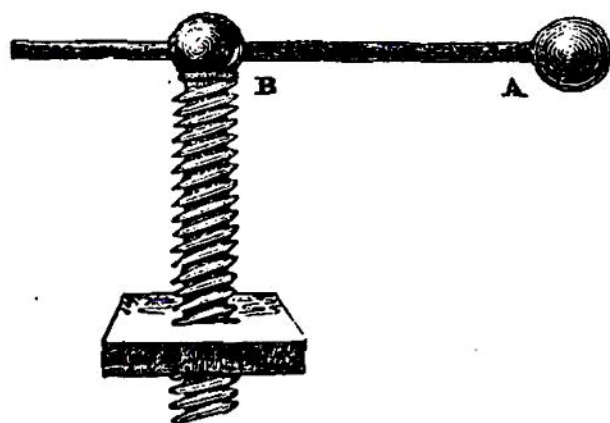


c., acts upon the humerus, B., in raising the extended lever of the arm and hammer, with every possible disadvantage, seeing that it is inserted or attached so near the centre of motion in the shoulder joint. But the loss of power is restored in another form. What the muscle D. loses by the mode of its insertion, is made up in the velocity communicated to the hammer; for in descending through a large space, it accumulates velocity, and velocity is equal to force. The advantage of the rapid descent of a heavy body is, that a smart blow is given, and an effect produced which the combined power of all the muscles, without this mechanical distribution of force, could not accomplish. This is, in truth, similar to the operation of the fly wheel, by which the gradual motion of an engine is accumulated in a point of time, and a blow is struck capable of crushing or of stamping a piece of gold or silver. In what respect does the mechanism of the arm differ from the engine with which the printer throws off his sheet?



Here is a lever with a heavy ball at the end ; in