

UNITED STATES PATENT OFFICE.

CONRAD HUBERT HEINRICH CLAESSEN, OF BERLIN, GERMANY.

ALUMINUM ALLOY.

995,113.

Specification of Letters Patent. Patented June 13, 1911.

No Drawing.

Application filed December 11, 1907. Serial No. 406,104.

To all whom it may concern:

Be it known that I, CONRAD HUBERT HEINRICH CLAESSEN, chemist, a subject of Prussia, residing at Dorotheenstrasse 45, Berlin, Germany, have invented new and useful Improvements in and Relating to Aluminum Alloys; and I do hereby declare the following to be a full, clear, and exact description of the same.

10 My invention relates to improvements in alloys, and particularly to aluminum alloys.

The object of my invention is to provide an alloy which will be very light and at the same time stronger and of better quality than aluminum or the aluminum alloys heretofore known.

It has been proposed heretofore to increase the quality and strength of aluminum by the addition of magnesium and with very good results, but in such old alloy the amount of magnesium employed has been in excess of two per cent. It has also been proposed heretofore to alloy aluminum with slight percentages of magnesium, copper, iron and zinc. I have found that an alloy of aluminum of properties far superior to the alloys heretofore known may be formed by alloying aluminum simultaneously with magnesium and copper, it being important, however, that the magnesium shall not exceed two per cent. On the other hand good results are obtained by using up to five per cent. of copper.

While the proportions of magnesium and copper with the aluminum may be modified

to a certain extent so long as the limits fixed by me are maintained, I have obtained particularly good results with an alloy consisting substantially as follows: Aluminum 95.5 to 95.75 per cent., magnesium 0.25 to 0.5 per cent., and copper 4 per cent.

It is to be understood that it is difficult if not impossible commercially to obtain absolutely pure metals, and therefore the proportions stated above are to be understood as relating to the metals in as pure a state as ordinarily obtained in commerce.

Having thus fully described my invention, what I claim is:

1. An aluminum alloy consisting of aluminum, magnesium and copper, the magnesium not exceeding two per cent.

2. An aluminum alloy consisting of aluminum, magnesium and copper, the copper not exceeding five per cent.

3. An aluminum alloy consisting of aluminum, magnesium and copper, the magnesium not exceeding two per cent. and the copper not exceeding five per cent.

4. An aluminum alloy containing about four per cent. of copper and from about 0.25 to 0.50 per cent. of magnesium.

In testimony whereof, I have signed my name to this specification in the presence of two subscribing witnesses.

CONRAD HUBERT HEINRICH CLAESSEN.

Witnesses:

HENRY HASPER,
WOLDEMAR HAUPT.