velopments, and a good preparation for a wholesome manhood and womanhood in future years.

Many of the more objectionable excitements to which we have referred, and their hurtful effects in early life, might be averted by more attention to that very useful branch of true education—self-control. Probably the most untoward exercise of the habit on which we have been commenting takes place when men let out in the privacy of their families some excitement which they have been obliged to bottle up at the time. A clerk in an office is put out of temper by his employer; unable to reply to him, he lets out his ill-temper on his wife and children. A merchant has just learned the ill-success of an important venture; pity the poor clerk who has to attend him next! Nay, pity the horse he drives, or the dog that follows him! Yet surely there is something very mean in the habit that thus makes a scapegoat of the innocent, that makes an Iphigenia suffer because of the wind over which she has no control. But who shall say that this form of vicarious suffering is uncommon? Anything that would screw up the self-control of the average human being a few points — what a wonderful improvement would it not make on the sum of human happiness! Probably there are few things that are more odious to the generality of the English people than the infliction of unjust suffering. Yet how many are continually inflicting it, and inflicting it because they are not careful to control themselves, and do not guard against the sin of making their own households miserable for things with which they have had nothing to do!

There are too many cases where the want of the needed self-control drives people to the bottle, in order by its help to relieve the pressure upon the brain. Here, however, the effect is not to distribute the pressure, or to divert it into better channels, but to deaden the brain itself, to weaken and destroy its power of feeling. The device is very handy, so to speak, but awfully fatal. You meddle here with God's most exquisite work, the brain, which is the finest structure of the body, the most delicate, the most worthy of our care. You drug this splendid product of the Divine mind, injuring its susceptibility, and diverting it from the purpose for which God designed it. Is it then wonderful that this should commonly be the first step in a sadly downward career, and that the ruin of soul and body should advance apace after a blow has been struck at the bodily organ which is in closest contact with the immortal soul of man?

There is another practice that shows how much evil comes from the want of self-control—suicide. What is this but a confession that the sense of evil presses so hard on the brain that it cannot be borne? It is said that if the suicide takes to cutting his throat, and does not at first cut into the carotid, the relief of the blood-letting cures his impulse; or if he tries to drown himself, the same effect is produced by the feeling of cold. Suicide must be held to be the devil's way of relieving an over-strained brain; that any should accept such a remedy shows the poverty of their resources. In the worst of all troubles, the God of love has surely some better prescription for us, if we would only apply to Him, than the father of lies.

THE REAL COST OF COAL.

BY J. W. STEEL.

THE "Pitman's Pay" is the best-known of the poems descriptive of the life of colliers; and it declares in homely but true words that few know—

"Of all the toils and tears it gives
To warm the shins of London city."

The cost of the coal is rarely dreamt of—in life, in labour, and in money. That cost is increasing in some degree, even with the improved machinery; but it is gratifying to know that, ton for ton, coal causes, from decade to decade, the loss of fewer lives. Occasionally, the public is startled by some great explosion that engulfs its scores of miners, and in that year the loss of life thus and in the single fatalities is great; but it does not over a period advance, and as the tonnage of coal raised is enlarged yearly, the loss of life in proportion to the coal gained is less. In the past few years the loss of life in the mines registered under the Coal Mines Act in Great Britain and Ireland has been over one thousand yearly, but these mines include iron-mines in certain instances, and the loss of life in the coal-mines may be put at one thousand yearly. A quarter of these are often caused by explosions; and nearly one-half more are lives lost by falls in the mines—falls of the "roof," &c. Of the remainder the largest portion are lost in the mines, in ascending or descending the shaft, and on the inclined planes, and by the trams underground, the number lost on the surface being comparatively small. About 156,500,000 tons of coal are raised out of the mines, in addition to fireclay, &c.; and this is the return that is given for that loss. Roughly speaking, for every 156,500 tons of coal that we raise from our mines, one life is lost by accident, and there is an amount of non-fatal accidents that cannot be tabulated. But that cost of life is the toll that the mines take yearly, and there is an additional cost of lost limbs, and of maiming, and of bodily pain.

It is comparatively easy, too, to state the extent of the labour that is needed to raise the coal that is brought from the mines. Yearly the number of men,

women, and boys employed in and about the coal-mines is returned to the mining inspectors ; and from the most recent return the official figures may be given as those, practically, that are now employed. Females do not now work under-ground in the coal-mines, but some are engaged above-ground about the mines. In all 4,600 females are so employed in Great Britain, and 300 of them are under sixteen years of age. Juvenile labour is rather largely employed in the mines, for out of 406,000 males working under-ground, 40,000 are below the age of sixteen. And above-ground there are some 93,000 males employed, of whom over 5,000 are from ten to sixteen years old. This employment of females and of tender children is one of the darkest features of the coal trade ; and it is as well that it should be said that the worst localities amongst the coal-yielding districts in this respect are East and West Yorkshire, Glamorganshire, West Lancashire, and part of Stafford. It is needless to say that only a small part of the miners are actually hewers of coal ; there are hewers, putters, drivers, enginemen, stablemen, attendants upon cages, fires, boilers, air-courses, and a hundred other occupations, all of whom are pitmen in the sense that they are occupied in or about a mine. The hewn coal is placed in waggons, drawn by pit-ponies, then by endless ropes (or other such appliances, to serve a similar use) to the bottom of the shaft, drawn up, screened, weighed, and in all these operations workers are needed to guide, to direct, to supervise ; and thus it is that at a colliery 1,000 men may be employed, and 10,000 tons of coal weekly extracted.

The monetary cost of coal is, in the aggregate, great. Mines are sunk deeper now than they were ; Parliament has made obligatory certain costly but needful provisions ; and there is a desire to enlarge the working area of the colliery. At one time, twenty fathoms was a remarkable depth to sink to the coal. Now 2,000 feet is known as having been attained by more than one colliery. Less than thirty years ago, the greatest authority in the coal trade of that date estimated the cost of sinking a pit, with that of the engines for pumping, drawing the locomotives, the tram-lines, &c., as £50,000 for seventy fathoms sinking to the lowest seam. Now the cost is much greater, from the causes named. It varies much, but it may be fairly said that to sink a pair of shafts down to a depth of two hundred fathoms, to fit them with hauling, winding, ventilating, pumping, and other machinery, and starting at the surface, and putting down the shafts, and fitting up the colliery so as to make it equal to a production of a quarter of a million tons yearly, would cost probably £200,000. Sums above that have been spent, and even then, in one case in Durham, the coal whose seeking had been so costly was found to be not worth the extraction. To that vast first cost there is a great addition weekly. A wages account of £1,000 a week is exceeded at some collieries ; a hundred horses and pit-ponies may be below, needing food, care, and veterinary visits ; often the ground above needs farming ; the miners need cottages ; the officials, houses ; and there may be a line of railway for a mile or two to a junction with a public line. Vast, therefore, is the monetary cost of coal, and if it be added to that of life and of labour some idea of the "toils and tears" that coal costs may be formed. If a less statistical idea be desired, a visit to a coal-mine will supply it. Here at a typical one, a score of years ago the grass grew where now the village, the pit-farm, and mine-shafts are ; long rows of cottages, stereotyped and stony ; a school, a church and chapel or two, a water supply improved of late, and the provisions for the housing, homing, and recreation of a population of 2,000 persons dependent upon one mine. At the pit-heaps, trains of coal ; miniature gasworks, smiths', joiners', and other mechanics' shops ; huge boilers for the engines, possibly air-compressing machines, weighing apparatus, screens ; and over all, coal, in the air, on the ground, and everywhere. Huge revolving drums, steel wire-ropes—each costing possibly £80—for the winding engines ; a continuous extraction of coal, and an occasional procession of miners from village to pit and back, men and lads in flannel, with the swinging lamps at times, and with the grimy look of their profession. And below, "deep in the dark dull mine," a mass of workers, hewing, harrying, driving, guarding horses, engines, air-courses, pumps, ventilators, furnaces—a work "never ending" like the Fall of Lodore—that is the cost of coal. And by vast capital, labour, and life, over many scores of years, we have recently extracted from the bowels of Britain the first cubic mile of coal.