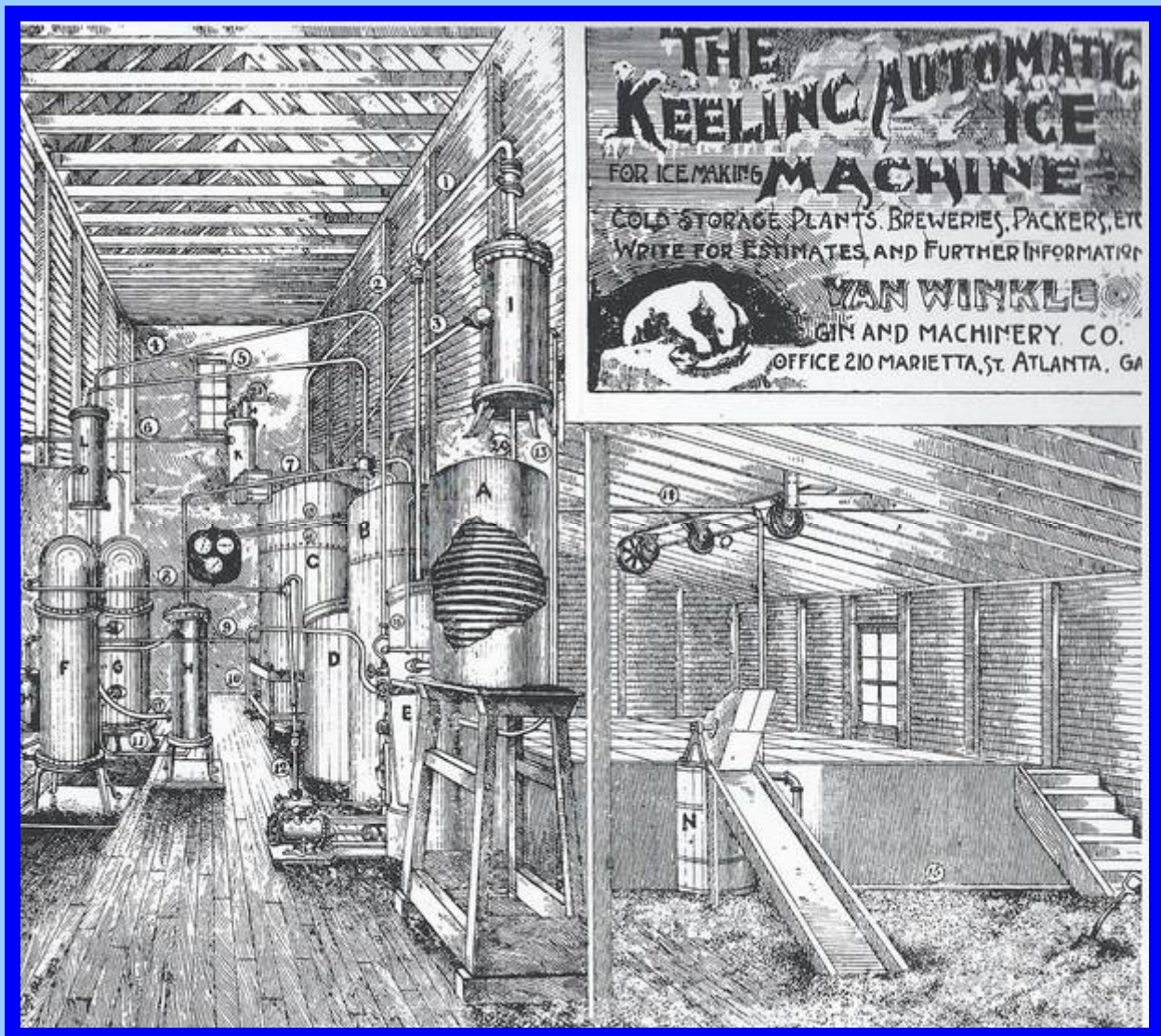
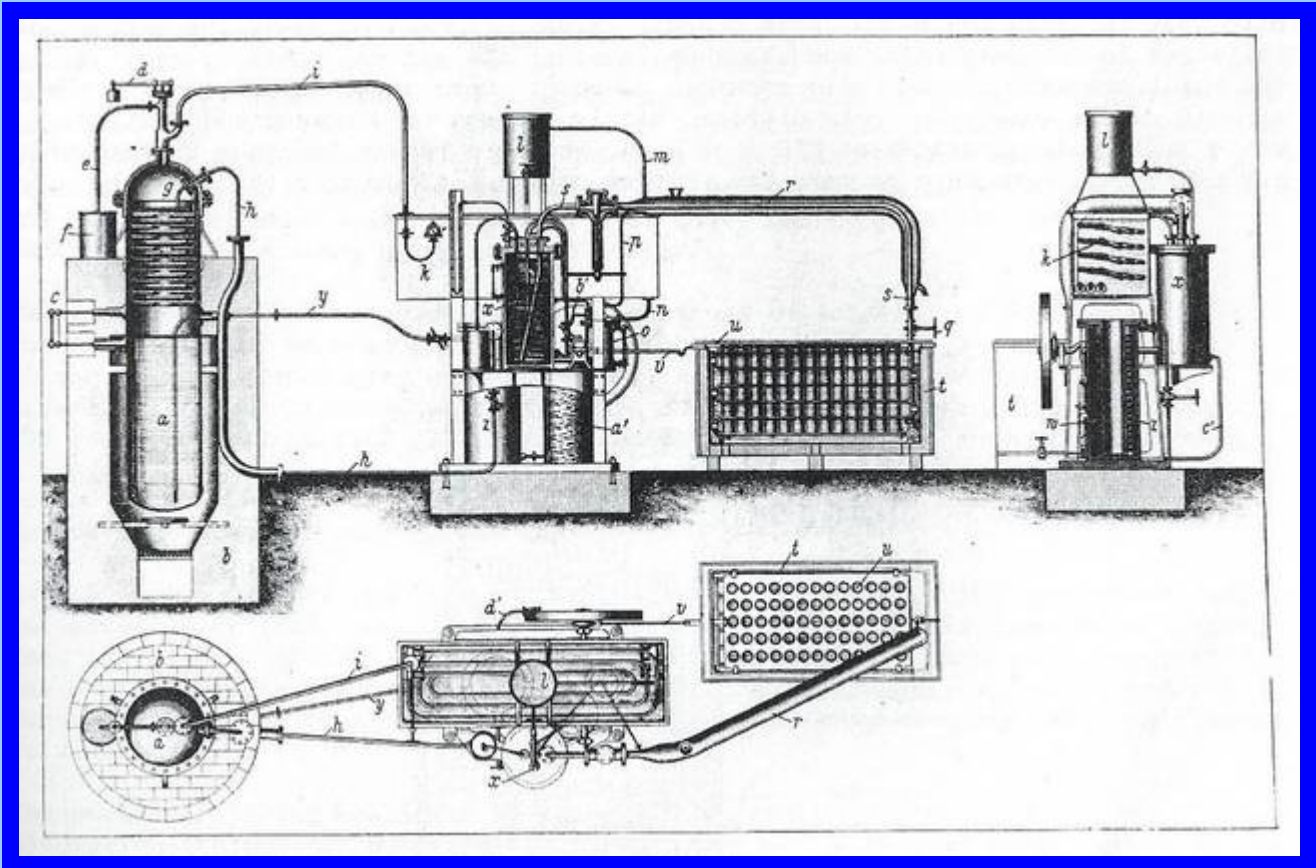


ABSORPTION REFRIGERATION

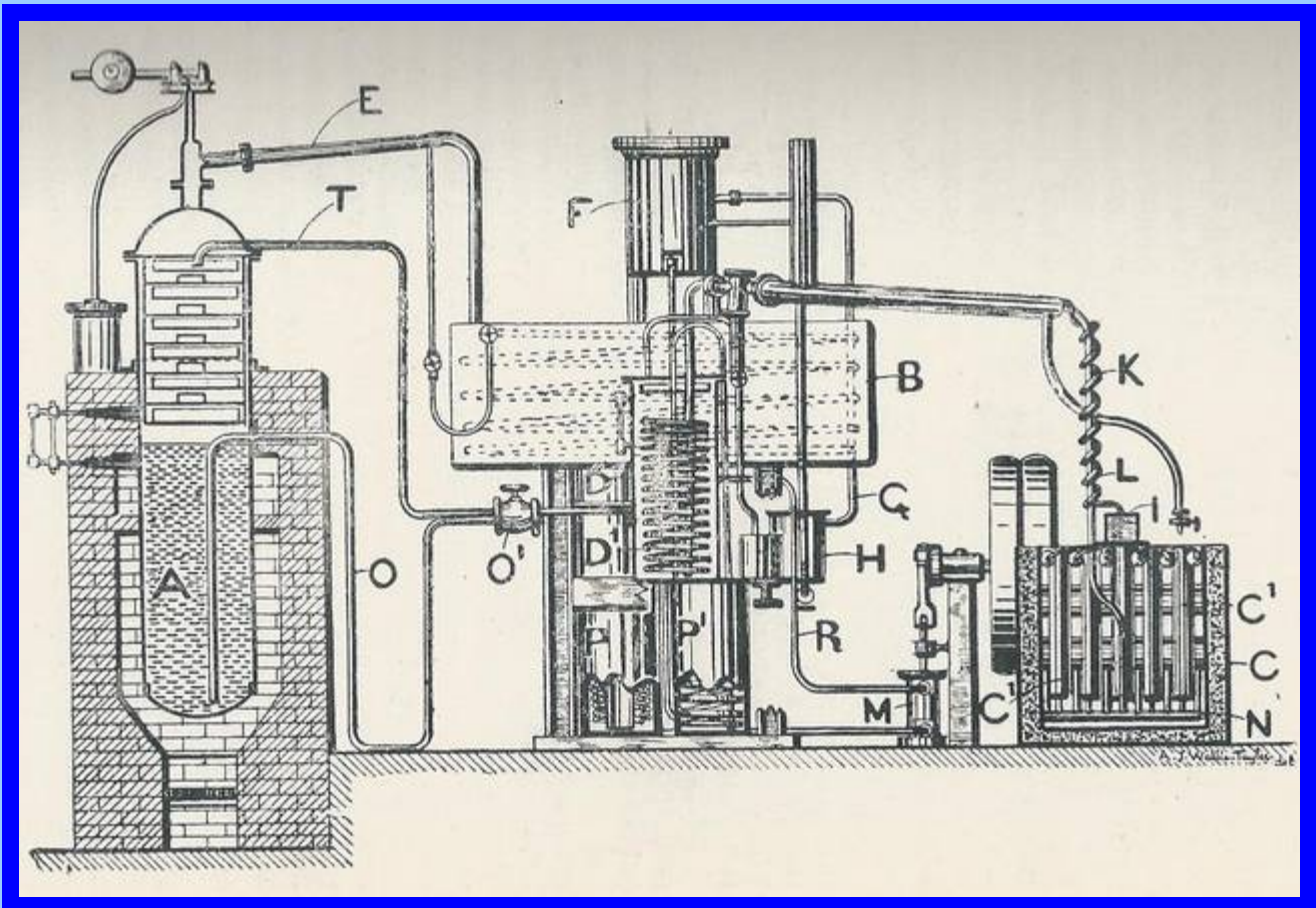
Ferdinand Carre of France patented an early type of absorption machine in 1859. Its practical development was due to Daniel Holden and others in the Confederacy during the American Civil War to produce ice for the Southern States when delivery of natural ice from the north was blocked by the Union. In the early 20th century aqua-ammonia machines were used until about 1915 when electrically driven compressors started to take their place. Modern plants, operated by steam or high pressure hot water, used lithium bromide as the refrigerant from about 1945 onwards.



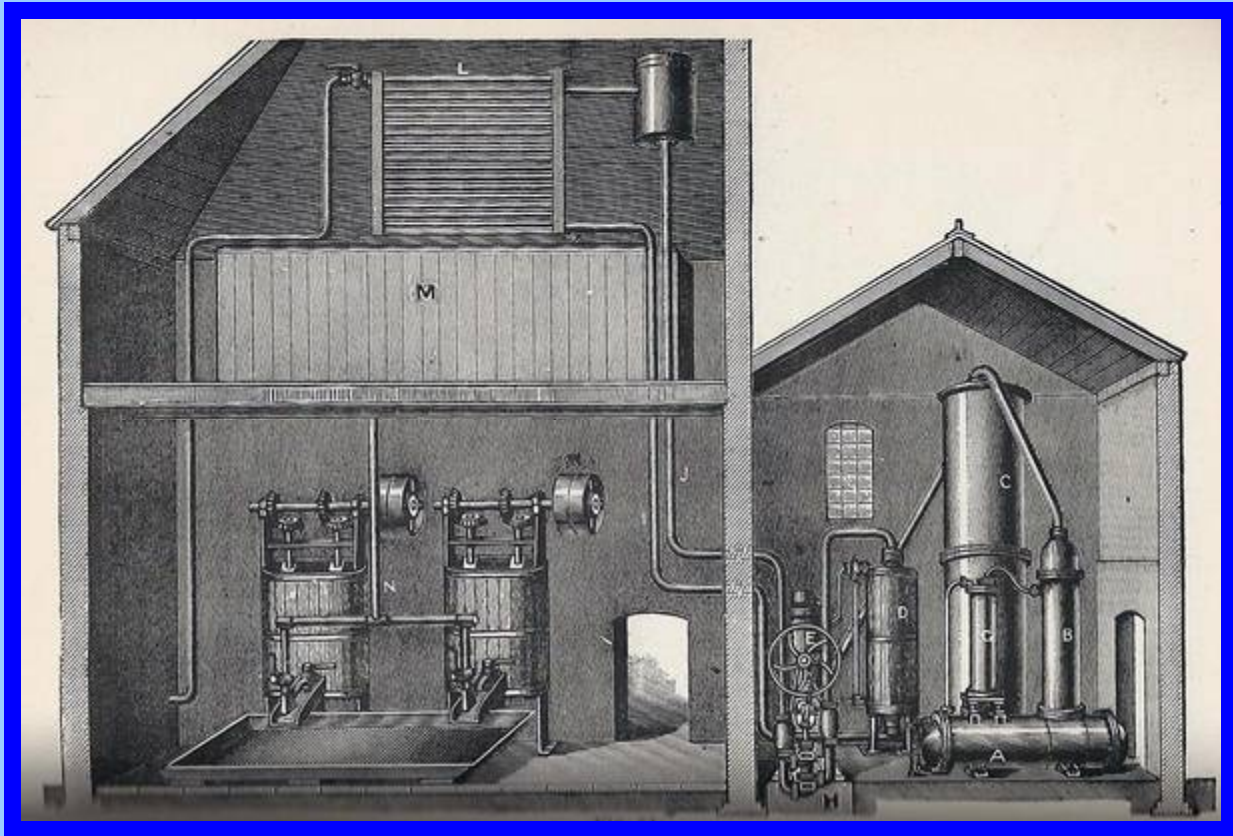
The Keeling aqua-ammonia absorption refrigerating plant for ice-making by Van Winkle Gin & Machinery Company of Atlanta, 1892



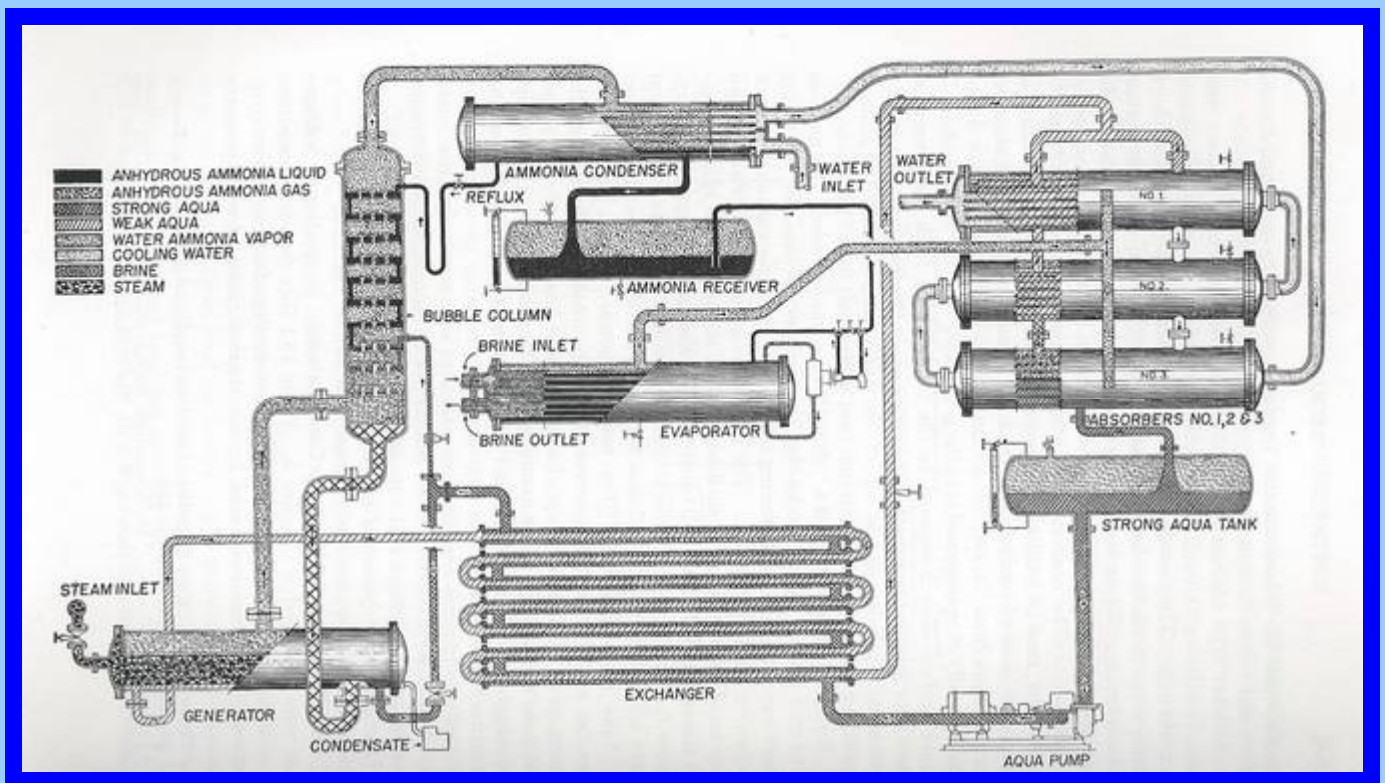
The Carre continuous absorption machine of 1859



Another drawing of the 1859 Carre machine



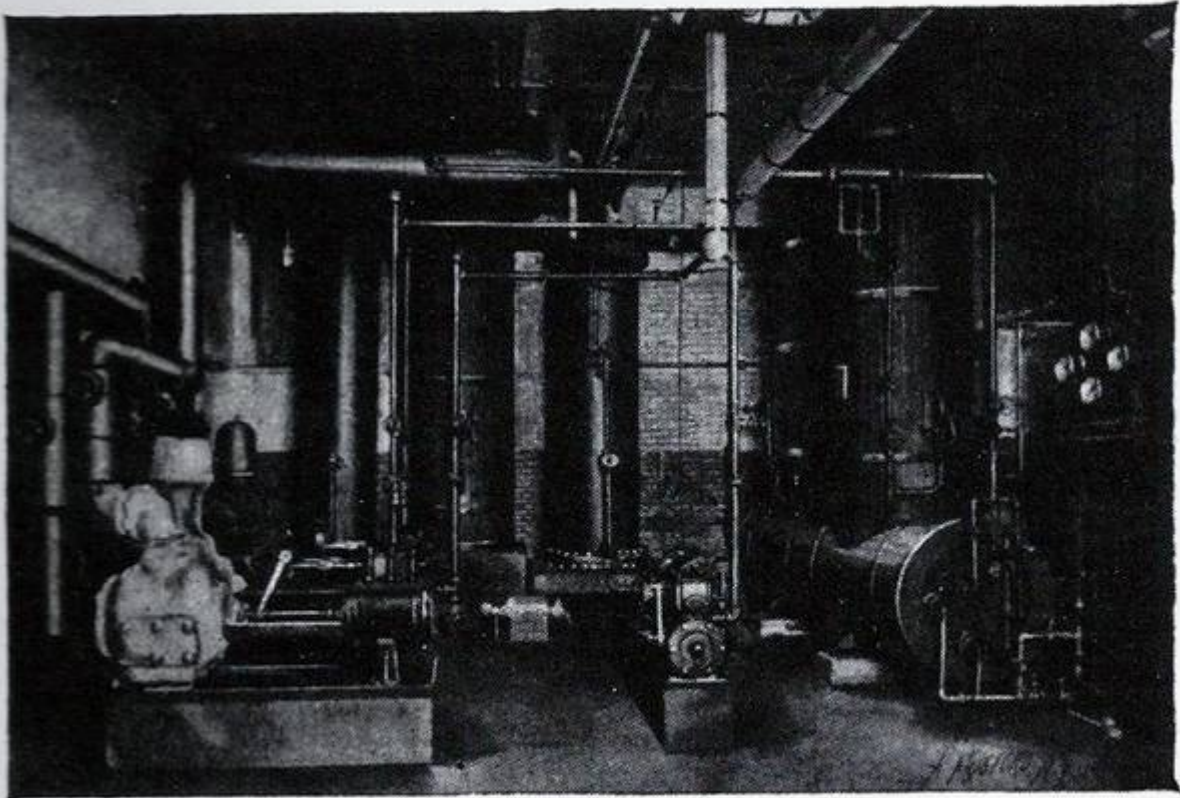
An installation of an ammonia absorption machine in an artificial butter factory, 1902



York absorption system, c.1946

THE
PONTIFEX-HENDRICK
ICE MAKING AND REFRIGERATING MACHINE
(REFRIGERANT—ANHYDROUS AMMONIA.)

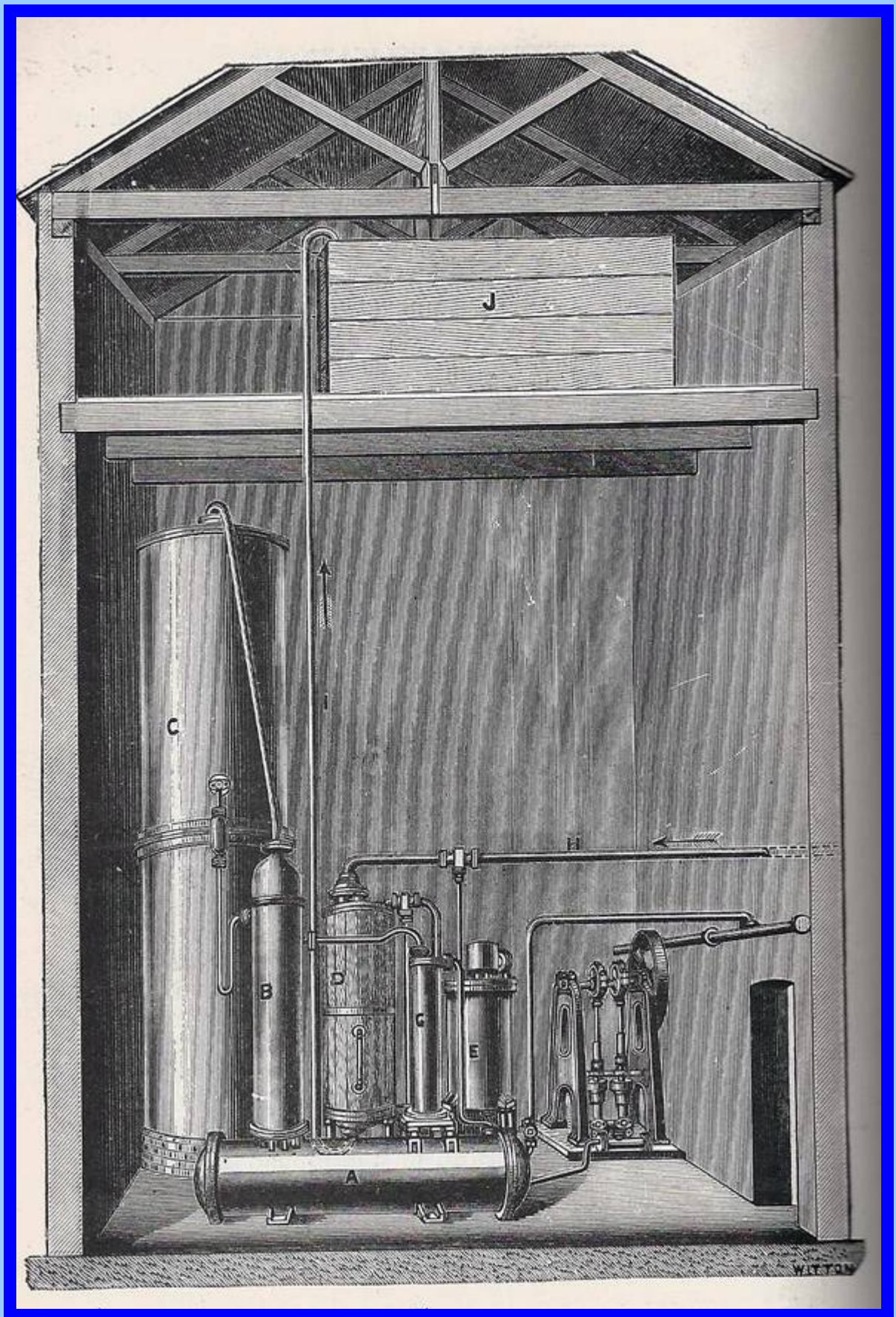
SPECIALLY ADAPTED FOR LOW TEMPERATURES IN
FREEZING AND COLD STORAGE HOUSES, CHEMICAL
WORKS, OIL REFINERIES, FISH FREEZERS, FUR STOR-
AGES, HOTELS AND RESTAURANTS, Etc., Etc.



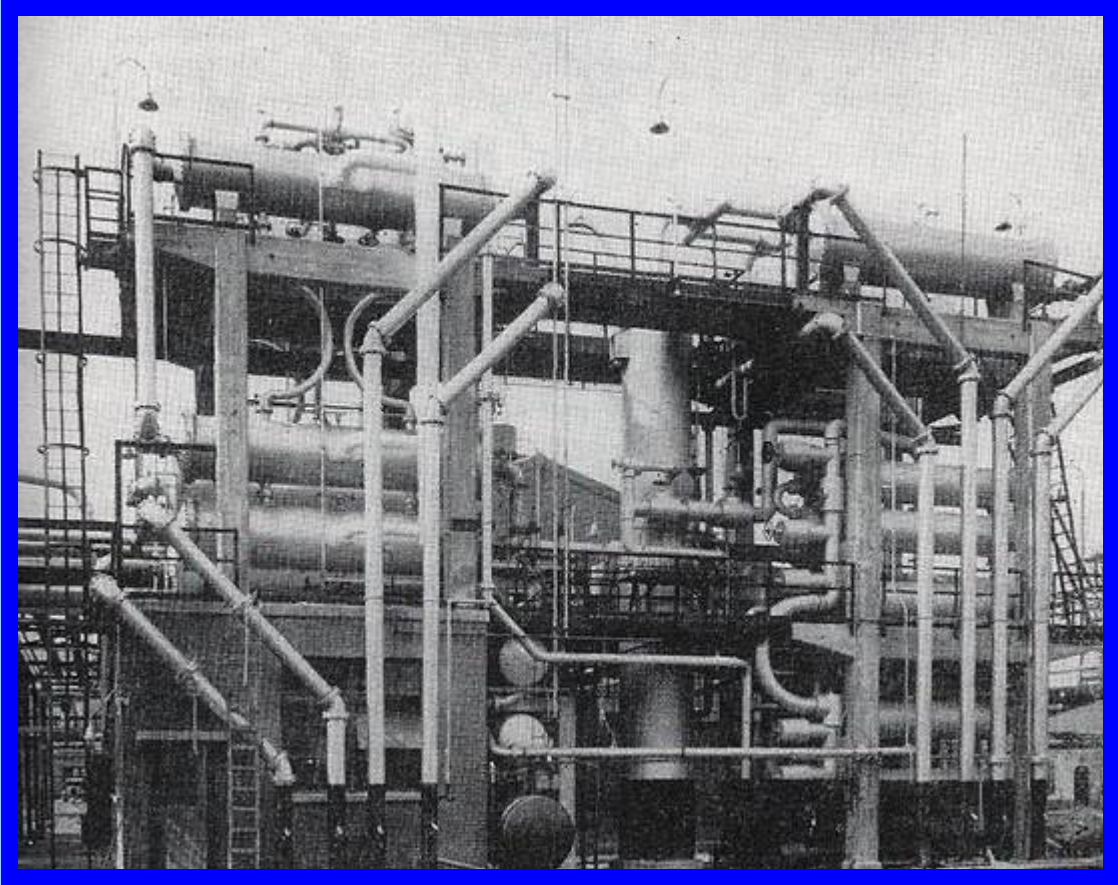
The Carbondale Machine Co.,
CARBONDALE, PA.

NEW YORK: 141 BROADWAY. CHICAGO: 61 PORTLAND BLOCK.
BOSTON: 544 TREMONT BUILDING.
PITTSBURG: 727 PARK BUILDING.

*Pontifex-Hendrix ammonia absorption system used by The Carbondale
Machine Company from 1882*



Pontifex-Wood ammonia absorption machine



York 600 TR (2100 kW) absorption unit c.1950



Carrier absorption machine of 150 TR (525 kW) installed at Mars Ltd, Slough c.1950