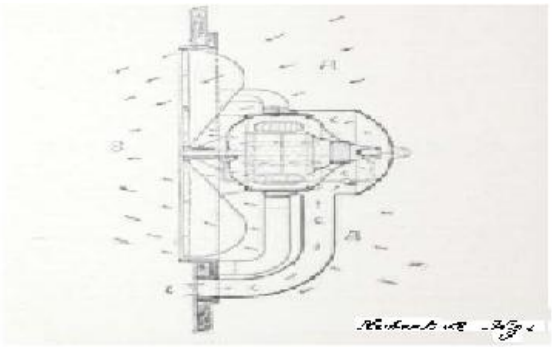
ILG Electric Ventilating Company, Chicago, Illinois

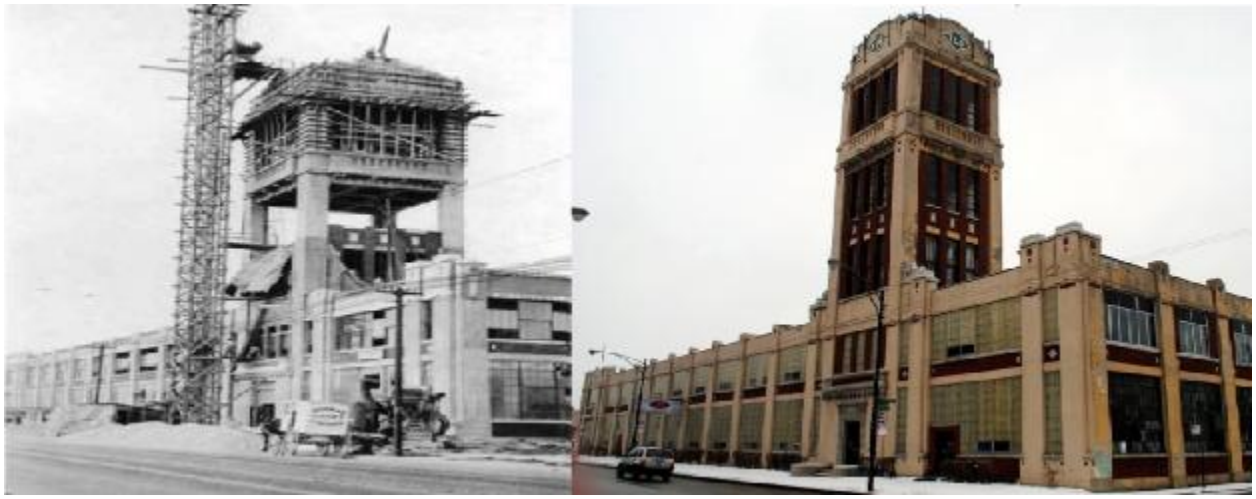
Historical Article

In 1887-1888 inventor Nicola Tesla had an experimental shop at 89 Liberty Street, NY where he built first electrical induction motor. In July 1888 he sold his design to George Westinghouse, who in 1889 mounted a prop on the motor shaft to produce first known electric fan.

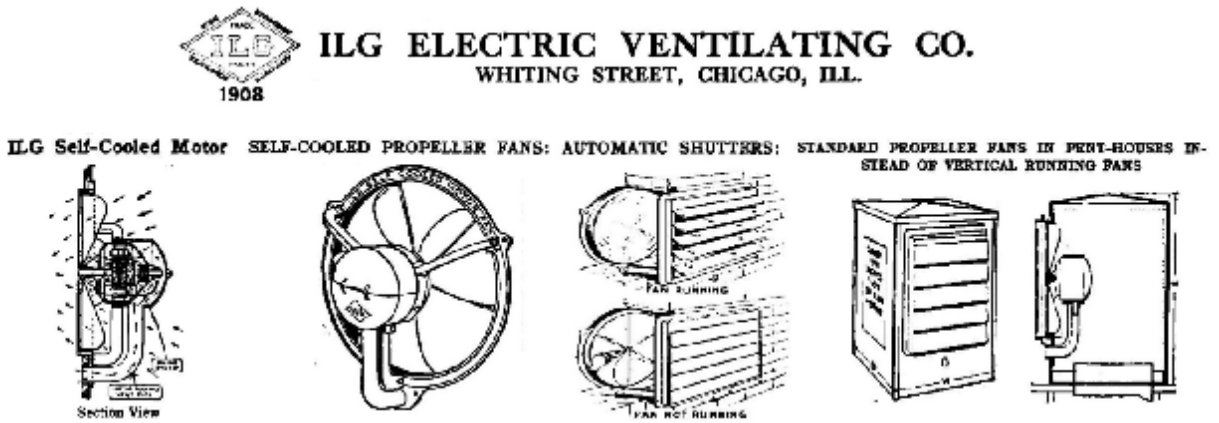
In 1905 inventor Robert A. Ilg developed on electrical motor for fans which could work with different voltages in AC and DC circuits. He also improved motor cooling design to make motors more suitable for hot air applications. Same year he involved private investors to start manufacturing fans powered by newly developed electrical motors.



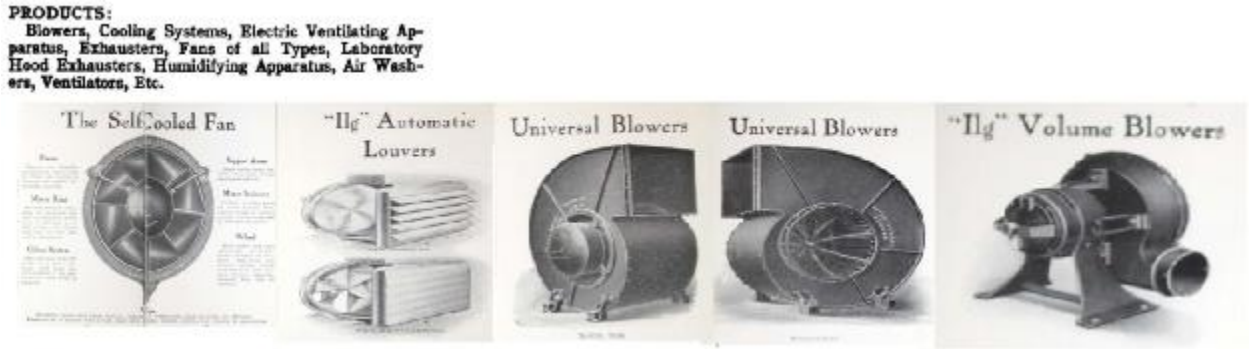
In 1906 Chicago architect Alfred S. Alschuler designed the future building of ILG which was erected in 1907 at 2850 N. Pulaski in Chicago.



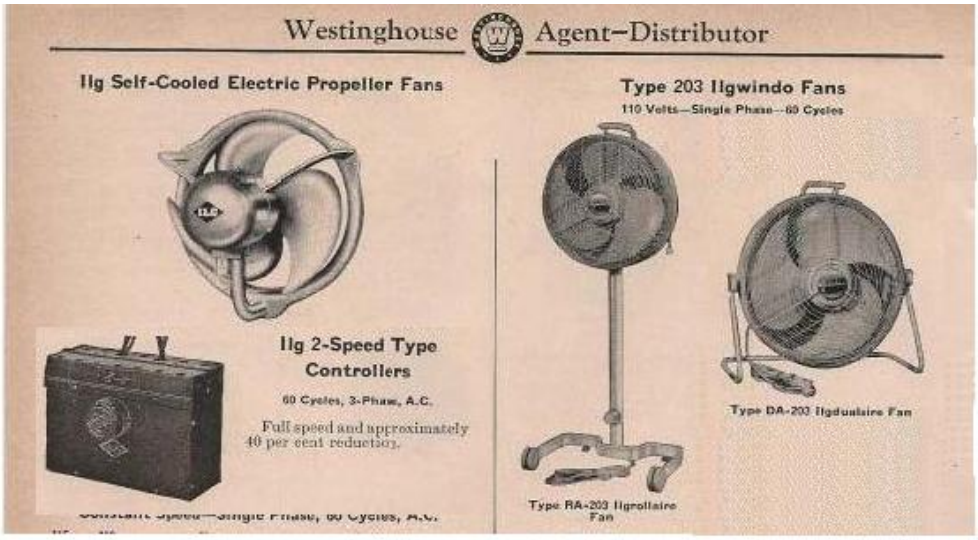
In 1908 Robert A. Ilg established The ILG Electric Ventilating Company at the same address, printed merchant's brochures, hired workers and started manufacturing fan motors and fans. The first production line included Self-Cooled Motor Propeller Fan, Variable Speed Controllers for DC Current and ILG Automatic Louvers, which enclosed in a sheet metal plenum would allow for roof mounting. These products were advertised nationwide for ventilating of office buildings, schools, churches, swimming pools and gymnasium halls, restaurants and factories.



After a few years in business The ILG Electric Ventilating Company became industry leader in commercial ventilation and started targeting industrial customers. Robert Ilg hired mechanical engineers and skilled tradesman and devoted part of the building to ILG ventilating testing laboratory which became in charge with designing new products and expansion of the manufacturing. Newly developed ILG Volume Blowers, Pressure Blowers and Universal Blowers, as well as custom fabricated humidifying apparatus, air washers, and laboratory hood exhausters were added to the production list. They were designed for process air industrial applications. The new products were marketed under the brand name of ILG Electric Ventilating Company and ILG Hot Air Electric Ventilating Company.



In the late 1920s The ILG Electric Ventilating Company was considered as “well run and very profitable with products sold nationwide”. About that period it also started targeting also household market by developing fan line for kitchens and homes. Primary attention was paid to kitchen exhaust ceiling fans. “Night Cooling Fans” which were essentially pedestal fans and desk-top fans of sizes from 16 to 30 gained popularity during hot and humid summer nights in Chicago and suburbs. Home fans were put in mass production batch orders and sold through Westinghouse distribution network.



By 1940 The ILG Electric Ventilating Company and ILG Hot Air Electric Ventilating Company were manufacturing and marketing complete line of commercial and industrial fans, ventilators and blowers, electric, hot water, steam and gas unit heaters, roof top air-handling AC Units and air filtering units for commercial and industrial buildings, as well as kitchen ceiling fans, attic fans and pedestal “night” cooling fans for homes. In the beginning of 1940s ILG Electric Ventilating Company was involved in series of projects for US Navy and Merchant Marine Vessels building fans and duct systems for corrosive marine applications, as well as steam, electric and gas unit heaters for US ground forces. It also supplied roof ventilators, roof top air handling filtration units and air curtains to military housing developments, as well as specialized building ventilating systems for hospitals. For its wartime efforts ILG Ventilating Company was awarded the Battle E award the military.

To help company sales force and design offices, as well for training of employees in late 1930s ILG started developing a comprehensive design guidebook for engineers and designers which altogether with company catalogues was published in 1943. It became a must-shelf-book for libraries and design offices across United Sates and Canada and sold in numerous copies.

"KEY" TO ILG PRODUCTS MENTIONED IN FOLLOWING INSTALLATIONS

ILG SELF-COOLED MOTOR PROPELLER FANS

Supremely quiet . . . smooth and effortless operation . . . dynamically balanced . . . rugged, heavy-duty frame . . . reduced operating and maintenance costs . . . exceptionally long life . . . "One-Name-Plate" Guarantee. 8" to 72".

ILG DIRECT-CONNECTED UNIVERSAL BLOWERS

Engineered as a balanced, integral unit (including all-ILG-built motor) instead of mere assembly of parts . . . wide variety of types and sizes . . . rugged construction . . . quiet operation . . . Belted blowers also available.

ILG "VITAL ZONE" UNIT HEATERS

With self-cooled motor that "breathes" (never "slow roasts") . . . horizontal, vertical, low-ceiling, or textile types . . . wide range of sizes and capacities . . . steam or hot water . . . also self-contained electric and gas-fired units.

ILG POWER ROOF VENTILATORS

Consists of Self-Cooled Motor Propeller Fan . . . in weather-tight, galvanized steel penthouse . . . with ILG Automatic Shutter to avoid motor overloading and to protect interior of building. Also available with "Blackout" Hood.

ILG NIGHT-COOLING FANS

Made in sizes and styles for homes, apartments, stores, offices, etc. . . . direct-connected . . . quiet . . . modern styling . . . adjustable height standard . . . two-speed motor . . . large capacity . . . "One-Name-Plate" Guarantee.

TYPE "B" TYPE "P"

VOLUME BLOWERS

TYPE "B"—for all types of blow-in or exhaust duty where low pressure, small volume, quiet operation are required. 12 capacities—180 to 2100 CFM.

TYPE "P"—for handling small quantities of air over a pressure range of ½" to 3". For removal of dust, fumes, steam, and vapors. 7 capacities.

ILG FILTER-TYPE ILGAIRATORS

Removes over 98% of dust, soot, and plant pollens from entering air . . . mounts in sliding sash window . . . adjustable air volume . . . "No-Draft" grille . . . exceptionally quiet . . . "One-Name-Plate" Guarantee.

ILG KITCHEN VENTILATORS

Exhaust cooking odors, heat, smoke, and fumes at their source . . . prevent "greasy grime" from penetrating other rooms and depositing on curtains, woodwork, walls, and furnishings . . . remove stale air, cigar and cigarette smoke from adjoining rooms . . . eleven different models for permanent or temporary installations . . . "One-Name-Plate" Guarantee.

"BUILT-IN" TYPE

In 1940s ILG was among pioneers who first employed advanced cold metal processing of spun aluminum machines in the main plant in Chicago and started using extensively aluminum sheet metal for building newly developed lines of spun aluminum roof fans and wall fans.

Also during these period ILG engineering worked on improving design of the original ILG electric motors for fans and developed line of light and medium duty direct drive utility blowers as well as first prototypes of heavy duty industrial blowers suitable for material handling applications, high temperature applications and applications which require medium and high pressurized air in large volumes, which manufacturing later was concentrated in the newly established General Blower Co. During 1950s ILG engineers finished design and published catalogues of spun aluminum roof and wall ventilators and square duct fans, which became iconic image of The ILG Electric Ventilating Company. In 1951, at 1421 – 13 Street, Racine, WI was established General Blower Co. as a subsidiary of ILG Electric Ventilating Company which product line included light, medium and heavy duty air handling, material handling and process blowers, plug fans, tubeaxial and vaneaxial fans, as well as a complete line of pressure blowers and turbo-pressure blowers for process air applications thus re-enhancing ILG position as a leading US maker of commercial and industrial fans and blowers represented across US, Canada and overseas by multiple sales offices and distributing centers.

The Ilg family run company till late 1960s when it was acquired by Carrier Corporation. Merger with Carrier gave ILG worldwide representation and major OEM accounts. However, in 1977 following market trend for specialization, ILG Management bought the company back from Carrier and changed its name to ILG Industries.

In 1991 ILG Industries assets were acquired by American CoolAir Corporation and production was moved to the main plant in Jacksonville, FL. Today, ILG Industries Division is a proud member of American CoolAir family and it continues manufacturing of fans which are fine example of highest manufacturing standard.

National Awards

During WWII The ILG Electric Ventilating Company was manufacturing specialized fans and duct systems for US Navy and the Merchant Marine and received the Battle E from the military for their wartime efforts.

Research and Engineering

In 1904 Robert A. Ilg filed application for patent for Self-Cooled Fan Motor and W shaped Propeller Blade but there was no record found for this patent in ILG library. Patent however was mentioned in ILG trade catalogues from 1908 till 1914.

On June 19, 1919 Joseph Eugene Truitt and Emil Ackerman filed application # 3-535 for Self-Cooled Motor for fans with the same drawings as in 1904 and on July 5, 1921 was granted US 1383883 patent, which was later reflected in the design of fan impellers, cross flow cooling fans, totally enclosed induction motors and rotors for wind turbines. Arguable this work was based on earlier application made by R.A.Ilg for self cooling motor propeller fan.

On Dec. 22, 1923 John M. Frank as ILG team member filed application for Unit for Heating and Ventilating Systems and on April 26, 1927 was granted US Patent # US1626400 A.

On Aug. 25, 1930 Andrew G. Orear as ILG member filed application for Ventilating Appliance and on April 26, 1927 was granted US Patent # US1935179A.

On May 17, 1933 Robert A. Ilg filed application for AirConditioning and Filtering Device and on 9th of October, 1934 was granted US Patent # US1976401A which later influenced design of perforated belt evaporative coolers, liquid barrier filters and humidifiers.

On August 3, 1939 Paul F. Ilg and Robert A. Ilg filed application for Motor Protector for Ventilating Fans and on January 7, 1941 were granted US Patent # US2228116 A which later influenced design of flow guide bodies of axial fans and became prototype for VaneAxial fan design.

Through steady expansion from 1908 t0 1940s the company outgrew research facilities which were part of the main plant and thus were subject to production noise and vibrations. In 1943 recognizing the need for research laboratory, a new building was constructed at the side of 2850 N. Crawford Ave, Chicago, IL. It was single storey, specially built to be shake-proof and to considerable extent sound-proof. This allowed to install extremely sensitive apparatus for sound analyses. Stroboscopic instruments were used to check deflection while tested product is in operation. A separate heating plant provided hot water and steam for testing unit heaters.

Social Legacy

The ILG Electric Ventilating Co was among the first to offer profit-sharing and benefits to employees. The social legacy of ILG culminated in 1932 when Robert Ilg built a recreational park in north suburban Niles, IL for his employees. He installed two swimming pools and a water tower which he hid behind a half-size replica of Italy's Leaning Tower of Pisa. Originally park was used for company picnics. Later, in 1960 the Ilg family donated part of the park property to

the Young Men's Christian Association. The tower has since been restored and is a symbol of the community. In 1991 Niles and Pisa became sister cities.

J. E. TRUITT AND E. ACKERMAN.

SELF COOLED MOTOR.

APPLICATION FILED JUNE 16, 1919.

1,383,883. Patented July 5, 1921.

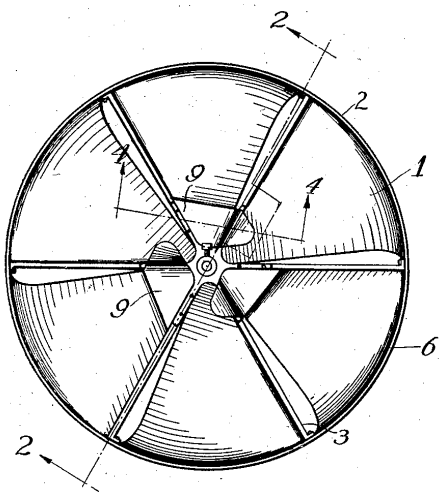
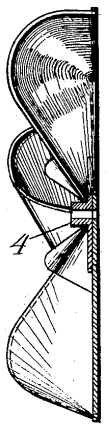


Fig 1



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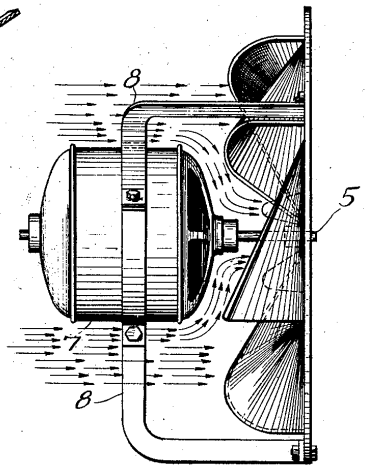


Fig 3

Inventors
JOSEPH EUGENE TRUITT.
EMIL ACKERMAN.
By Daniel & Brennan.
Atty

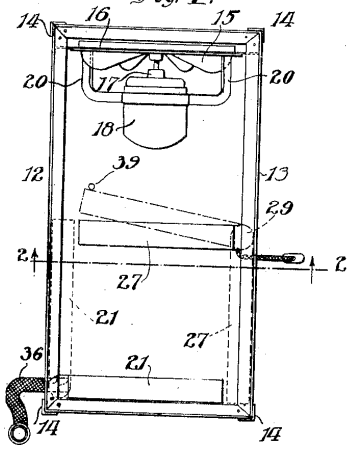
April 26, 1927. 1,626,400

J. M. FRANK

UNIT FOR HEATING AND VENTILATING SYSTEMS

Filed Dec. 22, 1923

Fig. 1.



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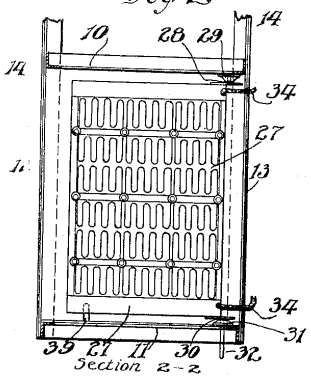

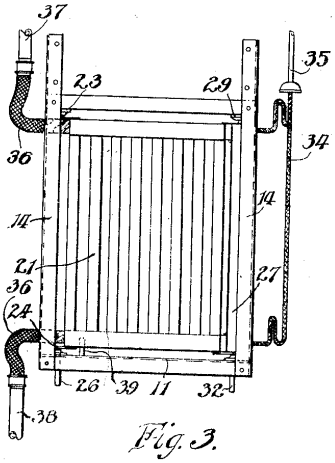

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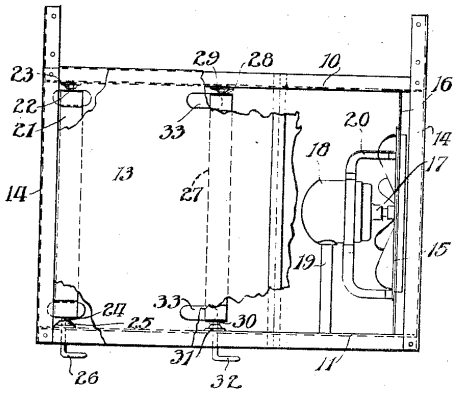


Fig. 4.

INVENTOR.
John M. Frank
BY Samuel N. Pond,
ATTORNEYS.

Nov. 14, 1933. A. G. OREAR 1,935,179

VENTILATING APPLIANCE

Filed Aug. 25, 1930

Fig. 1

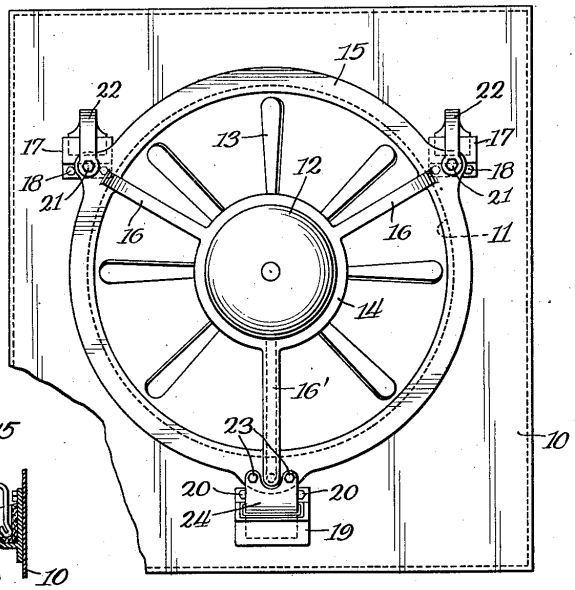


Fig. 4

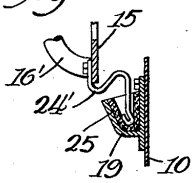
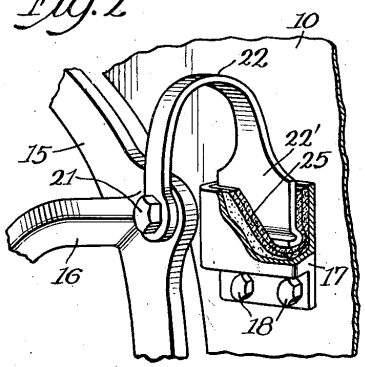


Fig. 2



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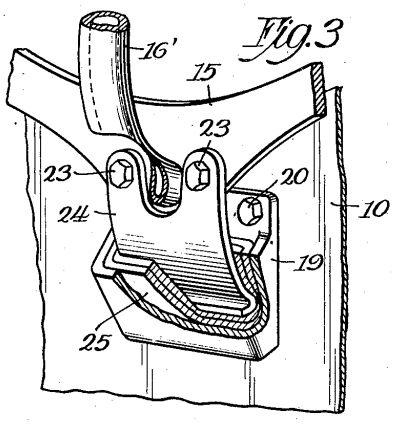


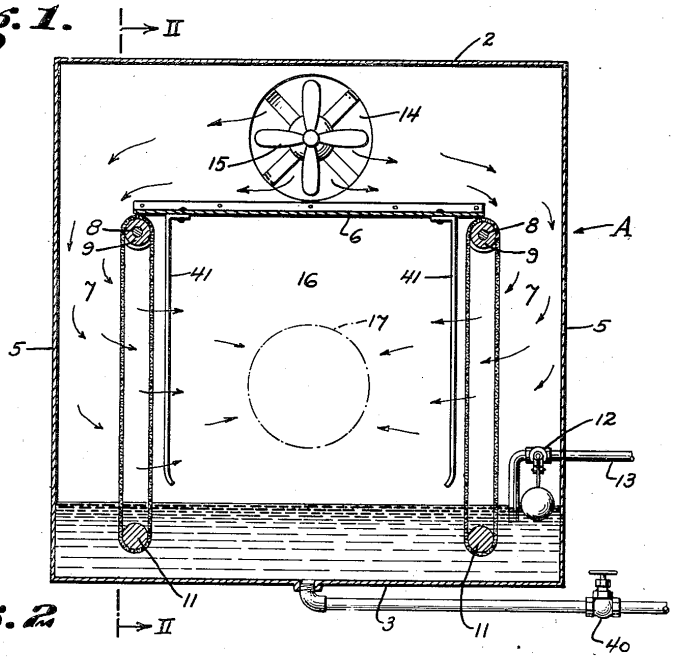
Inventor
Andrew G. Orear
By Fisher, Clapp, Soames & Pond Attys.

Oct. 9, 1934. R. A. ILG 1,976,401

AIR CONDITIONING AND FILTERING DEVICE

Filed May 17, 1933 2 Sheets-Sheet 1

Fig. 1.



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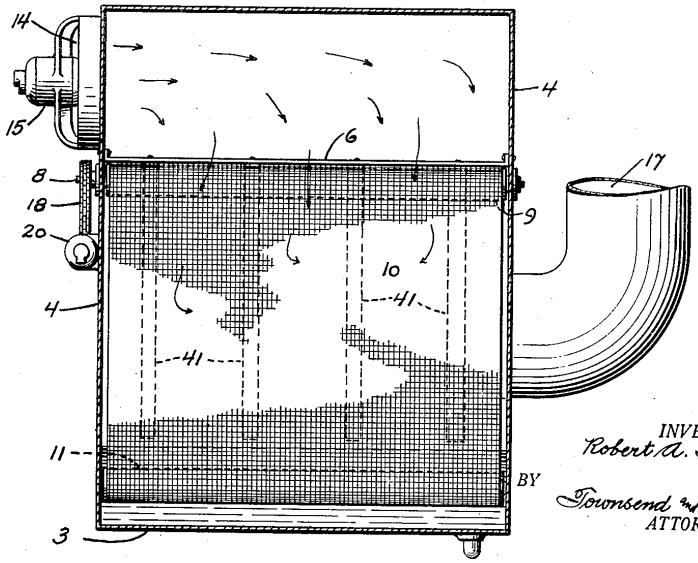

INVENTOR.
Robert A. Ilg.

BY Townsend and Loftus.
ATTORNEYS.

Oct. 9, 1934. R. A. ILG 1,976,401

AIR CONDITIONING AND FILTERING DEVICE

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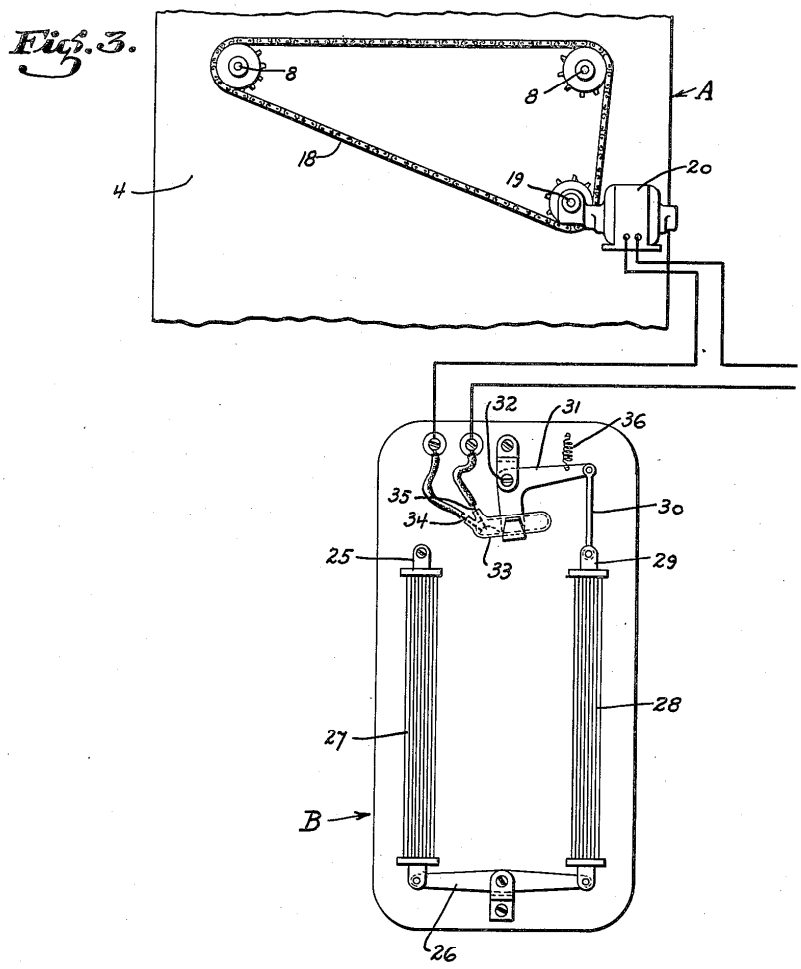
Fig. 3.



INVENTOR.
Robert A. Ilg.
BY Townsend & Loftus.
ATTORNEYS.

Jan. 7, 1941. R. A. ILG ET AL 2,228,116

MOTOR PROTECTOR FOR VENTILATING FANS

Filed Aug. 3, 1939

Fig. 1

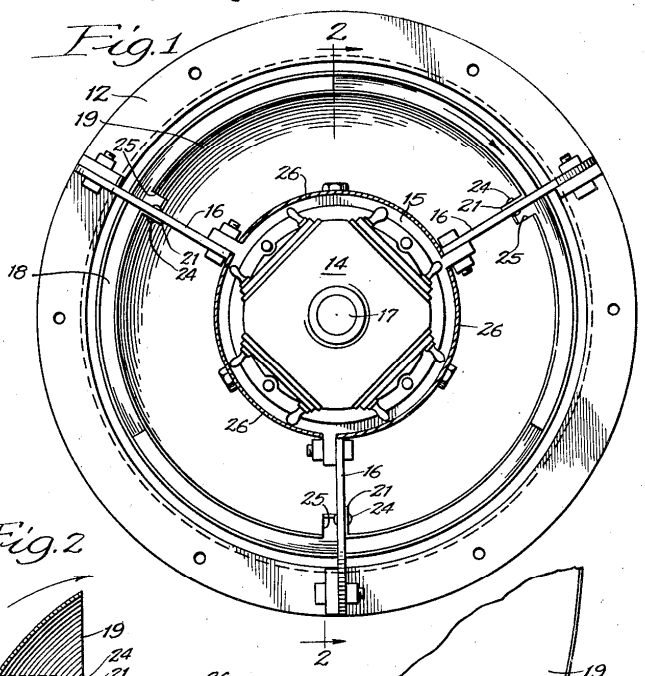
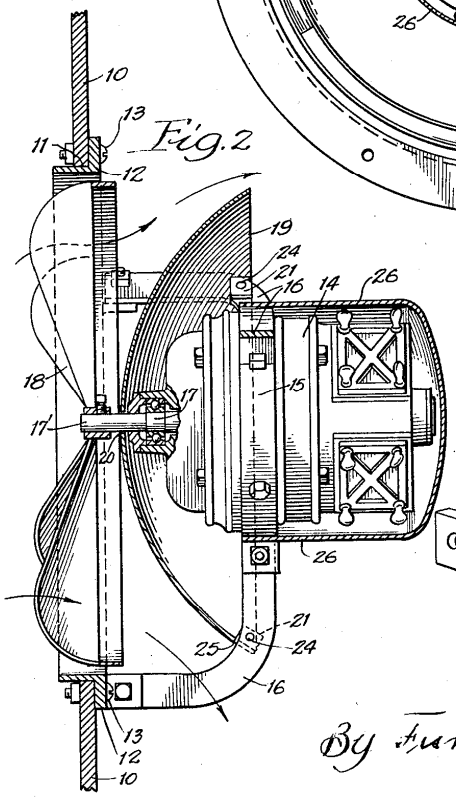


Fig. 2



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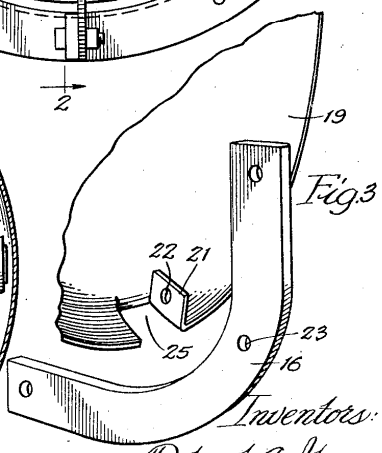

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