in turning a winch, pulling at a rope, walking in the inside of a large wheel to move it, as a squirrel or turnspit dog moves his little wheel, &c. Each of these has some particular advantage; but that made in which, for many purposes, the greatest effect may be produced, is for the man to carry up to a height his body only, and then to let it work by its weight in descending. A brick-layer's laborer would be able to lift twice as many bricks to the top of a house in the course of a day, by ascending a ladder without a load, and raising bricks of nearly his own weight over a pulley each time in descending, as he can by carrying bricks and himself up together, and desending, again without a load, as is still usually done. Reflection would naturally anticipate the above result, independantly of experiment; for the load which a man should be best able to carry, is surely the one from which he can never free himself, the weight of his own body.

Accordingly, the strength of muscles and disposition of parts, are all such as to make his body appear light to him. The question which was agitated with such warmth some time ago, as to the propriety of making men and women work on the tread-mill, receives an easy decision here. They work by climbing on the outside of a large wheel, or cylinder, which is turned by their weight; and on which they must advance just as fast as it turns, to avoid falling from their proper situation. There are projections or steps for the feet on the outside of the cylinder, and the action of the workers is exactly that of ascending an acclivity. Now, as nature has fitted the human body for climbing hills, as well as for walking on plains, the work on the tread-mill, under proper restrictions as to duration, must be as natural and healthful as any other. Its effects have now proved it to be so. As animal power is exhausted exactly in proportion to the time during which it is acting, as well as in proportion to the intensity of force exerted, there may be often a great saving of it by doing work quickly, although with a little more exertion during the time. Suppose two men of equal weight to ascend a stairs, one of whom takes only a minute to reach the top, and the other four minutes; it will cost the first but a little more than a fourth part of the fatigue which it cost the second, because the exhaustion has relation to the time during which the muscles are acting. The quick mover may have exerted perhaps one-twentieth more force in the first instant, to give his body greater velocity, which was afterwards continued; but the slothful mover supported is load four times as long.

A healthy man will run rapidly up a long stairs, and his breathing will scarcely be quickened when he arrives at the top; but if he walk up slowly, his legs will feel fatigued, and he will have to wait some time before he can speak calmly. For this same reason, coach-horses are much spared by being made to gallop up a short hill, and being then allowed to go more slowly for a little time, so as to rest at the top. The rapid waste of muscular strength which arises from continued action, is shown by keeping the arm extended horizontally for some time: few can contine the exertion beyond a minute or two. In animals which have long horizontal necks, there is provision of nature in a strong elastic substance on the back or upper part of the neck, which nearly supports the head, independently of muscular exertion.

ROBINSON'S LECTURES.

LECTURE VI.

THE THEORIES OF DRS. BROWN, RUSH AND THOMPSON.

It was observed by the ancients, as an argument for the duration of the soul, that this state did not appear to be the final residence of any portion of its inhabitants: That all nature was in progressive motion; evidently hastening forward to some far distant centre, where it should attain the perfection of its being, and the consummation of that excellence for which the Deity had designed it.

If we apply this argument to the progress and revolutions of medicine, we may anticipate, with joyful hearts, that the perfection of its scienc, is nigh at hand. In tracing its history, we find that almost every new professor comes forward with his new *theory*, and his proscription of his predecessors. Those inces-