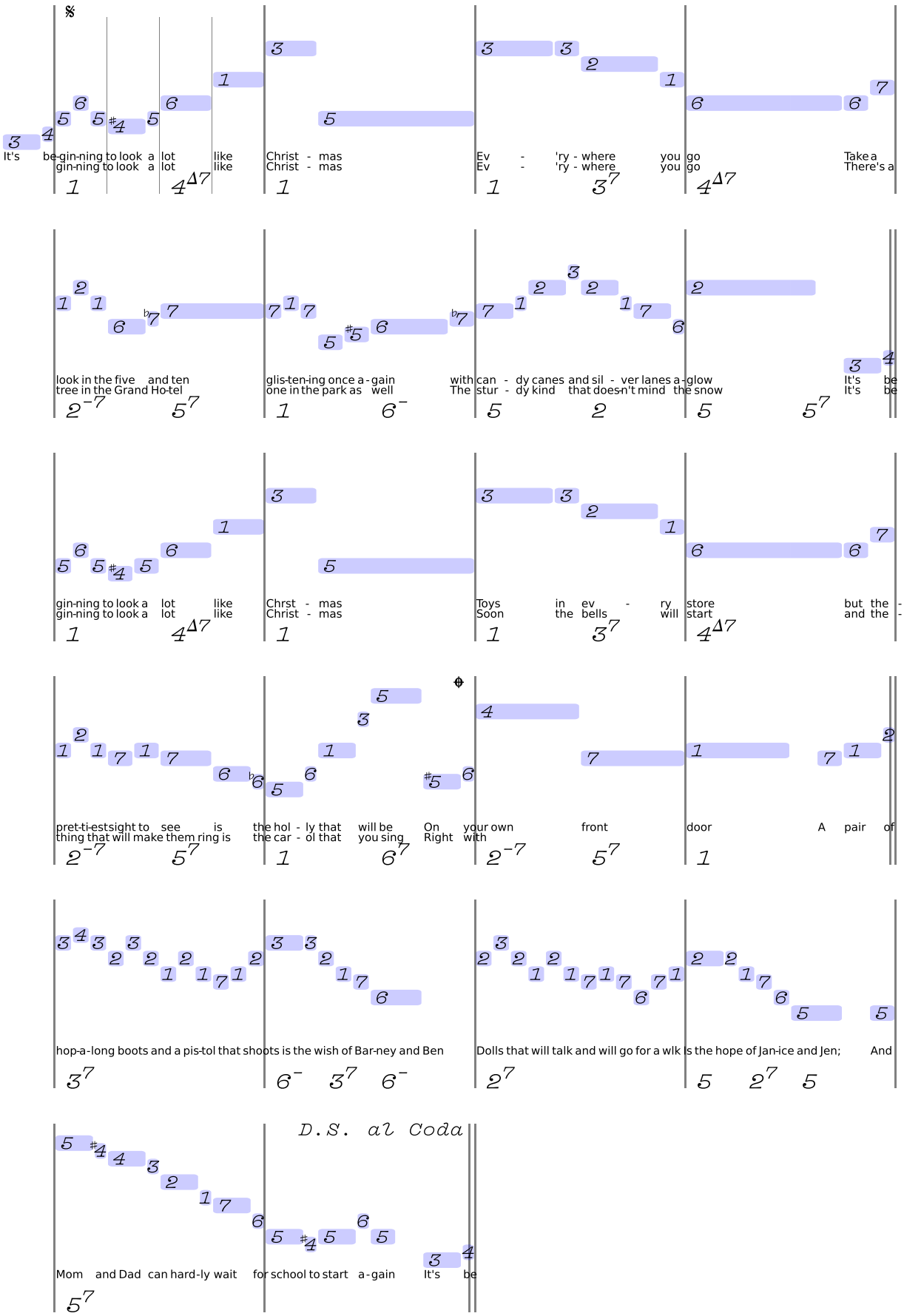


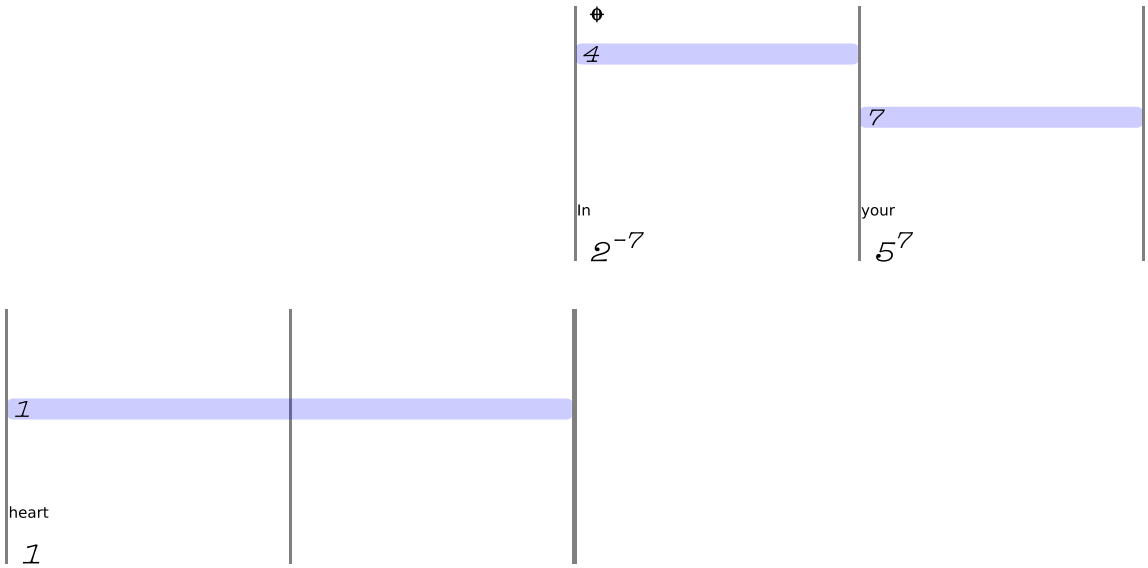

2
1
I'll be
4 6
2
1
home for
4 -6
5
Christ -
1
6
6
mas if
6 7
3
2
on - ly
2 -7
2
1
in my
5 7
1
dreams.
1

It's Beginning to Look a Lot Like Christmas

1 = E

Meredith Wilson



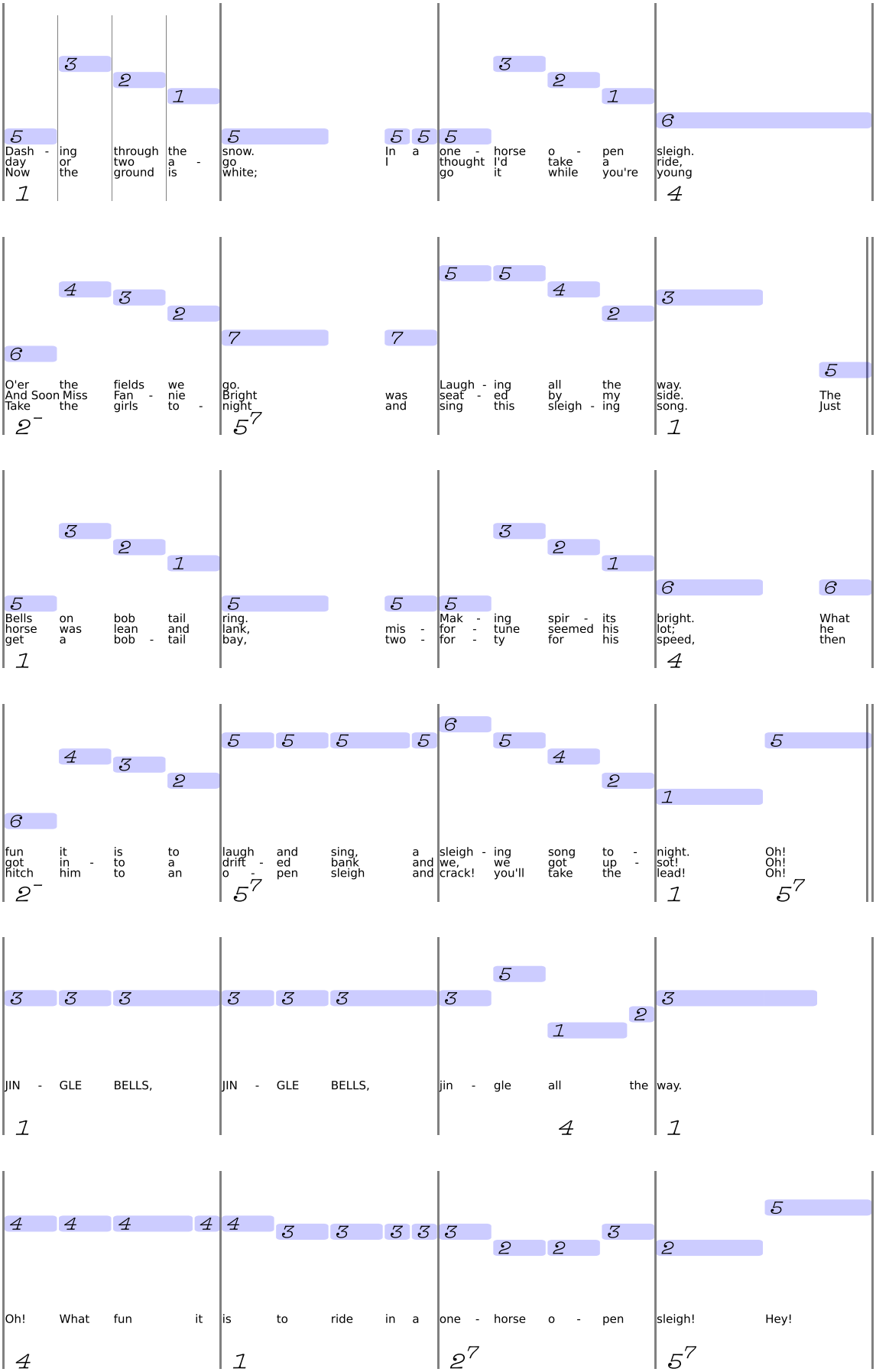

4
In
2^{-7}
7
your
5^{7}

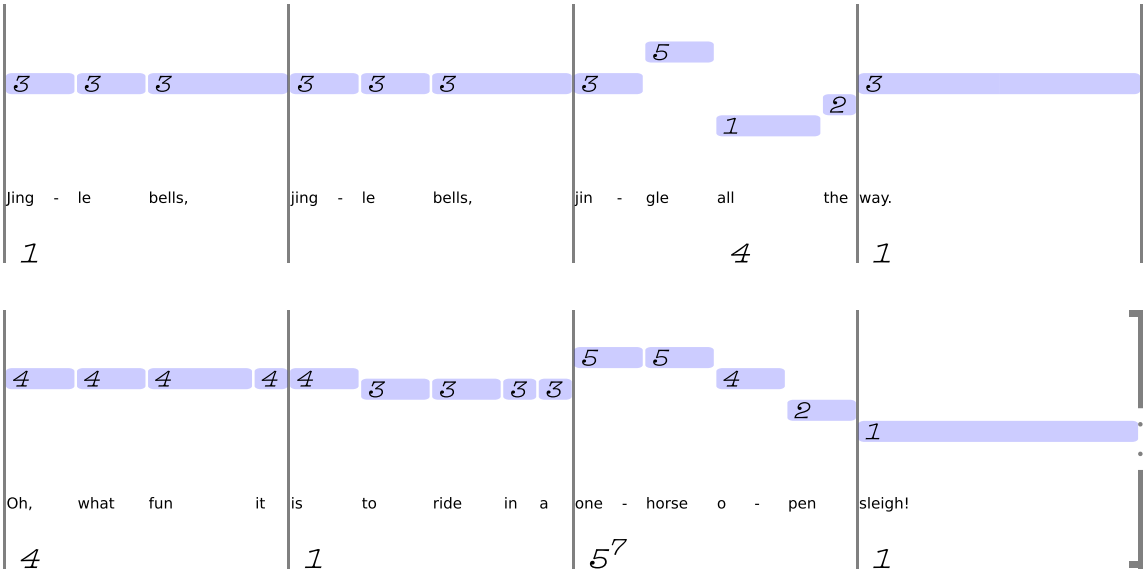
1
heart
1

Jingle Bells

1 = C

James Lord Pierpont

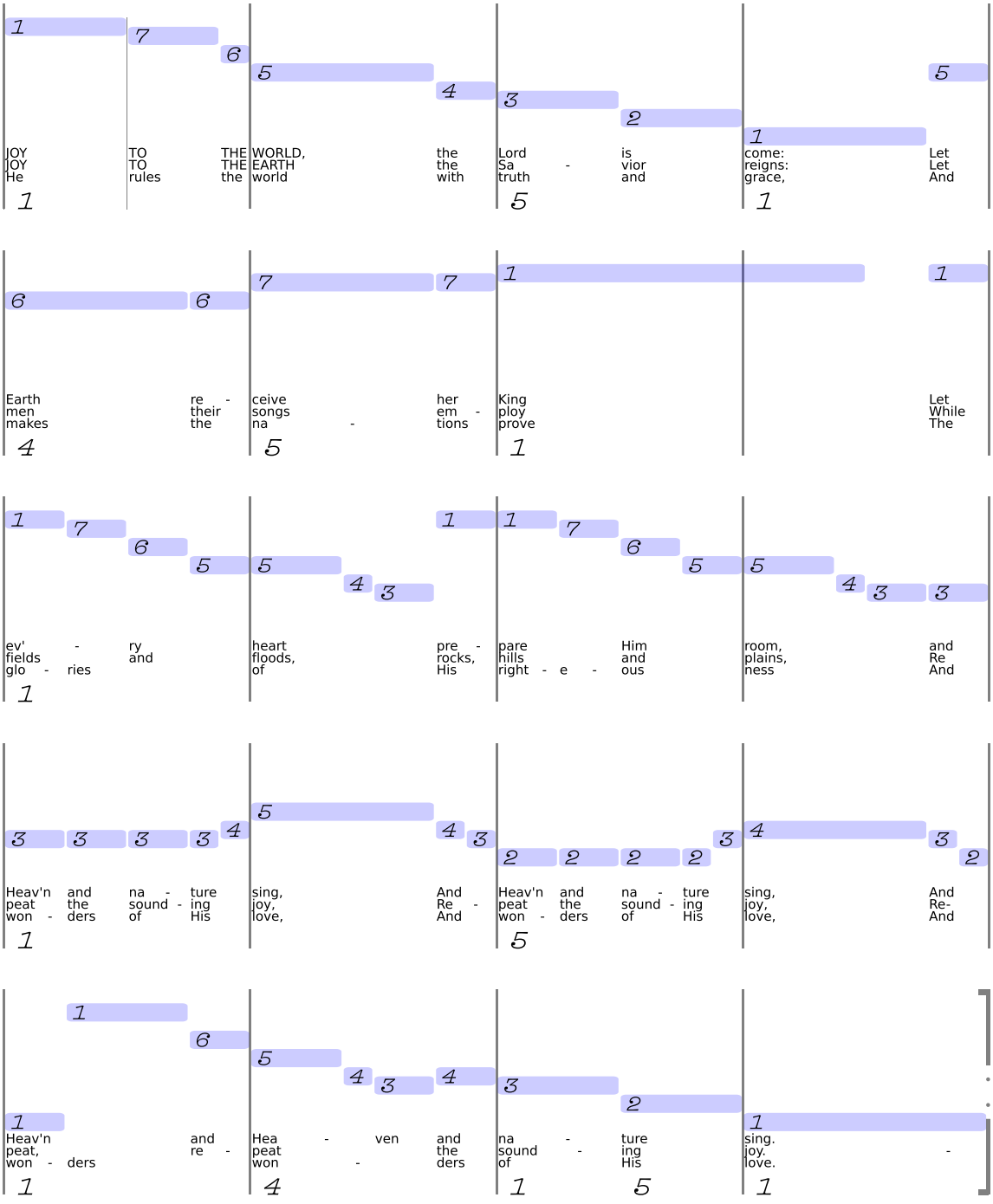



3 3 3 3 3 3 3 5 1 2 3
Jing - le bells, jing - le bells, jin - gle all the way.
1 4 1

4 4 4 4 4 3 3 3 3 5 5 4 2 1
Oh, what fun it is to ride in a one - horse o - pen sleigh!
4 1 5 7 1

Joy to the World

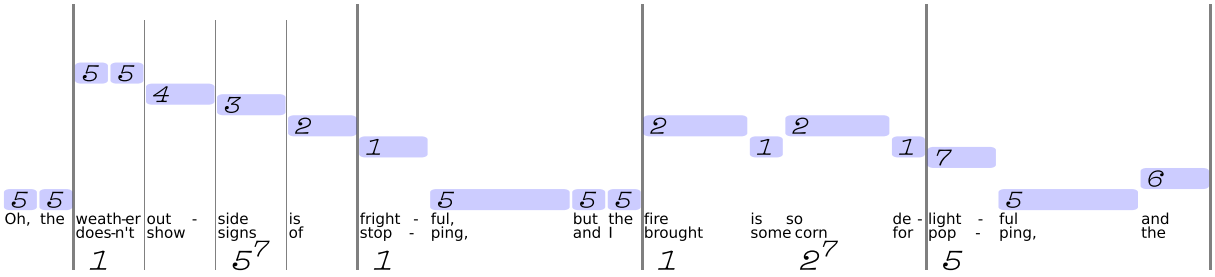
1 = C

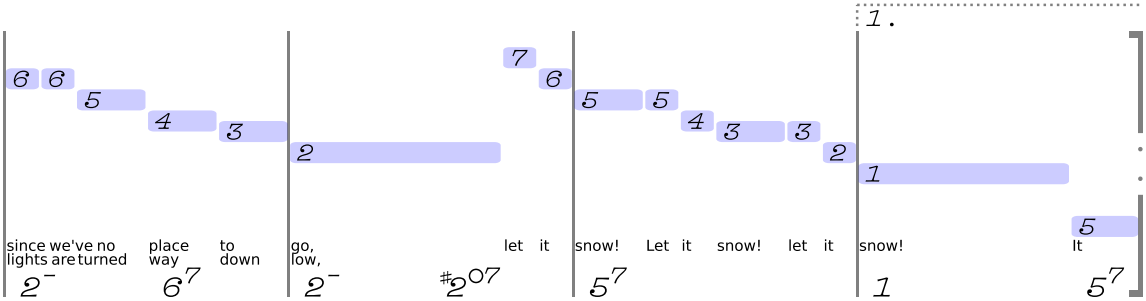


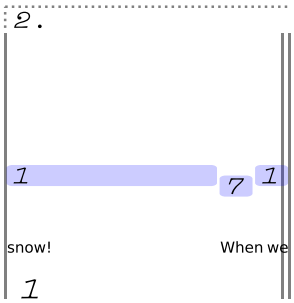
Let It Snow

1 = C

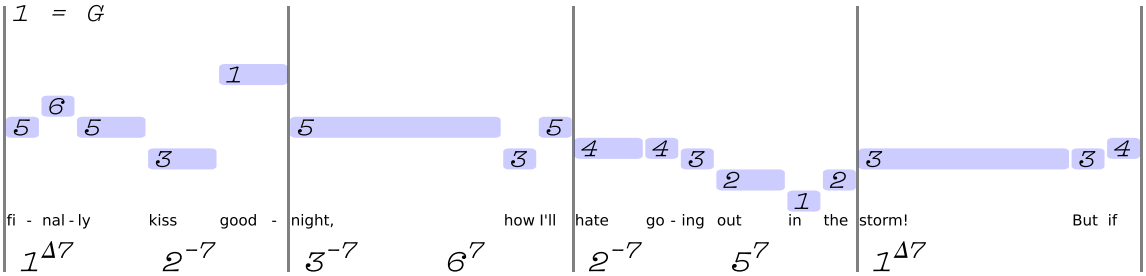
J.S. Pierpoint

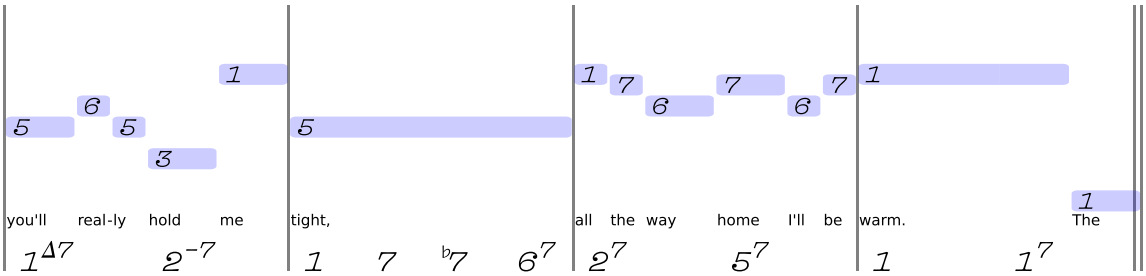




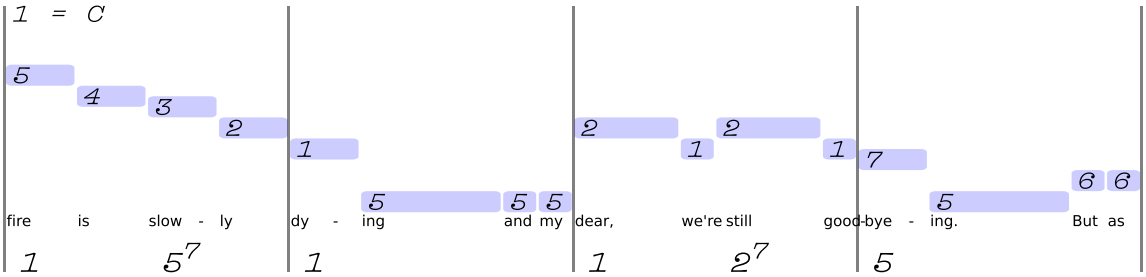


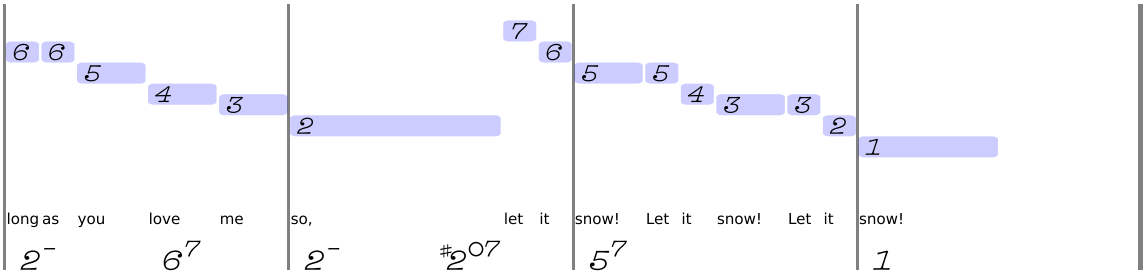
1 = G





1 = C

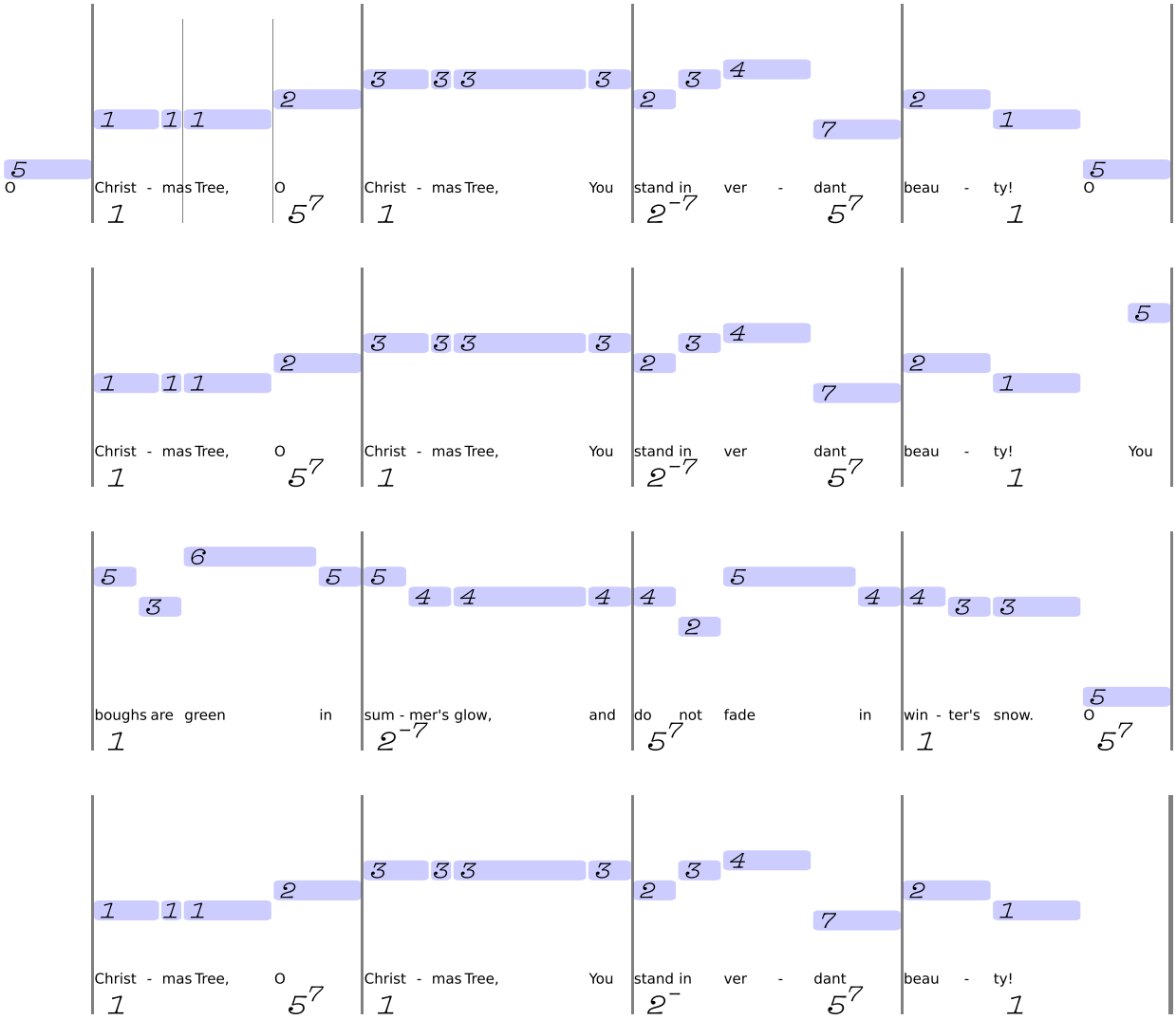



6 6 5 4 3
long as you love me
2⁻ 6⁷
2 7 6
so, let it
2⁻ #2°⁷
5 5 4 3 3 2 1
snow! Let it snow! Let it snow!
5⁷ 1

O Christmas Tree

1 = F

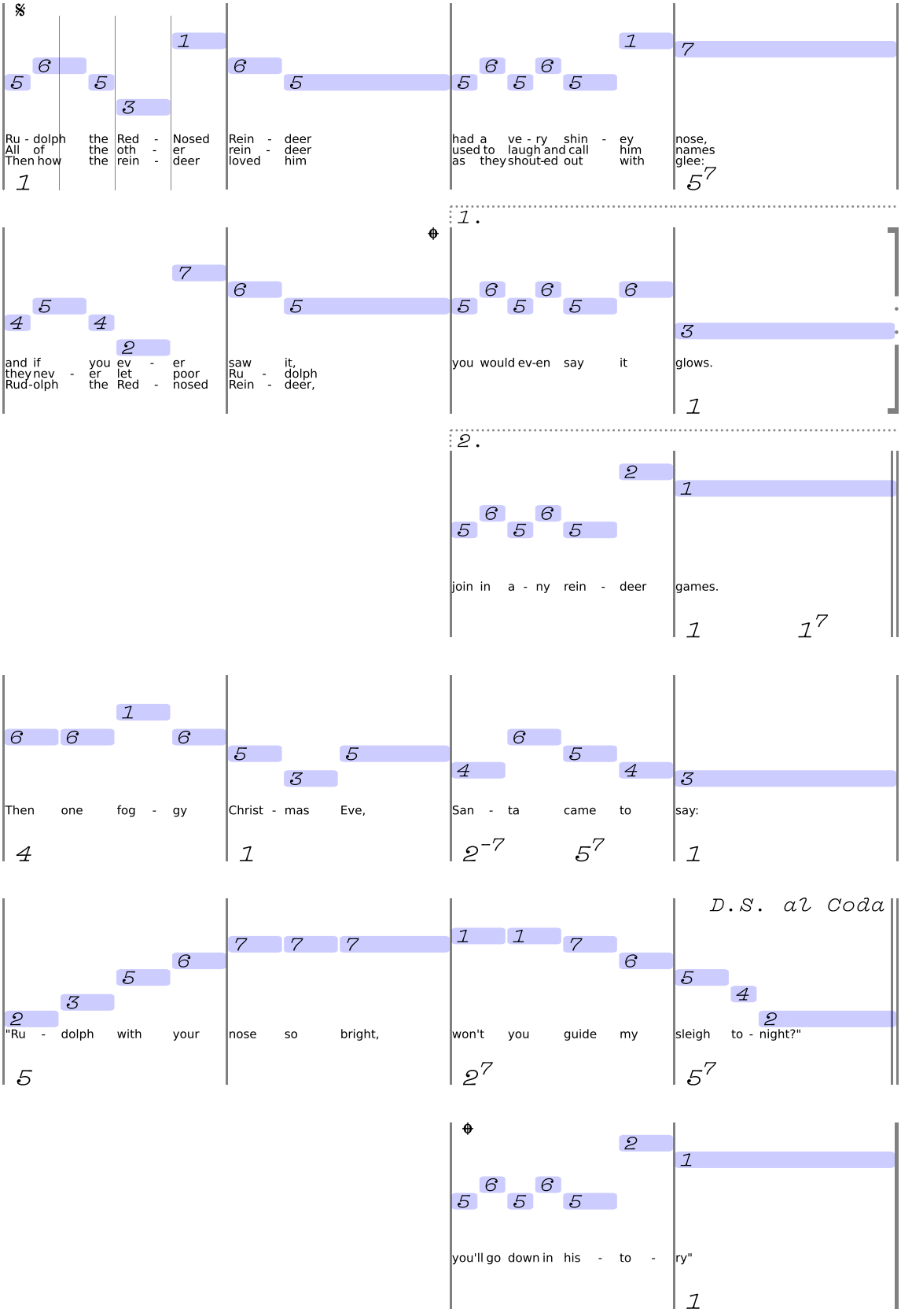
Traditional German Carol



Rudolph the Red-nosed Reindeer

1 = C

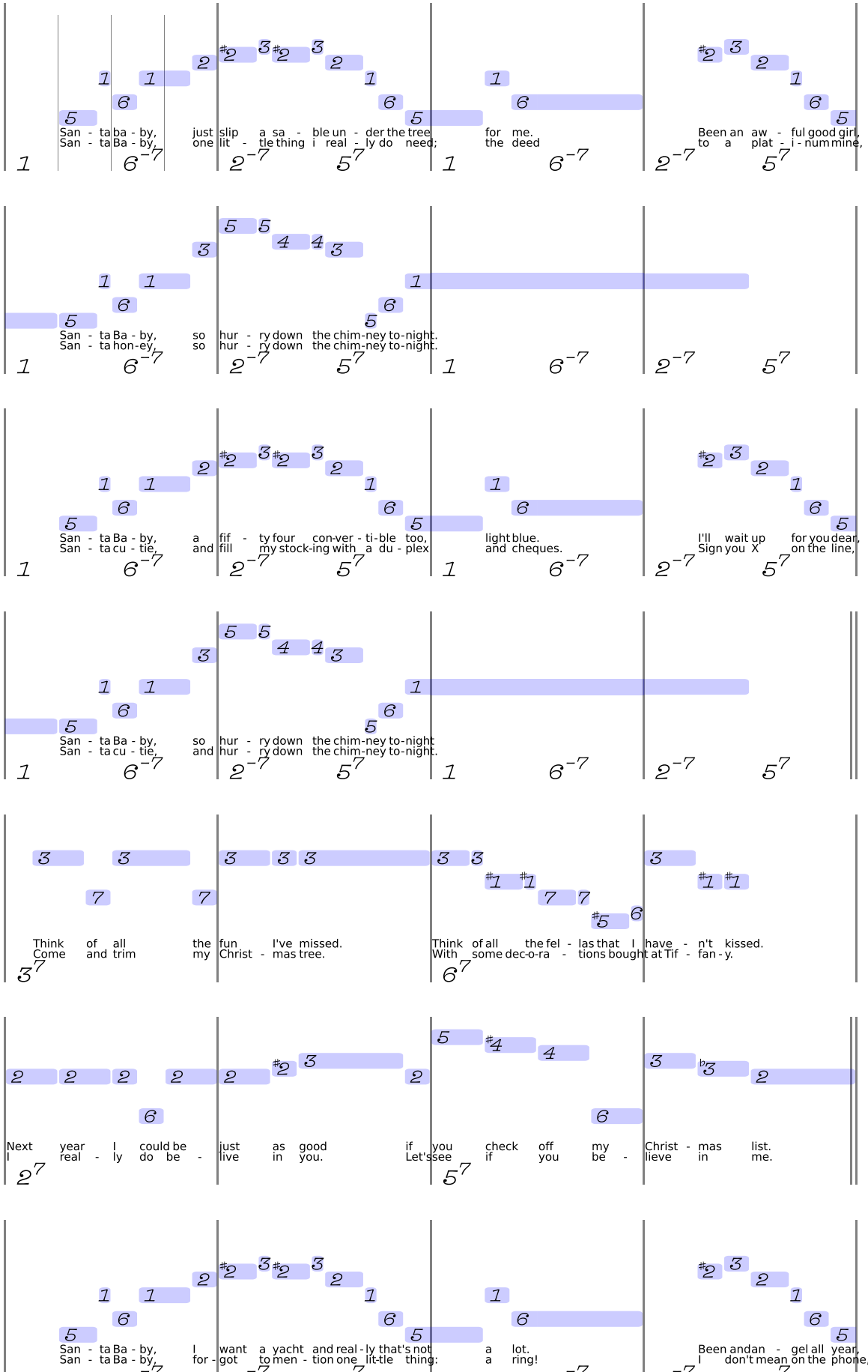
Johnny Marks

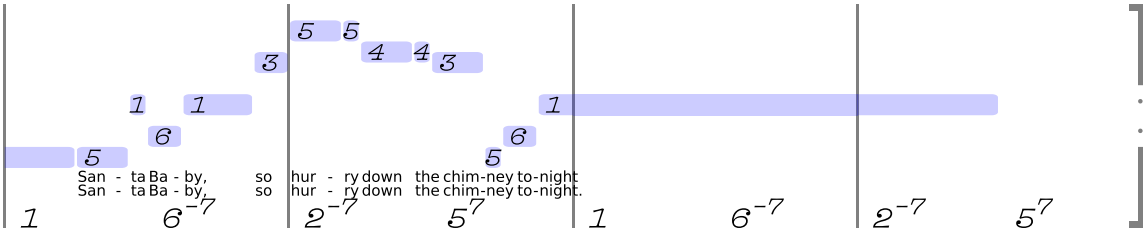


Santa Baby

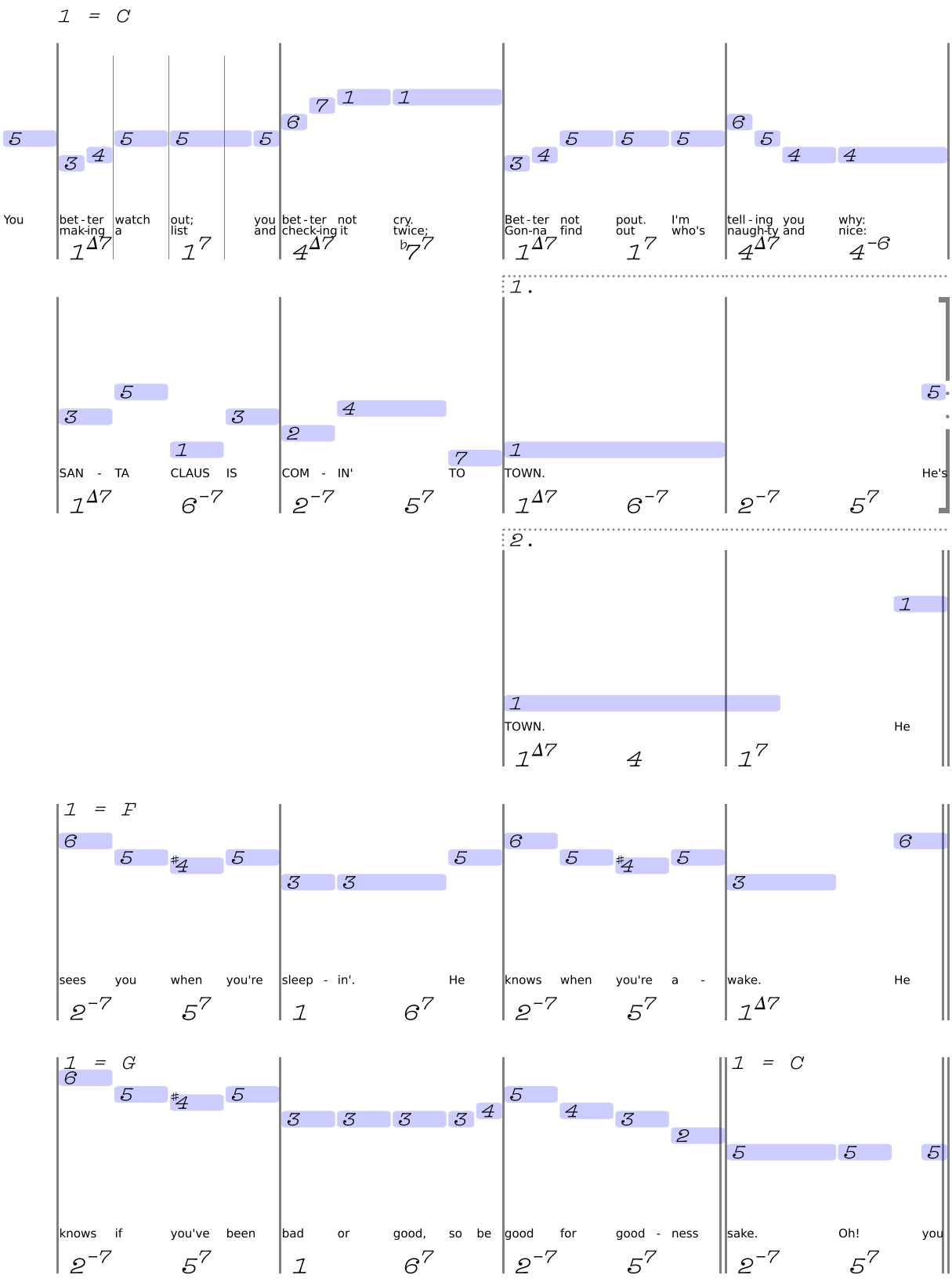
1 = $D^{\flat}$

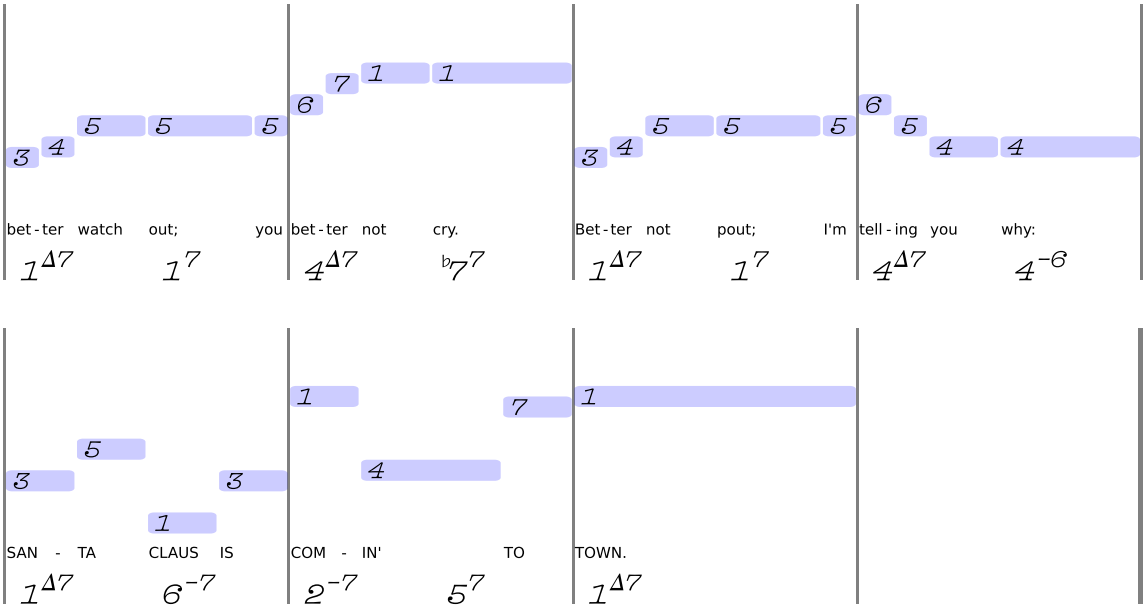
Phil Springer, Tony Springer




San - ta Ba - by, so hur - ry down the chim-ney to-night
San - ta Ba - by, so hur - ry down the chim-ney to-night.
1
6-7
2-7
57
1
6-7
2-7
57

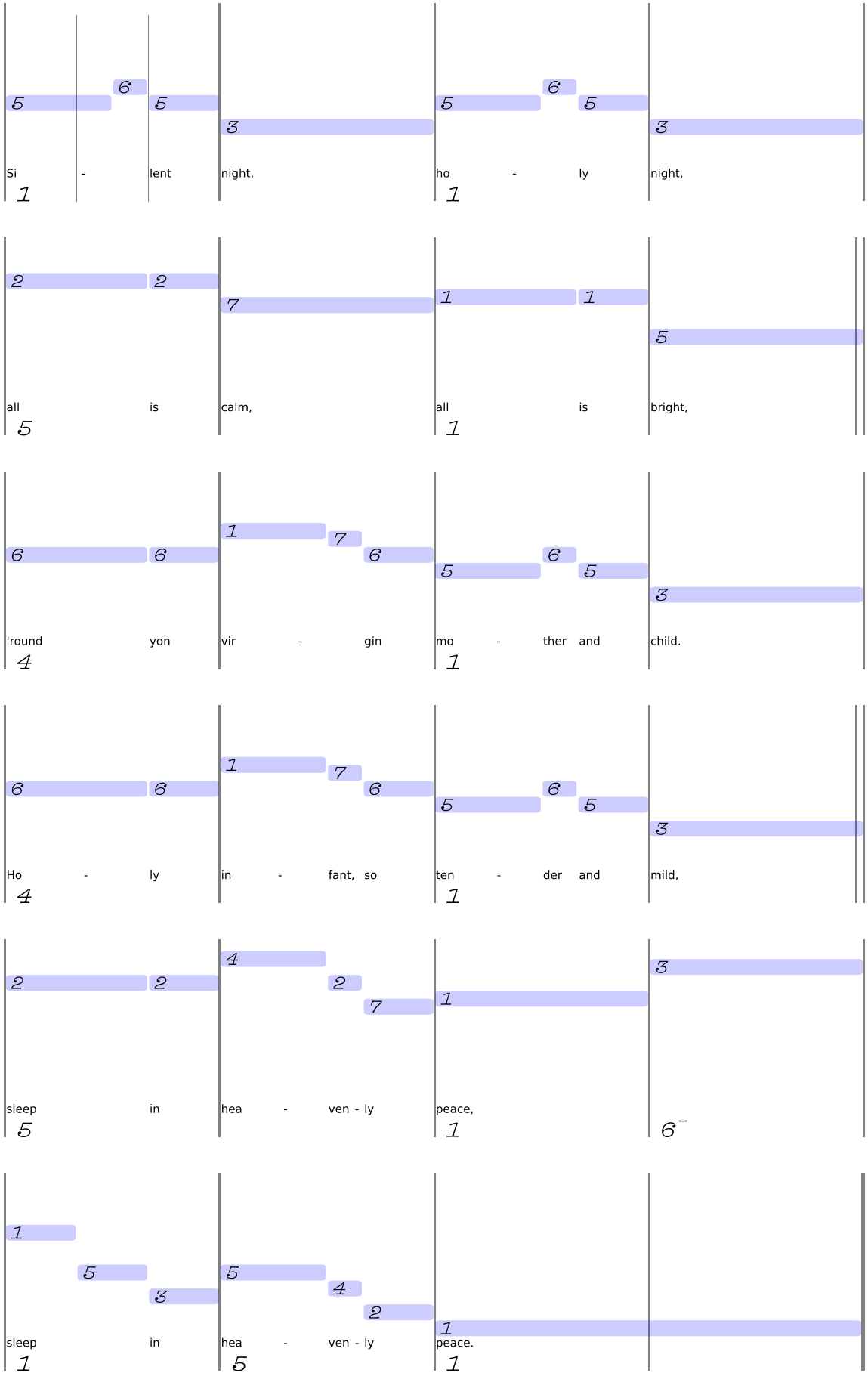
Santa Claus is Coming to Town




bet - ter watch out; you
bet - ter not cry.
Bet - ter not pout; I'm
tell - ing you why:
SAN - TA CLAUS IS
COM - IN' TO
TOWN.

Silent Night

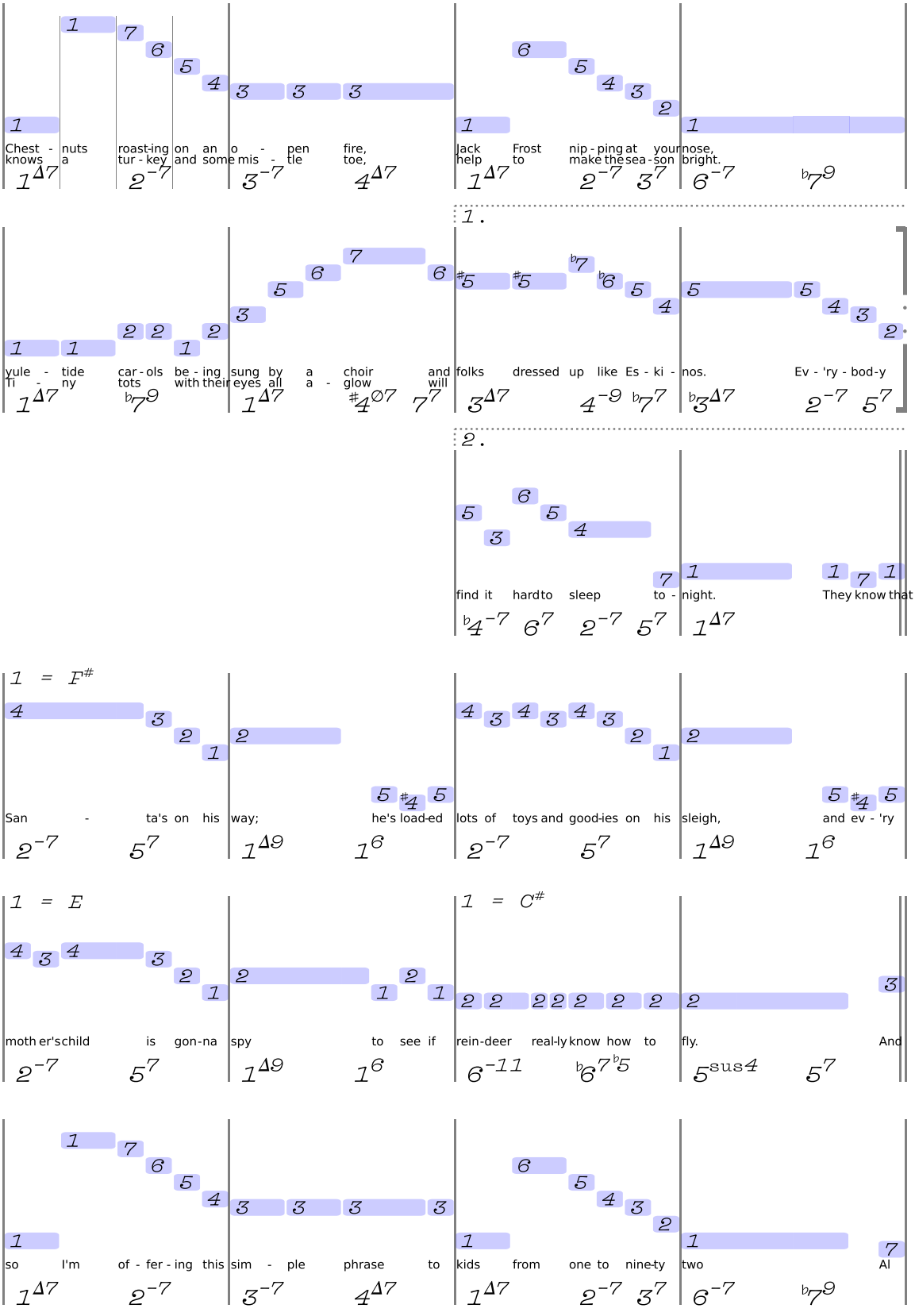
1 = C

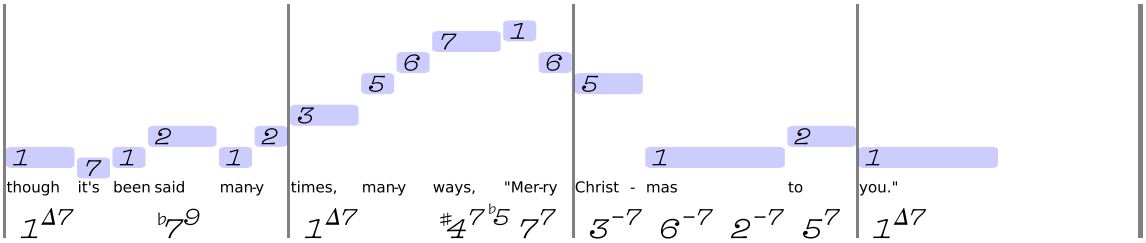


The Christmas Song

1 = C♯

Mel Torme, Robert Wells

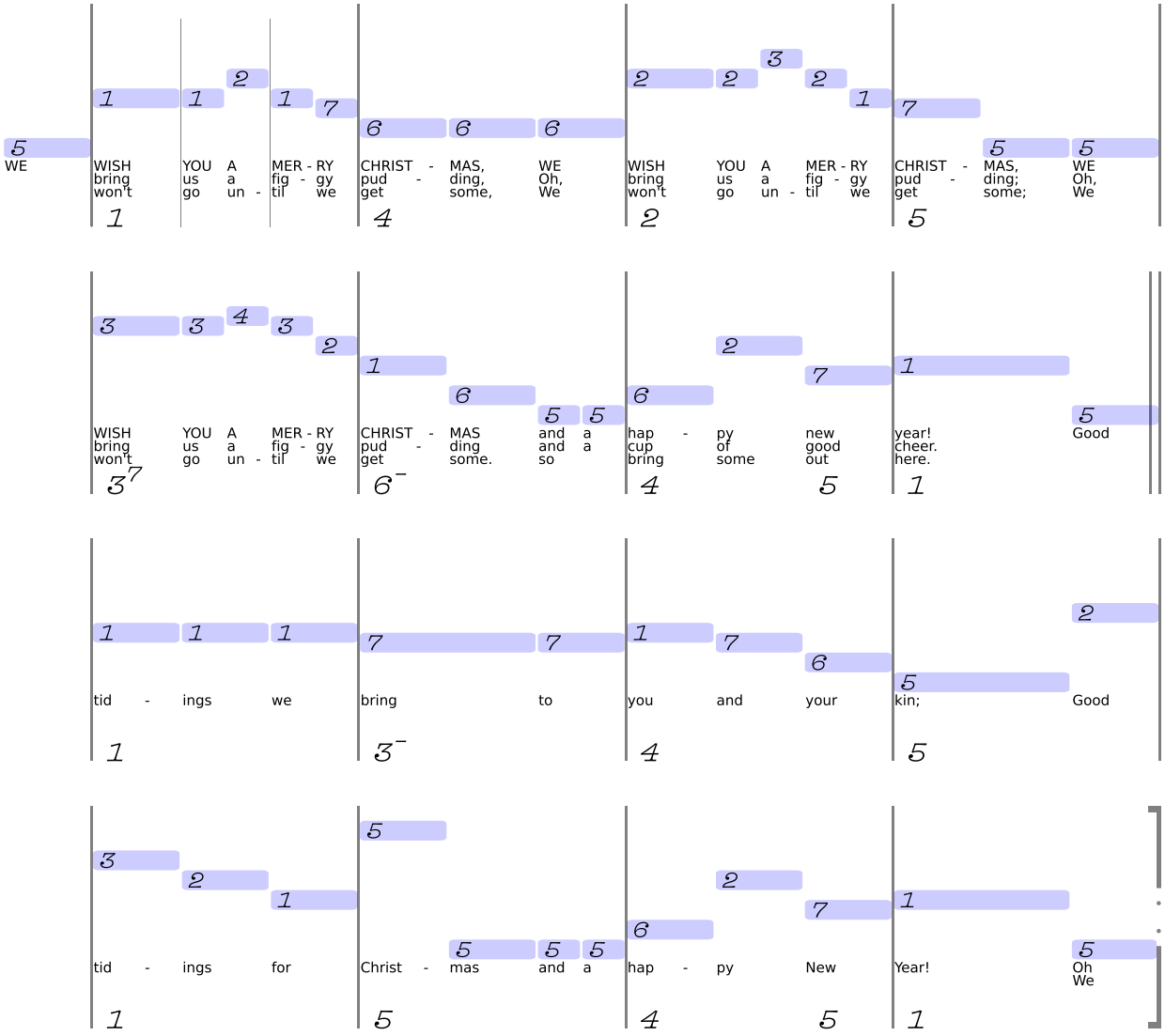



1 7 1 2 1 2
though it's been said many
1Δ7 ♭7⁹
3 5 6 7 1 6
times, many ways, "Mer-ry
1Δ7 ♯4⁷♭5 7⁷
5 1 2
Christ - mas to
3⁻⁷ 6⁻⁷ 2⁻⁷ 5⁷
1
you."
1Δ7

We Wish You a Merry Christmas

1 = C

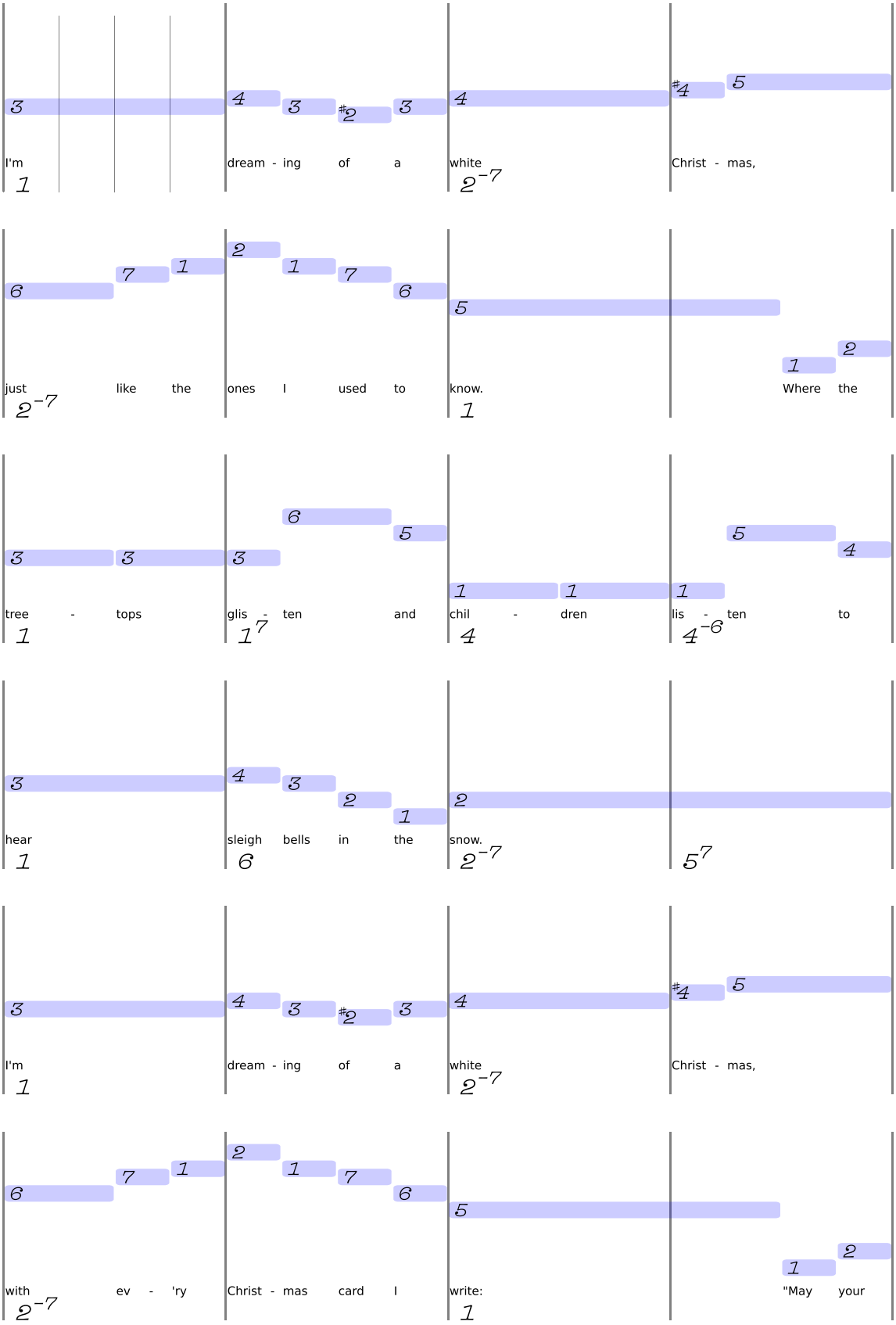
Traditional

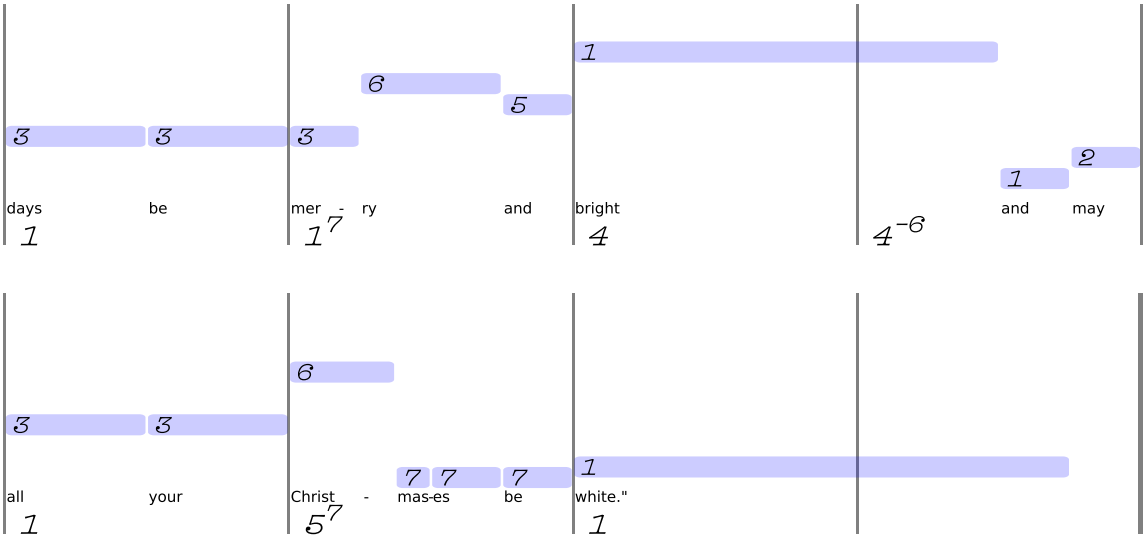


White Christmas

1 = C

Irving Berlin

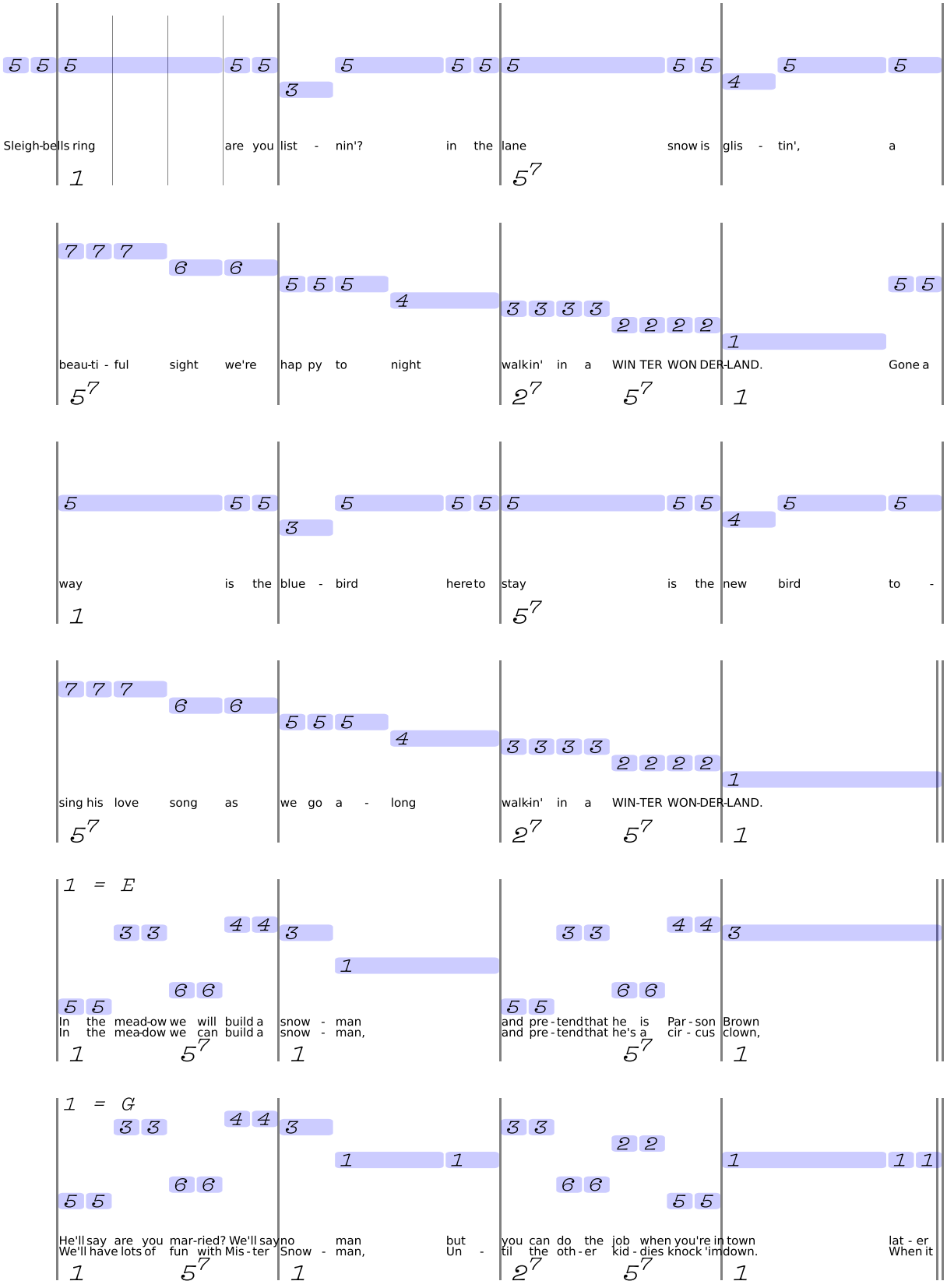


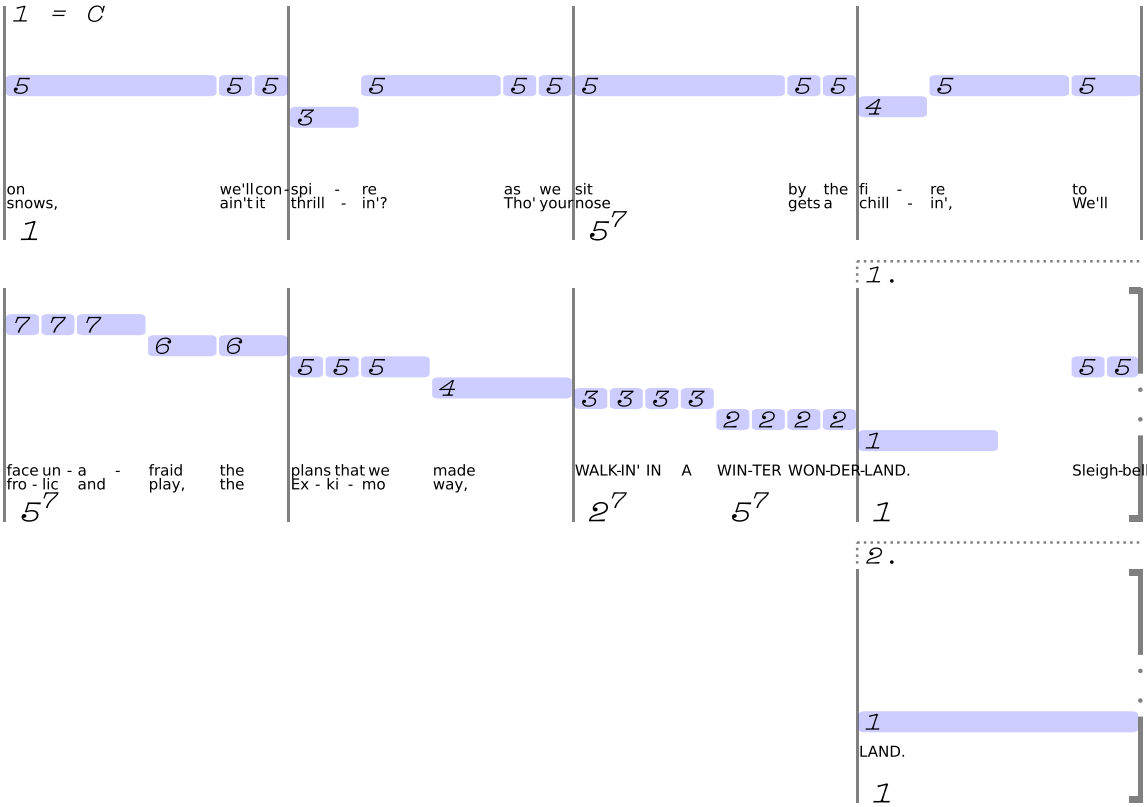

3 3 3 6 5 1 1 2
days be mer - ry and bright and may
1 1 7 4 4 -6
3 3 6 7 7 7 1
all your Christ - mas-es be white."
1 5 7 1

Winter Wonderland

1 = C

Felix Bernard




1 = C
on snows,
we'll ain't it con-
spi - re in'?
as we Tho' your
sit nose
by the gets a
fi - re chill - in',
to We'll
1
5⁷
face un - a - fraid the fro - lic and play, the
plans that we made Ex - ki - mo way,
WALK-IN' IN A WIN-TER WON-DER-LAND.
Sleigh-bells
1.
2.
LAND.