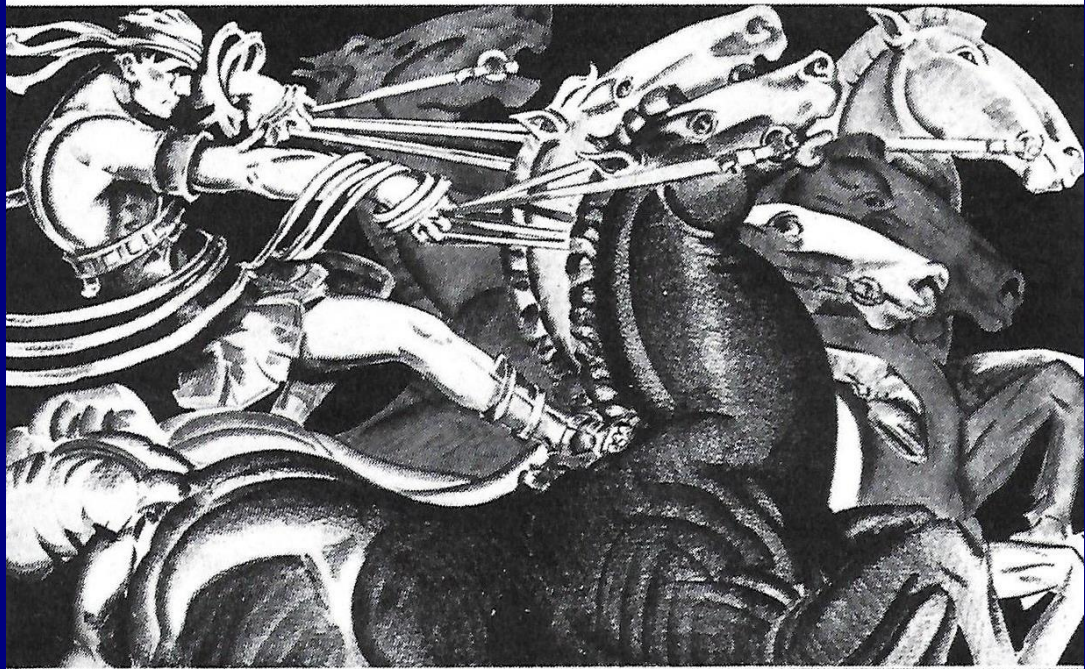
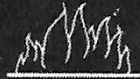


Controlled ... IN ONE HARNESS ...
THE SIX "CLIMATIC FACTORS"
OF TRUE AIR CONDITIONING



MINNEAPOLIS-HONEYWELL CONTROLLERS VALVES, RELAYS, THERMOSTATS, AND OTHER UNITS PROVIDE FOR SIMULTANEOUS CONTROL OF



WARMING



COOLING



HUMIDIFYING



DE-HUMIDIFYING



CIRCULATING



CLEANING

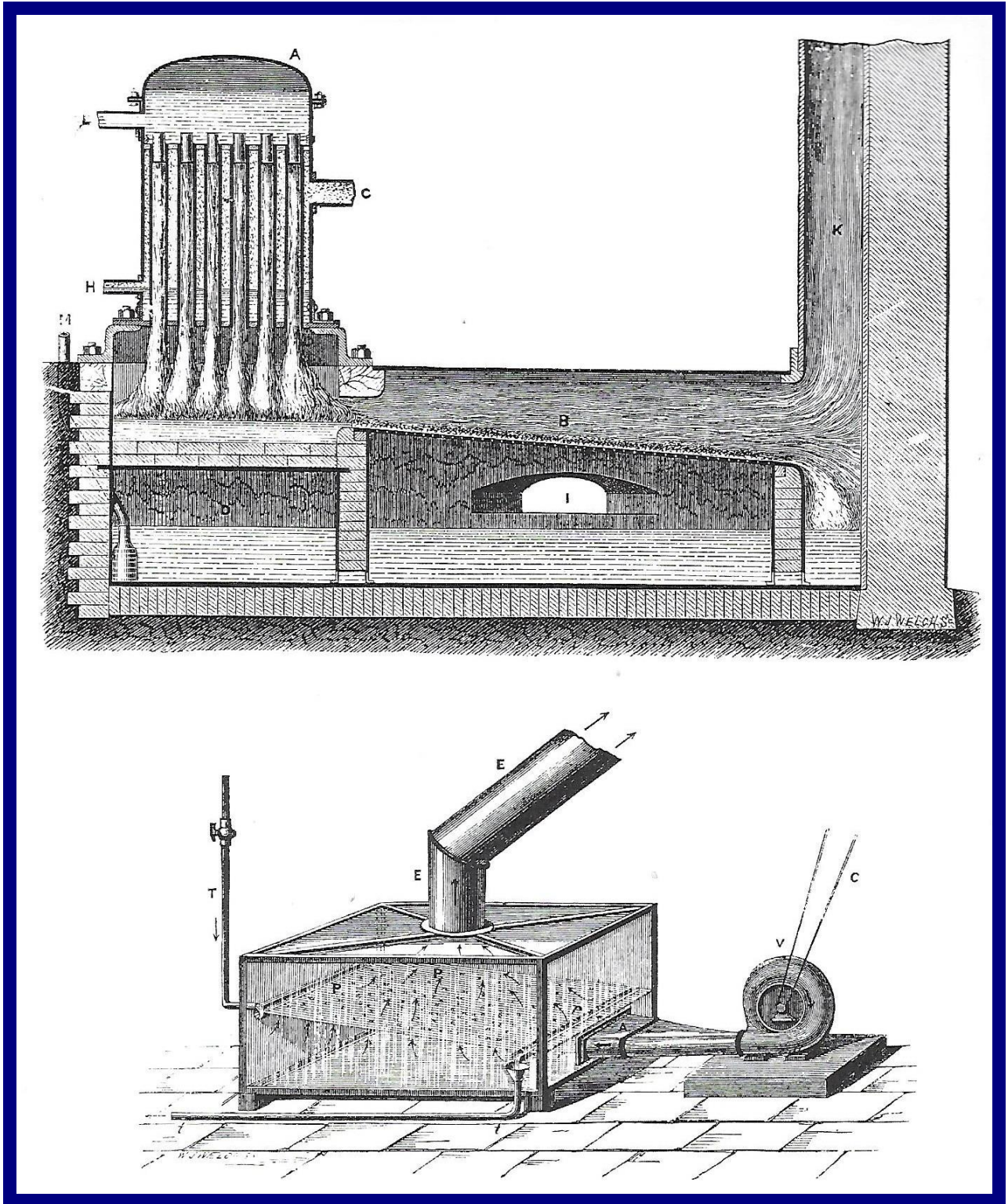
Minneapolis-Honeywell Controllers (*Automatic Heat and Air Conditioning, 1934*).

COMFORT AIR CONDITIONING

EVAPORATIVE COOLING, REFRIGERATION, ROOM UNITS

BRIAN ROBERTS

EVAPORATIVE COOLING 1873



Evaporative air cooler and air washer (*The Practical Magazine*, 1873).

CONTENTS



(The Heating and Ventilating Magazine, 1920).

Information and illustrations are taken from the Heritage Group Archives and Website.
BMR, Budleigh Salterton 2021.

EVAPORATIVE COOLING

Buffalo Forge 4 & 5, Carrier AC America 4, Jeffreys 6 & 7, Unknown (1873) 2

AIR CONDITIONING

Carrier Engineering Company UK 8 to 17 inc, Minneapolis-Honeywell 1

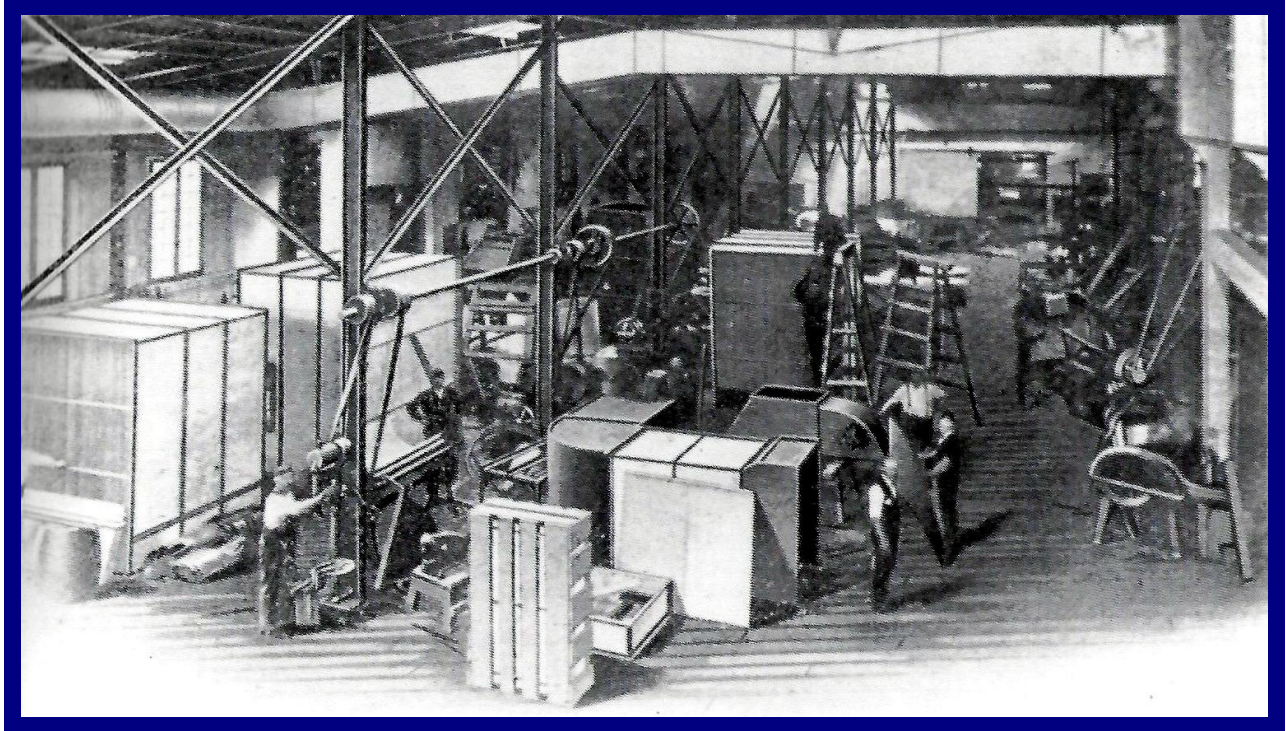
REFRIGERATION

Brown Boveri 20, Carbondale 18 & 19, Carrier 21,24 & 25, Trane 27,
Unknown 26, York 22 & 23

ROOM AIR COOLING "MISNAMED AIR CONDITIONING" UNITS

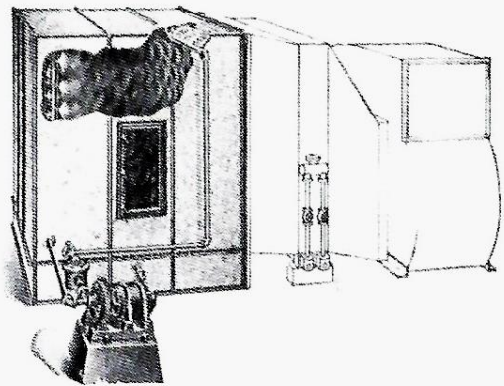
PATENTS: Babcock 37, Moore 35, Schutz 34, Sherman 34, Terry & Komroff 36,
MAKERS: Carrier 28 & 29, Carrier-Brunswick 30, Crosley 39, Fedders 39, Frigidaire 28 & 29,
General Electric 30 & 31,43, Mueller 41, Philco 40, Servel 40, Westinghouse 42, York 44

EVAPORATIVE COOLING 1908, 1912 Buffalo Forge & subsidiary CAC



Pure Air ^{is} the One Important Essential

necessary to perfect health in every station of life. THE CARRIER SYSTEM OF AIR PURIFYING AND HUMIDIFYING makes possible a healthful condition of air in every type of large building. Air breathed ordinarily *is not pure*. It must be *washed* free from the dust, dirt and germ-laden matter before it is absolutely pure and healthful. The CARRIER AIR WASHER and HUMIDIFIER *washes* air taken from outside the buildings—the fan distributing it to all rooms in a healthy condition and properly humidified.



The Eliminator Plates in the CARRIER AIR WASHER *eliminate* all infectious matter from the air. No system embodies such constructive principles and no system yet devised can equal ours in effectiveness. It is unquestionably perfect. Fully described in our literature, which is sent free on request. Also, at your request, our Engineer will call and lay before you a plan for your immediate requirement. Write today.

Carrier Air Conditioning Company
OF AMERICA

39 Cortlandt Street

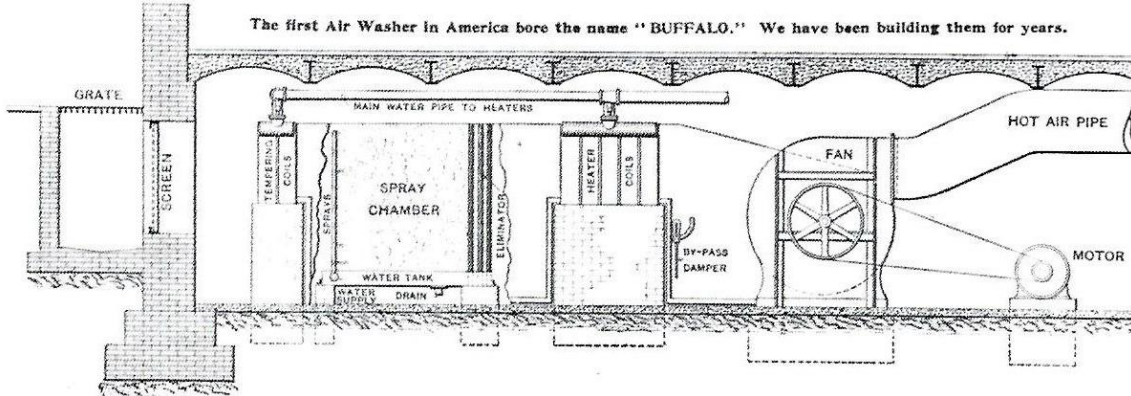
NEW YORK



EVAPORATIVE COOLING 1906

Buffalo Air Washer

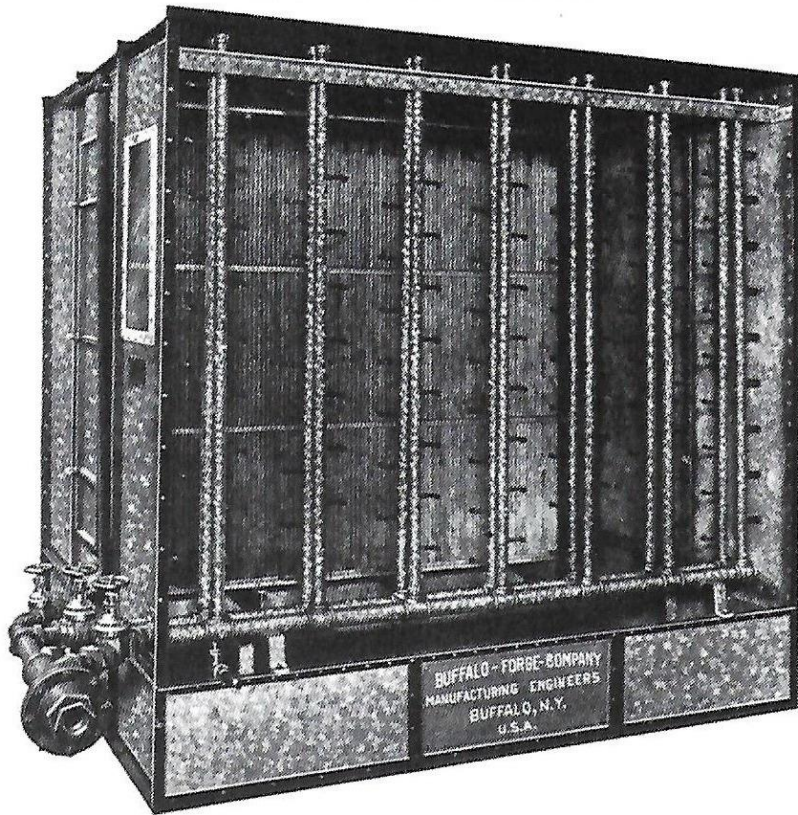
Patented in the United States (No. 808,897) and Canada (Nos. 96,770 and 96,771)



The first Air Washer in America bore the name "BUFFALO." We have been building them for years.

PRACTICAL OPERATION OF BUFFALO AIR WASHER

New Illustrated Catalog No. 97 just out. Send for a copy. Treats thoroughly and concisely on the Buffalo Air Washer and Humidifier.



BUFFALO AIR WASHER SHOWING NOZZLES AND SPRAY CHAMBER

Buffalo Forge Company
Buffalo, N.Y.

EVAPORATIVE COOLING 1928 J. Jeffreys & Co.

Arthur *L*loyd.co.uk

The Music Hall and Theatre History Site
Dedicated to Arthur Lloyd, 1839 - 1904.

[Home](#) [Index](#) [About](#) [Share](#) [New](#) [Contact](#) [FAQ](#) [Theatres](#) [People](#) [Business](#) [Features](#)

The Opening Souvenir Programme for the Davis Theatre Croydon - Tuesday December 18th 1928



Above - A Sketch of the Davis Theatre from the Theatre's opening souvenir programme on the 18th of December 1928

The Romance of the Davis Family

PIONEERS OF HIGH-CLASS CINEMA ENTERTAINMENT

EVAPORATIVE COOLING 1928

J. Jeffreys & Co.

The publicity manager is Mr. H. A. Arnold, from the publicity department of W. and F. Film Service, Ltd.

Mr. Trask, the engineer-in-charge, has for years held a similar position at the Lavender Hill Pavilion; fourteen years under the Davis regime.

Miss Chant, the manageress of the cafe-restaurant, for years held a similar position at the Marble Arch Pavilion, and is an old employee of the Davis Family.

Mr. Morris Levey, the assistant house manager, has for some months been at the Shepherd's Bush Pavilion preparatory to taking over his duties at Croydon.

Heating and Ventilating Apparatus

THE auditorium is warmed and ventilated in winter and cooled in summer on the most modern "Downward" system. The whole of the fresh air is introduced at the ceiling levels, whilst the vitiated air is exhausted at the floor levels in the stalls and balconies. By this means, cool air may be introduced in summer without causing objectionable draughts, whilst even in cooler weather, the temperature of the crowded auditorium may be prevented from rising unduly by the introduction of relatively cool air without creating draughts.

The auditorium is ventilated by means of 280 tons of fresh air per hour. This air is thoroughly washed and cooled in summer by passing through a large chamber filled with finely atomised water, and provided with special arrangements for preventing free moisture from passing into the building. This air washing chamber is the most modern "Mist" type air washer, by means of which the humidity of the air can be carefully regulated.

The air is warmed in winter by passing over steam-heated batteries, the temperature of the air being controlled from a specially designed control board in the boiler room. The engineer in charge can read the temperature of any part of the auditorium by means of an electrical temperature recorder fixed on the above control board, so that he may regulate the temperature of the theatre without leaving the boiler house.

Right - An advertisement for Lloyd Loom Woven Furniture as supplied to the Davis' Theatre - From the opening souvenir programme for the Davis Theatre, Croydon, 18th of December 1928.

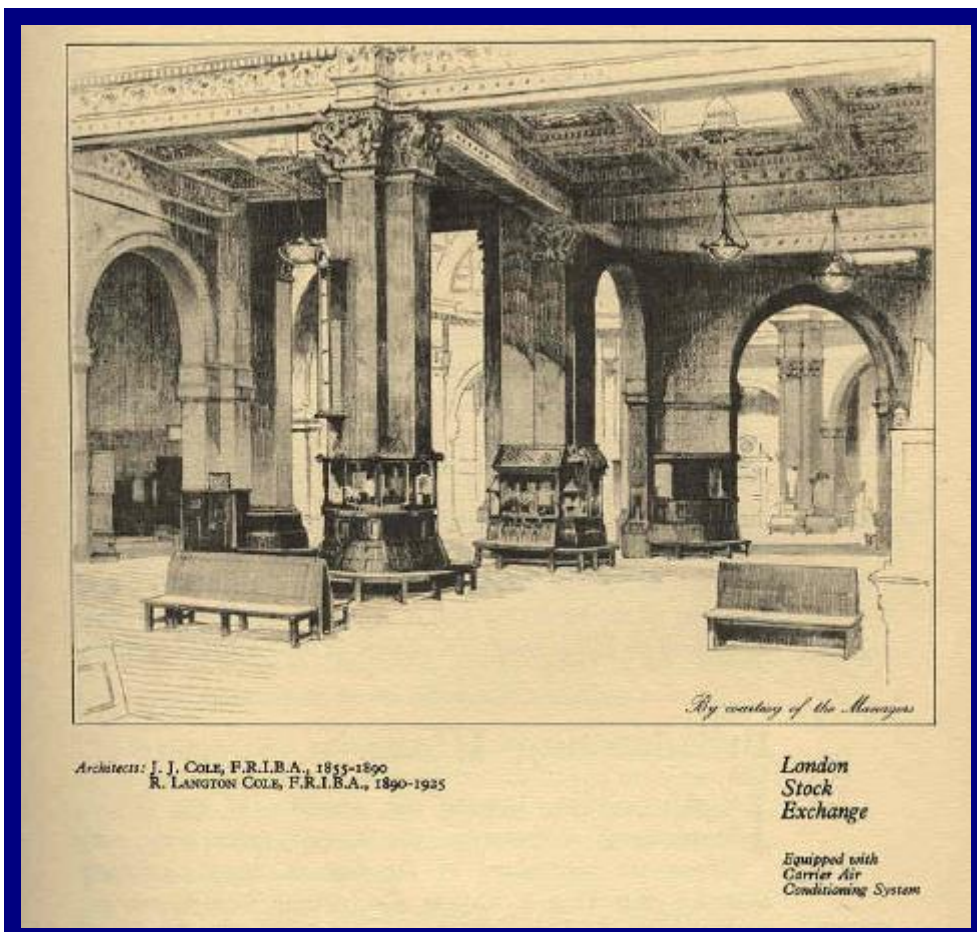
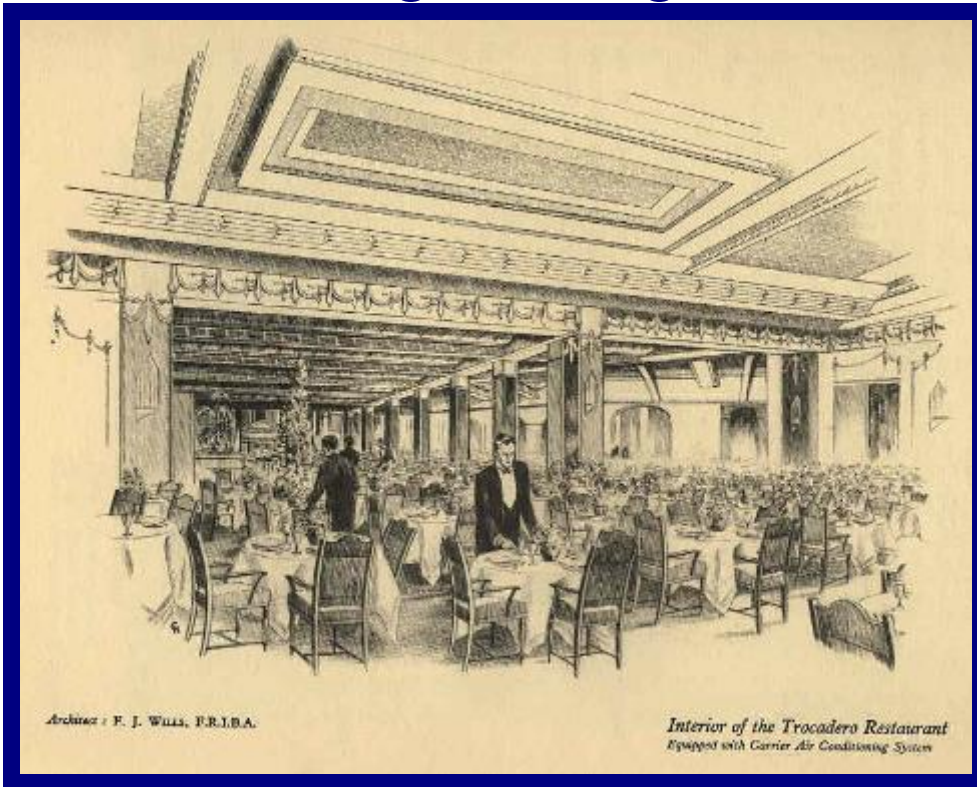
The remaining portions of the building are heated by means of hot water low pressure radiators, supplied with hot water from a steam-heated calorifier in the boiler house.

The vitiated air is exhausted from the theatre at floor level by means of a very powerful motor-driven exhaust fan of special design.

Steam is supplied to the air heater and the hot water calorifier from two dry back oil-fired steam, boilers, the oil fuel being stored in two large tanks under the road adjoining the boiler house. The oil is pumped to the boilers by means of specially designed pumps, and the oil is atomised by means of compressed air.

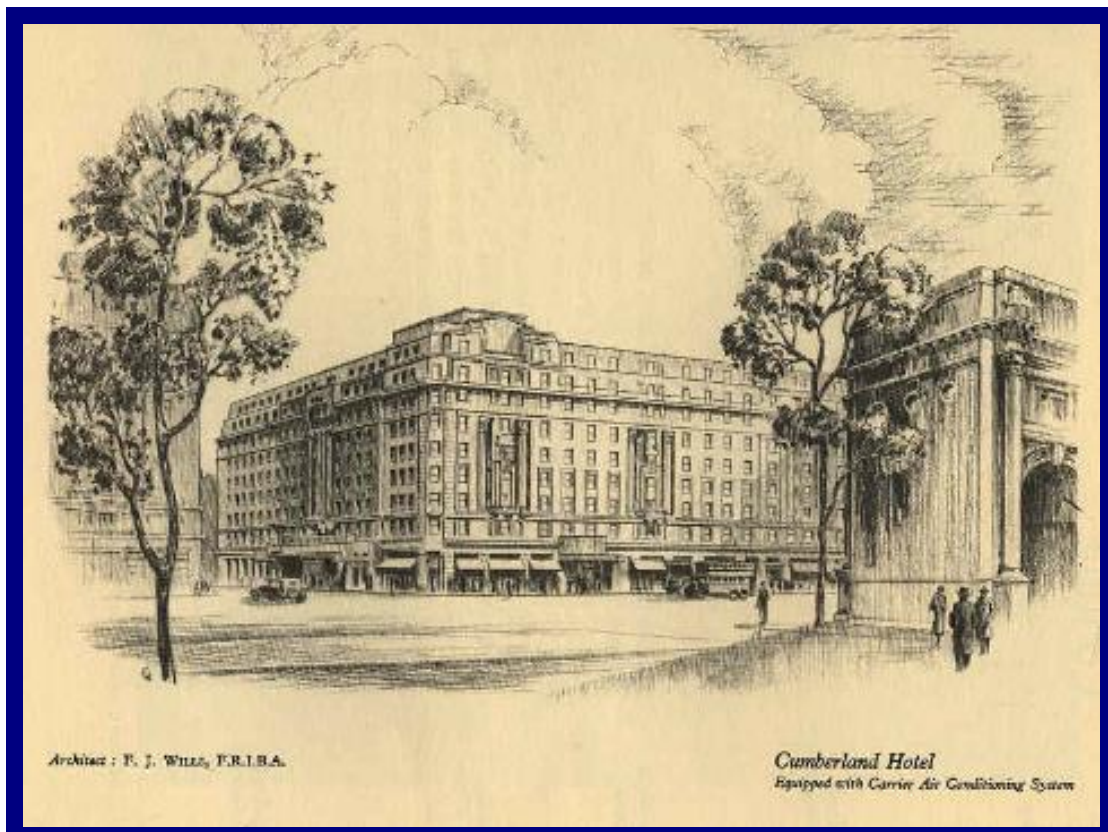
AIR CONDITIONING 1922-1930

Carrier Engineering Co, Ltd



AIR CONDITIONING 1931, 1933

Carrier Engineering Co, Ltd



AIR CONDITIONING 1922 Carrier Engineering Co, Ltd



Architect : RALPH KNOTT, Esq., F.R.I.B.A.

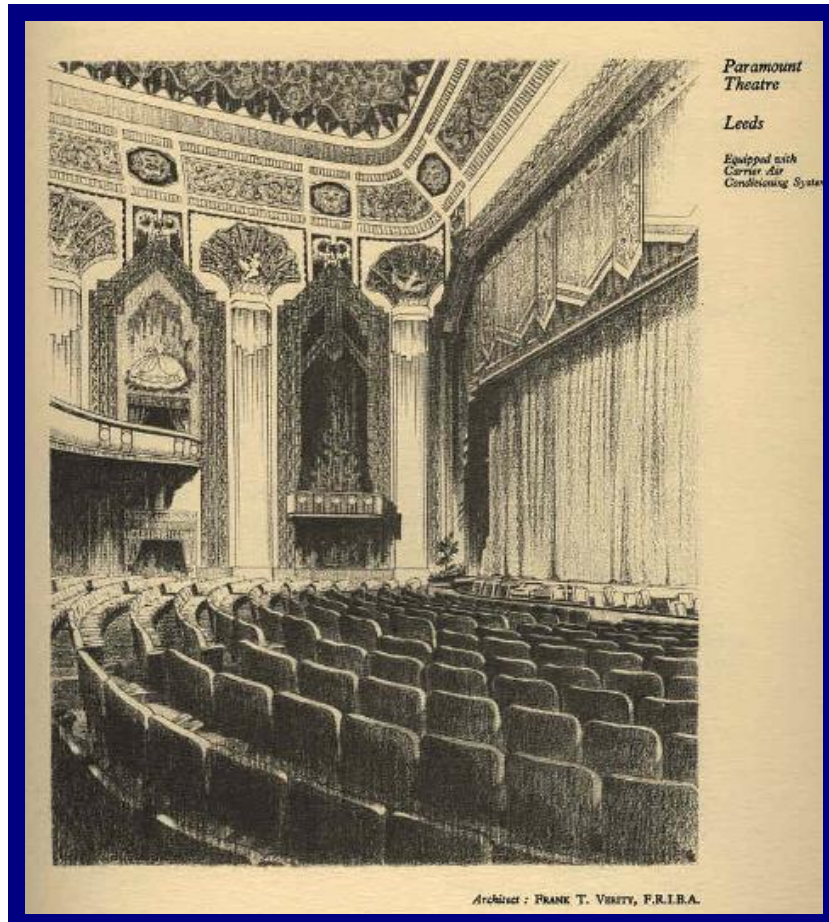
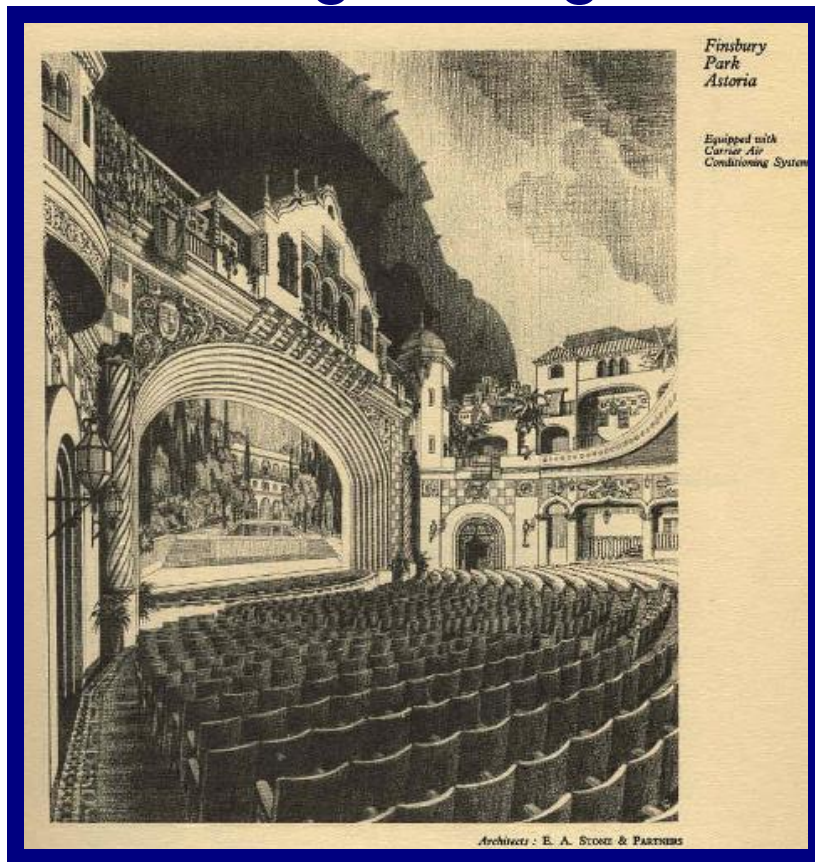
The London County Hall
Equipped with Carrier Air Conditioning System



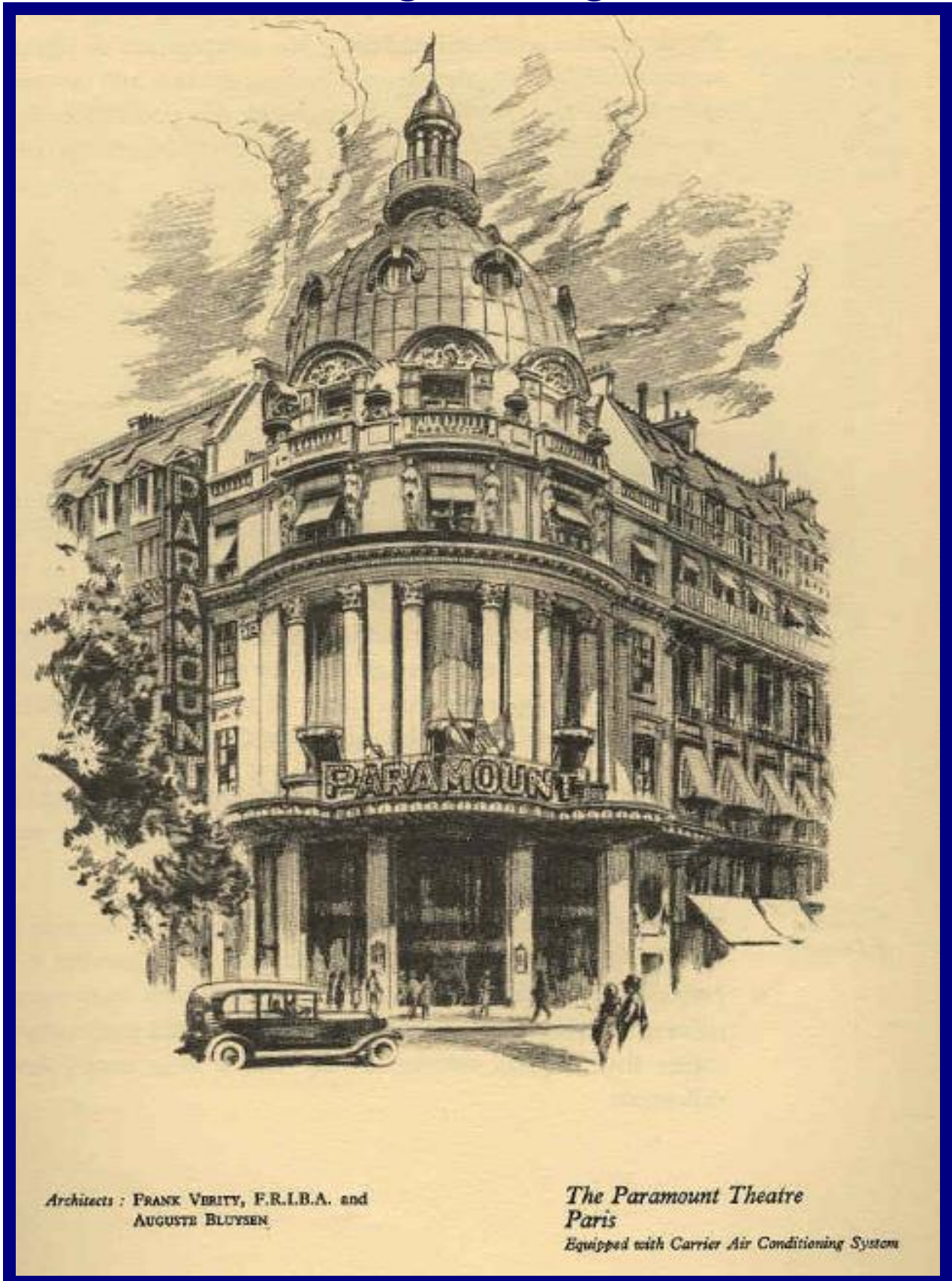
Architects : KNOTT & COLLINS
E. STONE COLLINS, F.R.I.B.A.

The London County Hall
Equipped with Carrier Air Conditioning System

AIR CONDITIONING 1930, 1932 Carrier Engineering Co, Ltd



AIR CONDITIONING 1929
Carrier Engineering Co, Ltd

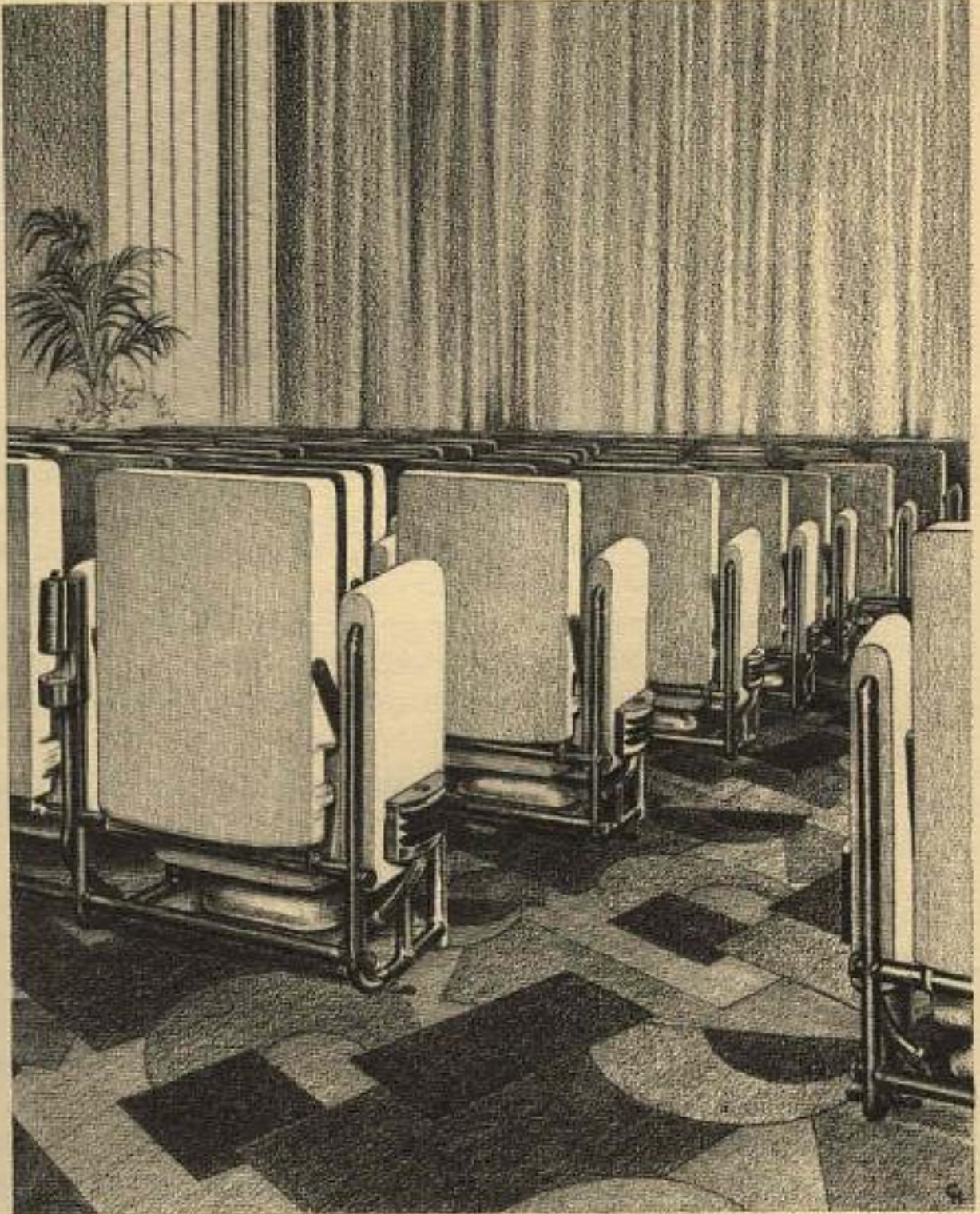


Architects : FRANK VERITY, F.R.I.B.A. and
AUGUSTE BLUYSEN

The Paramount Theatre
Paris

Equipped with Carrier Air Conditioning System

AIR CONDITIONING 1930
Carrier Engineering Co, Ltd



*Theatre Seating showing
Air Extraction Mushrooms
Carrier Air Conditioning System*

AIR CONDITIONING 1930 Carrier Engineering Co, Ltd



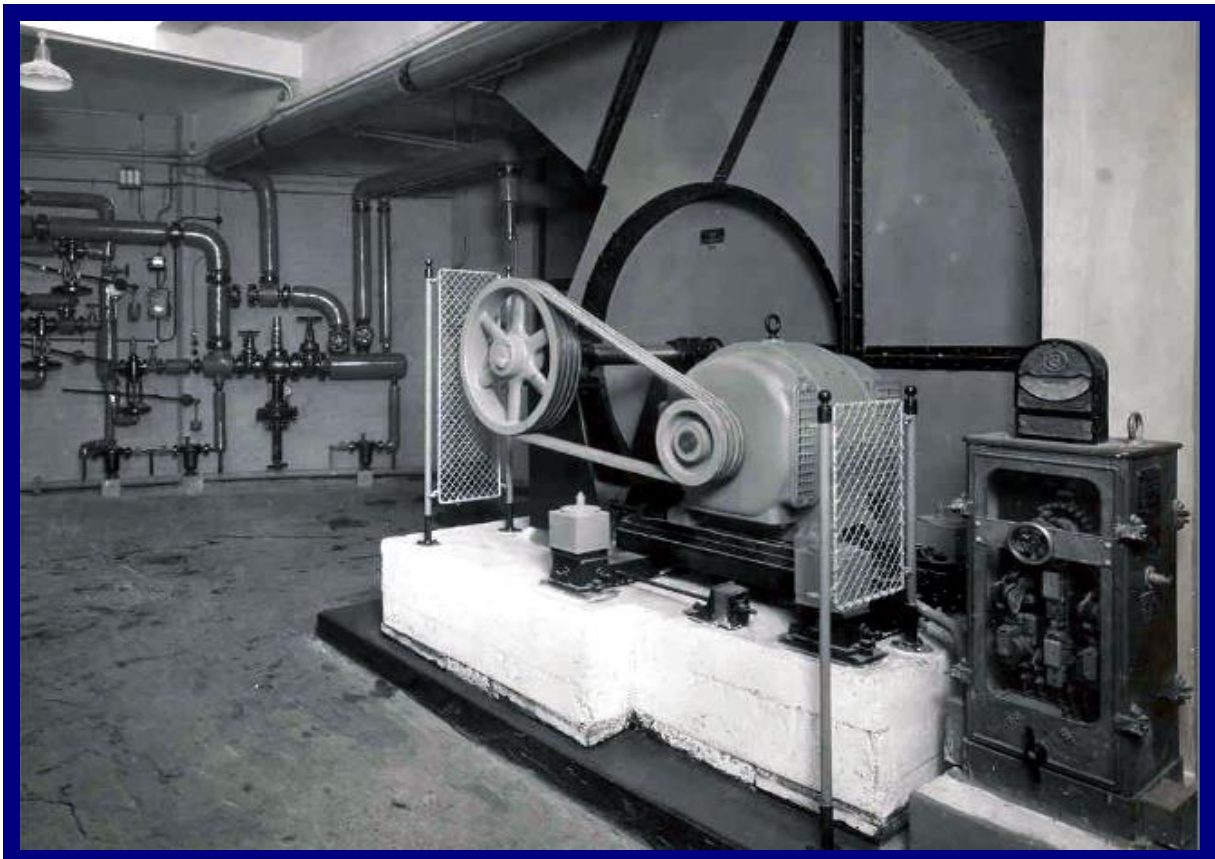
Astoria Cinema, Finsbury Park, London.



Astoria Cinema, Streatham, London.

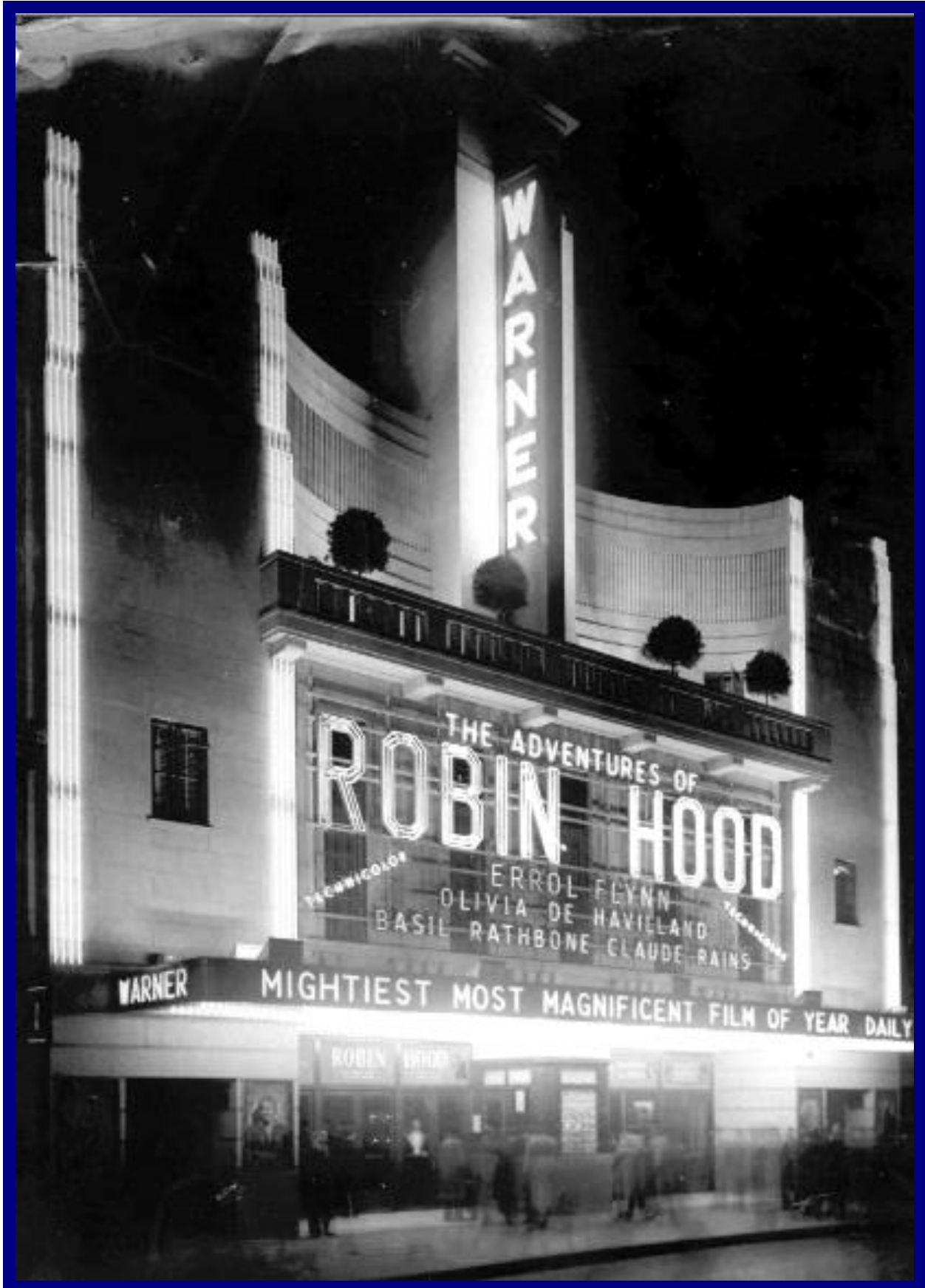
<15>

AIR CONDITIONING 1930 Carrier Engineering Co, Ltd



The Cambridge Theatre, London.

AIR CONDITIONING Carrier Engineering Co, Ltd



Warner Theatre, Leicester Square, London.

<17>

AIR CONDITIONING

Carrier Engineering Co, Ltd

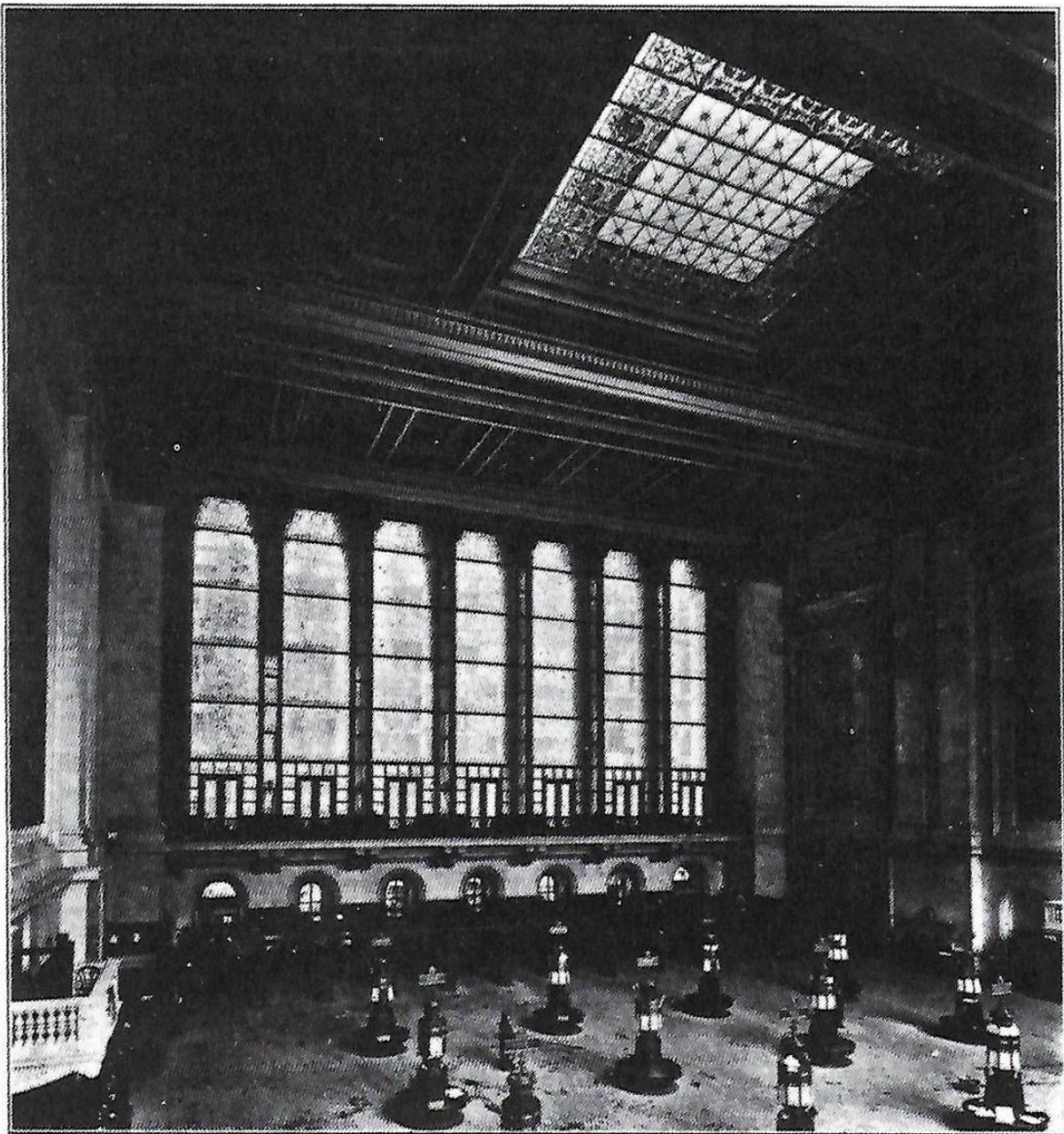


Warner Theatre, Leicester Square, London.

ABSORPTION REFRIGERATION 1903 **Carbondale Machine Company**

BIG COOLING PLANT IN STOCK EXCHANGE.

Three 150 Ton Machines Will Try to Keep the Brokers' Tempers Even—This Practically Marks the Opening of a New Era in Refrigeration.



INTERIOR OF THE BOARD ROOM OF THE NEW YORK STOCK EXCHANGE.

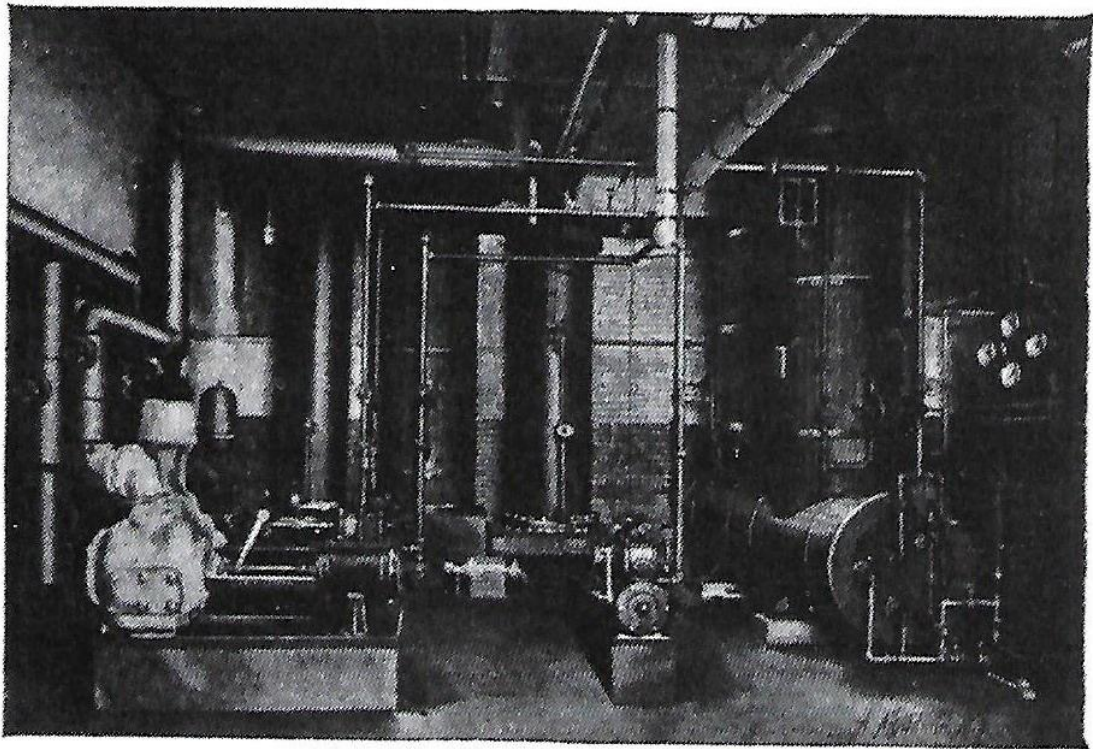
New York Stock Exchange.

<19>

ABSORPTION REFRIGERATION 1903
Carbondale Machine Company

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.



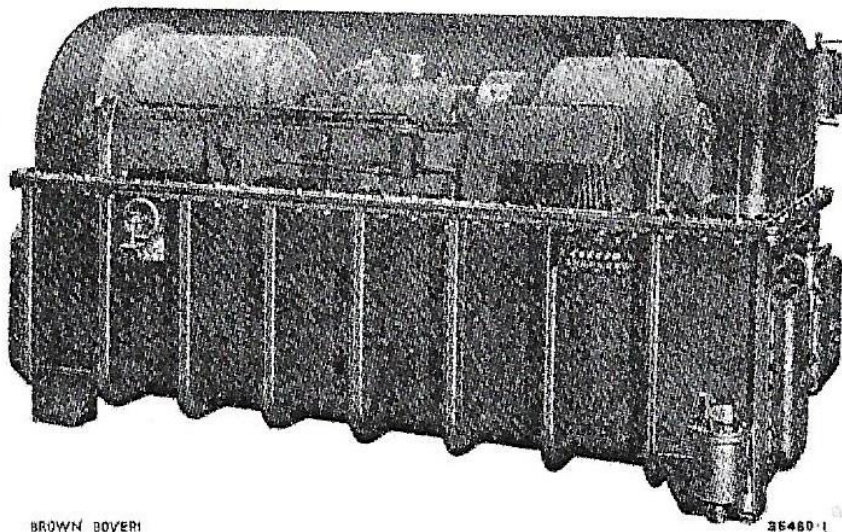
The Carbondale Machine Co.,
CARBONDALE, PA.

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

New York Stock Exchange.

CENTRIFUGAL REFRIGERATION 1932 Baden, Switzerland

Brown Boveri Refrigerating Turbo-Compressors



BROWN BOVERI

36480-1

BROWN, BOVERI & COMPANY
LIMITED

CHARLTONS
BADEN (SWITZERLAND)

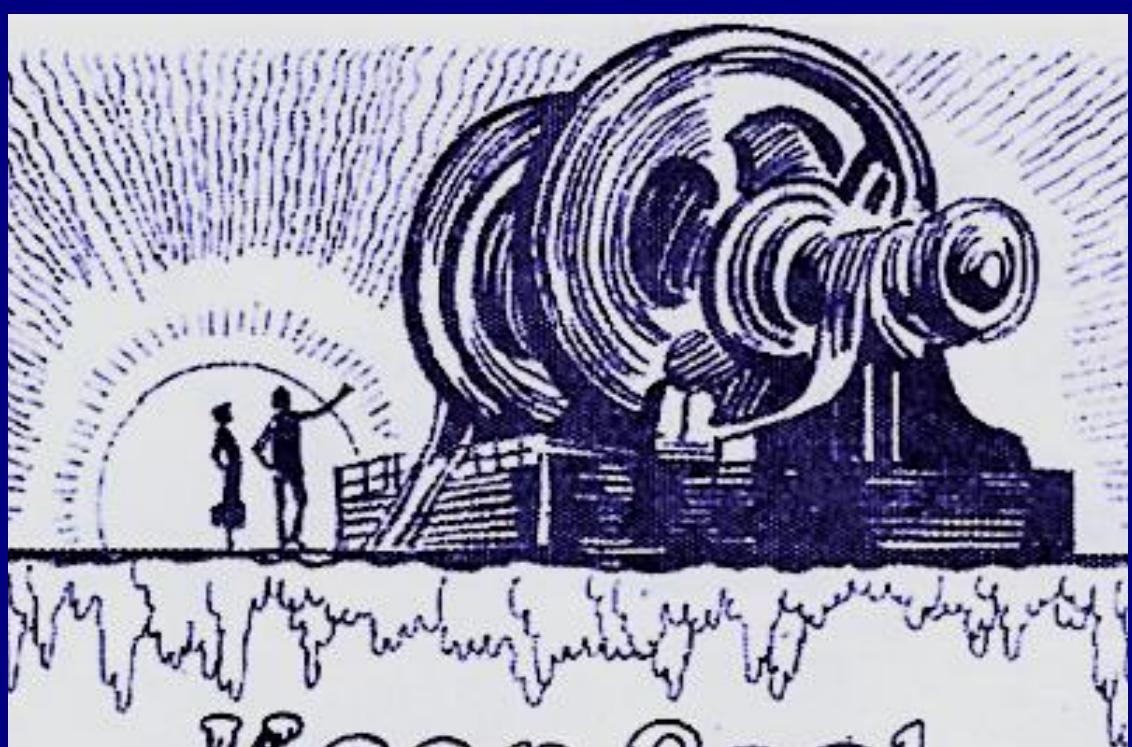
56
VICTORIA STREET,
LONDON,
S.W. 1.

1327 E-IX

April, 1932



CENTRIFUGL REFRIGERATION 1925 Carrier- Rivoli Theatre, NYC

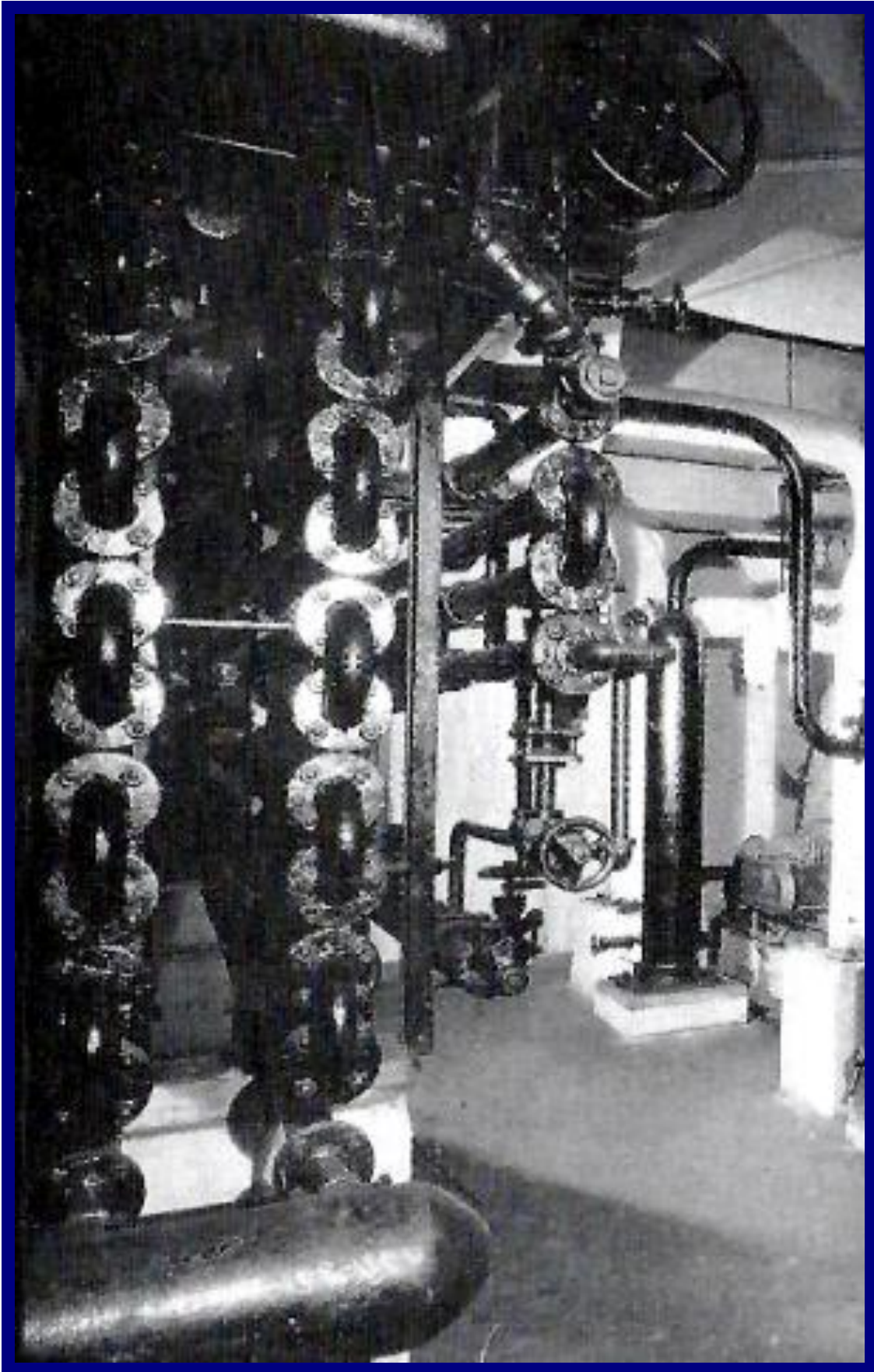


Keep Cool AT THE Rivoli

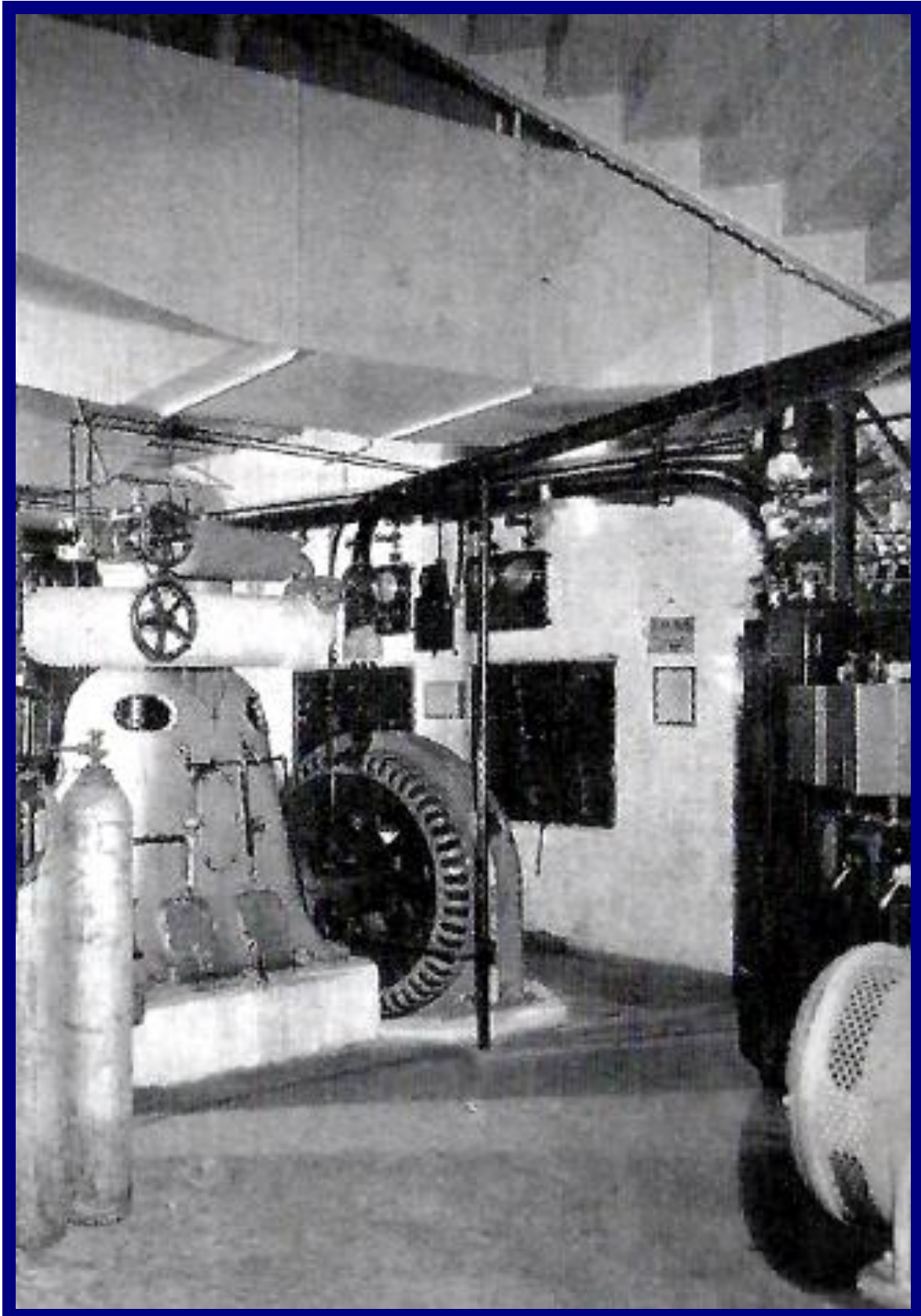
We have invested over \$100,000 in a refrigerating cooling plant to keep you cool and comfortable when the world is sweltering. Unseen, unheard, resistless are the huge motors with a combined pulling power of 221 horses—representing but a small part of the marvellous equipment which absolutely assures a temperature that is just right. Delightfully refreshing days and evenings all summer at

The **RIVOLI THEATRE**
BROADWAY at 49th STREET.
THE HOME OF *Paramount Pictures*

YORK MFG, CO₂ REFRIGERATION 1929
State/Kings Theatre, Brooklyn, NYC



YORK MFG, CO₂ REFRIGERATION 1929
State/Kings Theatre, Brooklyn, NYC



CENTRIFUGAL REFRIGERATION 1946 Fox Theatre, Atlanta, Georgia



REFRIGERATION-SPRAY AIR WASHER

Fox Theatre, Atlanta, Georgia



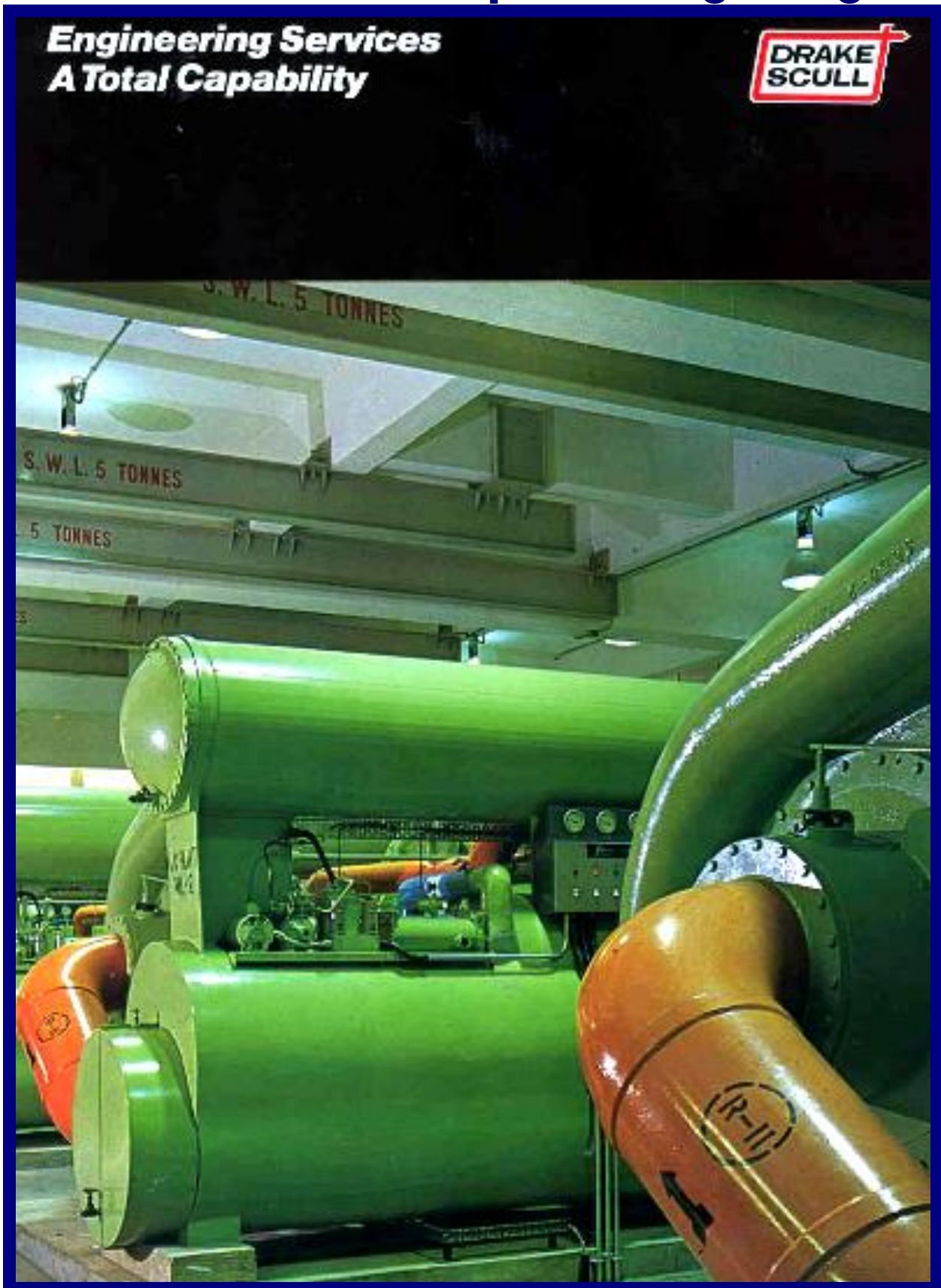
CHILLED WATER REFRIGERATION 1970 Cable & Wireless Offices, Hong Kong

設計, 統籌及管理合約



CENTRIFUGAL REFRIGERATION 1972 **Trane- Kai Tak Airport, Hong Kong**

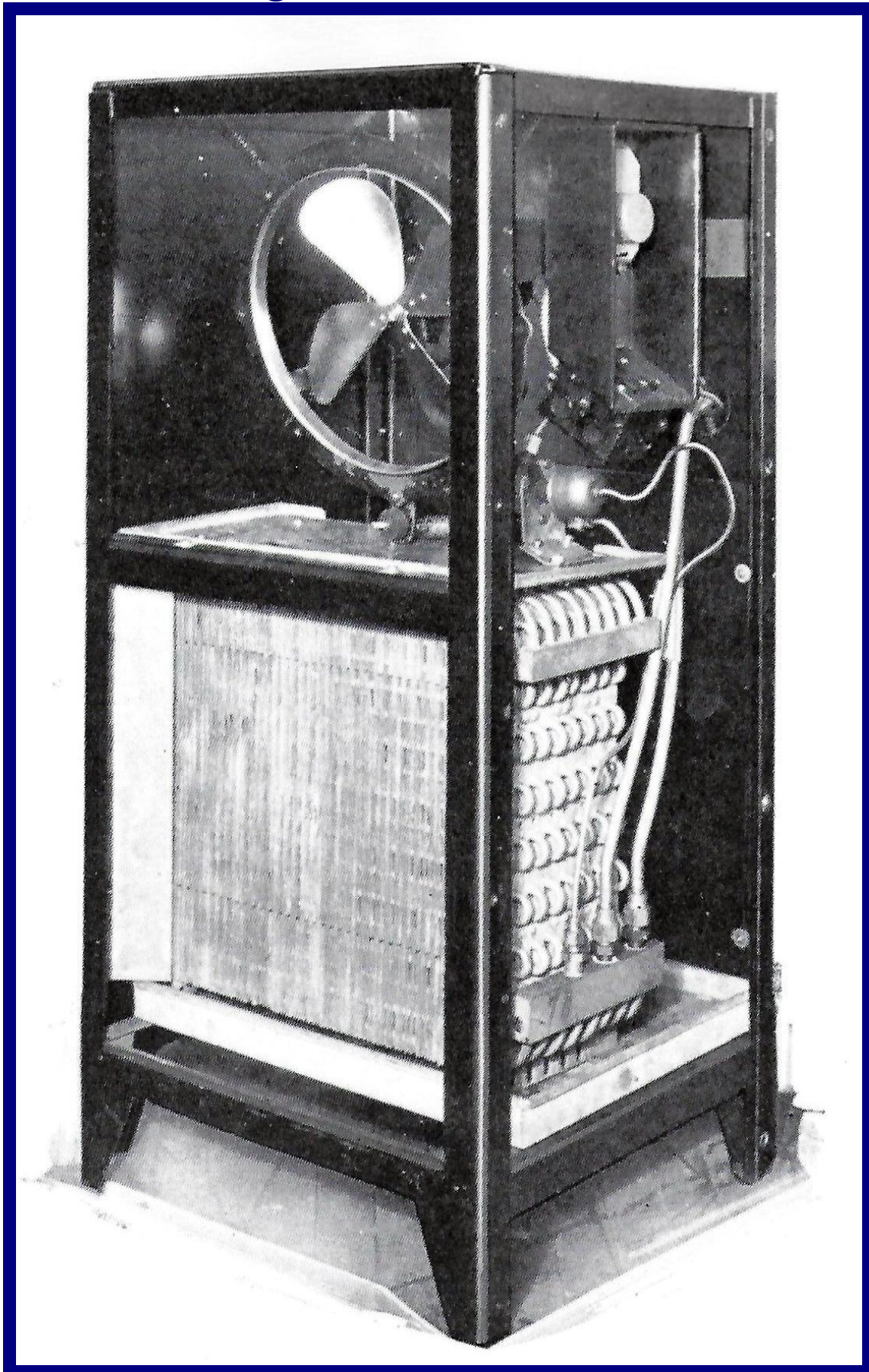
Engineering Services
A Total Capability



ROOM AIR CONDITIONING UNITS 1920S
Frigidaire Room Cooler, USA



ROOM AIR CONDITIONING UNITS 1920S
Interior Frigidaire Room Cooler, USA



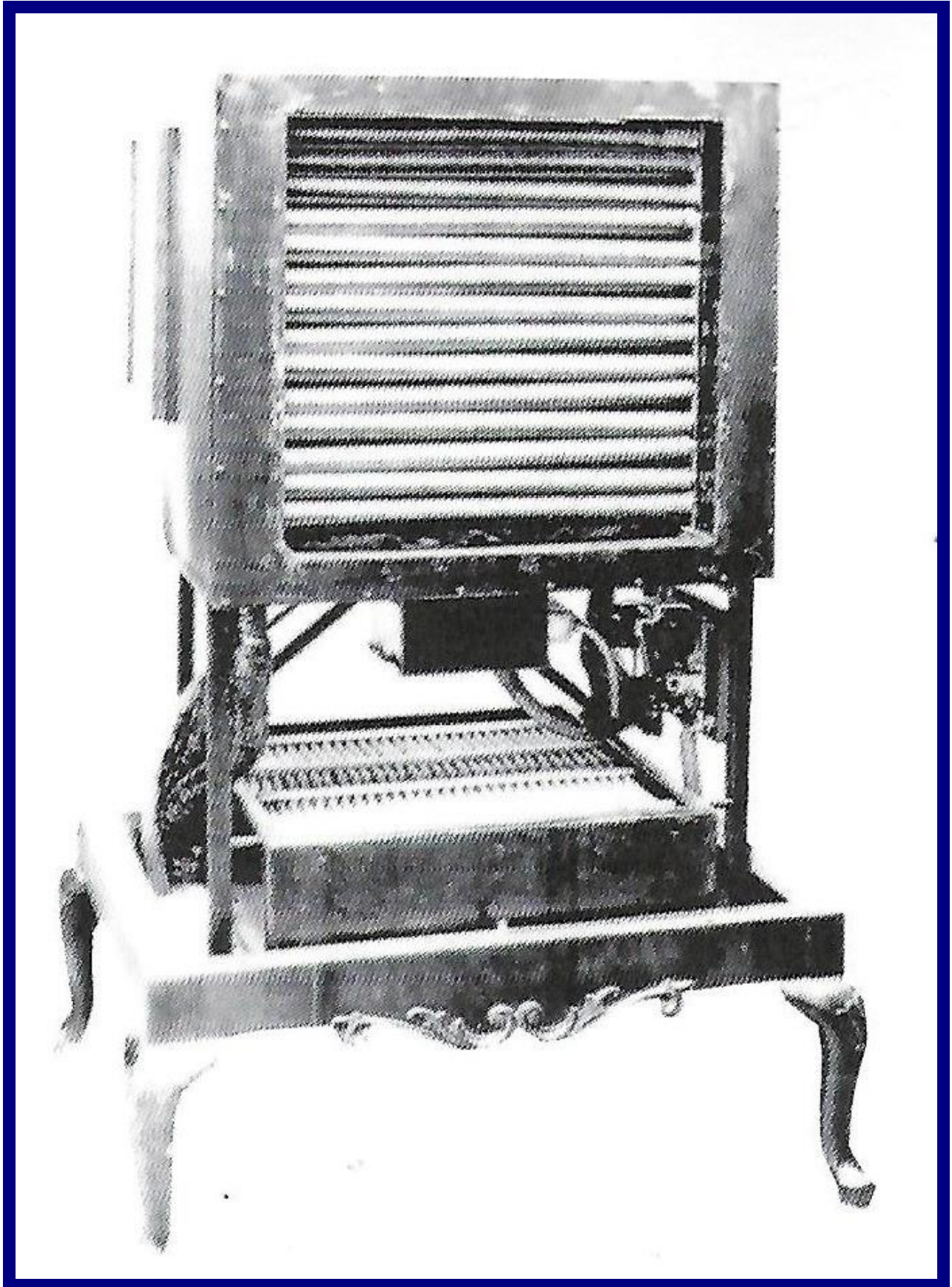
ROOM AIR CONDITIONING UNITS

General Electric Room Cooler, USA



ROOM AIR CONDITIONING UNITS

General Electric Room Cooler, USA



ROOM AIR CONDITIONING UNITS 1928 Carrier Engineering Corporation



THE Carrier Unit Air Conditioner humidifies the air, washes the air, heats or cools the air and produces uniform controllable air circulation. The Unit automatically creates and controls conditions of Temperature and Humidity to suit the manufacturing process. The Unit is compact, it occupies less than half the space of an ordinary office desk. The Unit requires only simple water, steam and electrical connections to prepare it for operation. The Unit is operated by a single motor at an overall efficiency never before approached in air conditioning equipment. The Unit is sold at an exceedingly low price. A single Unit will meet all of the requirements in the average work-room of 15,000 cubic feet. Three Units will condition a large work-room.

HERE is the most revolutionary step ever taken in the science of Air Conditioning.

Carrier Engineers, the pioneers and leaders in the design, development and application of systems to create and control any desired atmospheric conditions within buildings, have now perfected **The Carrier Unit Air Conditioner.**

This Unit performs every function of the complete Carrier Central Station Air Conditioning Systems which for 15 years have been making "every day a good day" in many of the great industrial plants of the world. The Unit is not a miniature humidifier copied from the standard central station equipment, but a completely novel design developed under the direction of Willis H. Carrier to place Manufactured Weather within the means of **any** manufacturer.

There is an economic margin which directs whether the Carrier Unit Air Conditioner or the Carrier Central Station System shall be used in manufacturing plants. Upon request Carrier Engineers will present all of the facts, without obligation, to manufacturers.

Every Manufacturer, large or small, every Engineer should obtain immediately the full details of the Carrier Unit Air Conditioner. Write for Bulletin 103, The Carrier Unit Air Conditioner. Ask for a visit from one of our engineers.

Carrier Engineering Corporation

Office and Laboratories
Newark, N. J.

NEW YORK PHILADELPHIA BOSTON CHICAGO CLEVELAND WASHINGTON KANSAS CITY LOS ANGELES

ROOM AIR CONDITIONING UNITS

Carrier Engineering before 1930



August 5th 1 A.M.
85° and 80% Humidity
Out-of-Doors—Windows Closed....
and COMFORTABLE!

And he'd be equally comfortable on the coldest winter night because the room in which he is sleeping is supplied with Manufactured Weather.

Hotels today equip their ball rooms—golf rooms—conviction floors—restaurants and roof gardens with Manufactured Weather because the comfort and convenience thus provided for guests lead to attractive earned dividends on the investment in increased patronage and increased profits. But the step of supplying this same service to every guest room as well is going to be made soon by some hotel—and from that day on Manufactured Weather will be well on its way to being standard hotel equipment.

The following pages cover the major features of Manufactured Weather for the hotel—what it is—what it does, and why it more than pays its way.

Carrier Engineering Corporation

A Division of Carrier Corporation
300 Frelinghuysen Ave., Newark, N. J.
New York Philadelphia Chicago
Cleveland Boston Washington
Dallas Los Angeles

ROOM AIR CONDITIONING UNITS

Patents: Schutz 1931, Sherman 1932

Nov. 17, 1931. H. H. SCHUTZ 1,831,825
COOLING DEVICE
Filed July 10, 1926 2 Sheets-Sheet 1

Fig 1
"Cooling device,"
patent application,
1926

In 1932, Henry Galson and Charles Neeson invented an air cooled, R12 room cooler, for which they were awarded the John Scott medal in recognition of their achievement.

The records show that by 1929, commercial sales of room air conditioners were underway, and thus was launched a whole new industry. These early machines were mainly free standing, console types, with water-cooled condenser, belt driven compressors

INVENTOR
Harry H. Schutz.

Dec. 13, 1932. J. Q. SHERMAN 1,890,628
AIR COOLING APPARATUS
Original Filed Oct. 25, 1926 2 Sheets-Sheet 2

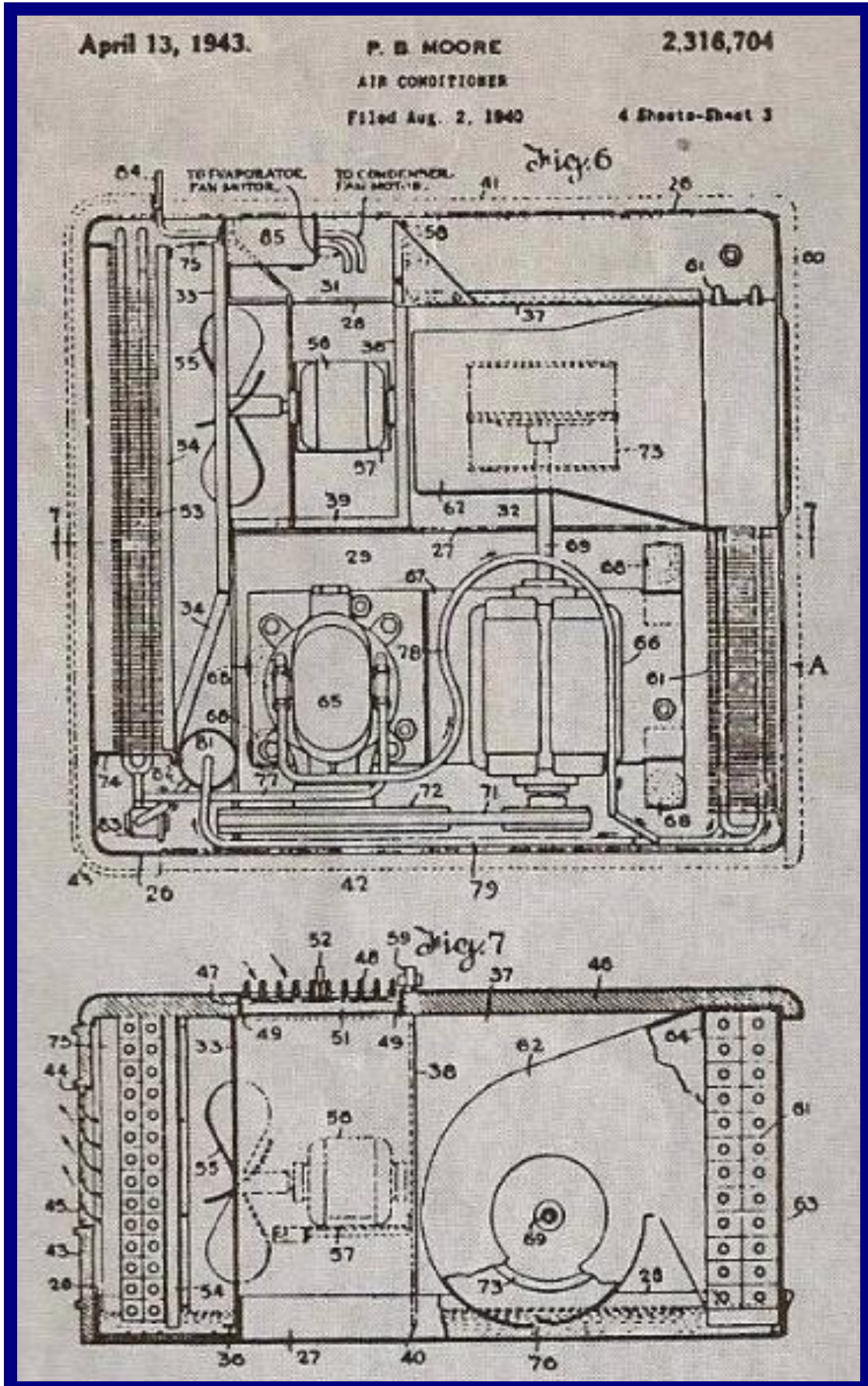
INVENTOR
BY John Q. Sherman
W. L. Walker ATTORNEY

Fig. 2
Unitary cooling apparatus,
patent application, 1926

INVENTOR
BY John Q. Sherman
W. L. Walker ATTORNEY

ROOM AIR CONDITIONING UNITS

Moore Patent 1943



ROOM AIR CONDITIONING UNITS

Terry & Komroff Patent 1943

Jan. 26, 1943.

M. C. TERRY ET AL

2,309,224

SELF CONTAINED AIR CONDITIONER

Filed Jan. 11, 1940

4 Sheets-Sheet 1

FIG. 1.

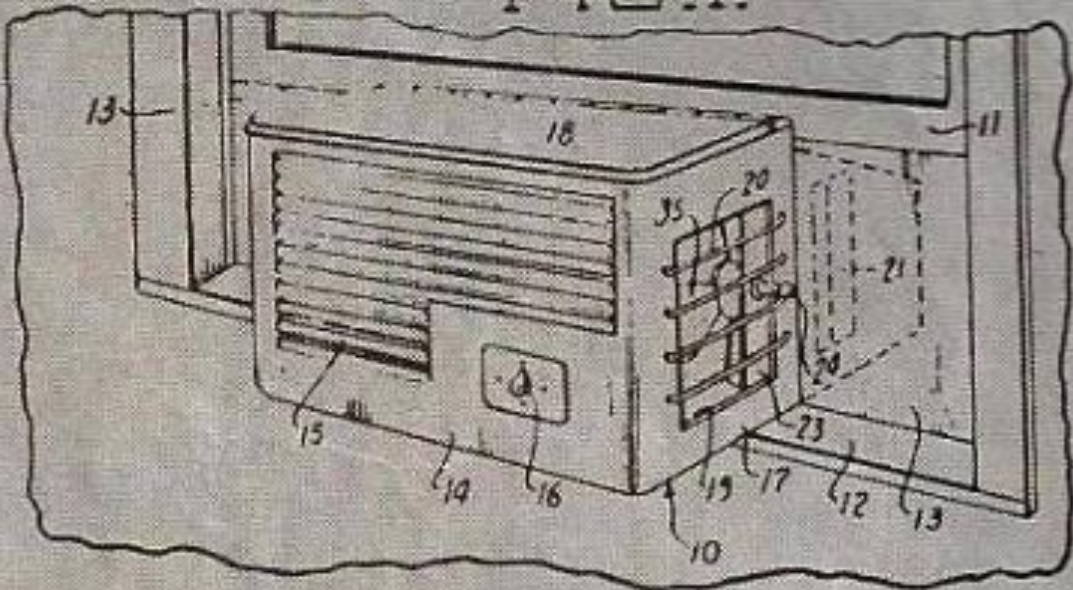
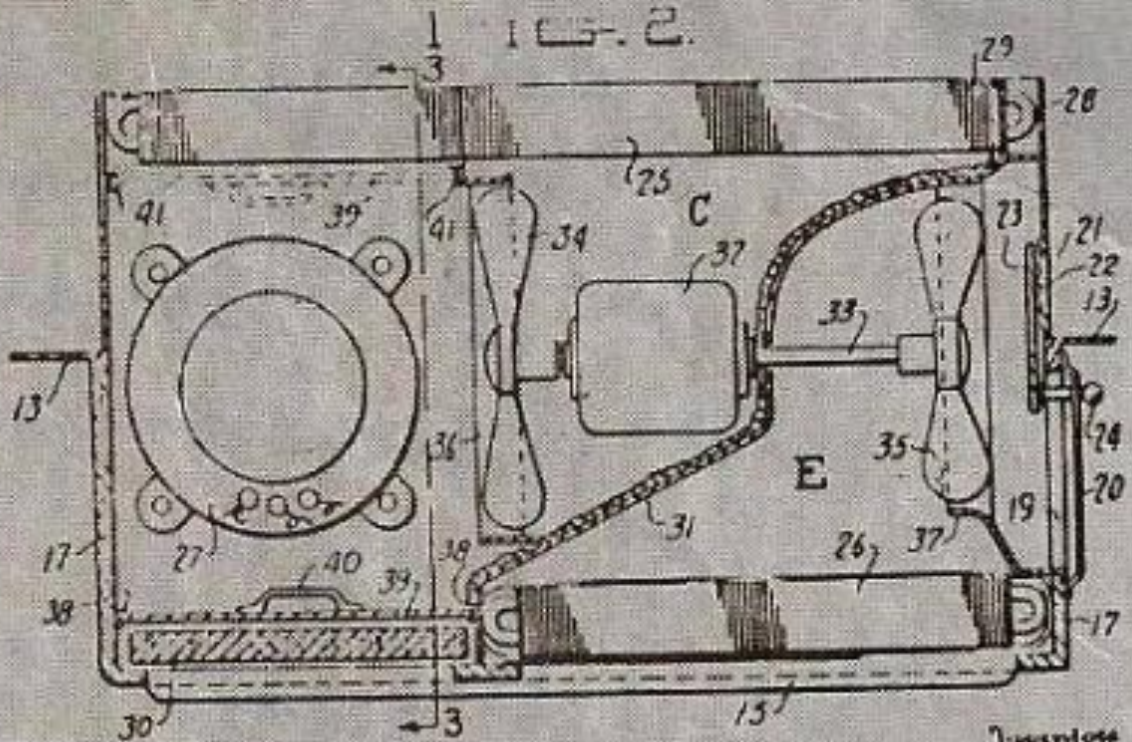
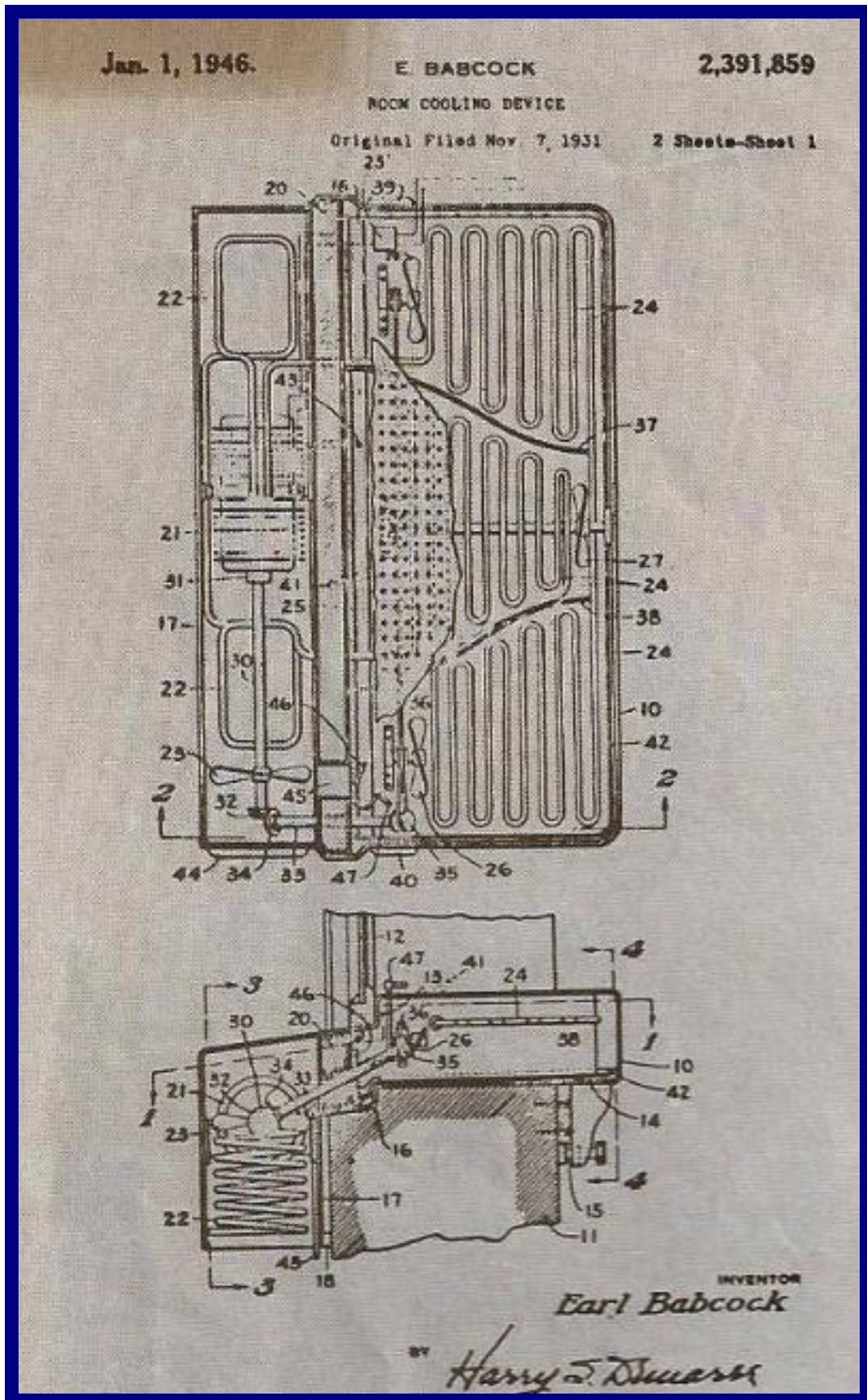


FIG. 2.

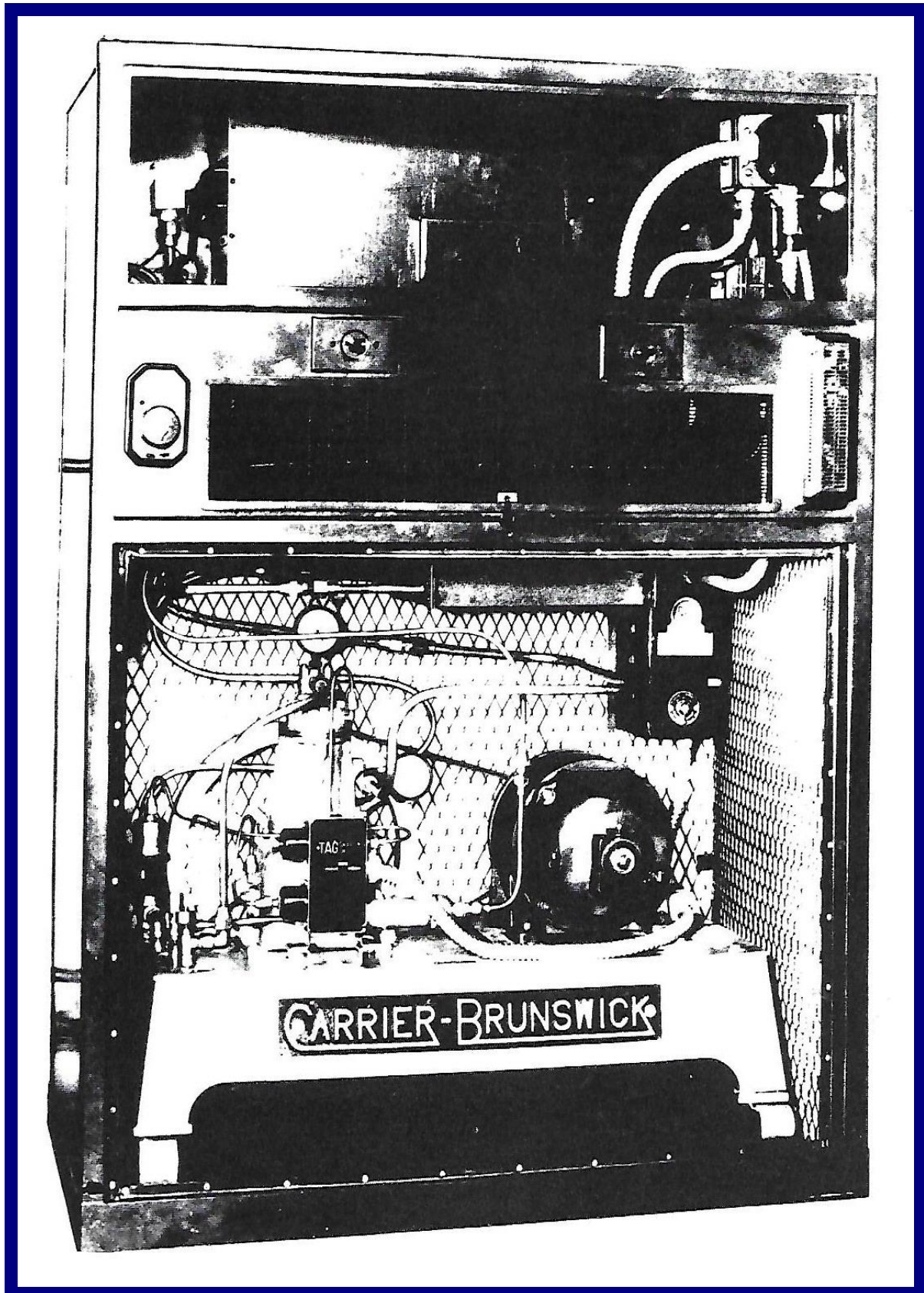


Inventors
Malson C. Terry
Paul Komroff

ROOM AIR CONDITIONING UNITS Babcock Patent 1946



ROOM AIR CONDITIONING UNITS 1933 Carrier-Brunswick "Atmospheric Cabinet"



ROOM AIR CONDITIONING UNITS Crosley and Fedders



ROOM AIR CONDITIONING UNITS

Window Box: Philco top pic, Serval below



ROOM AIR CONDITIONING UNITS Mueller Wall Mounted



Yes! now you

A New Refreshing Comfort - Appeal

Of all the fine quality features you build into your homes, none will create more "buy appeal" in the minds of your prospects than being able to tell them your homes have cooling. Think of the comfort, modern living and "joie de ownership" advantages cooling offers. The value of cooling has already been demonstrated in the commercial field — in stores, restaurants and theaters. Until recently, summer air conditioning has been a luxury for the home. Right now, it is best viewed as "necessary luxury for modern living." Soon — perhaps even this year, summer air conditioning will be a plain necessity if you want to sell your homes at a profit.

Keep in mind that at least a part of the cost for cooling equipment may be offset by good planning. As an example, with cooling it would not be necessary to provide screens for those rooms that are cooled, or to provide a screened-in porch.

More important to you from a good business standpoint, cooling will help you sell your homes. Because the Mueller Climatrol Type 910 recessed summer conditioner maintains a balance between equipment costs and the total cost of a low-cost home, it is your best buy.

Mueller Climatrol —

ROOM AIR CONDITIONING UNITS Westinghouse Window Box

make
your
own
weather

WITH **Westinghouse** ROOM AIR CONDITIONERS

NO RELIEF IN SIGHT
AS HEAT WAVE BUSTERS U.S.

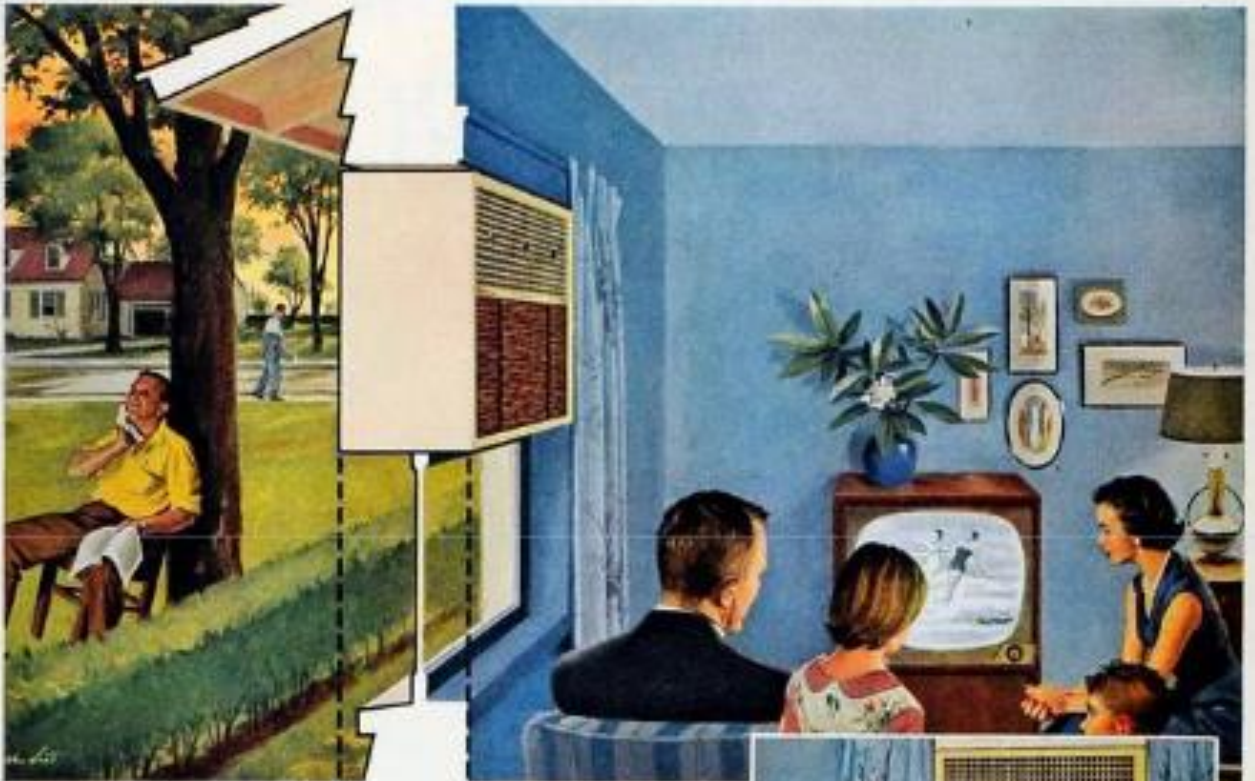
WHEREVER YOU LIVE YOU CAN NOW
ENJOY COOL, DRY, RESTFUL COMFORT

with the New **Westinghouse** Room Air Conditioner

ROOM AIR CONDITIONING UNITS General Electric Window Box

July 14, 1958

All new G-E Thinline Air Conditioner takes up $\frac{1}{3}$ less space!



G-E Thinline is 16 1/2 inches "thin"...
no unsightly overhang!

Why wait when you can switch from hot, humid misery to cool, cool comfort with a G-E Thinline Room Air Conditioner?

HERE is a completely new concept in room air conditioners that offers top performance, yet actually takes up one-third less space than previous corresponding models.

It fits flush with your inside wall, yet has no unsightly overhang outside. And not only does it offer you amazing cooling capacity and dehumidification—its High

Power Factor Design assures economy of operation!

You have a choice of many different comfort-conditions just at the flick of a finger. Delightfully cooled, filtered air pours quietly into your room, makes your days and nights comfortable all summer long! See your G-E dealer today for a demonstration—he's listed in your classified phone book.

General Electric Company, Room Air Conditioner Department, Appliance Park, Louisville 3, Kentucky.

After models available in Canada.



With a G-E Room Air Conditioner you choose your own weather with the flick of a finger. Knobs on top grille control fan direction, swirl-cool, twice-filtered air to all parts of your room. An Air Freshener freshens your room in seconds.



Fits anywhere—in upper or lower wall. Can be mounted flush with inside wall so there's less of an overhang to allow windows to be closed. All inside installation is done for you in office.



Look—it fits anywhere windows, too. The G-E Thinline can be installed in any window, without affecting or delaying the window. It can even be installed through any outside wall.

Progress Is Our Most Important Product

GENERAL  ELECTRIC

ROOM AIR CONDITIONING UNITS York Window-Wall Box

