

(1) Number of pages_____

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MADRAS RECORD OFFICE

Government of Madras

Public Works DEPARTMENT

G.O. No.	1727	Press
B.P. No.		Mis.
Dated	18-6-1955	

Not to be folded or roughly handled

*Proceedings of the Madras Government, Public Works Department,
18th June 1875.*

No. 415. Read the following letter from Messrs. J. JACKSON & Co., Engineers, to Colonel G. W. WALKER, R.E., Secretary to Government, Public Works Department, dated 17, Gracechurch Street, London, E. C., 7th May 1875:—

Bastier's Chain Pumps.

WHEN calling at the India Office in Westminster the other day, it was suggested to us that we might communicate with some of the officers in reference to the above-named pumps, which we have supplied to the various departments of the Home Government for a good many years.

2. We, therefore, take the liberty of enclosing, herewith, a circular descriptive of the apparatus, and shall be happy to forward further particulars which you may desire, or estimates and drawings for any arrangement of heavy pumping which may be contemplated.

3. We made a number to the order of the India Office Director of Stores for Abyssinian Expedition.

4. Begging the favor of your consideration of this application, we are, &c.

THE "BASTIER" PUMP

FOR MINES, WELLS, SEWAGE, DRAINAGE, AND IRRIGATION.

THIS is the most efficient pump ever introduced into public notice for vertical lifts. It is moderate in its first cost, and requires less power than any other.

The water is lifted through vertical tubes. At every interval of 40 yards a contracted part, or working barrel, is inserted, smaller in diameter than the main pipe, one of which is always placed at the lower end. An endless chain passes over the driving wheel at the top, going down free, and coming up through the tube into which it enters by a bell-shaped mouth-piece. On this chain are fixed India-rubber discs, smaller in diameter than the main pipe, but fitting tight in the working barrels, so that all the water that enters is forced up and carried through the main pipe. The discs being free all round from the pipe for nine-tenths of the whole distance, friction is reduced to a minimum.

Eighty-seven per cent. of the whole area of the tube is lifted in water. A 3½ inch pump has lifted 120 gallons per minute, from a depth of 270 feet, with 10·75 indicated horse-power; other sizes in proportion.

We have supplied these pumps to the various departments of the British Government—(the Admiralty, War Department, India Office, Colonial Office, and Royal Engineers,) with uniform approbation; also to the Netherlands, Egyptain, and other Governments.

The following is an extract from the Official Report of the Abyssinian Campaign, in reference to a number of pumps we supplied to order of the War Department for that Expedition:—

From the Record of the Expedition to Abyssinia, compiled by Major TRÉVENEN J. HOLLAND, C.B., and Captain HENRY M. HOZIER.

"The Bastier Chain Pump is equal to 12 Norton's. At Kumayli one kept 45 mules, regularly drinking, the Norton's only three at one time, and four the next alternately, each worked by one man.

"The Bastier once in position is difficult to injure, and the suckers, which wear out in time, can be renewed in a few minutes.

*Proceedings of the Madras Government, Public Works Department,
13th June 1875.*

"In trying the Bastier Chain Pump, working hard 40 revolutions per minute, a result was obtained of 8 cubic feet of water per minute, equal to 50 gallons. With 30 revolutions, 5 765 cubic feet, equal to 36 gallons, were obtained. (*These pumps were 2½ in.*)

"The Bastier gives on an average about 2,200 gallons per hour, two men working.

"One with a pipe 6 in. in diameter gave a supply of 180 gallons per minute. Its motive power was a camel or a pair of bullocks."

We subjoin copies of a few letters as to the results of the application of the pump for the various purposes referred to.

FOR MINES.

THE OLD PARK AND MAINS LEE COAL AND IRON WORKS,
SHIFNAL, SHROPSHIRE, 12th Nov. 1869.

(PUMP, 18½ ft. by 4 in.)

DEAR SIRs,—We have had your four-inch chain pump at work for the last *twelve* months; it has done its work very satisfactorily, and has not given any trouble or required any outlay upon it. We are expecting very shortly to be ready to put down a six-inch pump of which I spoke to you some time since, and of which you will hear further in due course.

Messrs. J. Jackson & Co.,
17, Gracechurch Street.

Yours faithfully,
THOMAS W. PLUM, *Manager.*

And under date 18th August 1870, Mr. PLUM writes us again as follows:—

"In reply to your enquiry, the pump you put in for us continues to work quite as satisfactorily as ever; it has not been in any respect troublesome."

This pump ran nearly four years without even requiring new rubber discs.

FOR LIFTING THICK LIQUIDS IN FACTORIES, &c.

PATENT RICE STARCH WORKS,
BATTERSEA, S. W., May 16th, 1868.

DEAR SIRs,—In reply to your enquiry, we have much pleasure in stating that we have been perfectly satisfied with the working of Bastier's Pump. We have used it for pumping starch daily during the past year, and have found it admirably adapted for lifting the material.

Messrs. J. Jackson & Co.

We remain, Dear Sirs,

Yours faithfully,
ORLANDO JONES & Co.

FOR SHEEP FARMS AND COLONIAL PURPOSES.

QUEEN'S ROAD, CLAPHAM PARK, May 6th, 1869.

(PUMP, 120 ft. by 3½ in.)

DEAR SIRs,—My brother, who has stations in Munriahidge, New South Wales, requires 100 more discs for the Bastier Pump you sent out two years ago. He says, "we like that pump very much, and have been using it constantly for the last four months."

Messrs. Jackson & Co.

Yours faithfully,
JOHN L. LEARMOUTH.

*Proceedings of the Madras Government, Public Works Department,
18th June 1875.*

FOR WATER WORKS AND SINKING.

OLDHAM CORPORATION WATERWORKS,
WATER WORKS OFFICE,
OGDEN EMBANKMENT,
4th October 1872.

MESSRS. J. JACKSON & Co.

GENTLEMEN.—In answer to your note of the 13th ultimo, I have much pleasure in stating that for more than 12 months we worked the Bastier Pump while sinking the foundation of one of the public trenches on the Ashton-under-Lyne and Stalybridge (Corporations) Waterworks at Swineshaw.

During the whole of this time, the pump did its work to our entire satisfaction, working night and day, and lifted the water 54 feet with the same ease and economy as the first 20 feet we sank the trench.

Beyond the renewal of the India-rubber discs as they got worn out, we were at no additional cost from the first.

By suspending the *main* on wooden cross pieces with iron rods, it can be raised and lowered at will, according to the lengths of *screws* you have a mind to give the rods at the top ends: in fact, the screws should be sufficiently long to allow of the *main* being lowered, until a short length can be put on. By this way of working, we never experienced any difficulty in sinking the *sump hole*, and the buckets will bring up stone and other *débris*, when not too large to be gathered.

My experience of the working of your Bastier Pump on the Ashton-under-Lyne and Stalybridge Works induced me to recommend the purchase of a second one on these Works, which we have now at work, night and day, with similar satisfaction.

Yours truly,
WILLIAM WATTS, *Manager.*

The high percentage of water lifted, in proportion to the power expended, will be seen on reference to the accompanying Table, which has been more than verified in practice.

Prices and full particulars of these pumps, with steam engines, and cattle, wind, or hand-power gear; or whole plants of mining, sewage, and water works, supplied on application to

J. JACKSON & Co., *Engineers.*
17, Gracechurch Street, London.

No. 416.

ORDER THEREON, 18th June 1875, No. 1,727.

ESTABLISHMENT, No. 25.

COMMUNICATED to all Superintending
and District Engineers.

(True Extract.)

Major, R.E.,

Offy. Joint Secretary to Government.

To all Superintending and District Engineers.

To the Chief Engineer for Irrigation.

" Special Executive Engineer, Wynaad.

Exd. A. Grubert.

Spare Copies

JACKSON & CO
ENGINEERS
LONDON & GLASGOW.

17, Gracechurch Street
London E.C. 7 Ma

The Secretary
Public Works Department
Government Offices: St.

Sir, Baster's Chain Pump

When calling at the India Office
Westminster the other day, it was
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Pumps which we have supplied to
various Departments of the Home Office
for a good many years. —

We therefore take the liberty
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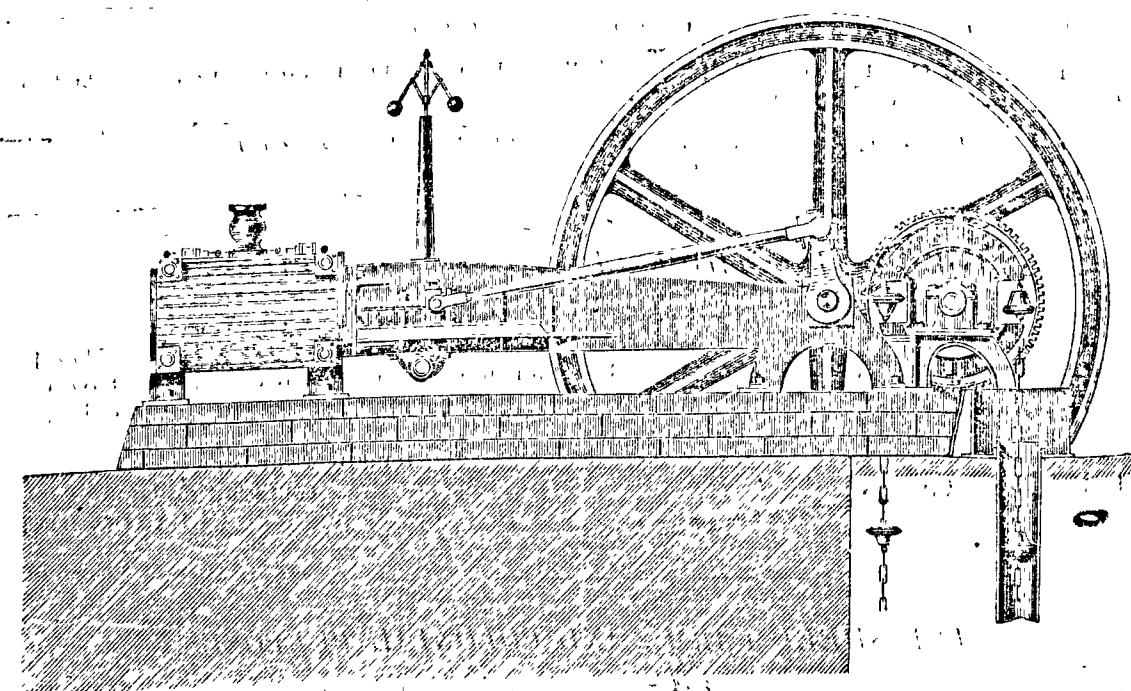
B. H.

Mr. May 1880

J. JACKSON & CO., ENGINEERS, LONDON.



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We subjoin copies of a few letters as to the results of the application of the Pump for the purposes referred to:—

FOR MINES.

The Old Park and Malins Lee Coal and Iron Works,
Shifnal, Shropshire, 12th Nov., 1868.

(Pump, 184 ft. by 4 in.)

DEAR SIR,—We have had your four-inch chain pump at work for the last twelve months; it has done its duty satisfactorily, and has not given any trouble or required any outlay upon it. We are expecting very soon to be ready to put down a six-inch pump of which I spoke to you some time since, and of which you will hear in due course.

J. JACKSON & Co.,
17, Gracechurch Street.

Yours faithfully,
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OLDHAM CORPORATION WATERWORKS.

WATER WORKS OFFICE.

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J. JACKSON & Co., Engineers.
17, GRACECHURCH STREET,
LONDON.

47, WEST GERRARD STREET,
GLASGOW.

(We made a number to the order of the Indian Office Director of Stores for the Abyssinian Expedition.)

Begging the favor of your consideration of this application

We are, meantime Sir,

Your obedient servants

Wm Jackson & Co.
Rob Jackson

Press

Mis.

Dated

28-6-1875

195

Not to be folded or roughly handled

1875
J. J. J.

no: 3860.

7-3

J. Jackson & Co.
Engineers
London

Debted 7. May 31895.
Paid. 12 June 31895.

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Regarding the
Bastien's Chair
Pumps.

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Communicated to all Sup. & Districts

4 Ensign

sc. Refd - 1-7-25

415/6

Rec'd to Recy 12-6-35-

3860

Sept. of 1875 *Madras.*

PUBLIC WORKS.

To

Allegpeth

Dated

Issued

Recd.

Encl.

Superintending

18 June 1875 No. 177

1103-415--415

Bastier's Chain Pump

*Circular from Jackson
and Co. Engineers, London
descriptive of ———
communicated to
all Superintending
and District Engineers.*