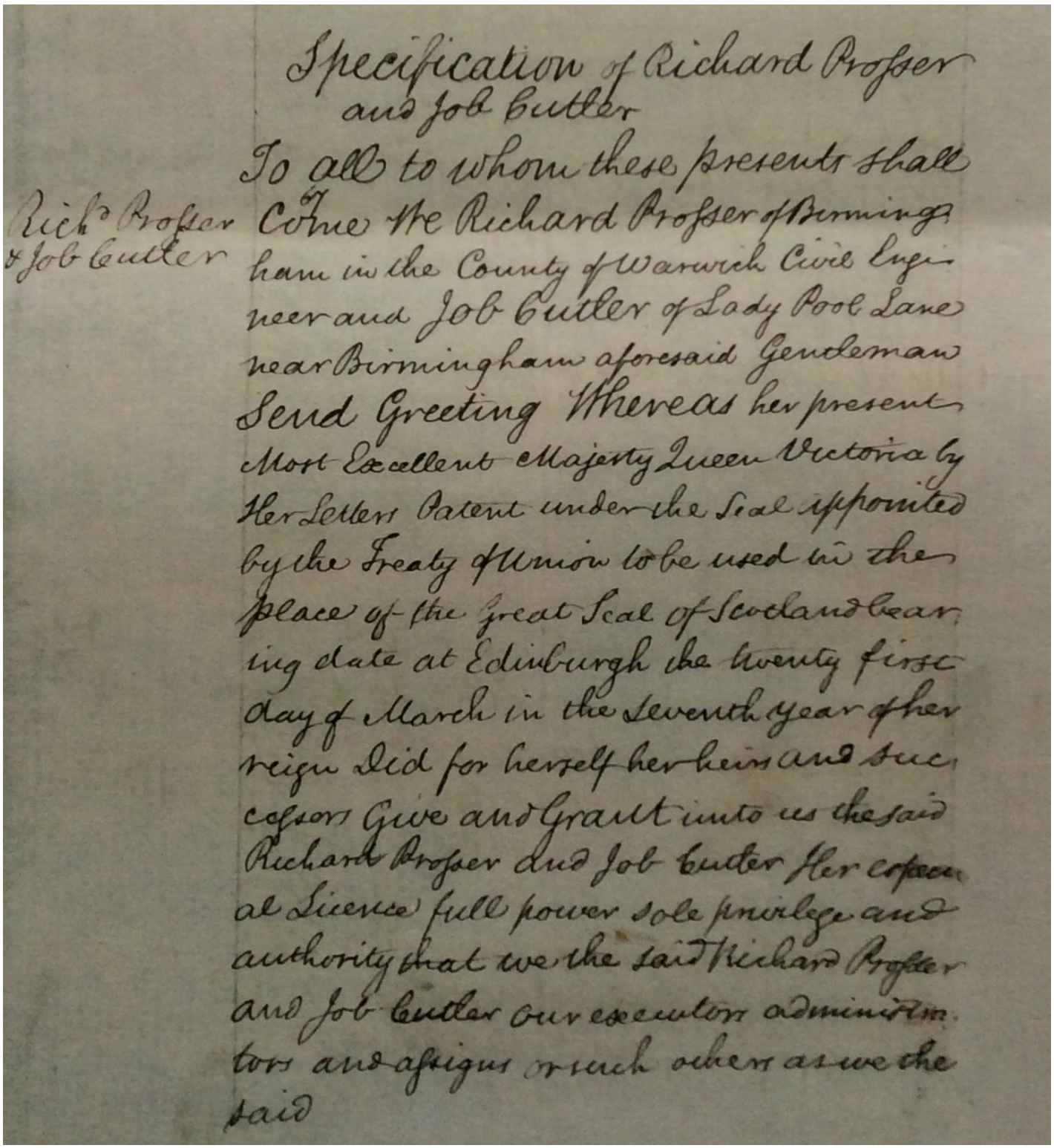
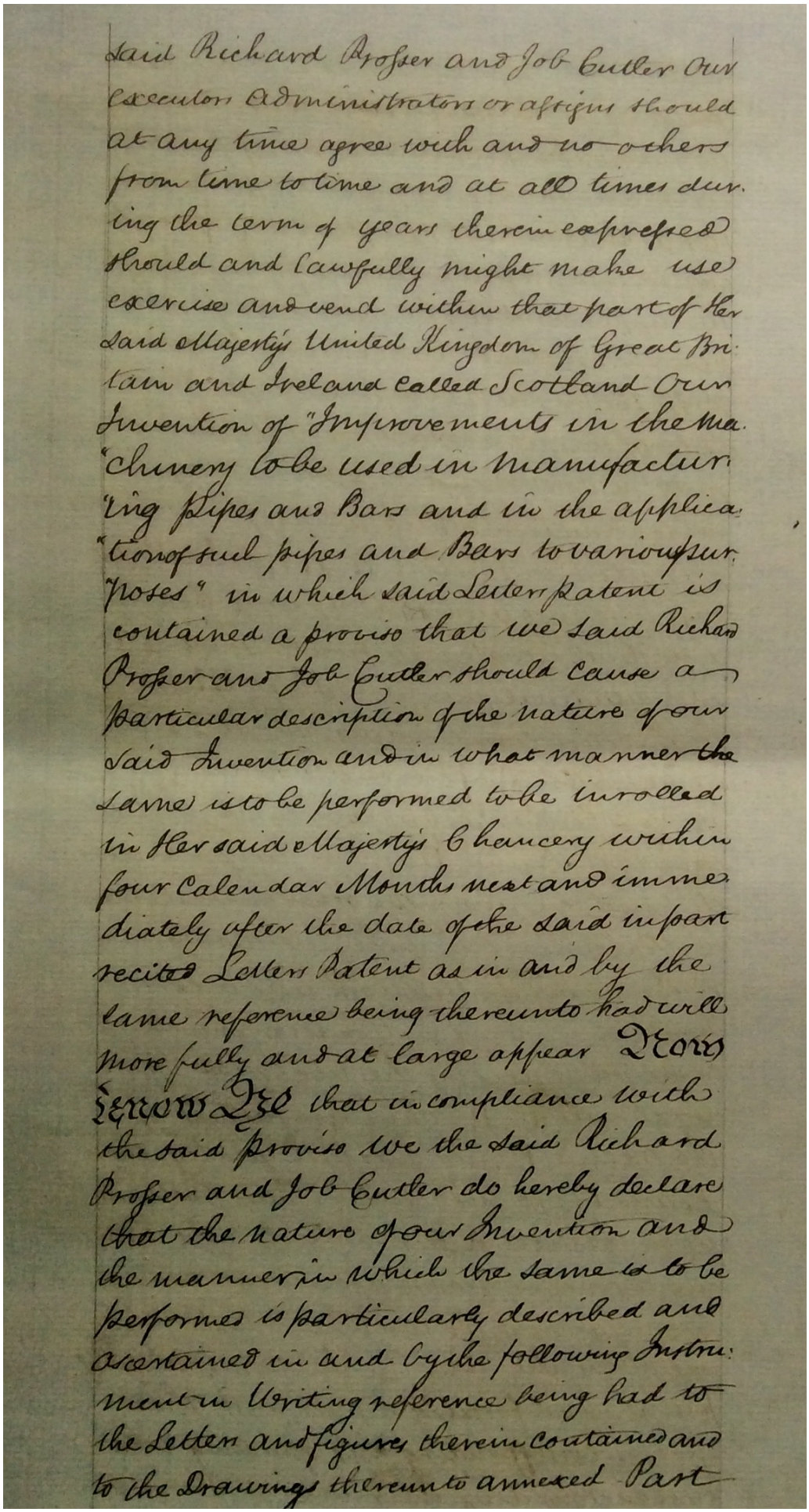


Specification of Richard Prosser and Job Cutler

Richd Prosser & Job Cutler

To all to whom these presents shall Come We Richard Prosser of Birmingham in the County of Warwick Civil Engineer and Job Cutler of Lady Pool Lane near Birmingham aforesaid Gentleman Send Greeting Whereas her present Most Excellent Majesty Queen Victoria by Her Letters Patent under the Seal appointed by the Treaty of Union to be used in the place of the great Seal of Scotland bearing date at Edinburgh the twenty first day of March in the Seventh year of her reign did for herself her heirs and successors Give and Grant unto us the said Richard Prosser and Job Cutler Her especial Licence full power sole privilege and authority that we the said Richard Prosser and Job Cutler our executors administrators and assigns or such others as we the said



said Richard Prosser and Job Cutler Our
Executors Administrators or Assigns should
at any time agree with and no others
from time to time and at all times dur-
ing the term of years therein expressed
should and lawfully might make use
exercise and vend within that part of Her
said Majesty's United Kingdom of Great Bri-
tain and Ireland called Scotland Our
Invention of "Improvements in the Ma-
"chinery to be used in Manufactur-
"ing Pipes and Bars and in the Applica-
"tion of such pipes and Bars to various pur-
"poses" in which said Letters Patent is
contained a proviso that we said Richard
Prosser and Job Cutler should cause a
particular description of the nature of our
said Invention and in what manner the
same is to be performed to be inrolled
in Her said Majesty's Chancery within
four Calendar Months next and imme-
diately after the date of the said in part
recited Letters Patent as in and by the
same reference being thereunto had will
more fully and at large appear Now
Know Ye that in compliance with
the said proviso We the said Richard
Prosser and Job Cutler do hereby declare
that the nature of our Invention and
the manner in which the same is to be
performed is particularly described and
ascertained in and by the following Instru-
ment in Writing reference being had to
the Letters and figures therein contained and
to the Drawings thereunto annexed Part

time as drawing such Tubes on Mandrils the mandril being a necessary and important part of the mechanical apparatus in producing the welding. Secondly we claim the welding of Iron or Steel Tubes by hammering upon a mandril at the same time we are drawing the Tube from the Fire along a Mandril so that the Tube is welded on and drawn over a mandril at one process. Thirdly we claim the application of either Iron or Steel Tubes when coated with copper Brass or other alloys of Metal in the construction of tubular flues for Steam Boilers And fourthly we claim in the Construction of Tubular flues of Steam Boilers the application of welded Iron or Steel Tubes which have been drawn through a circular hole or die or between Rollers and which have been drawn over a Mandril for the purpose of smoothing the external and internal surfaces of the Tubes and for regulating the thickness of the Metal. We would have it understood that the four claims lastly hereinbefore defined relate only to that part of our invention which is illustrated on Sheet 13 of the Drawings hereunto annexed Another part of our Invention for manufacturing pipes as shewn on Sheet 14 by the Drawings 1. 2. 3. 4. 5 and 6 where the same letters of reference refer to the same parts in each of the drawings. We combine three grooved rollers B. C. D one above another in the same manner

as they are used for rolling ship bolts and place them in the front of the furnace used for heating the shelp, and at a convenient distance from it within one of the grooves (2.2) of the rolls B.C. we place a mandril c. c and then place the heated "shelp" through the said groove and over the mandril c.c. and when the tube is so passed through this groove and is on the mandril two workmen take hold of the hot tube with Iron Tongs and remove it and the mandril together into the hole formed between the rolls C D by the meeting of the grooves 3, 3, when the Tube being griped by the rolls is drawn off the Mandril. The Groove 3.3 through which the Tube is rolled off the mandril must be a little less than the one through which it was rolled on to the mandril (in the first instance) which will be the means of more effectually welding the Tube and compressing or reducing any fins or superfluous metal that may have arisen on the external surface of the Tube while being passed the first time through the rolls - As it may be found convenient or even necessary to use rolls the grooves of which form an egg shaped hole (instead of a round one) We have shewn a pair of such rollers at Figure 5 .A A are the standards or roll frame, B. C. D the three rolls with grooves turned on their faces C, c is the mandril fixed between the rolls C. D. for the purpose of drawing the Tube d' d' off it E is a slot or stay

having two holes g. g. cut in it, in which the neck e, of the mandril is laid to hold it (the mandril) stationary and keep it directly in the centre of the rolls while the Tube is being rolled either on or off it. We claim the application of three Rolls (combined as above described) to the manufacture of wrought Iron Pipes - In Witness whereof I the said Job Cutler on behalf of myself and the said Richard Prosser have hereunto set my hand and Seal this Sixteenth day of July in the year of our Lord One thousand eight hundred and forty four (signed) Job [L.S.] Cutler Taken and acknowledged by Job Cutler the party hereto at the Public Office Southampton Buildings Chancery Lane in the County of Middlesex this Sixteenth day of July One thousand eight hundred and forty four Before me (signed) I. W. Farrer Edinburgh the twentieth day of July in the year one thousand eight hundred and forty four This Specification is Enrolled in the Records of Her Majesty's Chancery in Scotland by me Archibald McNeill Director of said Chancery (signed) Arch.d McNeill C. D. -

20 July 1844

Drawing 14 of 14