

XLII. *A Letter from Thomas Lawrence, M. D. to William Heberden, M. D. and F. R. S. concerning the Effects of Lightning, in Essex-street, on the 18th of June, 1764.*

S I R,

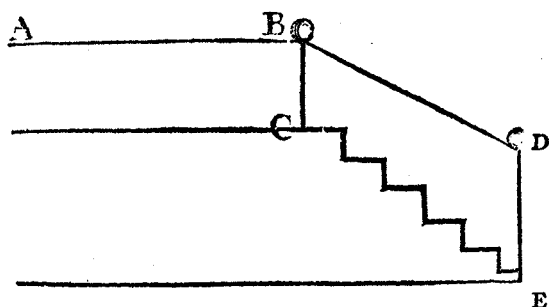
Read July 5, 1764. **I** Send you, as you desired, an account of the effects the lightning on Monday se'night had in my neighbourhood. The storm, which came from the South-east, broke first on the two houses at the bottom of Essex-street (which look from their south windows upon the river) and beat down several feet of the east-flue of the chimney on the west side, and separated the remainder down to the roof of the house from the western flue by a wide crack. From hence the lightning went higher up the street, and at the distance of about eighteen yards from the chimney just mentioned, went thro' the eves of a house, in a direction from the North-east to the Southwest, as appeared by the breach, and forced the cieling of the garret inward by a kind of pointed bulge, without breaking the laths. It continued up the street, perhaps along the leaden gutter, over the eves of the houses for thirty yards, as guess, and turned downward by the side of a leaden pipe made to convey the water from the top of the house, and tore a wooden case at the lower end of that pipe, cracked the wall near that place, and broke several

panes of glass in the kitchen window next it. The wall that was cracked was blackened, and there was a strong smell of sulphur in the street.

On the east side of the street, the lightning broke the south garret window of the bottom house, threw down the eastern flue of the chimney down to the roof of the house, and took away part of the western flue. The lightning seemed to have passed between the garret window and the chimney, as the window was damaged on the west side; but the chimney, which stood west of the window, on the east side.

The tiles on the roof of both houses were broken both on the south and north side in a deep furrow, as if a heavy plough had passed over them.

The house last mentioned has a door on the east side, which opens into a garden looking into the Temple; from this door there are several stone steps down to the garden. On the left hand of the steps is an iron rail. I have represented the steps and rail as well as I can in the figure.



AB is an iron rail supported by an iron baluster BC; BD is the same rail continued down the side of the steps, and supported at D by the iron baluster DE. The lightning, conducted (as I suppose) by the

the rail AB to B, and from thence by the baluster BC to C, struck off the corner of the stone step at C, without any discolouring of the step; the piece struck off might be three or four pounds weight. Part of the lightning, conducted farther from B to D along the iron rail was carried by the baluster DE to E, and a large piece was struck off from the corner E of the stone step; there was no discolouring of the step. The piece, which I took up in my hand, might be three or four pounds weight, and fitted the broken corner of the step exactly. This iron rail is within three feet of a leaden pipe, which comes down from the top of the house, and is not continued to the ground.

The lightning went up the east side of the street without any effect, till, at about the distance of 70 yards from the bottom house, it struck the flag pavement near the iron rails of the adjoining house, and broke off a piece of the flag stone, weighing, perhaps, two pounds; there was no discolouring here, but, as in the stone steps before mentioned, the appearance was as if the stone had been broken by the blow of a sledge hammer. One continued leaden gutter runs over the eaves of these houses on the east side as well as on the west side.

The effects of the shock were very particular on some persons. A lady in the bottom house on the east side, who had left the room which looks over the river, to avoid the lightning, and sat near a window which looks directly up the street towards the north, fell from her chair; but her surprize was so great that she cannot say whether she was thrown down by the concussion of the air, or fell by the
fright.

fright. She says, she felt the lightning on her arm, and had a very odd sensation like what she supposes people feel by the electrical shock; she further says, her arm smelt very strong of sulphur for a considerable time, though she went out of the house immediately.

Another lady, who lives on the west side of the street, in the house the roof of which was bulged in, as, has been mentioned, as she sat on the bed with a window open behind her, which looks to the west, was thrown off the bed on a child, who sat on a chair by the bedside. The sensation the shock gave her, was as it were of a blow cross her shoulders.

My house is on the east side of the street, next door but one to that where the steps were broken and the chimney thrown down. I was at home in the fore room on the ground floor. I felt a greater shock and concussion in the air than I had ever observed before from thunder. A gentleman, who was with me, says, what he felt was most like the sensation produced by the pressure of the water when a man leaps into it.

I am, Sir,

With great respect,

Your most humble servant,

Essex-street,
June 28, 1764.

Thomas Lawrence.