are similar cases mentioned by the late Dr. Campbell in his *Introduction to the Study of Midwifery*. There is some influence, I should imagine, to be attributed to retardation of the heart's action in the hæmostasis effected by digitalis. This consideration, and the clearly established fact that this agent does really excite uterine contractions, appears to me to mark it out as a valuable means of controlling the hæmorrhage which occurs in cases of fibrous tumour of the uterus. This application is not strictly obstetric; but is so nearly so, that it appears fairly worthy suggestion here.

[To be continued.]

CASE OF BULLET IMPACTED IN THE CHEST FOR FORTY-TWO YEARS.

By ROBERT HOWARTH LEACH, Esq., Shaw, near Oldham.

ON November 18th, I forwarded to Edward Stanley, Esq., F.R.S., for presentation to the Royal College of Surgeons, a preparation which I have had made of a part of the lung, cyst, and ball, which I recently removed from the body of the late Henry Barrott, of Fullwood, near Oldham.

The following is a short history of the case, and may be most implicitly relied on.

Henry Barrott was aged about 27 years at the time of receiving his wounds. His statement is as follows:—"I was in the First Regiment of Life Guards. We were fighting in close column, on the afternoon of June 18th, 1815, at Waterloo, when I received my wounds. The ball passed through the muscles of my left upper arm, and entered the left side of my chest, fracturing two of my ribs. It could not be extracted. I was in the hospital at Brussels from the above date to March 1816, when I was discharged, with a pension of ninepence a day. I had an incision made into my side, while I was in the hospital at Brussels, to evacuate a large quantity of matter that had collected in my chest."

For a number of years after Barrott returned home, he suffered much, as he stated to me, from attacks of pneumonia; and after I began to attend him, he was subject to inflammatory attacks in the chest, with copious expectoration, which, latterly, was of a muco-purulent character. He sank exhausted on October 13th, 1857, forty-two years and one hundred and seventeen days after he received his wounds. I examined the body, and removed a portion of the left lung, with the cyst and ball, forty-two hours after death. The ball weighs 5 drachms and 34 grains, or nearly three-quarters of an ounce (apothecaries' weight).

Mr. Lund, lecturer on anatomy at the Royal School of Medicine, Manchester, having seen the parts before they were put up, wished to be informed whether Barrott had coughed up blood, or been bled, while in the hospital at Brussels. On my putting these questions to the widow, she informed me, in reply to them, that she had heard her husband often say—"that he did cough up blood from his chest, and that he was bled in the arm twice in one day."

I find, on examining Barrott's papers, that he was discharged on March 6th, 1816; and the cause assigned is a "wounded thorax and abscess in the lung". His papers give him "nine years and a half servitude".

EXAMINATION OF THE BODY forty-two hours after death. The circular cicatrices caused by the ball in the left upper arm and left side of the chest were still very visible. On raising the sternum, we found the left lung diminished in size, very much solidified, and firmly bound down to the ribs by strong adhesions, which resisted the knife like so much cartilage. On separating the adhesions, we opened a large abscess in the lung, which contained about a pint of foetid pus; and in detaching the lung from its posterior wall, we accidentally opened the cyst which contained the ball, and the latter escaped for the moment into the cavity of the chest. This circumstance I very much regret, but the occurrence was unavoidable, owing to the abscess having been opened in our endeavours to separate the lung from the ribs.

REMARKS. I have, as shortly as possible, given the history of the case, and will now venture to offer an opinion upon it. My own impression is, that the ball, having entered the chest and being nearly spent, instead of passing at once into the substance of the lung, glided down posteriorly between the lung and ribs, and, slightly wounding the lung, became fixed in its situation by adhesive inflammation being set up in the pleura pulmonalis and pleura costalis. That the lung was

wounded, the hæmoptysis proves; and that violent inflammation followed, the bleedings spoken of by the widow, go far to prove.

The preparation is in the Museum of the Royal College of Surgeons, where it may be seen on application to Mr. Quekett.

THE VACCINE SCARIFICATOR AND GUARD.

By WALTER GARSTANG, Esq., Blackburn.

AN unusually successful method of operating in vaccination consists in employing a little instrument, which I have designated as above, and constructed in the following way:—Having procured a common metallic pen-holder, with reversible end, and clipped off that portion of it which was intended for the insertion of the pen, and accordingly rendered duplex by compression, I had then left two small tubes, one of which, the larger, admitted of the other sliding into it. I next took the pointed extremities of six well-tempered medium-sized sewing needles, secured them together by ligature, and separated their points evenly placed in relation, by a turn of the thread passed between each; these I placed inside the in-going or lesser tube, just so low down as to allow their points to project outwards to one-tenth of an inch (see fig.), retaining them in position by means of softened gutta percha. So prepared, the lesser tube, elongated for facility of employment by its adaptability to the other, constitutes the vaccine scarificator, of which a full drawing is given (fig. 1).

The guard is an oblong disc of ivory (fig. 2), fashioned like

Fig. 1.

Fig. 2.

a pleximeter, and having in the median line two holes, half an inch apart, of such a size as will allow the scarificator to be moved in a limited degree to and fro in every direction within their area.

In proceeding with the operation, the vaccinator first places the guard in contact with the infant's skin; and, for an obvious reason, he is led to prefer a spot which is anterior to the insertion of the deltoid muscle. He then takes up the scarificator between his finger and thumb, and abrades, in the manner before mentioned, the cuticle and basement-membrane only, corresponding in extent to the size of a pock of variola discreta in its vesicular stage. By this procedure, an areola of derma is exposed, full of active lymphatic absorbents, and peculiarly susceptible of the influence of the vaccine virus, which is thereupon to be immediately applied, either with a lancet or clean ivory point, first clearing away any serous exudation by the touch of a napkin. If, however, the lymph be employed in the dry state on points (and it is by no means infrequently so employed), the serum serves the useful purpose of liquifying or dissolving it, and so promoting its absorption.

Any lymph, short of what may actually have become inert through long keeping, will by this method generally be found to be successful in its result—a circumstance of some importance, in the history of vaccination, to gentlemen in small practice or in remote parts; and the union surgeon, whose cases in this department are oftentimes numerous, will find his