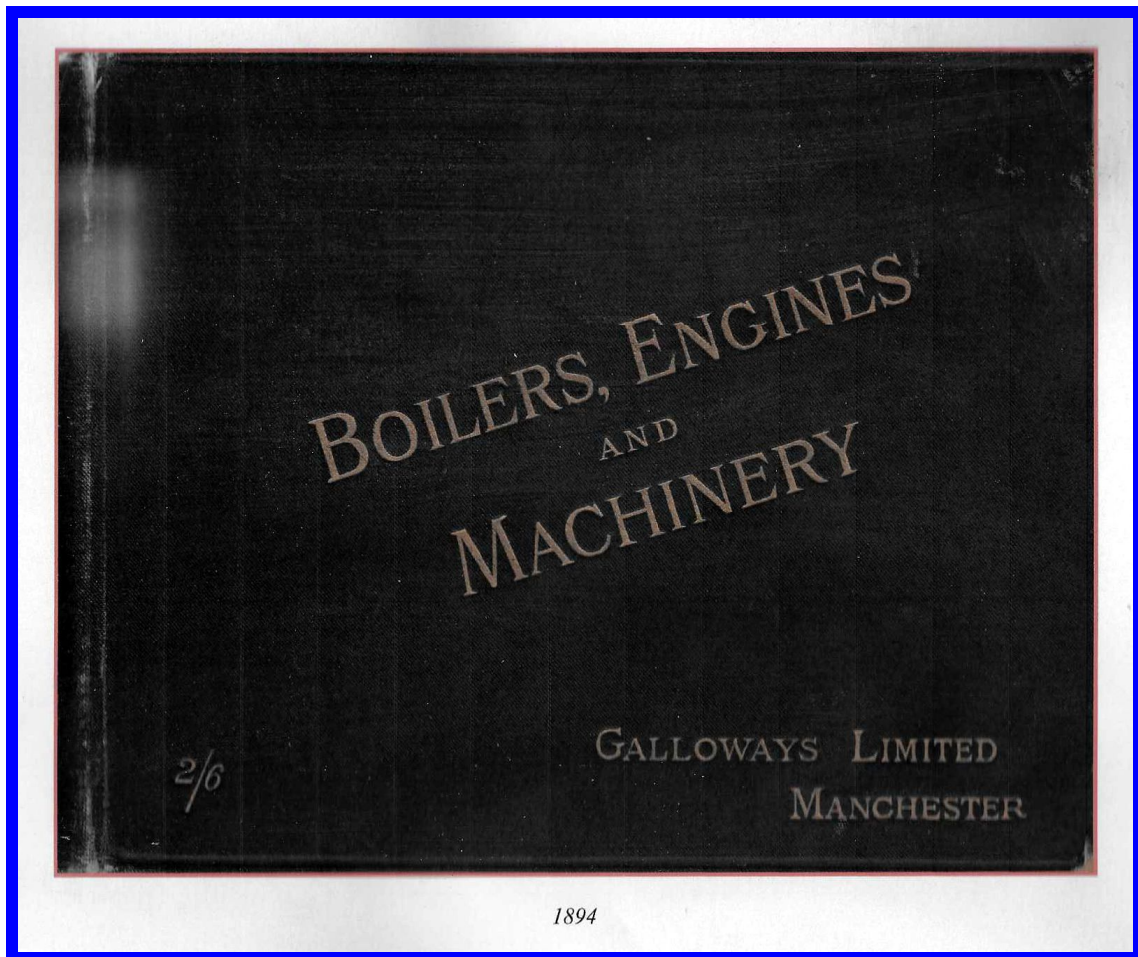


# STEAM & HOT WATER BOILERS 1840-1930

## *Galloway Steam Boilers* MANCHESTER



A History of the Company is given under Electronic Books/Manufacturers on the  
Heritage Group Website

## W & J GALLOWAY

In 1835\*, the brothers William Galloway (born 1796) and John Galloway (born 1804) having served an apprenticeship with Galloway, Bowman & Glasgow, a partnership involving their father William Galloway (1768-1836), they set up in business on their own account. They operated from Knott Mill Ironworks in Manchester and in 1846 were trading as ironfounders and manufacturers of Patent Screw or Lifting Jacks.

(\*Some reports give the set up date as 1836).

In 1848, the brothers obtained a British Patent for “improvements in steam engines and boilers.” Hence the “Galloway Boiler” was born. The Lancashire boiler, which formed the basis on which the Galloways developed their 1851 design, had been patented by Sir William Fairbairn and John Hetherington in 1844. But in 1854 Galloway sent a warning letter to Fairbairn claiming he had infringed their patents. They did something similar to James Lillie (a former business partner of Fairbairn) in 1845, claiming he had infringed upon a boiler-related design of theirs. These claims seem to have been unproven.

By 1851 Galloway was employing 260 men and producing gunpowder mills, steam engines and undertaking various civil engineering projects. John Galloway took a particular interest in boilers and ways to improve their efficiency. An important patent for the Galloway boiler was BP 13532: 1851. The Company had been making boilers of this type since 1849 and one was exhibited in 1851 at the Crystal Palace Great Exhibition, before being purchased by the West Ham Gutta Percha Company. Galloway went on to build some 9,000 boilers of this type by 1891, as well as licensing the design for manufacture by other parties. (The design of the Galloway boiler seems to have been aided by the engineer, Robert Armstrong, who in 1850 wrote the textbook “Boiler Engineering.”)

## **W & J GALLOWAY & SONS**

In 1856 the firm became W & J Galloway & Sons when John Galloway Jr (son of William, born 1826) and Charles John (son of John, born 1833) were taken into partnership, having served a seven year apprenticeship. From 1855, the Company also worked closely with Henry Bessemer and developed their interests in the steel industry.

As the business grew, additional premises were obtained in 1872 on Hyde Road, Manchester, near Ardwick Railway Station, leaving the Knott Mill factory to concentrate on building engines.

Charles John Galloway had a particular interests in exhibitions and the firm displayed two 40 hp Galloway boilers at the 1873 Vienna Universal Exhibition, and won awards at the 1876 Philadelphia Exhibition and the 1878 Paris Exhibition.

## **GALLOWAYS LTD**

The partnership was converted into a private company, Galloways Ltd, in 1889. When John Galloway Senior died in 1894, the Company had 500 employees at the Knott Hill site and a further 800 at Ardwick. At this time the Company had extensive manufacturing and engineering interests apart from boilers.

John Galloway Junior died in 1896 and in 1899 the business became a public limited company. Charles John Galloway died in 1904 when the Galloway boiler design was still being improved. A superheater had been added in 1902 and another design was introduced in 1910. However, the Company was placed in receivership in 1912 but continued after restructuring in 1925, before again going into receivership in 1932. In 1933, Hick Hargreaves & Co purchased the complete records, drawings and patterns of the defunct W & J Galloway Ltd.



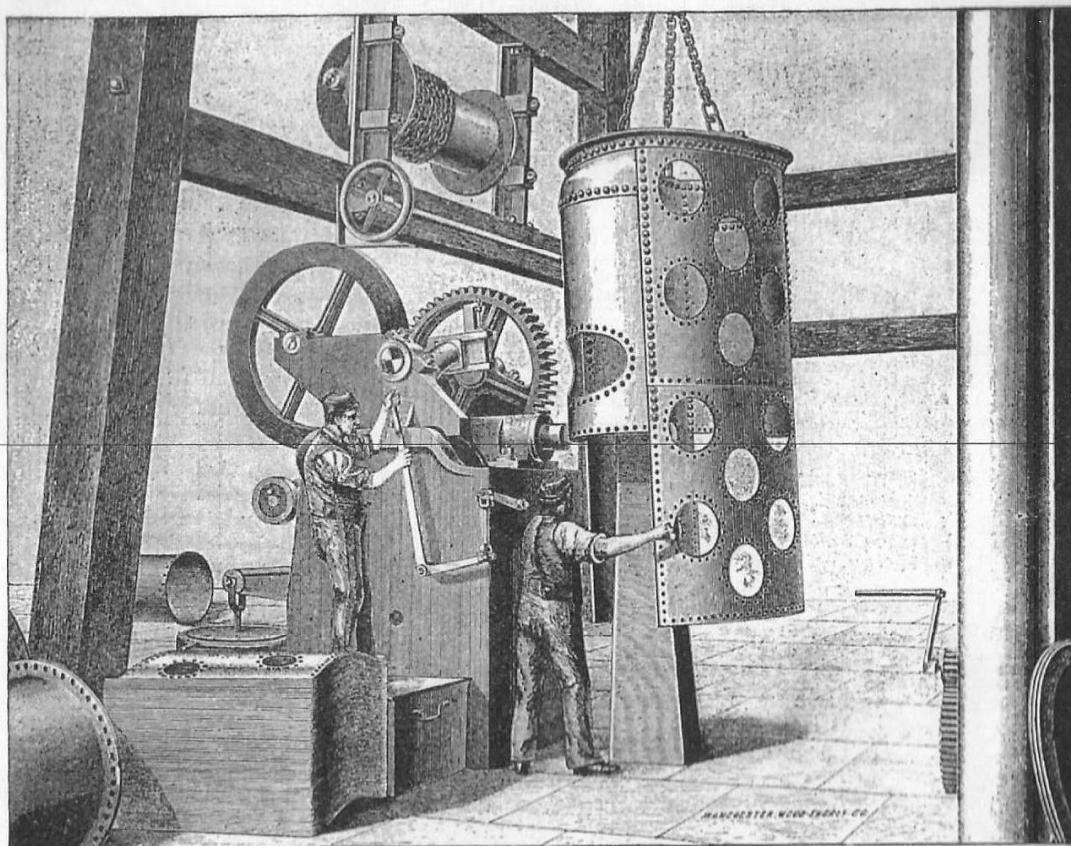
Galloways

LIMITED,

MANCHESTER.

BOILERS  
AND  
ENGINES

1905



FLUE RIVETING MACHINE

Fig. 33

MANCHESTER

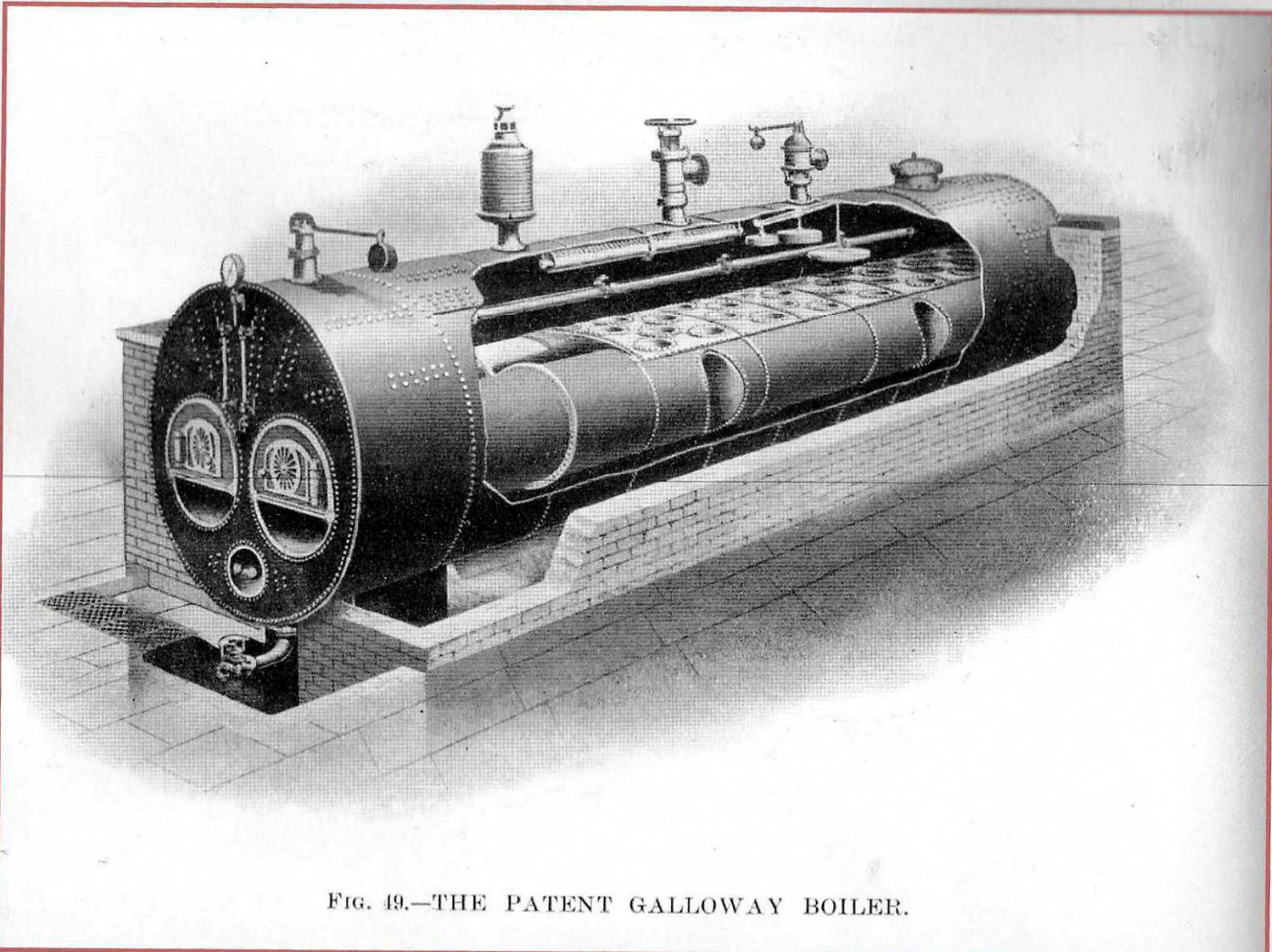


FIG. 49.—THE PATENT GALLOWAY BOILER.

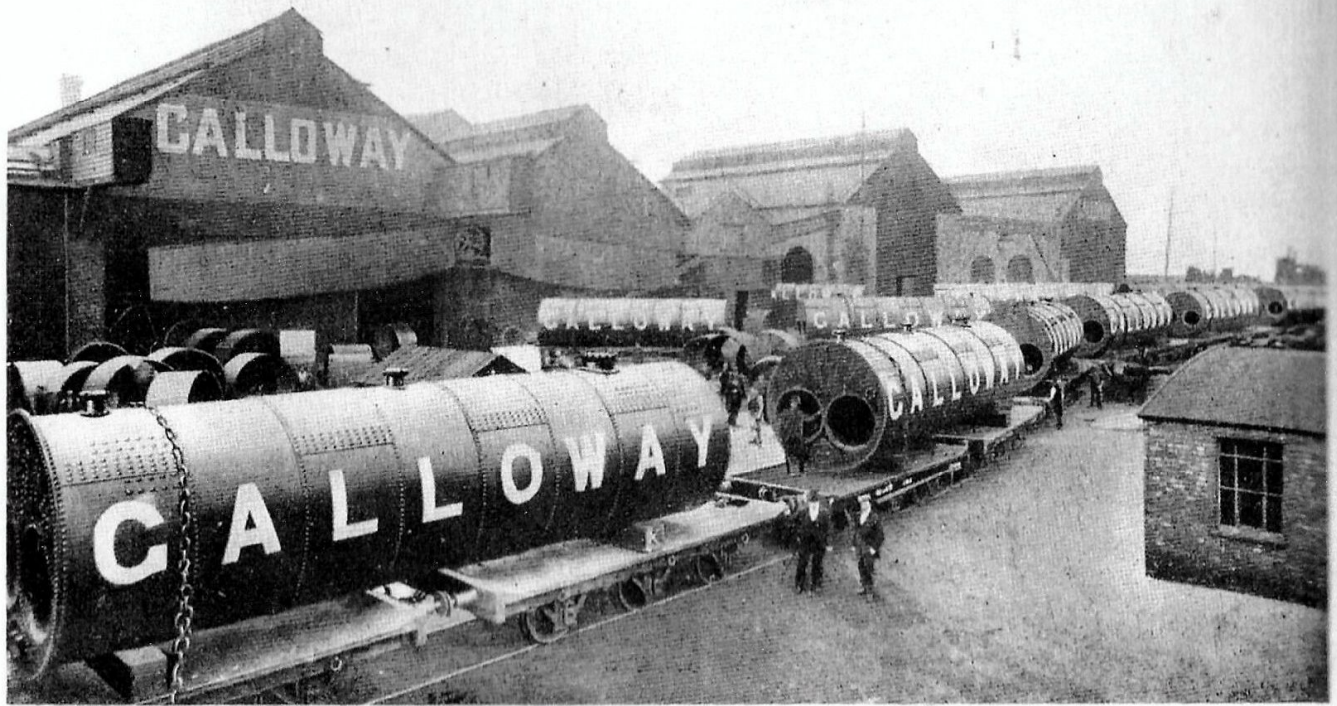


FIG. 42.—GENERAL VIEW OF BOILER STORE.

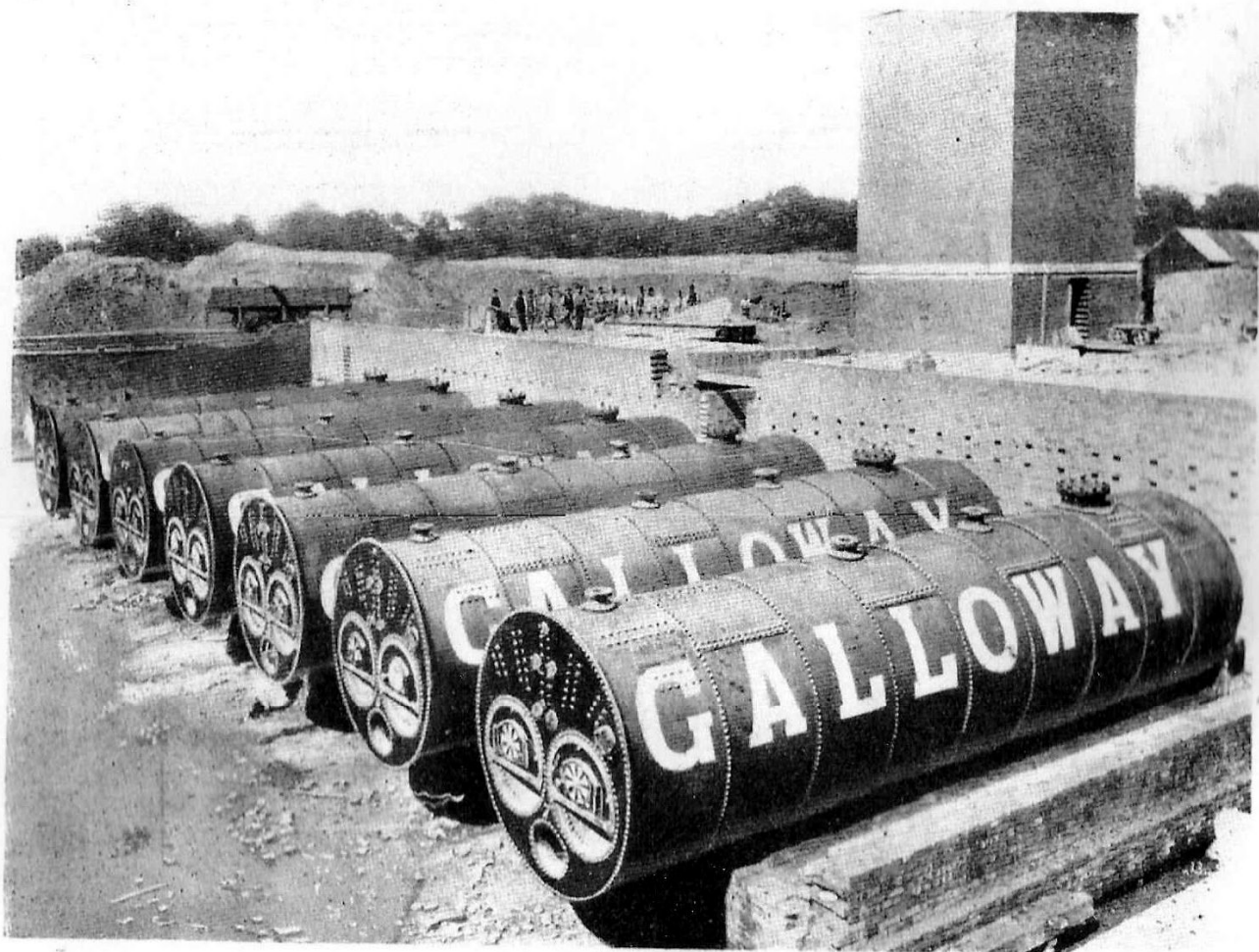


FIG. 48.—A BATTERY OF SEVEN GALLOWAY BOILERS AT CLAYBURY ASYLUM





*About 1900*

# STEAM-BOILERS

## THEIR THEORY AND DESIGN

BY

H. DE B. PARSONS, B.S., M.E.

CONSULTING ENGINEER

*Member American Society Mechanical Engineers; Member American  
Society Civil Engineers; Member Soc. Naval Arch. and Marine  
Engineers; and Professor of Steam Engineering,  
Rensselaer Polytechnic Institute.*

SECOND EDITION

LONGMANS, GREEN, AND CO.

91 AND 93 FIFTH AVENUE, NEW YORK

LONDON AND BOMBAY

1905

separating surface and to prevent priming. The tubes should be always arranged in vertical and horizontal rows, and not be

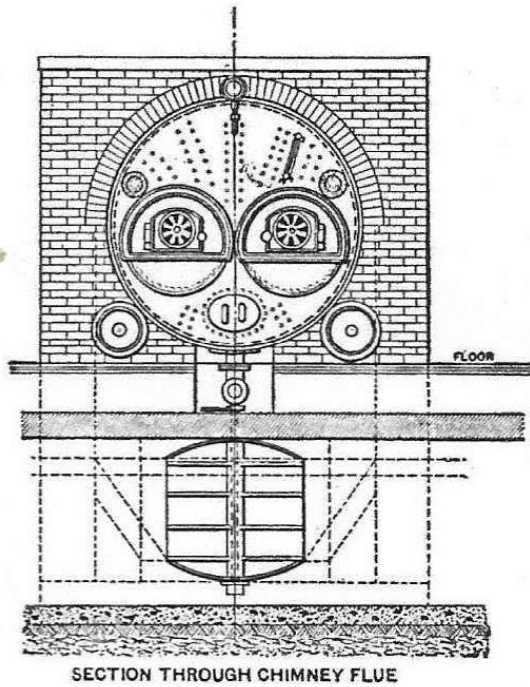


FIG. 19a.—Section of Galloway Boiler, Fig. 19.

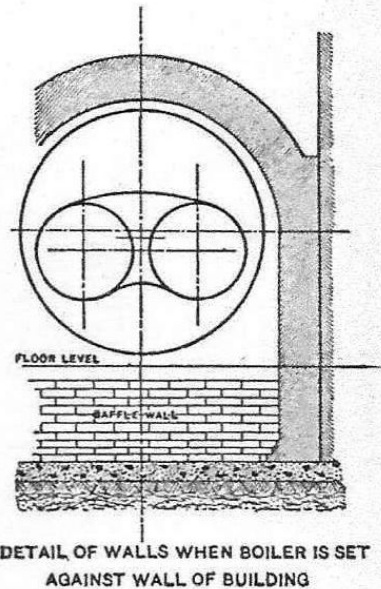


FIG. 19b.—Section of Galloway Boiler, Fig. 19.

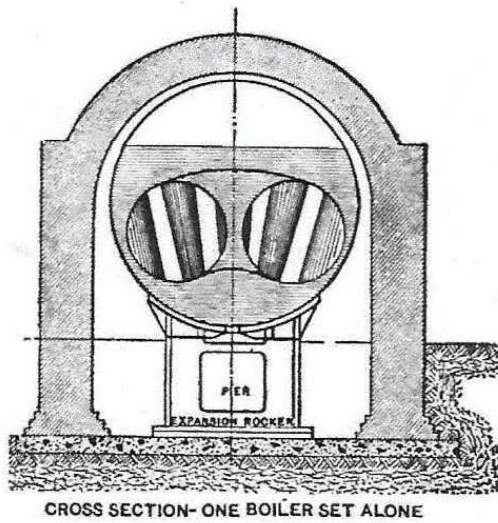


FIG. 19c.—Section of Galloway Boiler, Fig. 19.

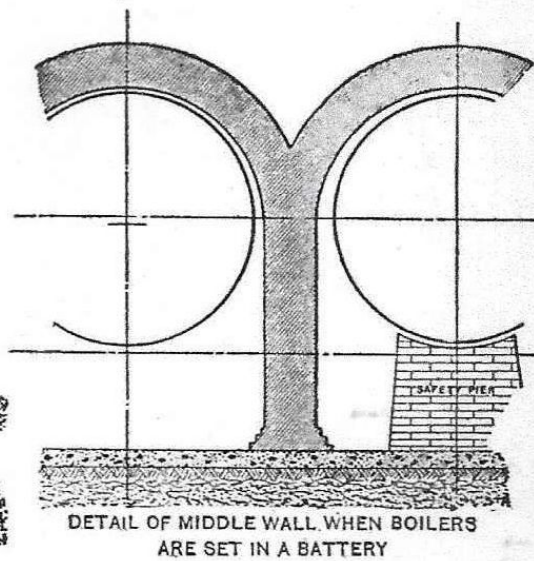
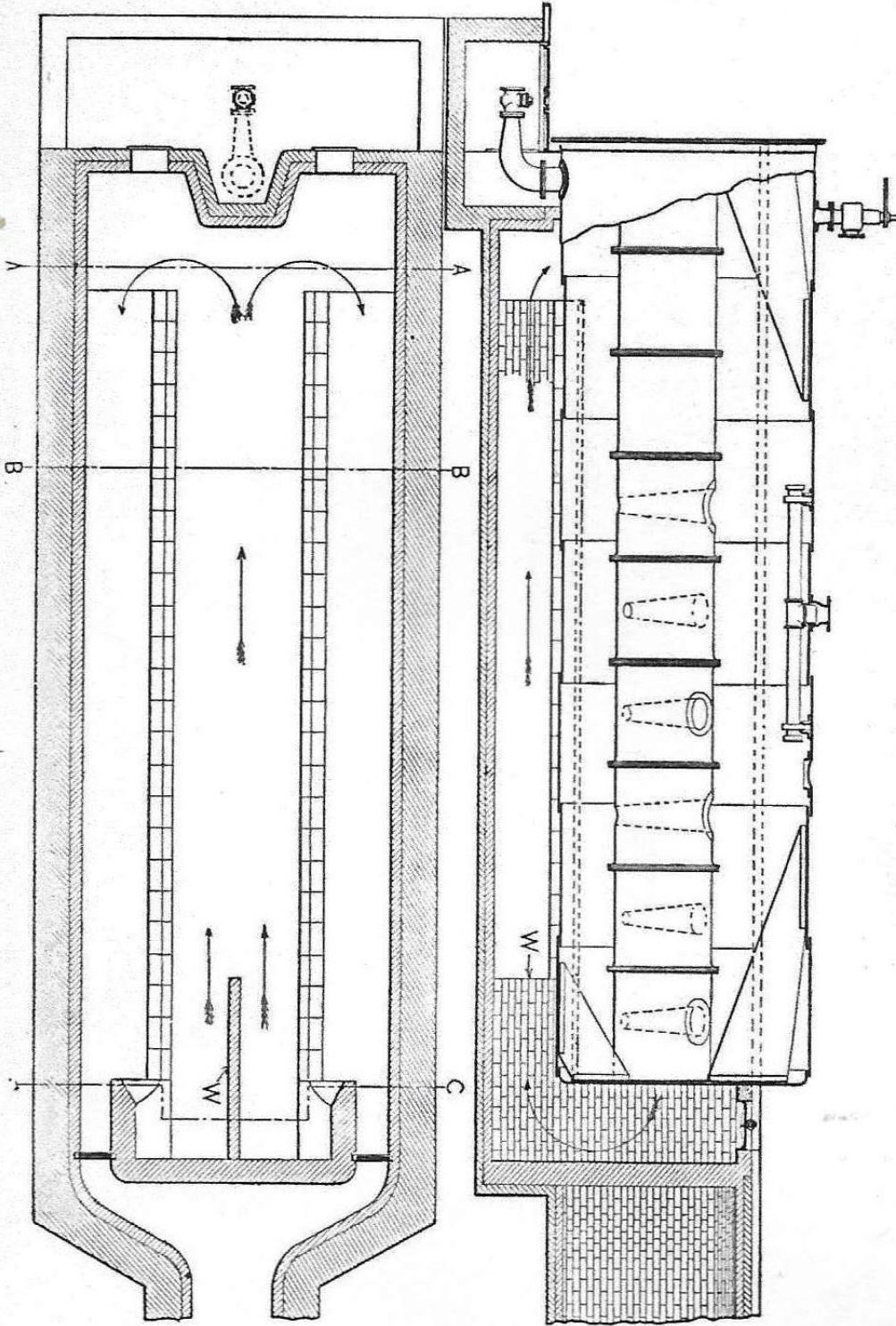


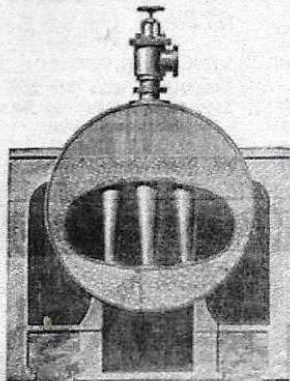
FIG. 19d.—Section of Galloway Boiler, Fig. 19.

staggered. The horizontal spacing is generally made wider than the vertical, to facilitate the rising currents carrying the steam-

FIG. 20.—Iancashire Boiler with Galloway Tubes, seated in the type of brick setting most used. For Galloway and Cornish boilers the division wall "W" is omitted.



# GALLOWAY'S PATENT CONICAL BOILER TUBES.



Section of "Galloway" Boiler, showing arrangement of back flues, the furnaces being of the same construction as in the common two-flue boiler.

These Tubes are made with such an amount of Taper as will allow the bottom flange to pass through the hole in the upper side of the Boiler flue, which renders their introduction into ordinary Sand Boilers a simple operation, and with the following advantages:—

The Power of the Boiler is considerably increased, and the Flues are **MATERIALLY STRENGTHENED.**

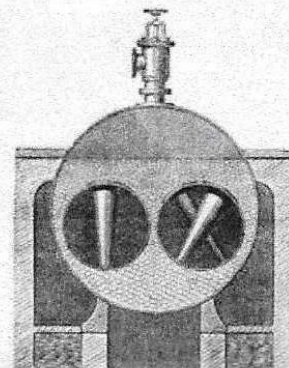
The Circulation of the Water is much improved, and unequal expansion, with its attendant evils, prevented. Liability to PRIME is lessened.

These Tubes have now been in use upwards of Eighteen years, and above 80,000 are in work in various parts of the country with the best results.

They can be fixed by any boiler maker, but can only be obtained from the Patentees,

**W. & J. GALLOWAY & SONS,**  
ENGINEERS AND BOILER-MAKERS,  
**MANCHESTER.**

Makers of Wrought-Iron Welded Furnaces, &c.



Section of Cornish Boiler, showing application of "Galloway" Tubes.

MANUFACTURERS OF THE WELL-KNOWN

## "GALLOWAY BOILER."

(AS PER SKETCH ANNEXED),

UPWARDS OF TWO THOUSAND OF WHICH ARE NOW AT WORK.

Boilers of any dimensions, upon this or any other plan, can be delivered within a few days from receipt of order.

## STEAM ENGINES

SPECIALLY ADAPTED FOR ROLLING MILLS, &c. &c.

Polishing, Grinding, and other Machines for Plate Glass.

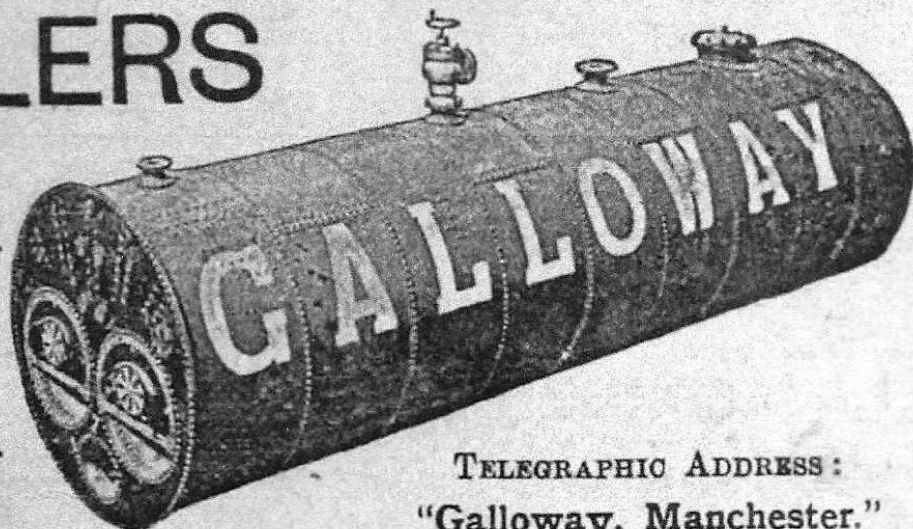
LEAD ROLLING MILLS AND PIPE PRESSES.—BESSEMER MACHINERY.

1872

# GALLOWAYS LIMITED, MANCHESTER.

50 or 60  
**BOILERS**

ALWAYS  
ON STOCK  
READY  
FOR  
DELIVERY



TELEGRAPHIC ADDRESS:  
"Galloway, Manchester."

1894

Galloways Limited,  
Manchester,  
Have about 50 Boilers  
Ready for Delivery.

7890

Telegraph Address: "GALLOWAY, MANCHESTER."

1891

