

ADDITIONAL ILLUSTRATIONS.

THE MECHANICAL PROPERTIES OF THE SOLID STRUCTURE OF THE ANIMAL BODY CONSIDERED.

It has been shown in the first chapter that solidity and gravity are qualities necessary to every inhabitant of the earth ; the first to protect it ; the second, that the animal may stand, and possess that resistance, which shall make the muscles available for action.

The first material to be taken notice of, which bestows this necessary firmness on the animal textures, is the *cellular substance*. This consists of delicate membranes, which form cells ; these cells communicate with each other, and the tissue thus composed enters every where into the structure of the animal frame. It constitutes the principal part of the *medusa*, which floats like a bubble on the water ; and it is found in every texture of the human body. It forms the most delicate coats of the eye ; and gives toughness and firmness to the skin. It is twisted into ligaments, and knits the largest bones : it is the medium between bone, muscle, and blood-vessel : it produces a certain