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(54) Title: METHODS AND SYSTEMS FOR STREAMING BLOCK TEMPLATES WITH CROSS-REFERENCES

(57) Abstract: Methods and devices for compressing transaction identifiers by a first mining node in a blockchain network. The method may include building a first candidate block containing a first ordered list of transaction identifiers; receiving, from a second mining node, data defining a second ordered list of transaction identifiers in a second candidate block being mined by the second mining node; determining that at least one of the transaction identifiers in the first ordered list is also in the second ordered list; generating an append message containing data defining the first ordered list of transaction identifiers, wherein the data specifies said at least one transaction identifier in the first ordered list of transaction identifiers by including an index position of said at least one transaction identifier in the second ordered list of transaction identifiers; and transmitting the append message to the second mining node.