

ITALIAN CONTRIBUTION TO CSP WITH FLAT REFLECTORS

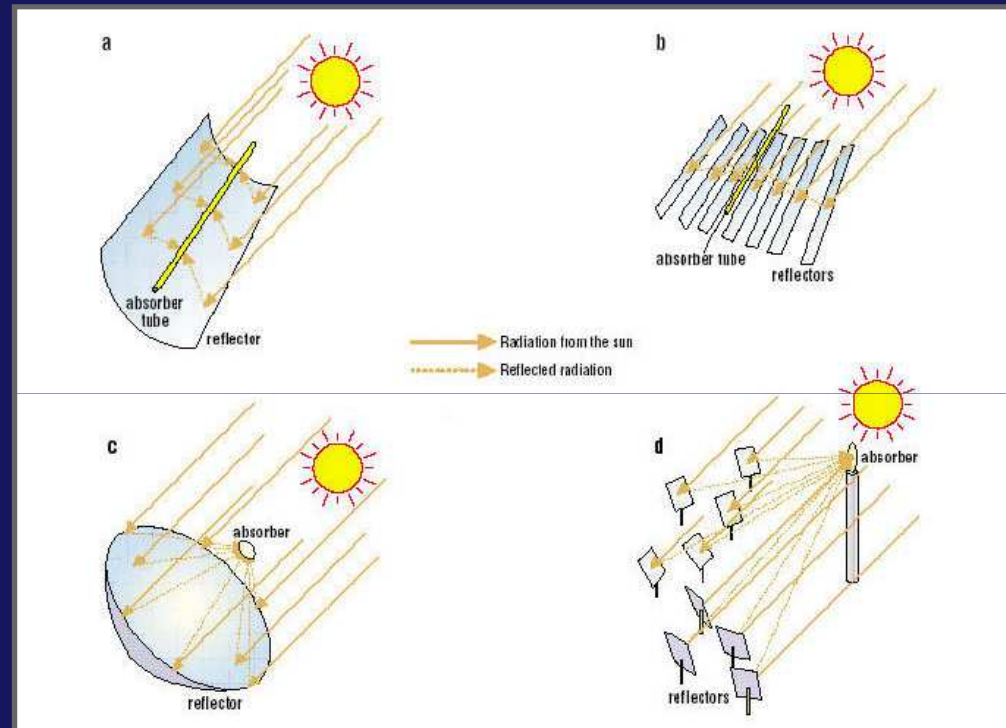
Cesare Silvi

Gruppo per la storia dell'energia solare (GSES), Italy
www.gses.it - csilvi@gses.it

ISES Solar World Congress
Kassel Germany, 28 Aug. - 02 Sept. 2011

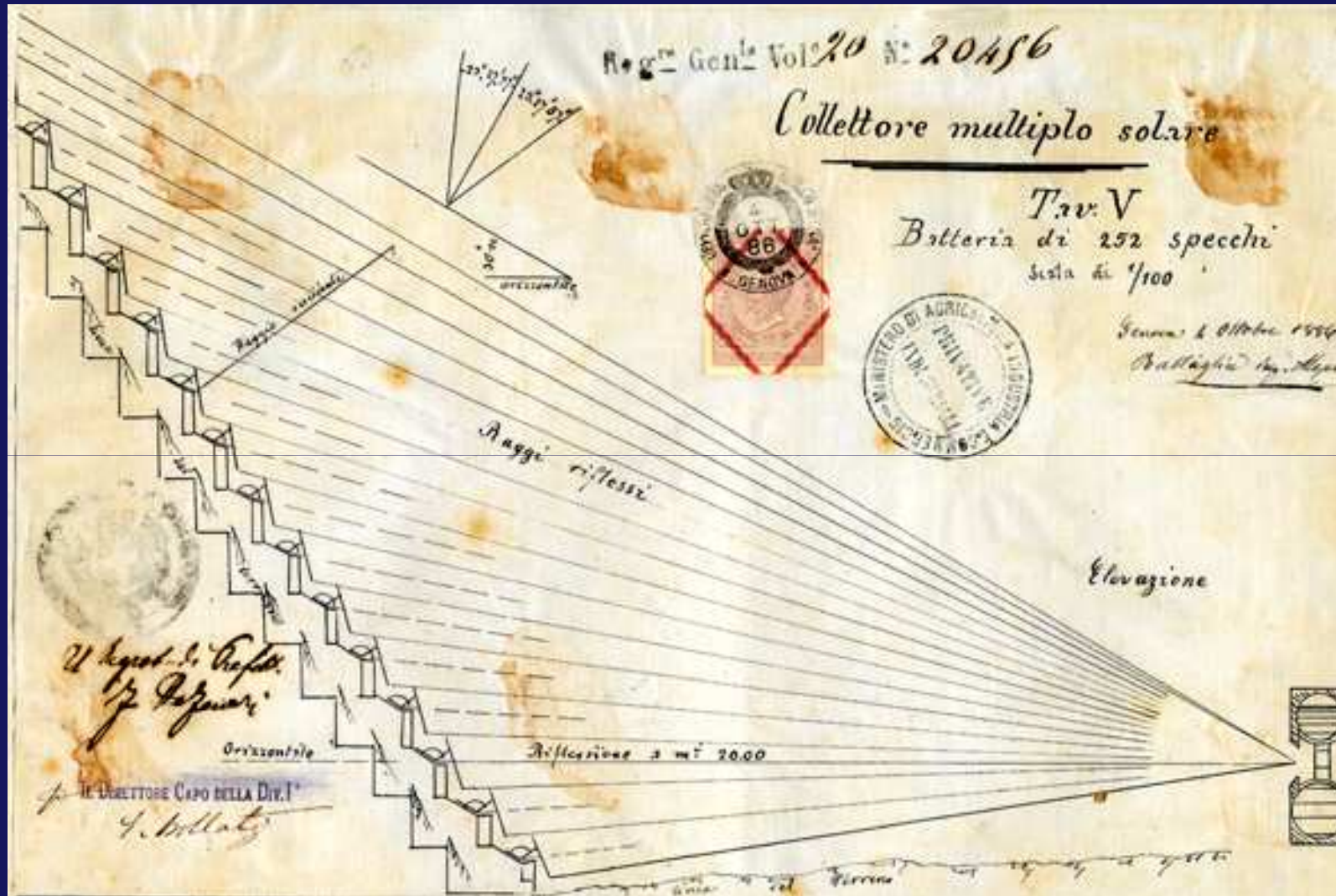


Concentrating Solar Thermal Power (CSP): curved or flat reflectors?



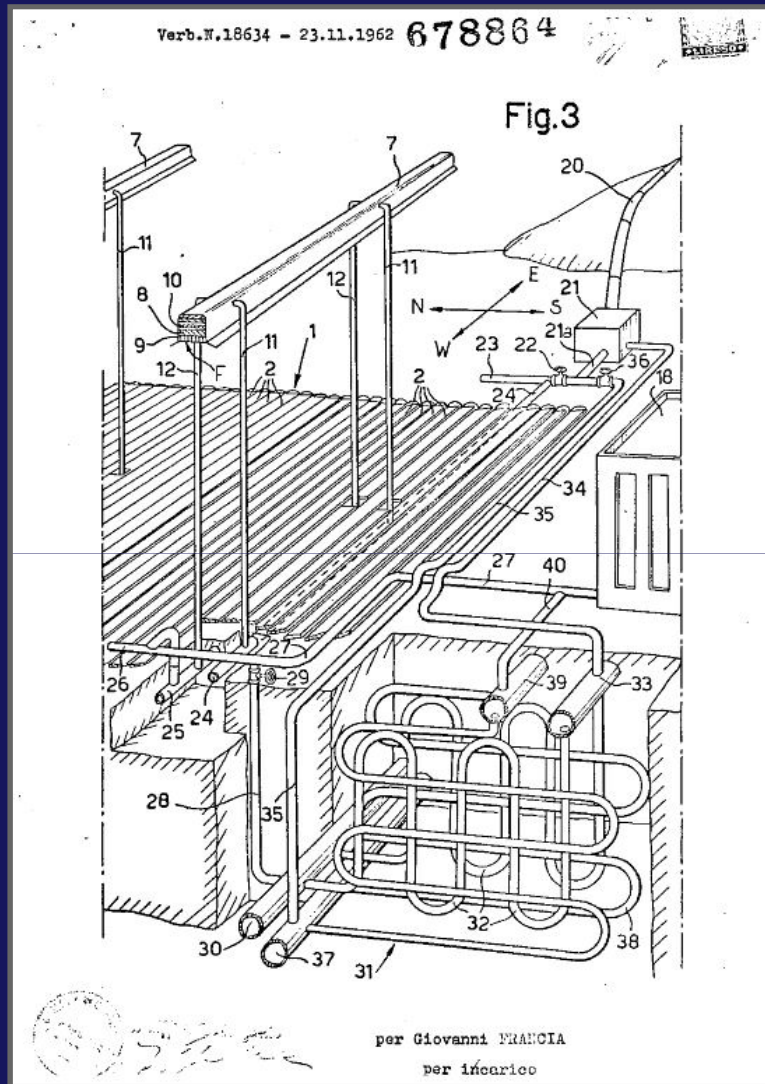
Flat reflectors: this was the answer of
Alessandro Battaglia in 1884
and Giovanni Francia in 1961/1965

Battaglia's "Multiple Solar Collector" patent, 1886

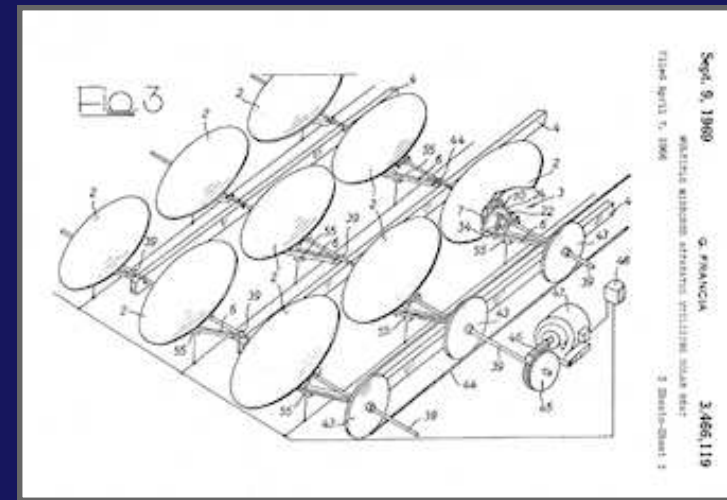
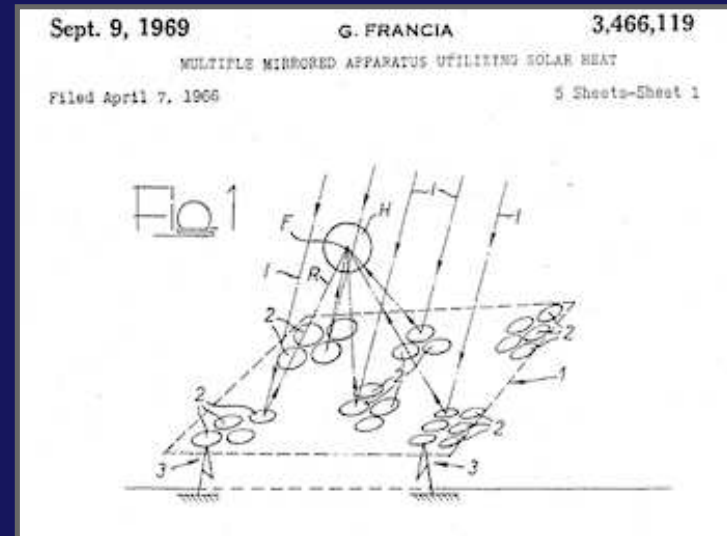


Separating the reflector field from the boiler

Francia's patents on Fresnel reflectors



Linear (Italy, 1962)

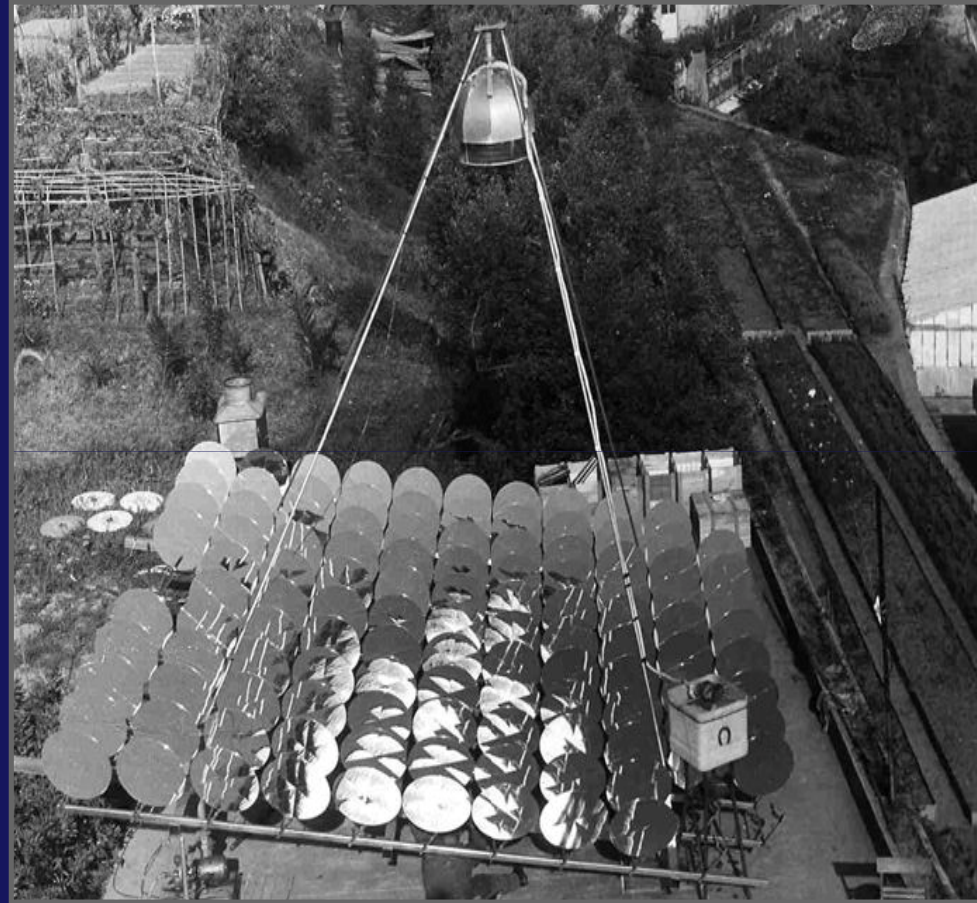


Point focus (US, 1969)

Francia's prototypes for Fresnel reflectors: *First in the world*

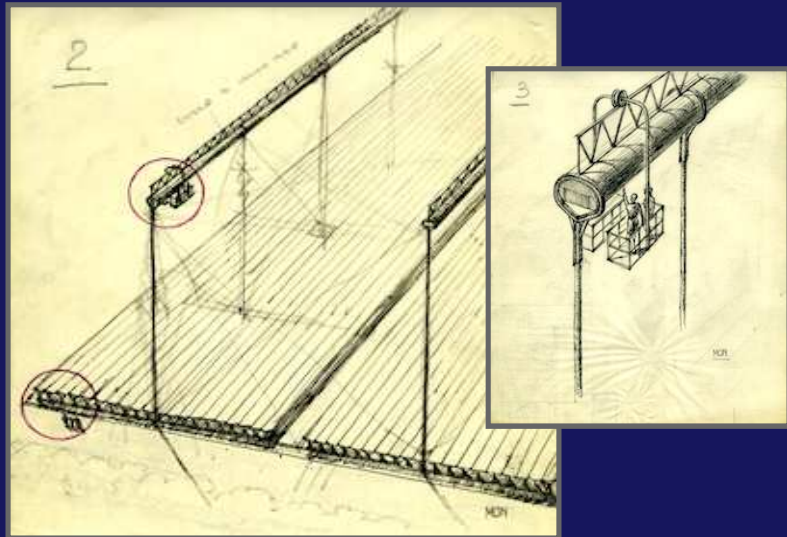


Linear (1961/1964)



Point focus (1965)

Pioneering work...



Francia's vision, 1965

Applied today



Ausra, 2009



Eurelios, Sicily, 1981



BrightSource Energy, 2011

Images and photos courtesy

Solar Paces

Italian State Central Archive

Giovanni Francia's Heirs

Museo dell'Industria e del Lavoro di Brescia

Ausra

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