Explicit Koszul-dualizing bimodules in bordered Heegaard Floer homology

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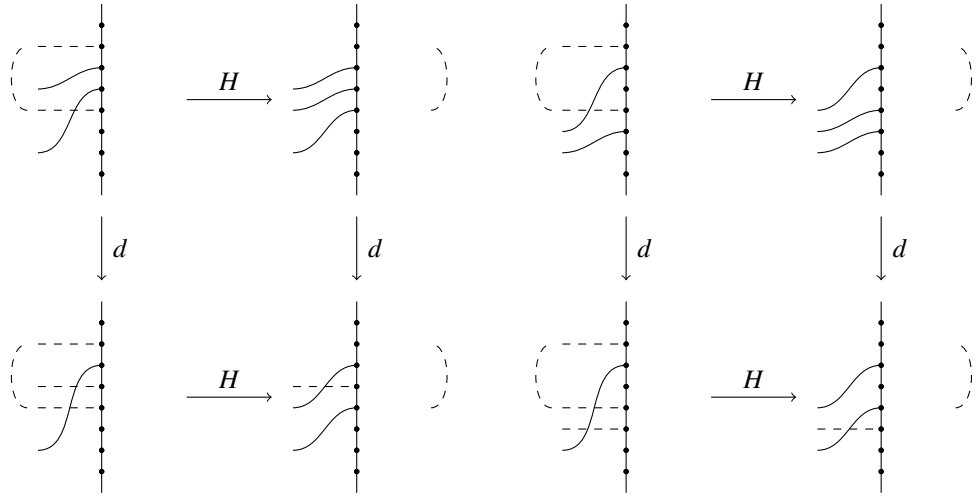
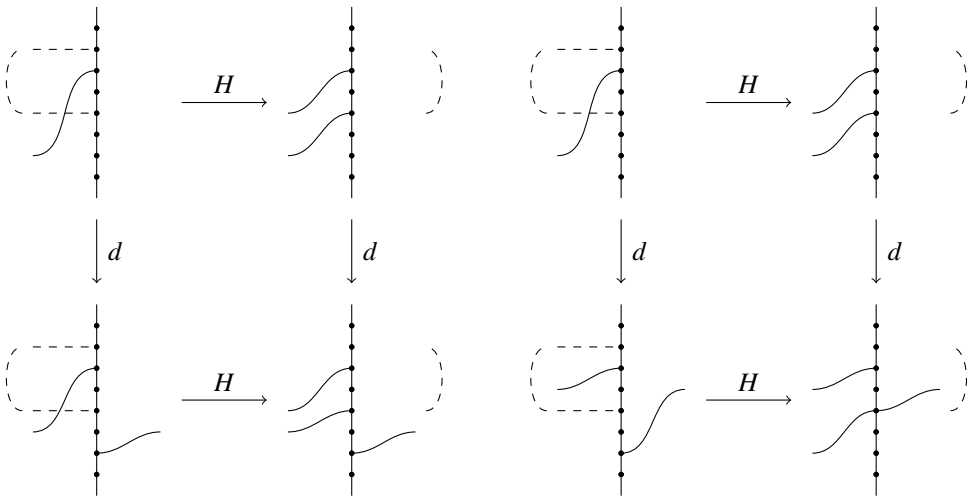
Supplement: Cancellation diagrams

In these diagrams, d–arrows are labeled d, ordinary H–arrows are labeled H, and special H–arrows are labeled H_{sp}.



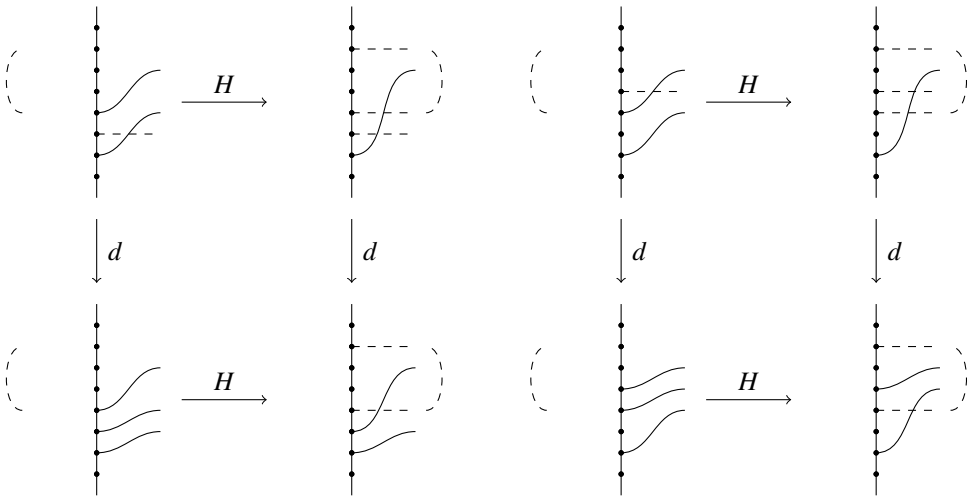
Case 1.1 Case 1.2

Figure 1: Cancellations in $d \circ H + H \circ d = \mathbb{I}_M$.



Case 1.3 Case 1.4

Figure 2: Cancellations in $d \circ H + H \circ d = \mathbb{I}_M$.



Case 2.1 Case 2.2

Figure 3: Cancellations in $d \circ H + H \circ d = \mathbb{I}_M$.

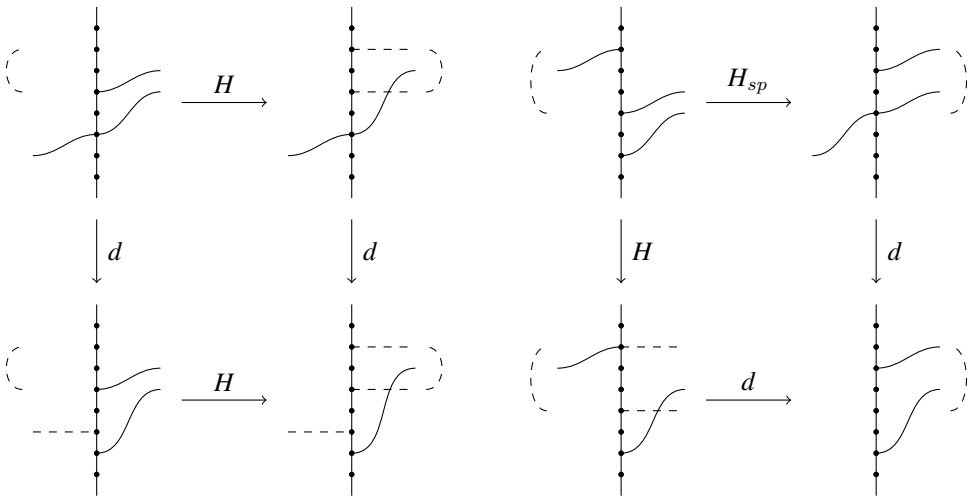


Figure 4: Cancellations in $d \circ H + H \circ d = \mathbb{I}_M$.

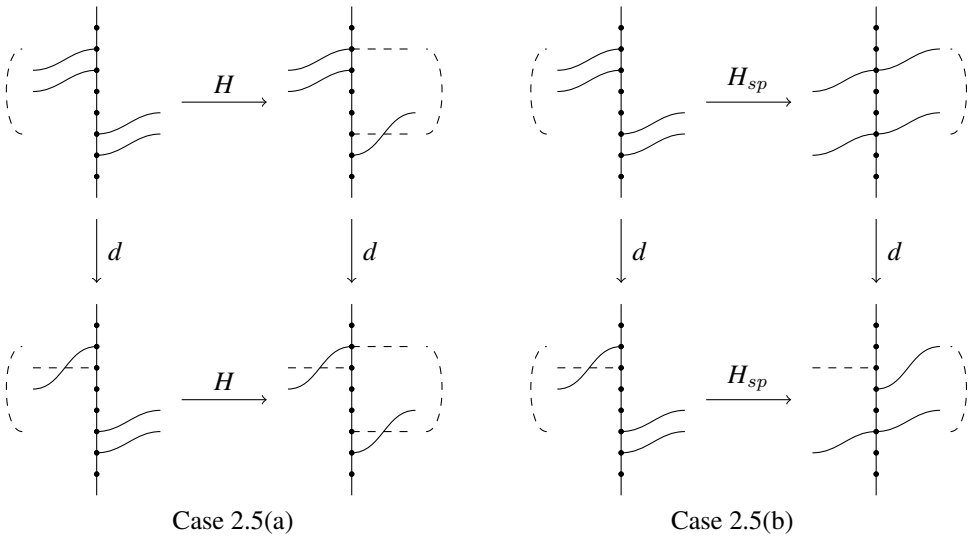
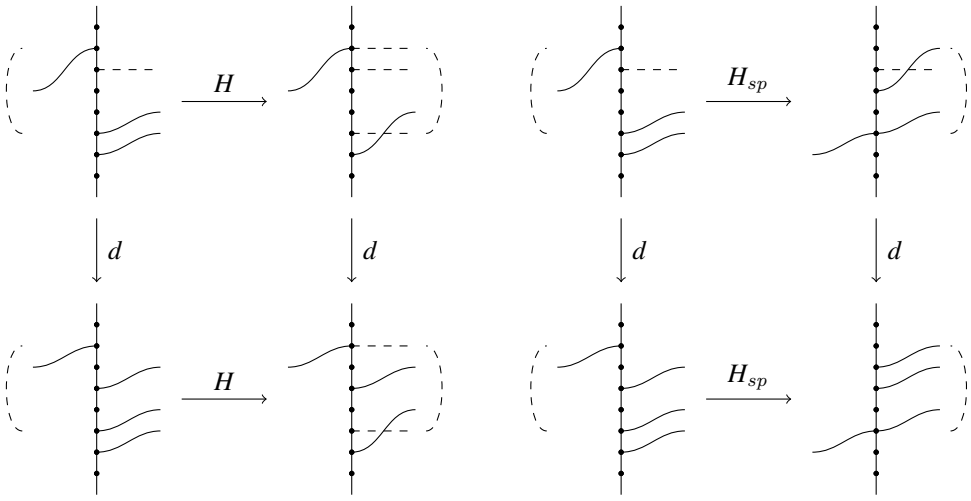
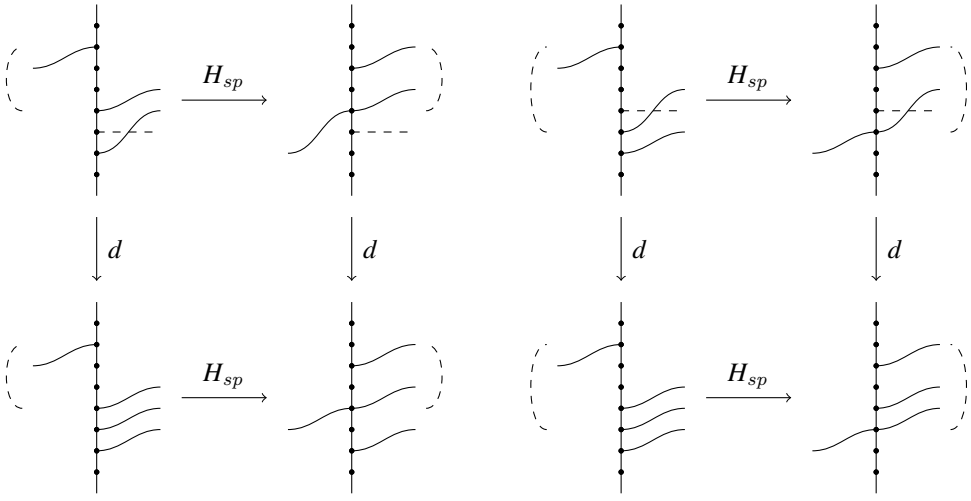


Figure 5: Cancellations in $d \circ H + H \circ d = \mathbb{I}_M$.



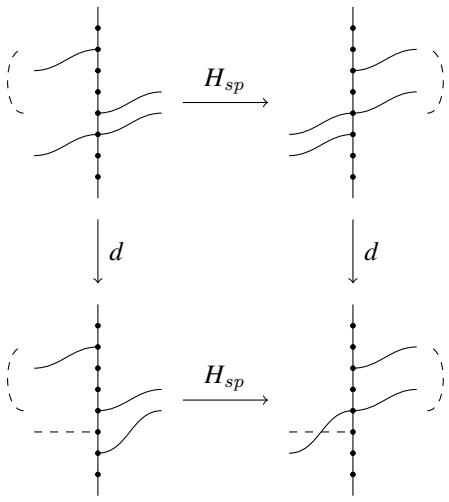
Case 2.6(a) Case 2.6(b)

Figure 6: Cancellations in $d \circ H + H \circ d = \mathbb{I}_M$.



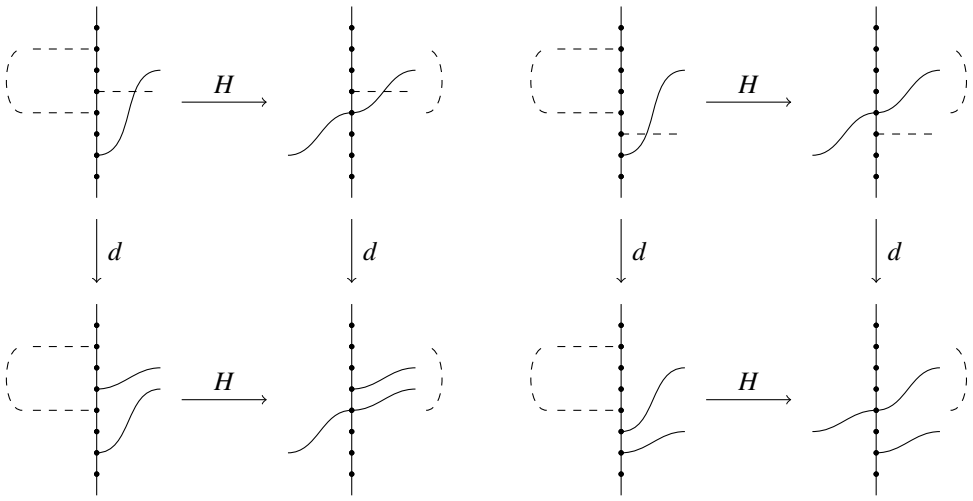
Case 2.7(b) Case 2.8(b)

Figure 7: Cancellations in $d \circ H + H \circ d = \mathbb{I}_M$. Cases 2.7(a) and 2.8(a) are exactly the same as Cases 2.1 and 2.2.



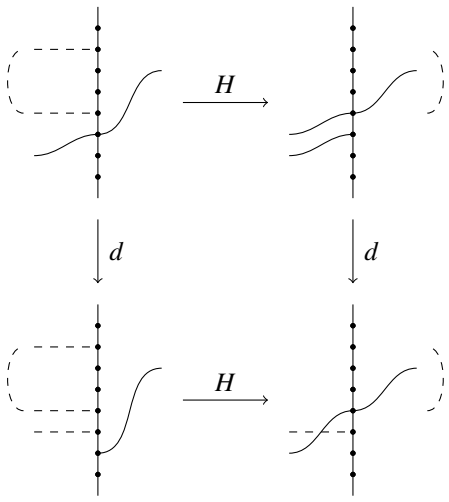
Case 2.9(b)

Figure 8: Cancellations in $d \circ H + H \circ d = \mathbb{I}_M$. Case 2.9(a) is exactly the same as Case 2.3.



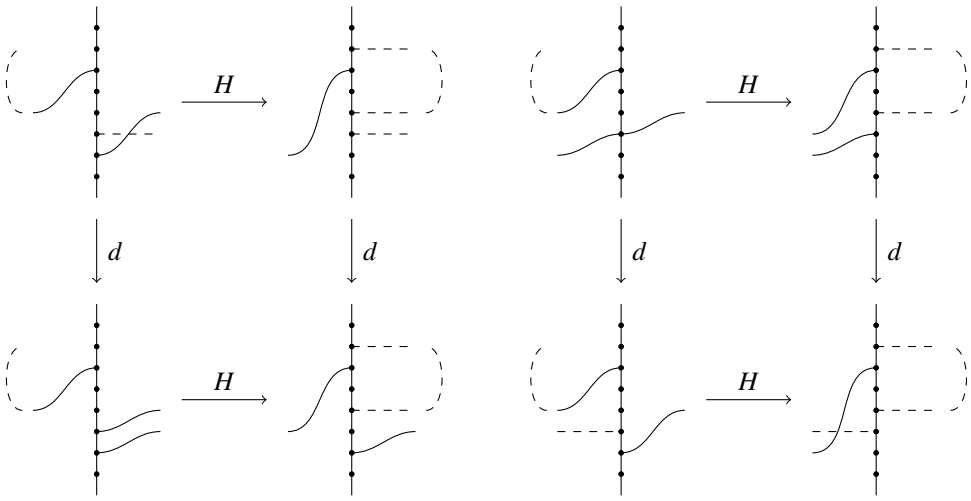
Case 3.1 Case 3.2

Figure 9: Cancellations in $d \circ H + H \circ d = \mathbb{I}_M$.



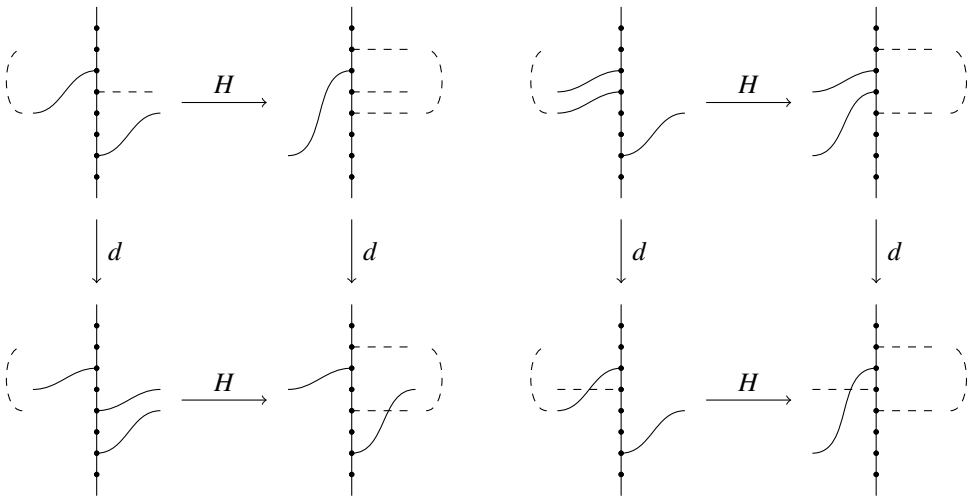
Case 3.3

Figure 10: Cancellations in $d \circ H + H \circ d = \mathbb{I}_M$.



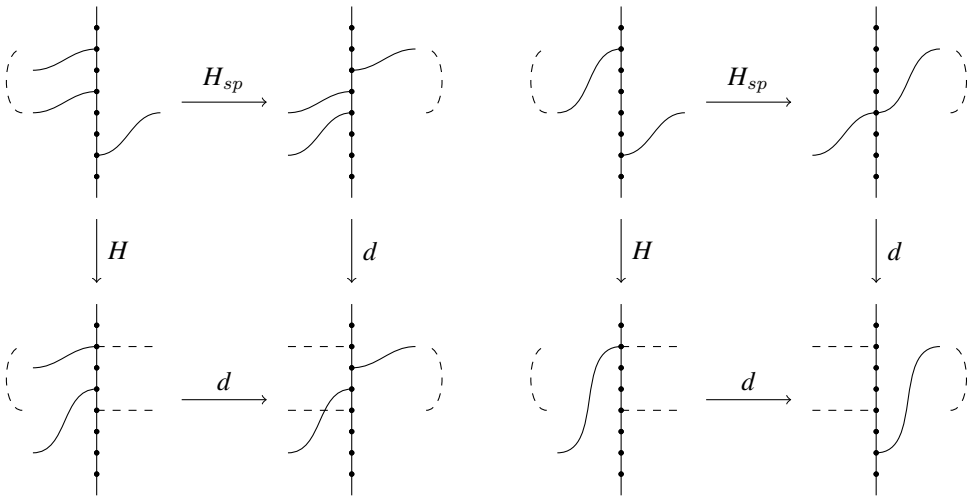
Case 4.1 Case 4.2

Figure 11: Cancellations in $d \circ H + H \circ d = \mathbb{I}_M$.



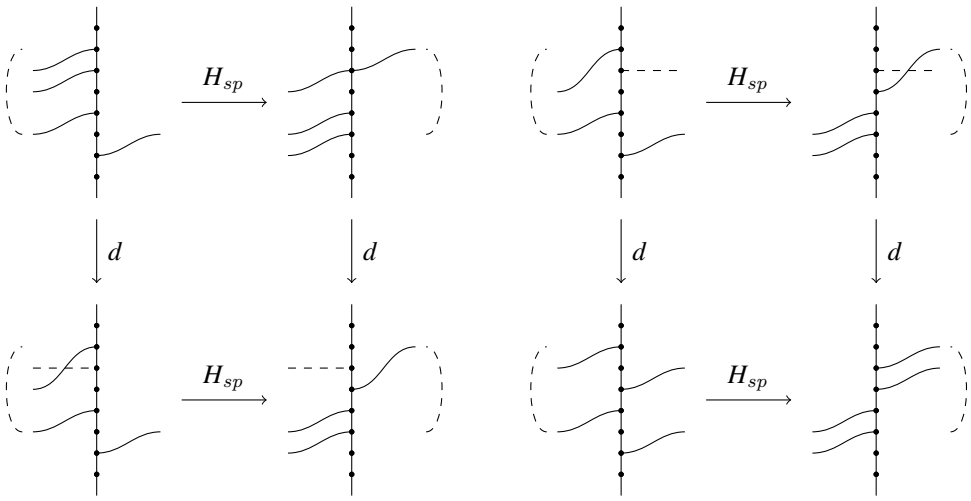
Case 4.3 Case 4.4

Figure 12: Cancellations in $d \circ H + H \circ d = \mathbb{I}_M$.



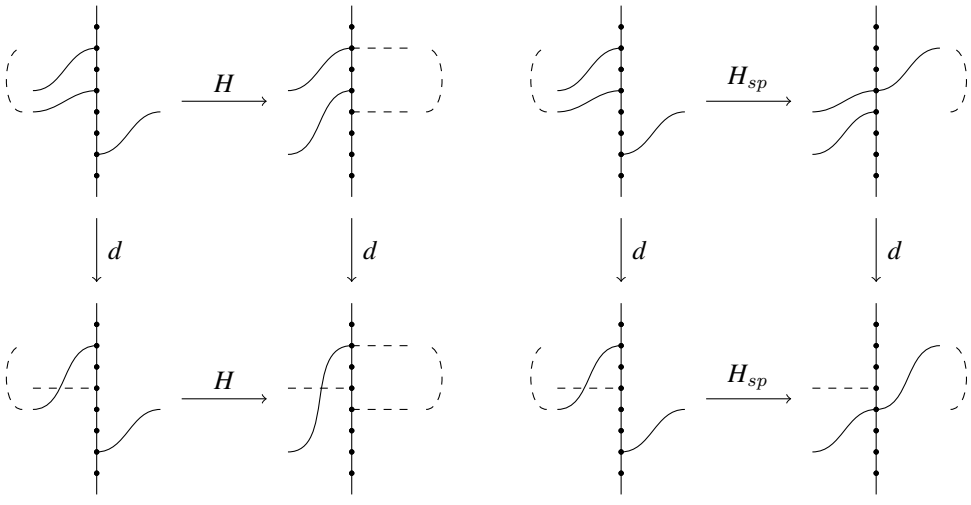
Case 4.5 Case 4.6

Figure 13: Cancellations in $d \circ H + H \circ d = \mathbb{I}_M$.



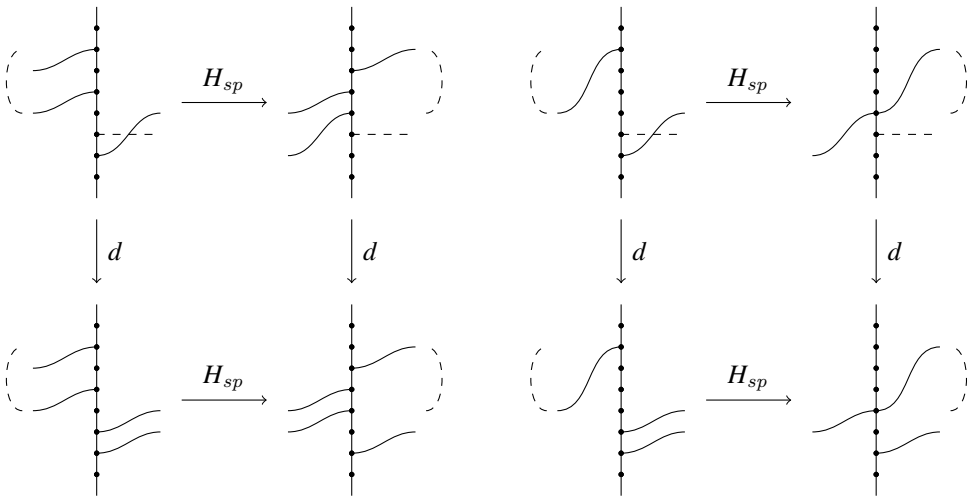
Case 4.7(b) Case 4.8(b)

Figure 14: Cancellations in $d \circ H + H \circ d = \mathbb{I}_M$. Cases 4.7(a) and 4.8(a) are similar to Cases 2.5(a) and 2.6(a).



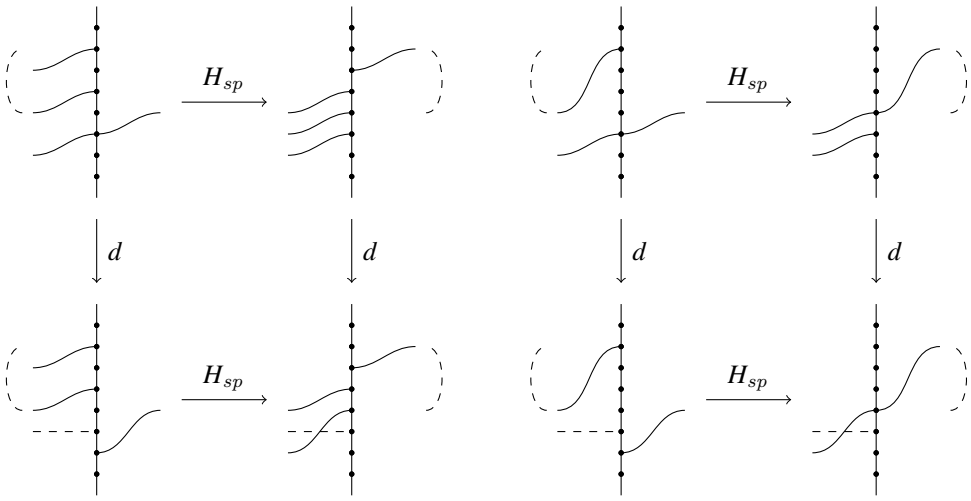
Case 4.9(a) Case 4.9(b)

Figure 15: Cancellations in $d \circ H + H \circ d = \mathbb{I}_M$.



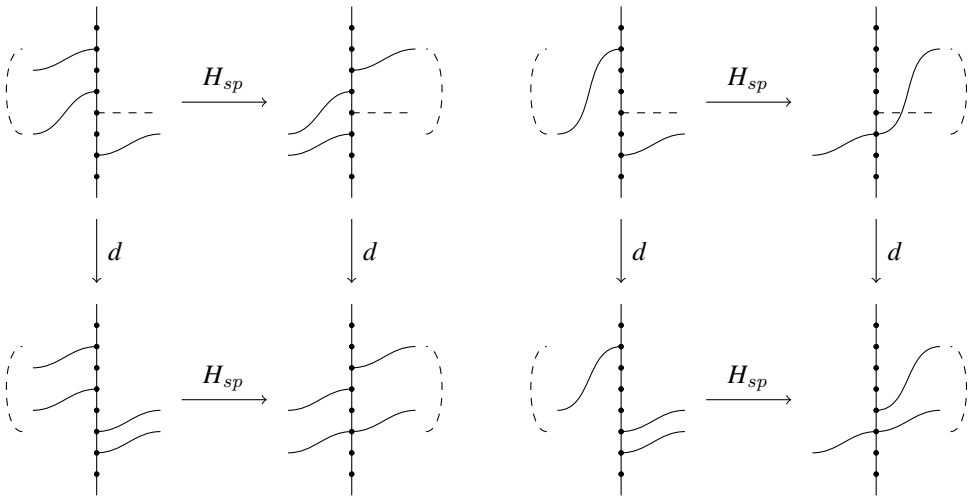
Case 4.10(b) Case 4.10(c)

Figure 16: Cancellations in $d \circ H + H \circ d = \mathbb{I}_M$. Case 4.10(a) is the same as Case 4.1.



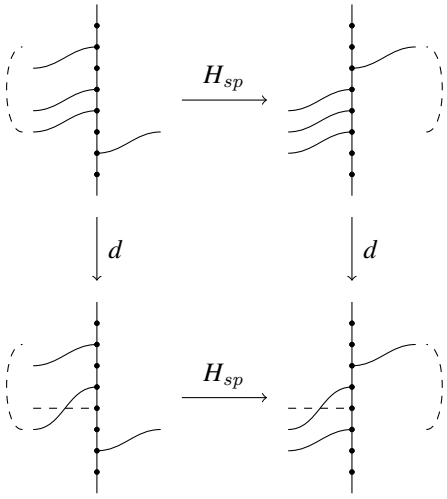
Case 4.11(b) Case 4.11(c)

Figure 17: Cancellations in $d \circ H + H \circ d = \mathbb{I}_M$. Case 4.11(a) is the same as Case 4.2.



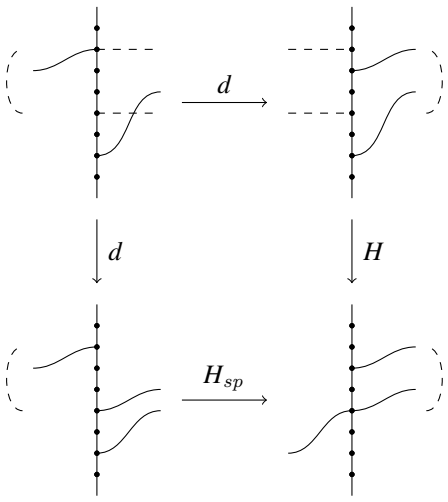
Case 4.12(b) Case 4.12(c)

Figure 18: Cancellations in $d \circ H + H \circ d = \mathbb{I}_M$. Case 4.12(a) is the same as Case 4.3.



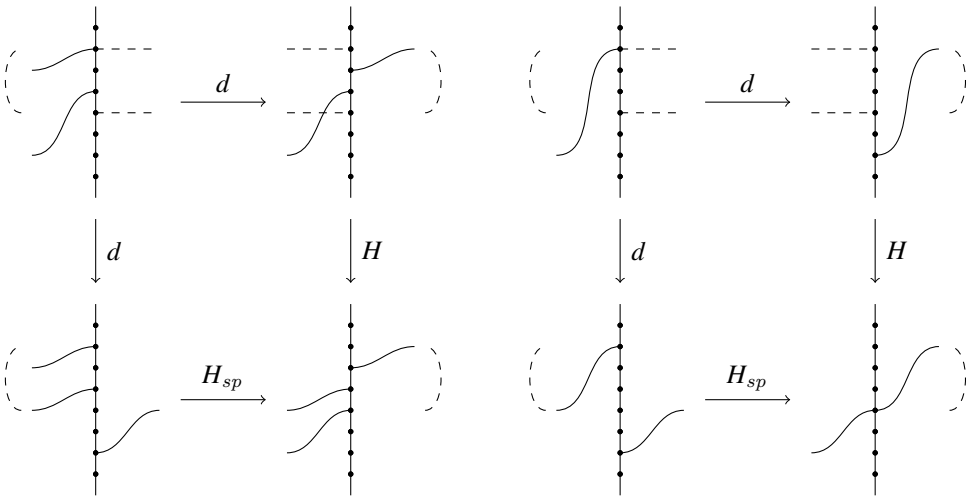
Case 4.13(b)

Figure 19: Cancellations in $d \circ H + H \circ d = \mathbb{I}_M$. Case 4.13(a) is the same as Case 4.4. Case 4.13(c), with the second special case, cannot occur.



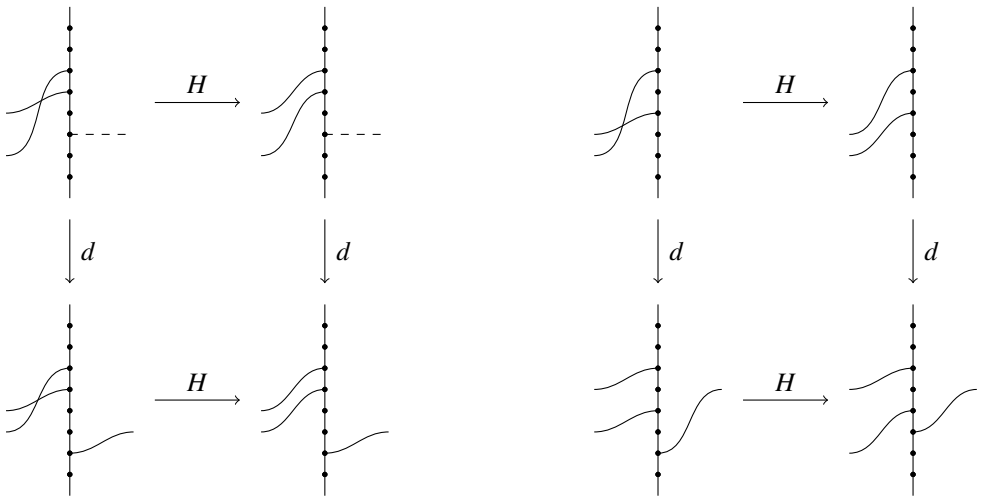
Case 6.1

Figure 20: Cancellations in $d \circ H + H \circ d = \mathbb{I}_M$.



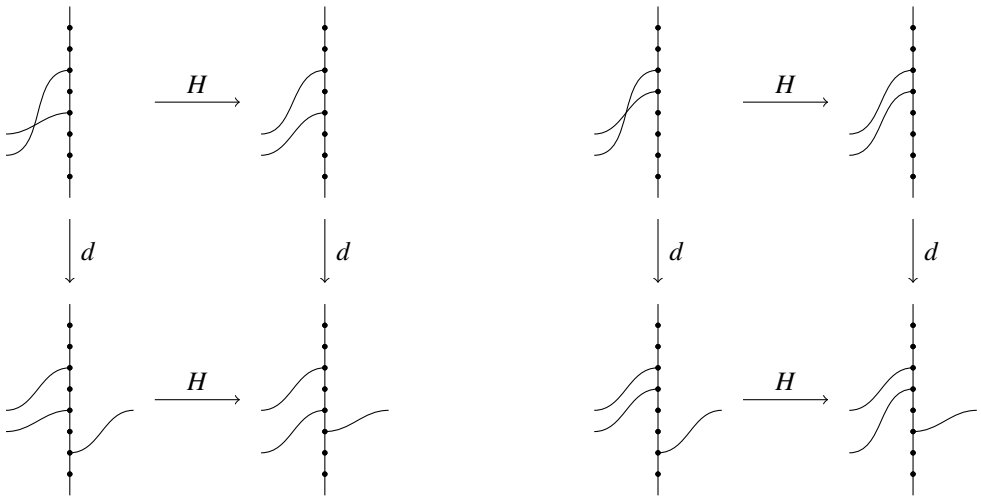
Case 7.1 Case 7.2

Figure 21: Cancellations in $d \circ H + H \circ d = \mathbb{I}_M$.



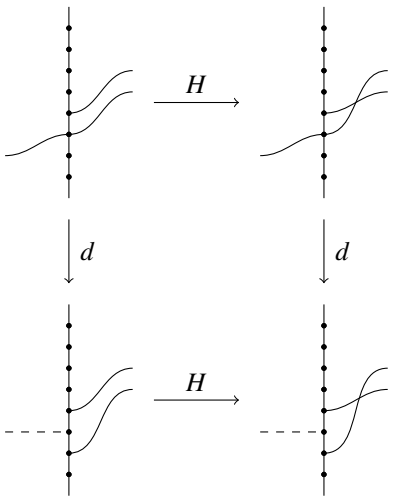
Case 9.1 Case 9.2

Figure 22: Cancellations in $d \circ H + H \circ d = \mathbb{I}_M$.



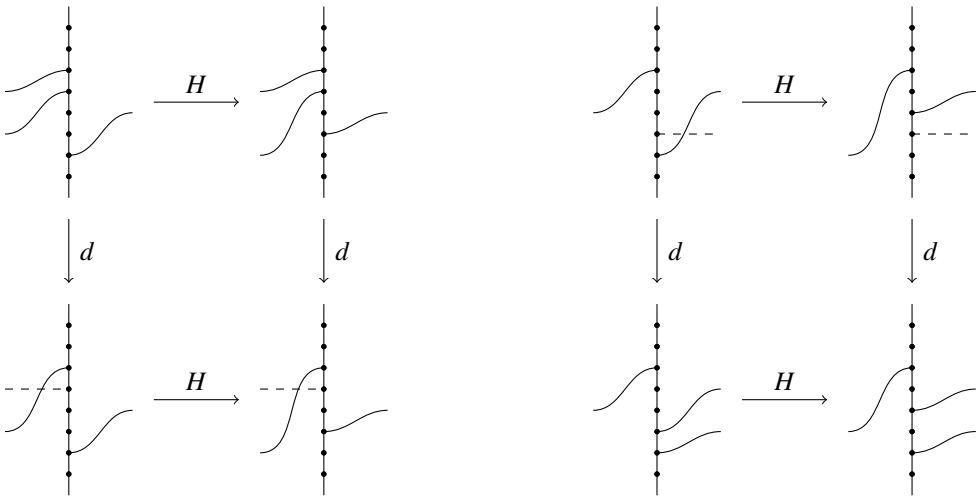
Case 9.2' Case 9.3

Figure 23: Cancellations in $d \circ H + H \circ d = \mathbb{I}_M$.



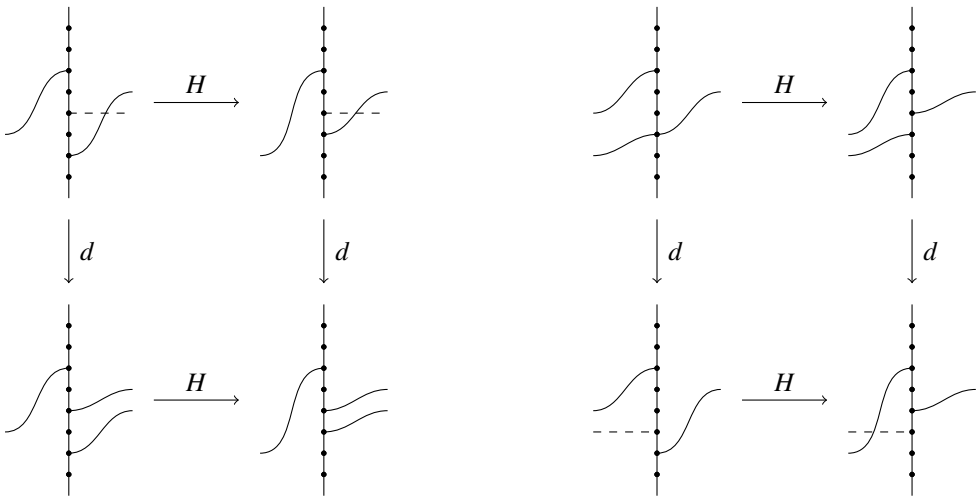
Case 10.1

Figure 24: Cancellations in $d \circ H + H \circ d = \mathbb{I}_M$.



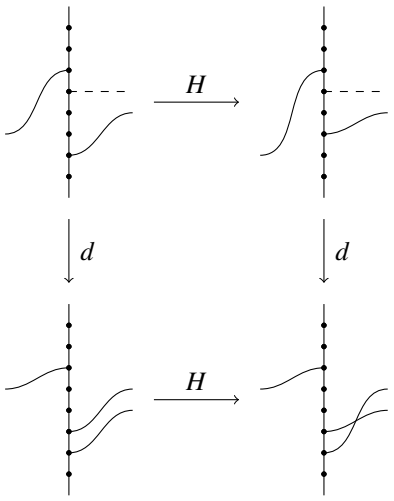
Case 11.1 Case 11.2

Figure 25: Cancellations in $d \circ H + H \circ d = \mathbb{I}_M$.



Case 11.3 Case 11.4

Figure 26: Cancellations in $d \circ H + H \circ d = \mathbb{I}_M$.



Case 11.5

Figure 27: Cancellations in $d \circ H + H \circ d = \mathbb{I}_M$.