larged powers of draining which Coal, and the steam engine, alone supply. It would be quite impossible to procure the fuel necessary for these engines, from any other source than mineral coal.

The importance of Coal should be estimated, not only by the pecuniary value of the metals thus produced, but by their further and more important value, when applied to the infinitely varied operations and productions of machinery and of the arts.

It has been calculated that in this country about 15,000 steam engines are daily at work; one of those in Cornwall is said to have the power of a thousand horses,* the power of each horse, according to Mr. Watt, being equal to that of five and a half men; supposing the average power of each steam engine to be that of twenty-five horses, we have a total amount of steam power equal to that of about two millions of men. When we con-

depth of 230 fathoms. The produce of these mines has lately amounted to more than 20,000 tons of ore per annum, yielding about 2,000 tons of fine copper, being more than one seventh of the whole quantity raised in Britain. The levels or galleries in these mines extend in horizontal distance a length of about 43 miles. (See J. Taylor's account of the depths of mines, third report of British Association, 1833, p. 428.)

Mr. J. Taylor further states, (Lond. Edin. Phil. Mag. Jan. 1836, p. 67) that the steam engines now at work in draining the mines in Cornwall, are equal in power to at least 44,000 horses, one sixteenth part of a bushel of coals performing the work of a horse.

* When Engineers speak of a 25 horse Engine, they mean one