Graph of existing and proposed relations among constant pool structures, to support "template classes".

Legend:

- A box shows one or more constant types. For example, class is a CONSTANT_Class_info structure.
- An arrow shows how one constant depends directly on another. For example, string depends directly on the Utf8 which specifies its characters.
- Arrows from boxes are labeled to show which item in a given constant pool structure provides the index for the relation indicated by the arrow. A label ending with brackets [] denotes an array of indexes associated with the constant pool structure.
- A circle shows, not a single constant type, but a conceptual group of types, which are (for some uses) interchangeable. Arrows into the circle show users of all the types in the group, while arrows out of the circle show the group itself. The only pre-existing conceptual group is *Loadable Constant*.
- A starred footnote of *new* or *new concept* indicates a proposed new constant type or conceptual group of types. The new types are CONSTANT_Segment, CONSTANT_Hole, CONSTANT_Descriptor, and CONSTANT_DefaultType. The new conceptual group is *Descriptor Constant*.
- Arrows with blank heads redirect to a different diagram.
- Blank boxes and circles denote recursion points, which redirect to the corresponding non-blank box or circle.
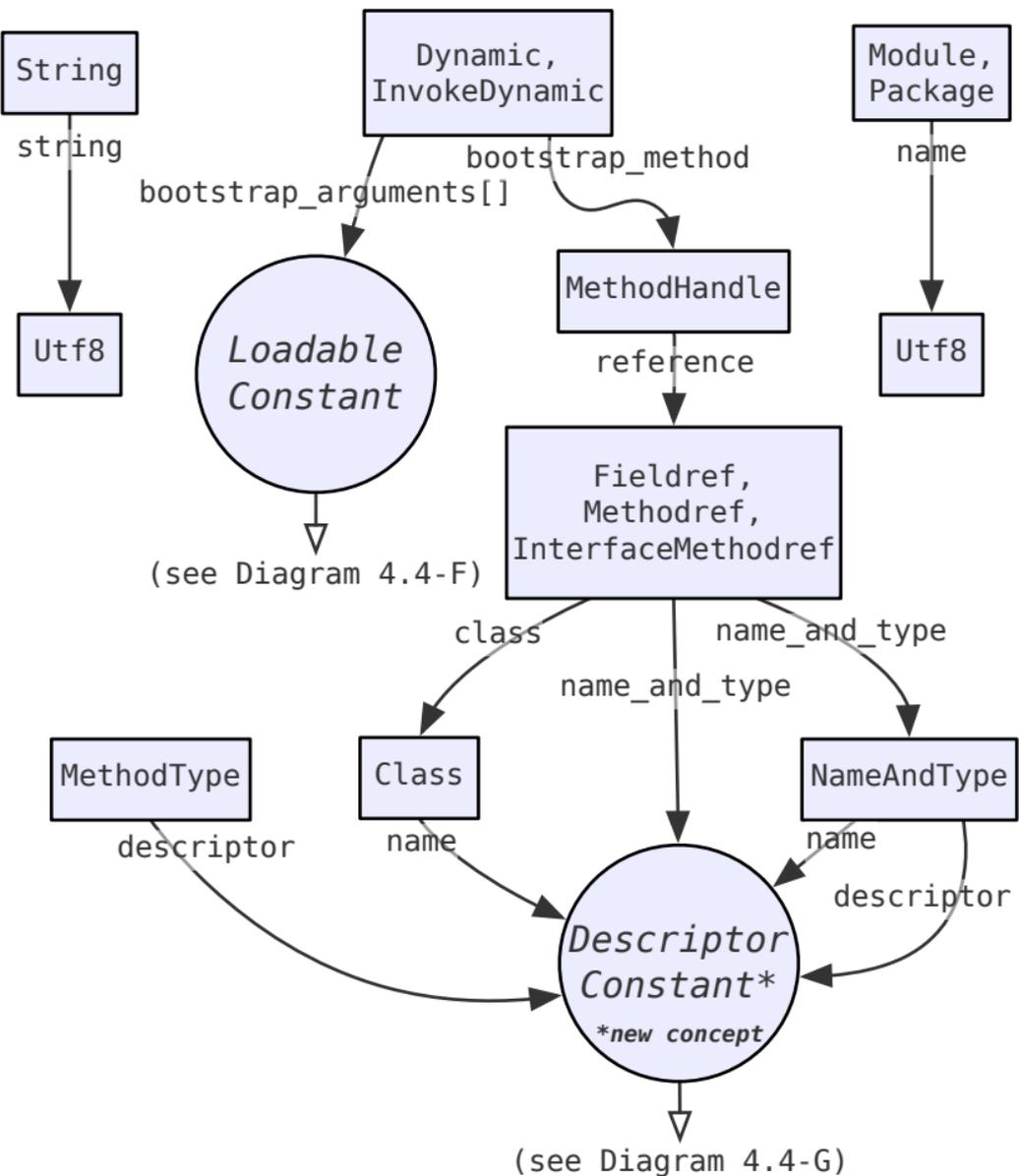
Diagram 4.4-E. Constant pool relations

String —string→ Utf8

Dynamic, InvokeDynamic —bootstrap_arguments[]→ Loadable Constant (see Diagram 4.4-F)

Dynamic, InvokeDynamic —bootstrap_method→ MethodHandle

Module, Package —name→ Utf8

MethodHandle —reference→ Fieldref, Methodref, InterfaceMethodref

Fieldref, Methodref, InterfaceMethodref —class→ Class

Fieldref, Methodref, InterfaceMethodref —name_and_type→ NameAndType

MethodType —descriptor→ Descriptor Constant*

Class —name→ Descriptor Constant*

NameAndType —name→ Descriptor Constant*

NameAndType —descriptor→ Descriptor Constant*

Descriptor Constant* *new concept (see Diagram 4.4-G)

Diagram 4.4-F. Loadable constant relations

Dynamic

bootstrap_arguments[]

InvokeDynamic

bootstrap_arguments[]

Loadable Constant

Class,
MethodType,
MethodHandle

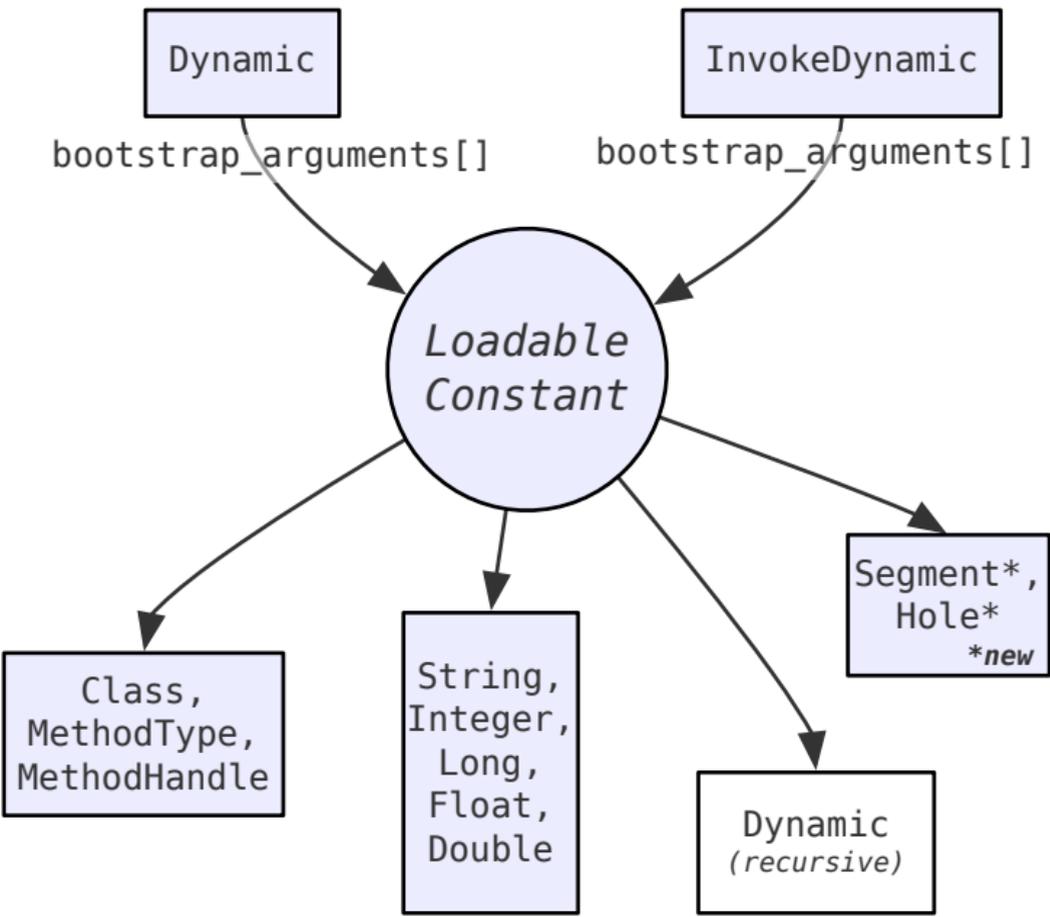String,
Integer,
Long,
Float,
Double

Dynamic
(recursive)

Segment*,
Hole*
new

Diagram 4.4-G. Descriptor constant relations