

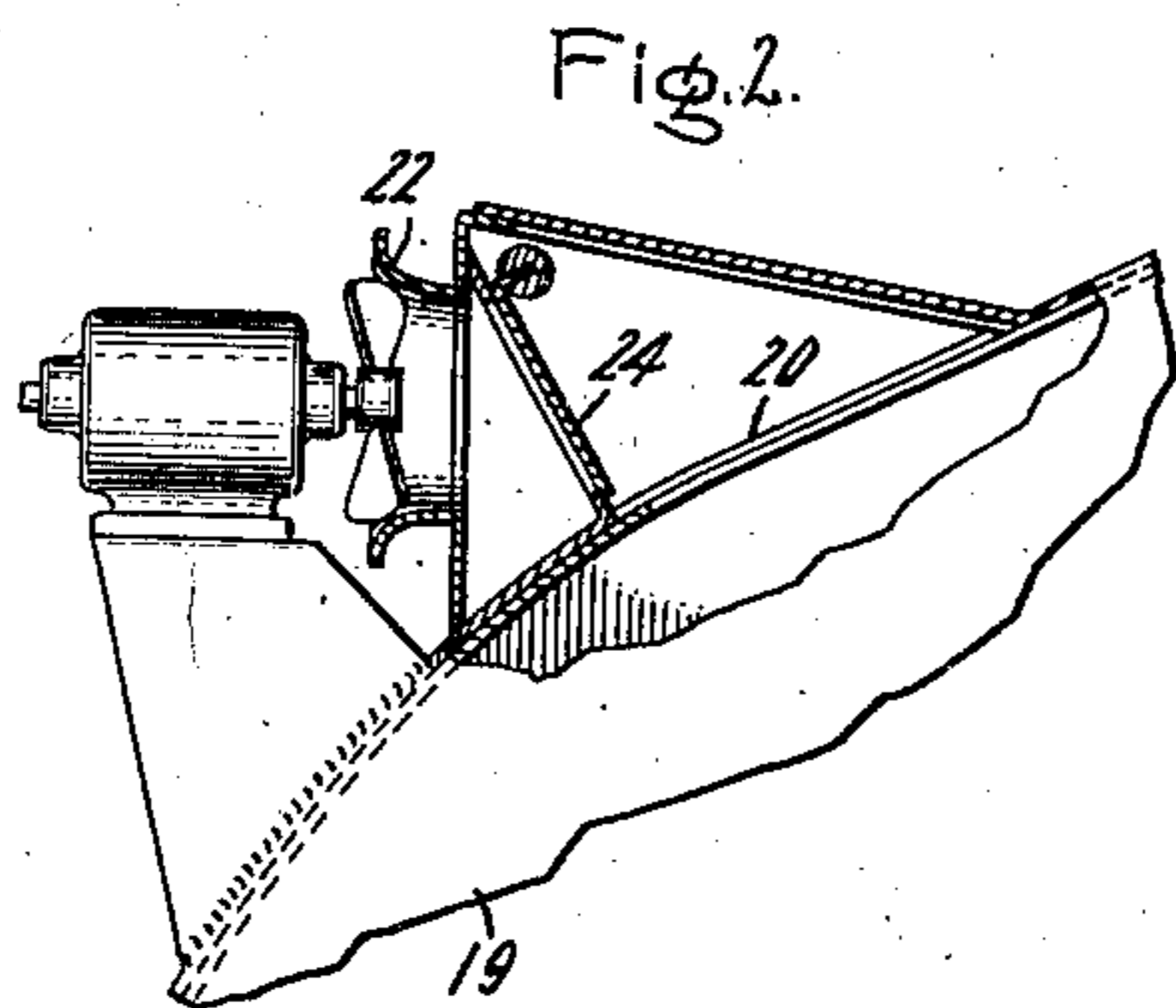
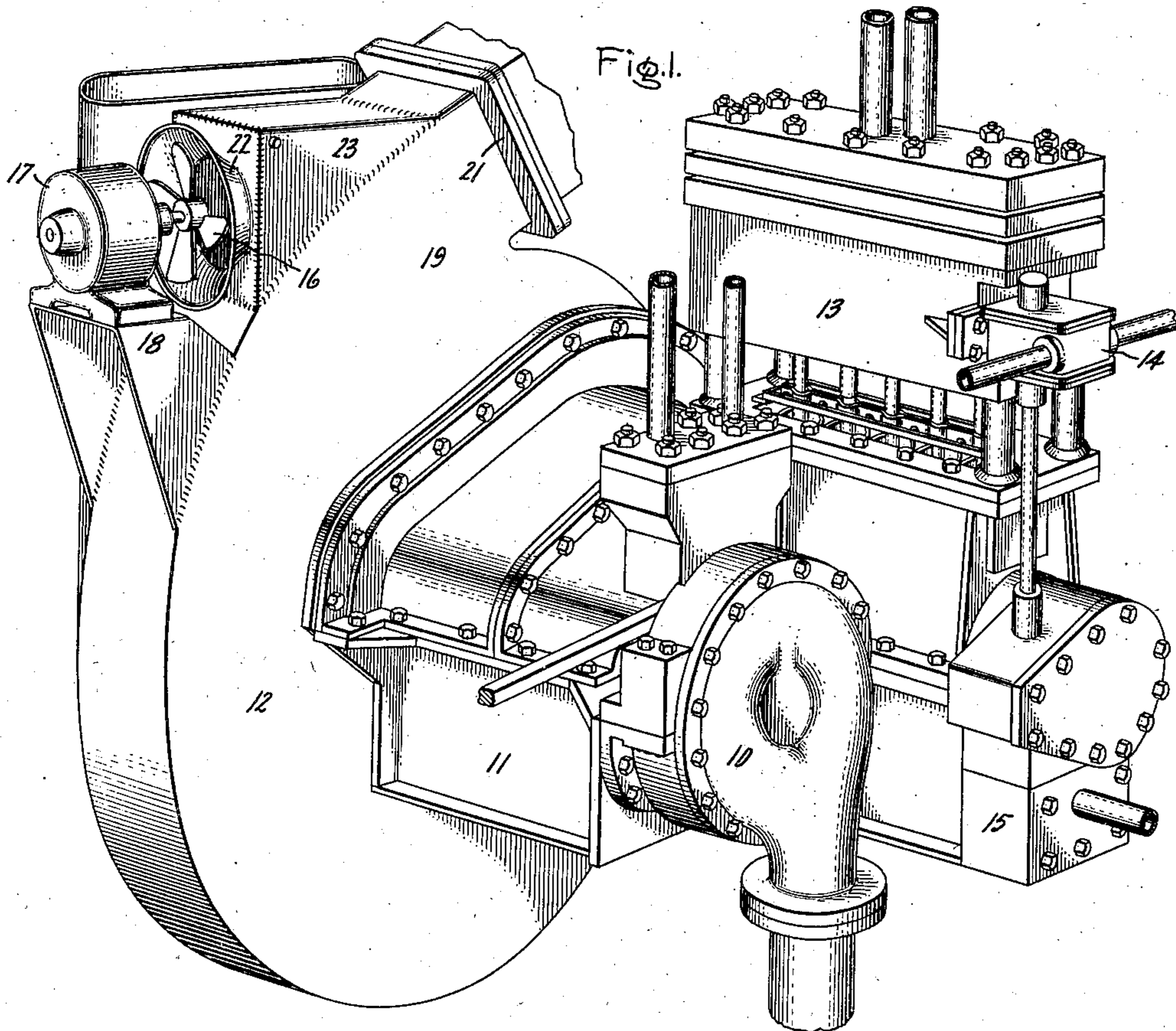
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2,149,107

AUXILIARY UNIT FOR OPERATING POWER PLANTS

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AUXILIARY UNIT FOR OPERATING POWER PLANTS

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26, 1937, Serial No. 127,879

2 Claims. (Cl. 230—44)

This is a division of my main application Serial No. 37,704, filed August 24, 1935, now Patent No. 2,095,845, October 12, 1937.

The present invention relates to auxiliary units for operating power plants and has for its object the provision of an improved construction and arrangement of such auxiliary units whereby a plurality of auxiliaries such as blowers, pumps and like appliances or accessories are driven by a single motor or prime mover and united with such prime mover to form a unitary structure which can be easily installed and transported as a whole. These auxiliary units usually include a main blower for forcing air into a combustion chamber during normal operation and an auxiliary, motor-driven blower for forcing air into the combustion chamber during the starting period.

A more specific object of my invention is to provide an improved construction and arrangement of the auxiliary and main blowers forming parts of such auxiliary units.

For a consideration of what I believe to be novel and my invention, attention is directed to the following description and the claims appended thereto in connection with the accompanying drawing.

In the drawing, Fig. 1 represents a perspective view of an auxiliary unit embodying my invention, and Fig. 2 is a side view partly in section of a part of Fig. 1.

The auxiliary unit comprises a motor or prime mover, in the present instance an elastic fluid turbine 10 connected to a gearing having a casing 11. Supported on the casing 11 of such gearing and driven by the gearing are a number of auxiliaries such as a blower 12, a boiler feed pump 13, a fuel pump 14 and a lubricating pump 15. These auxiliaries and their arrangement are described more in detail in the main application.

In cases, as in the present instance, where the auxiliary unit is driven by an elastic fluid turbine 10 receiving elastic fluid from a main boiler, means must be provided for starting the boiler, that is, for supplying air to the furnace thereof before the main blower can be operated. The starting means in accordance with my invention comprises an independently driven auxiliary blower, in the present instance shown as a fan 16 driven by an electric motor 17. The motor-driven fan is held on a support 18 welded to the casing of the main blower 12. The latter has a scroll 19 with an opening 20 (Fig. 2) near a

flanged outlet opening 21 and the fan 16 is arranged to force air through the opening 20 in the direction of the flanged outlet opening 21, that is, along the path defined by the outlet portion of the scroll 19. A funnel or nozzle 22 is disposed adjacent the fan to increase the pressure of air forced towards the opening 20 during operation of the fan 16. The nozzle 22 is secured to a lateral extension 23 of the main blower casing. As stated before, the auxiliary blower represents a means for starting a boiler before the turbine-driven main blower can be operated. During normal operation of the main blower the discharge of air from the scroll through the opening 20 is prevented by means including a valve member 24 for closing the compression nozzle 22.

Having described the method of operation of my invention, together with the apparatus which I now consider to represent the best embodiment thereof, I desire to have it understood that the apparatus shown is only illustrative and that the invention may be carried out by other means.

What I claim as new and desire to secure by Letters Patent of the United States is:

1. An auxiliary unit for operating a power plant including a centrifugal main blower having a scroll with a discharge outlet and an opening near the outlet for normally forcing air to a boiler, an auxiliary fan type blower independent of the main blower for starting the power plant, the auxiliary blower being mounted onto said scroll with its axis at an angle to the axis of the main blower and arranged to discharge air in a direction through the opening towards said outlet that is along the path defined within the scroll.

2. An auxiliary unit for operating a power plant including a centrifugal main blower having a scroll with a discharge outlet and an opening near the outlet for normally forcing air to a boiler, an auxiliary fan type blower independent of the main blower for forcing air to such boiler to start the power plant, the auxiliary blower being mounted onto said scroll and arranged to discharge air in a direction through the opening towards said outlet along the path defined within the scroll, and a compression nozzle disposed intermediate the auxiliary blower and said opening for increasing the pressure of the air forced into the scroll during operation of the auxiliary blower.

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