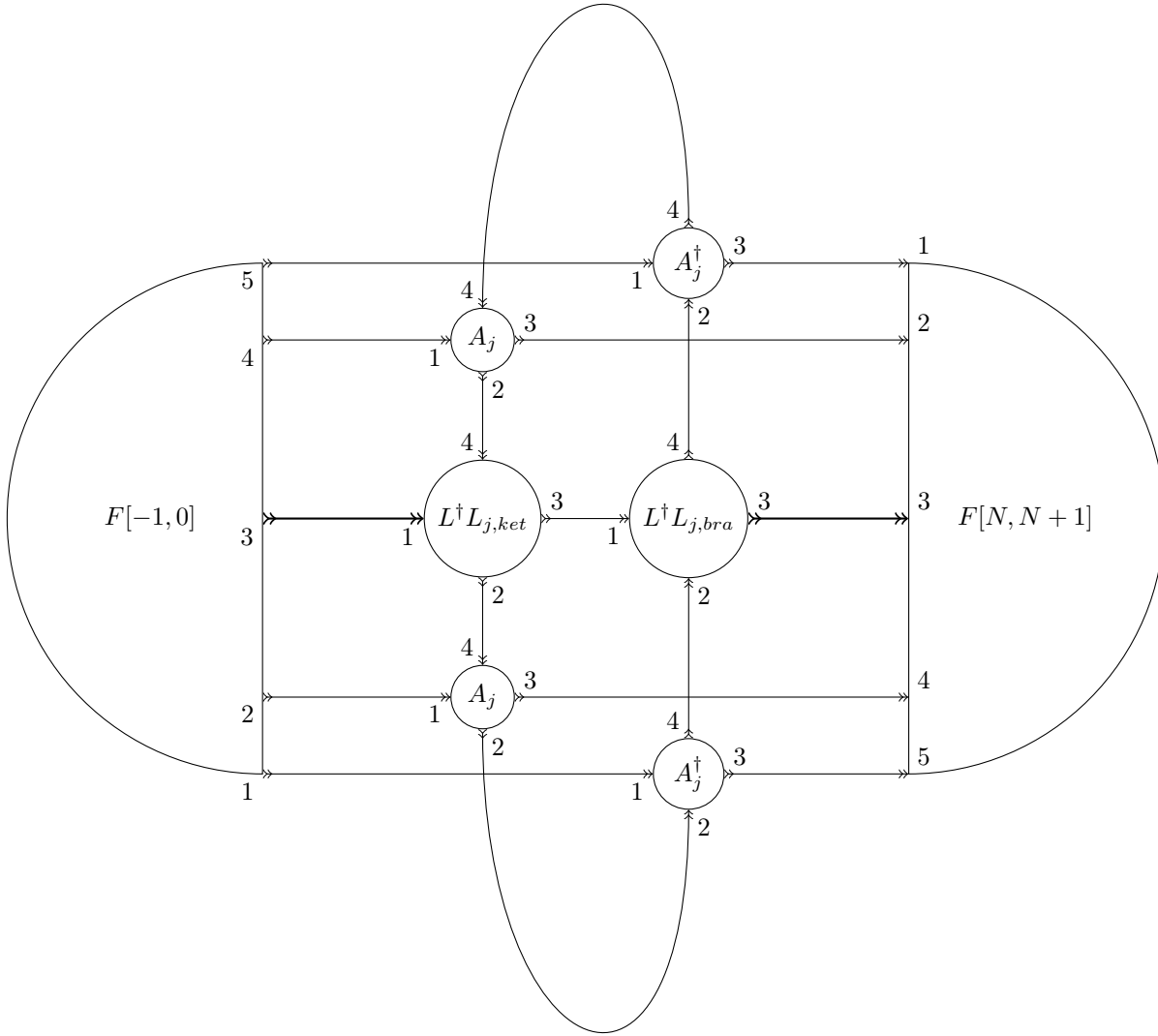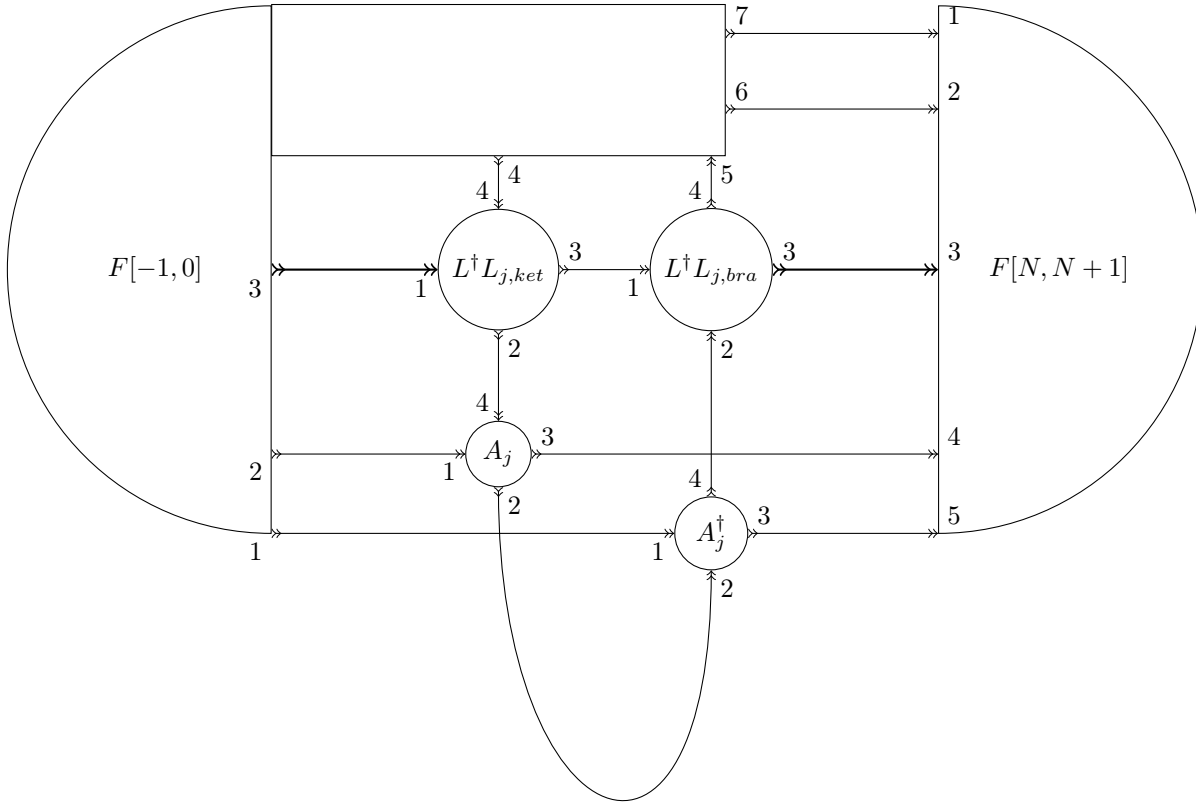# 1 Structure

1.1 Notice

It is important to note, that despite axes being indexed beginning with 0 within yastn, we begin indexing on 1. That is because on contracting we beging with -1 for assigning indices for the legs of the contracted tensor.
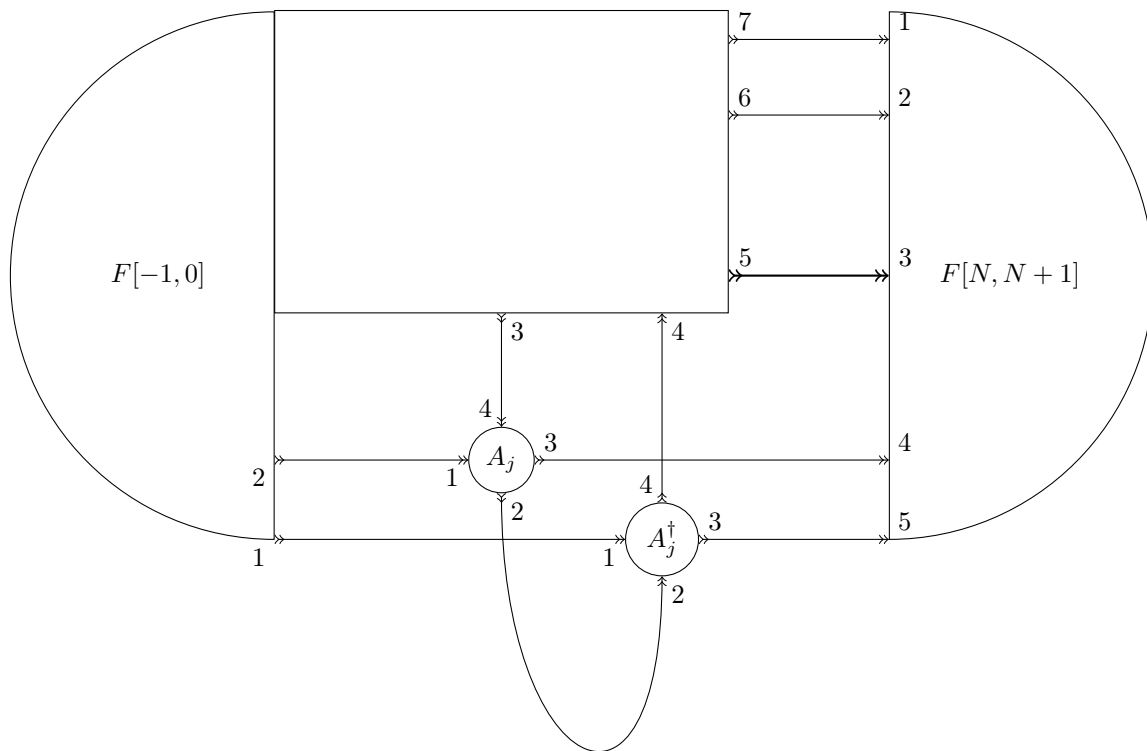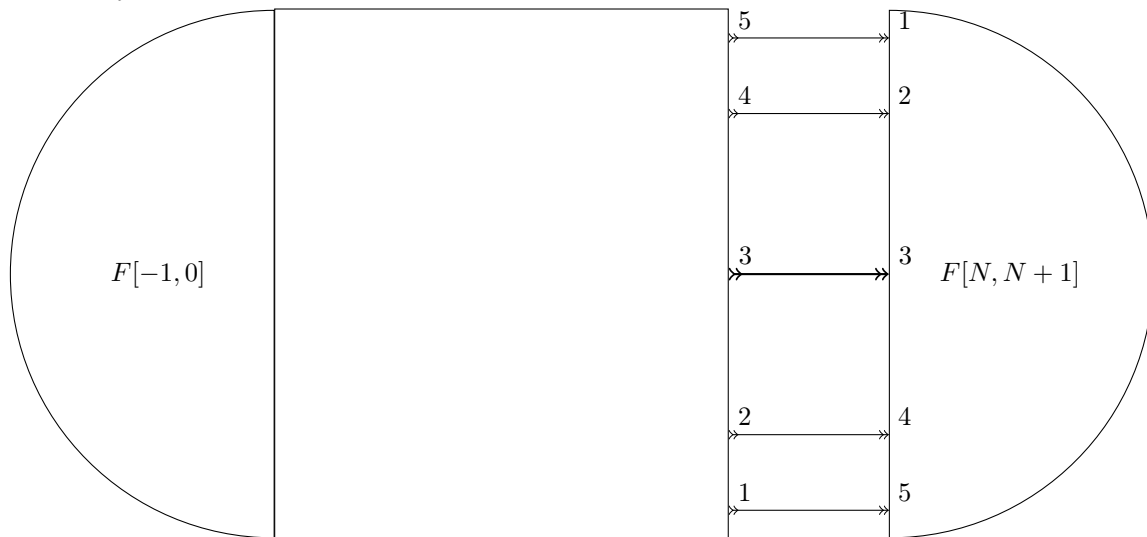
1.2 Left side contraction

First the 'upper' Tensors are contracted.

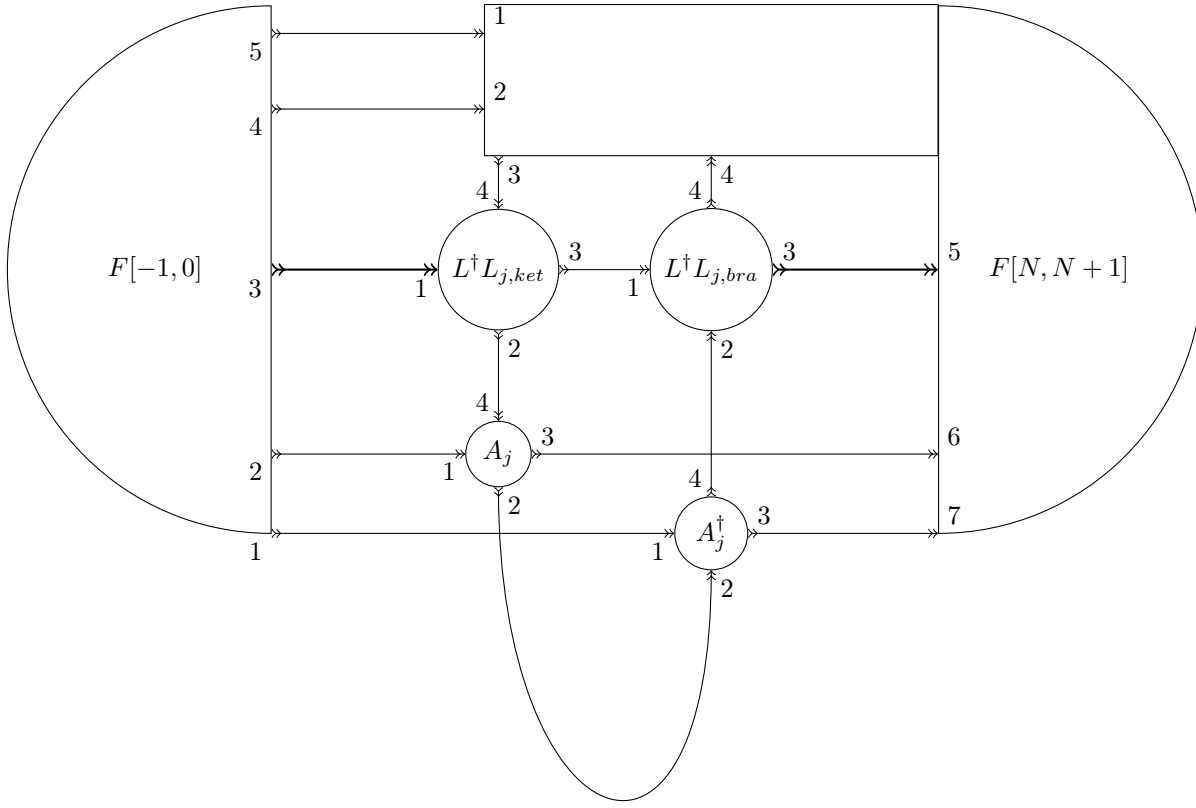Then the Lindbladian Components are contracted.

2
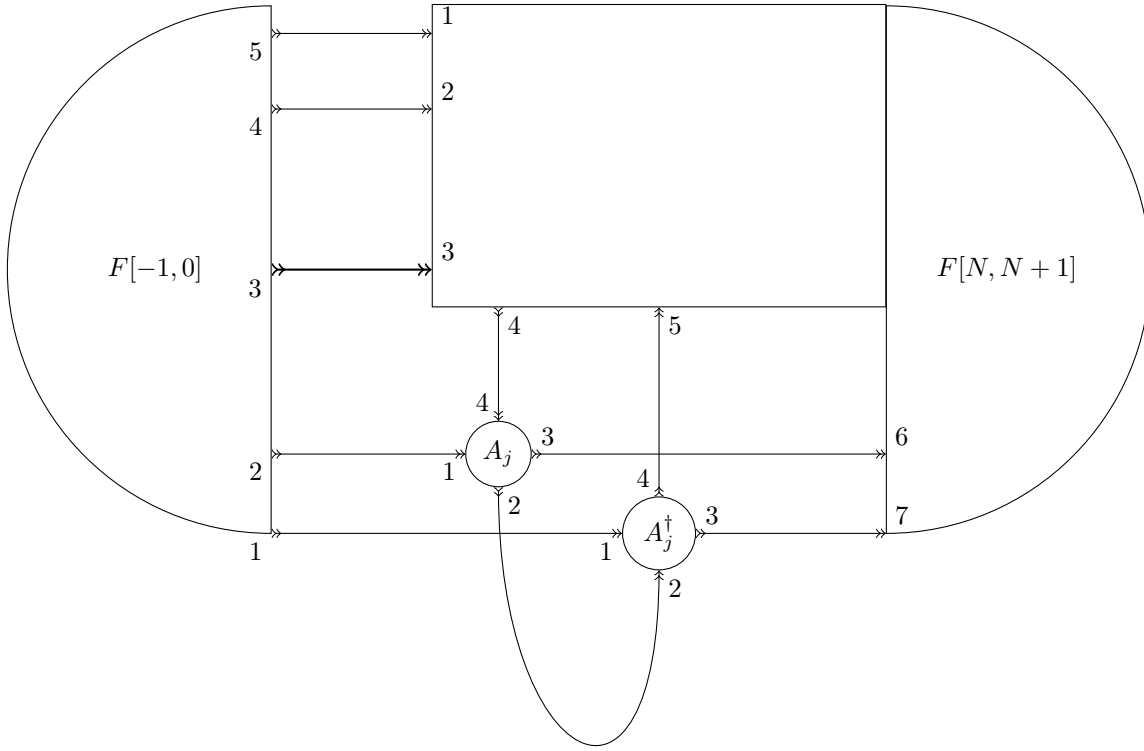
And lastly the 'lower' Tensors are contracted.
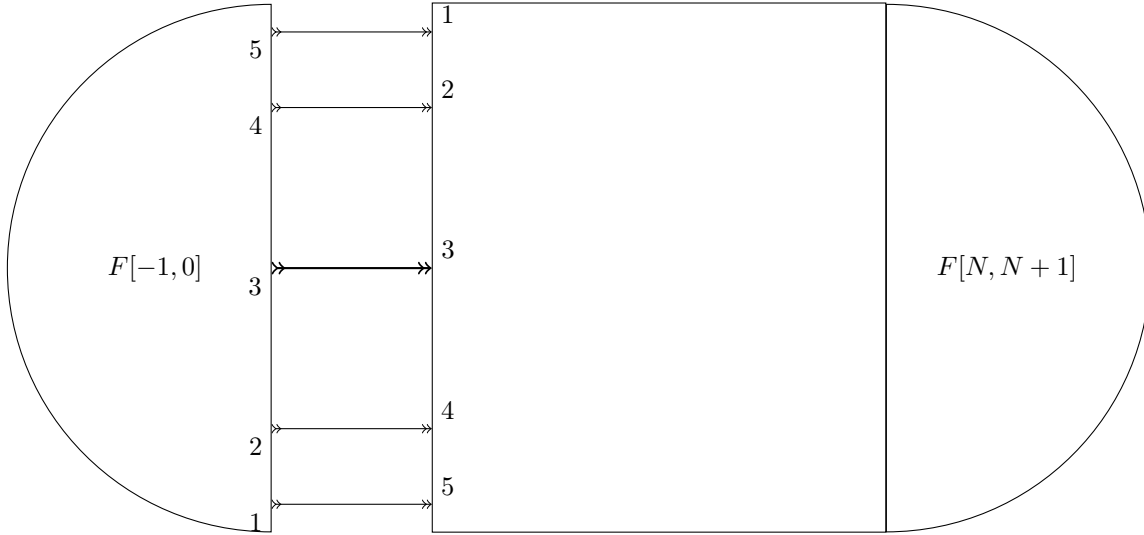

1.3   Right side contraction

First the 'upper' Tensors are contracted.

$F[-1,0]$

$F[N,N+1]$

$L^{\dagger}L_{j,ket}$

$L^{\dagger}L_{j,bra}$

A_j

$A_j^{\dagger}$

Then the Lindbladian Components are contracted.

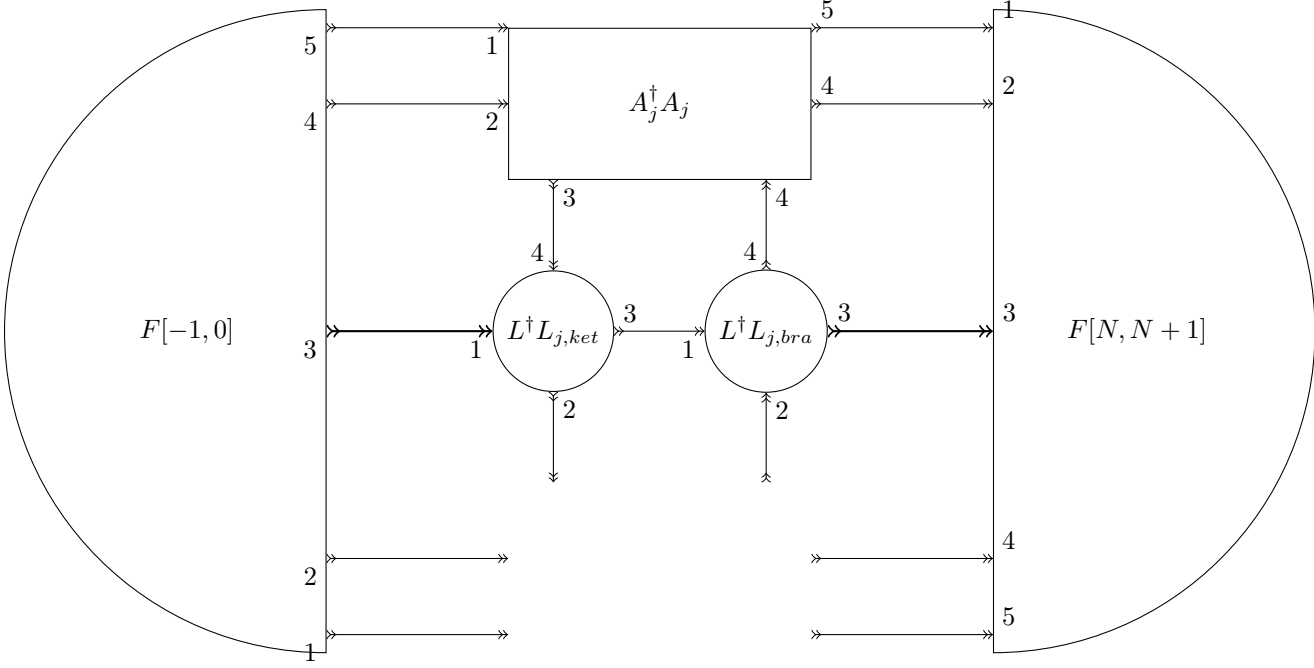And lastly the 'lower' Tensors are contracted

2 Heff1

2.1 Description

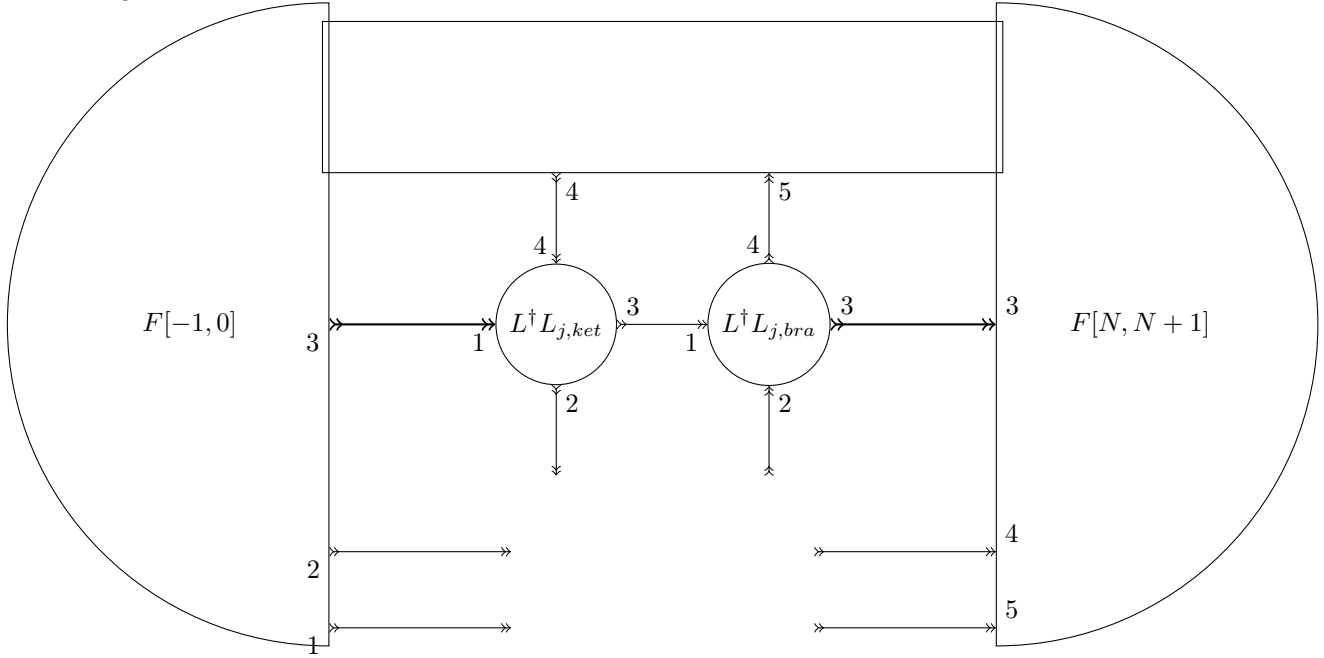Heff1 is the Action of Heff on a site MPS tensor Heff1 @ AdagA

2.2 Parameters

- AdagA (tensor) - site tensor with 6 legs

- n (int) - index of corresponding site

2.3 Procedure

First AdagA is contracted.

Then the Operators are contracted.

$F[-1, 0]$

$F[N, N+1]$

2

2

2

4

2

5

1