



# View from the Bridge

## Friends' Newsletter – Christmas 2016

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Supported by almost 600 400 individual Friends and by Cheviot Trees, JH Greenwood & Co , Hutton Stone, and Simpsons Malt  
The Friends of the Union Chain Bridge is a Charitable Incorporated Organisation constituted under the Charities Act 2011

**A Happy Christmas and Best Wishes to all our Friends in the firm expectation of real progress in 2017!**



### Capt Brown's Patent Acquired



A chance scan of listings on a specialist bookseller's website has enabled the Trustees to purchase on behalf of the Friends an original Queen's Printer's copy of Samuel Brown's 1817 Patent for his "Invention or Improvement in the Construction of a Bridge by the Formation and Uniting of its Component Parts in a Manner not hitherto Practised". The fascinating 12-page document, with a large linen plan embossed with the stamp of the Patent Office, includes a declaration by Capt Brown, that his "said Invention or Improvement consists of a bridge or bridges of suspension, in the construction of which, instead of using metal chains formed of links, wires, or by other methods, as heretofore practised, I employ a combination of straight bars, bolts, or rods, joined or united at their ends by side plates and bolts, coupling boxes, welding or other suitable methods, so that these bars, bolts, or rods so joined become in effect one entire length or piece the whole extent or length of the bridge, and support their proper proportion of the tension in the direct line of the curve which they assume or partake of, and these constitute my main lines or means of suspension." **In short, the Union Chain Bridge, as we know it!**



**.... is time running out for wire rope?**



Not a part of Capt Brown's patent or of the originally-constructed Bridge in 1820, the supporting wire ropes on both sides of the Bridge were added in 1903 at a cost of £1500\* – some 50 years after Brown's death - following worrying reports about its structural integrity and load-bearing capacity. We understand that recent engineers' reports suggest that these two ropes are now serving no useful purpose and, in fact, may actually be detrimental to the stability of the Bridge; and – having been in place for 113 years - they may well be removed as part of the restoration works;

\* supplied by the Cleveland Engineering Company with additional works by the local firm of Henry Elliot & Son; 2016 equivalent cost:£165,000!

### Forthcoming book: Capt Samuel Brown and the Union Bridge

One of our Patrons, Gordon Miller, who has amassed an encyclopaedic knowledge of the Bridge, supported by a library of documentation, over the past half century, is finalising a book on the Bridge and its designer and builder, which he intends to publish to coincide with the bicentenary. The book, which will combine technical detail with a fascinating account of the planning and preparation for the Bridge; its construction and the opening celebrations; and its subsequent structural problems; and a brief reference to Brown Lenox (Brown's ironworks) the suppliers of the chains; together with previously unpublished photographs and plans, is expected to sell for under £20. To gauge demand for printing, it would be very helpful if Friends would let us know, *entirely without obligation*, whether they would be interested in purchasing a copy in due course, by e-mailing [unionbridgefriends@gmail.com](mailto:unionbridgefriends@gmail.com)

 **Last Minute Gift Suggestion!** 

**Lovely Union Bridge bone china mugs; English and Scottish sides; £8 each or £15 a pair.**

**From the Honey Farm or call 01289 382541**