$$floating\,point ::= (non\,zero\,integer)`.'(fraction)$$
$$fraction ::= (middle\,sequence)|(fraction\,with\,exponent))$$
$$fraction\,with\,exponent ::= (non\,zero\,fraction)`E'(non\,zero\,integer)$$
$$non\,zero\,fraction ::= (middle\,sequence)(non\,zero\,digit)$$
$$non\,zero\,integer ::= `\text{-}'(non\,zero\,number)|non\,zero\,number$$
$$non\,zero\,number ::= (non\,zero\,digit)(middle\,sequence)$$
$$middle\,sequence ::= (any\,digit)(middle\,sequence)|\epsilon$$
$$any\,digit ::= `0'|non\,zero\,digit$$
$$non\,zero\,digit ::= `1'|`2'|`3'|`4'|`5'|`6'|`7'|`8'|`9'$$