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WEAR RESISTING ALLOY

Robert W. Schlumpf and Anderson D. White, Houston, Tex., assignors to Hughes Tool Company, Houston, Tex., a corporation of Delaware

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2 Claims. (Cl. 75—126)

The invention relates to ferrous alloys designed to be employed in constructing devices which must resist abrasion.

The invention is designed for use in the formation of devices which are subjected to rapid wear, as in the construction of sand blast nozzles, well drill nozzles, and similar devices. In such cases the material of the nozzle is subjected to repeated impact of grains of hard material, such as sand and the like, and must resist wear.

It has been found by test that objects made of this alloy are exceptionally hard and abrasion resistant. The metal is not malleable, however, but is designed to be cast in the shape in which it is to be used.

In the production of our improved alloy we employ ingredients fused together in approximately the following proportions:

	Per cent
Carbon	1.50– 4.50
Manganese	0.50– 1.50
Silicon	0.50– 2.00
Chromium	25.0 –35.0
Molybdenum	3.00– 8.00
Iron—Balance to make up	100

It is understood that the proportions of the ingredients may be varied slightly from those which are indicated but it has been found that the best results are obtained within the ranges set out.

In carrying out our invention we have found the following typical composition to be entirely satisfactory:

	Per cent
Carbon	3.88
Manganese	1.08
Silicon	1.49
Chromium	32.3
Molybdenum	5.80
Iron—Balance to make up	100

It will be understood that our improved alloy may be employed in the construction of any device which may be cast into the desired shape and in which the device is not subjected to a great amount of shock or impact which may lead to fracture. It is particularly resistant to abrasion and wear.

What we claim as new is:

1. A hard abrasion resisting ferrous metal alloy, comprising the following ingredients fused together in approximately the proportions stated below:

	Per cent
Carbon	1.50– 4.50
Manganese	0.50– 1.50
Silicon	0.50– 2.00
Chromium	25.0 –35.0
Molybdenum	3.00– 8.00
Iron—Balance to make up	100

2. A cast ferrous hard metal object made up of ingredients alloyed together in appropriately the following proportions:

	Per cent
Carbon	3.88
Manganese	1.08
Silicon	1.49
Chromium	32.30
Molybdenum	5.80
Iron	55.45

ROBERT W. SCHLUMPF.
ANDERSON D. WHITE.