

**IMPROVED LADY'S WORK TABLE.**

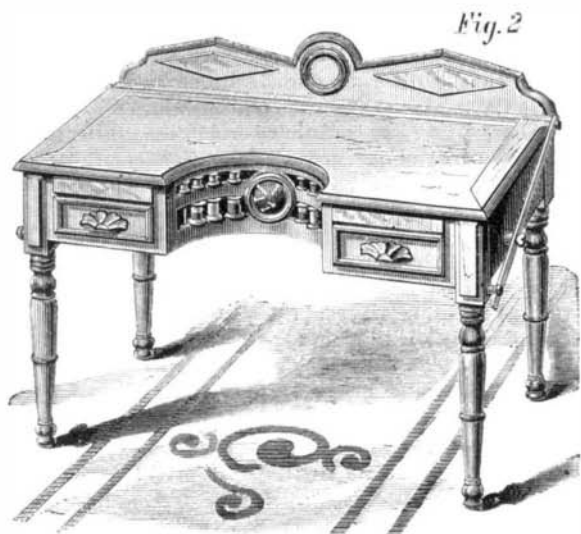
The accompanying illustrations represent a new lady's work table, patented to Mr. C. R. Snyder, December 1, 1874. The lid of the table, as shown in Fig. 1, is readily convertible into a lap board by the side arms turning on a pivot, and resting, when down, on pins in the table legs. The legs of the lap board serve as supports for the table lid when up, and are then folded under, out of sight, as indicated in Fig. 2. If desired, the lap board can be detached from the table and used independently, in which case the elongated side arms become legs. The conformity of the table to the shape of the lap board gives a beautiful design for the former, and at the same time admits of a very convenient arrangement.

The recess in front is used for a double row of spools, retained in place by brass standards. The center piece forms a pincushion. This recess may be tastefully ornamented. The divisions over the right hand drawer may be used for writing utensils, those over the left drawer for "notions," while the division between will hold a large quantity of cut and basted work. These tables are manufactured by the inventor, corner 2d avenue, South, and 14th street, Minneapolis, Minn. He may be addressed for further particulars by parties wishing to manufacture in other States.

**The English Engine Driver.**

It is one of the most singular facts connected with modern literature that the deep and striking poetry of the rail and the locomotive has never yet inspired any man of genius to sing it forth to the world. Probably it is a consequence of the classical training of modern youth. Our poets get mad over the achievements of Greeks and Romans, over the Isthmian and other games, and seem absolutely blind to the fact that the things which put them into ecstasies are quite childish compared with the everyday marvels of the age we live in. No doubt "distance lends enchantment to the view;" still the Greek charioteer who, standing on a very rickety two-wheeler, whips his horses along in the Olympian races is at best a prosaic figure when placed in contrast to an engine driver on any of our great lines of railway. The fire horse of our modern steam charioteer is infinitely more majestic than the noblest stallion seen in old Greece, and the speed at which he flies through the air is, compared with the Isthmian games, as the eagle's flight is to the crawling of the snail. In simple truth there is scarcely anything done by human beings that approaches, in daring, in true and absolute heroism, to the hurling of an express train through space at the rate of a mile a minute and more, a speed far superior to the velocity of the hurricane.

The master of the locomotive, though perhaps not willing himself to be a hero of romance, is, for all that, a very real, if quiet and unassuming, hero. There is something most manly, firm, and of the true heroic about all engine drivers, more especially those who have seen many years of service, and are trusted with fast and express passenger trains traveling long distances. Engine drivers of the latter class are seldom under forty years of age; and being picked men, fully conscious of the immense responsibility of their position, and accustomed to look with clear eye and unflinching nerve upon danger and death, daily braving the elements in the simple execution of their duty, they are, as a rule, singularly calm and self-possessed.

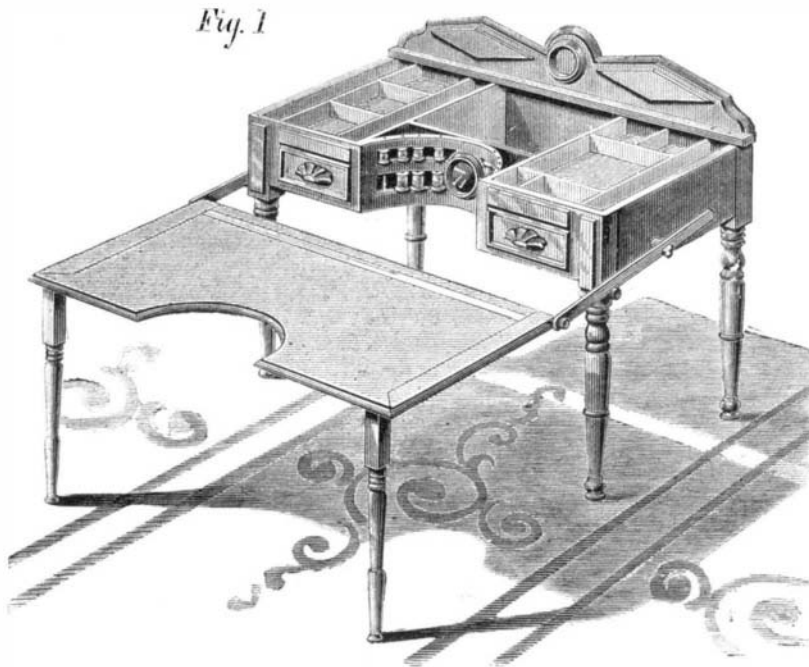


The pay of the highest class driver, a senior in all respects, is from \$1.75 to \$1.87 per day; \$1.87 is the maximum on most of our smaller railways, notably those south of the Thames; but the maximum is considerably surpassed in the pay given to the most trusted engine drivers on the great lines running northward and westward from London, and the trains of which are unsurpassed for speed and excellence. The Great Western Company give the high pay of \$2.75 per day, besides a bonus of \$50 per annum to a few veterans in the service, drivers of expresses. The \$2.75, among others, is the "compensation" of the dauntless, iron-sinewed charioteers who drive the "Flying Dutchman," fastest train in the world, from London to Bristol.

On most of our great lines of railway, the hours of duty of the engine driver, like the hours of work of the guard, vary from day to day. The driver generally follows a time bill under the regulations of which every week day gives him

a different train, with additional changes on Sundays, the whole so arranged that he has alternately day and night duties, and has besides about one half of the Sundays in the year for days of rest. Experience, the guiding principle in all railway management, has shown that this system is the best that can be made, and it is certain that, as it works well, so it gives thorough satisfaction to the drivers, more especially to those best able to form a judgment, the veterans of the service.

Considering the extremely fatiguing nature of his duties,

**SNYDER'S LADY'S WORK TABLE.**

his exposure to the rain and wind and all the extremes of heat and cold, and the wear and tear of mental anxiety he has constantly to undergo, and which reaches a climax when snow and fog, his great enemies, obstruct his outlook, the work of the engine driver is truly astounding as to its extent and amount. The average distance traveled over by the drivers of passenger trains on our smaller lines, as representative of which the South Eastern may be taken, is 800 miles a week, or about 40,000 miles a year; but this average is far surpassed by the drivers of the great express trains on the lines north of the Thames. A careful calculation of the distances traveled by the Great Western driver, whose time bill has been analyzed, shows that, in the course of one year, commencing November 4, 1873, and ending November 3, 1874, he hauled his trains, often at express speed, over 65,323 miles of ground, being an average of 1,256 miles per week. It seems terrible work; still the veteran here referred to, upwards of twenty-two years in the service of the Great Western, testifies, with many others, to the fact that the exertions gone through, great as they are, do not only not affect the health of a strong man with good nerves, but fortify his constitution, so as to harden it against age and disease. It is certain that engine drivers, as a class, look extremely florid and healthy, and mostly younger than they really are. No doubt they get abundance of ozone into their lungs; and if they will only stave off the enemy rheumatism by good flannel armor and temperance—the latter universal among the best drivers, not a few of whom are teetotalers—they have as much chance of living to the age of Methuselah as any of the most favored classes of the community, including country parsons. Besides, great as are the physical hardships which the engine driver has to undergo, there is some compensation for it, as for most things, in a corresponding feeling of elation, which no habit can altogether destroy, from flying through space with enormous swiftness. If Dr. Samuel Johnson held it the greatest joy of human life to travel in a post coach with four horses at the rate of twelve miles an hour, the man who rides the Flying Dutchman must surely feel at times, if not always, a joy of superhuman intensity by getting through space five times as fast—at a greater rate of velocity, indeed, than anything that ever moved on the face of the earth, except a cannon ball. There are men of birth and education, who, properly trained, act occasionally as engine drivers—a well known instance of the kind exists on one of our southern lines—and they confess that there is an excitement and a charm, that nothing can excel, in the riding of a fire horse. It may be said of the engine driver, as of no other mortal man: "He hath his way in the whirlwind and in the storm."—*London Railway News.*

**A Large Magnet.**

The Sheffield Scientific School, says a contemporary, has just received a very important addition to its physical apparatus, in an immense electromagnet, together with the accessories necessary for the study and illustration of magnetic phenomena. This splendid apparatus has been presented to the school by its ingenious and enterprising manufacturer, William Wallace, of Ansonia, who for many years has made a special study of electricity and magnetism, and for his own use has constructed some of the largest and most efficient pieces of apparatus ever employed in this department of physics. This great magnet, for which the Sheffield school is indebted to Mr. Wallace's deep interest in its work of scientific training, is only second in size, it is believed, to one other in the country, which was also made by Mr. Wallace a few years ago, and was purchased by the Stevens Institute of

Technology. The Yale magnet weighs altogether nearly half a ton, and is capable of lifting, it is said, twenty times that weight, or over ten tons, when in full action. The public, it is presumed, will have an opportunity of seeing it in operation before long, as one of the lectures in the mechanics' course, now going on at the school, is on the subject of magnetism.

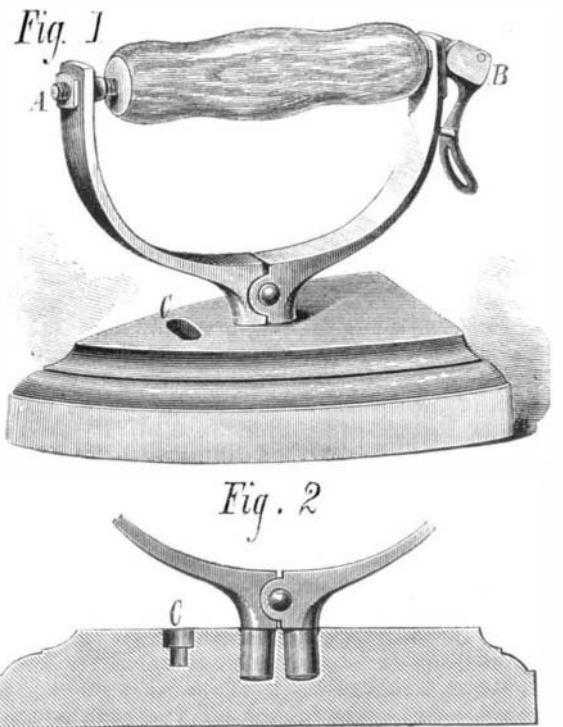
**Washing Out the Stomach.**

Dr. Ewald, of Berlin, Prussia, is said to have been very successful with the process some time since devised by him for washing out the human stomach. "For this purpose, a piece of ordinary india rubber tubing, such as is used for gas lamps, and about six feet long, is employed; one end is rounded, and two holes are punched at a short distance from the end. This tube is found to possess quite sufficient rigidity to be passed without difficulty into the stomach. To the outer end a funnel is fitted, into which is poured either water or a solution of soda, etc., according to circumstances. If the contents of the stomach are to be removed, the outer end of the tube must be sunk to the level of the pubes, or even lower; then the patient must make a short but forcible contraction of the abdominal walls. By this means the tube is filled to its highest point with the fluid contents of the stomach, and becomes a siphon, the liquid continuing to flow until there is no more, or until the tube is stopped up. This latter seldom occurs, if the tube be of moderate caliber."

This is certainly a novel treatment, but one which we would not advise any of our readers to try. We think that the running of an india rubber tube down into the stomach, and pumping water into it, is a ticklish operation.

**IMPROVED SAD IRON.**

A simple form of detachable handle is illustrated in the annexed engraving, the object of the device being to economize space on the stove or range, and to obviate the use of fixed handles and iron holders, thus offering advantages both in point of economy and of convenience. The standards of the handle are jointed together, and at their widest branching portion receive a rod. One end of the latter is threaded, and passes through a movable nut in the standard, at A. The other extremity passes through a square aperture in the opposite standard, and carries a pivoted cam, B. The wooden handle is supported by the rod between the standards, as shown. Below the joints the standards terminate in two vertical pieces, which are of proper size to fit into holes bored close together near the center of the top of the flat portion of the iron, and slightly inclined from each other from the top downward. When the cam, B, is pushed down, after said pieces are inserted in the holes, it presses the standards toward the handle so as to cause the parts to bind in the holes, thus securing iron and handle firmly together.



Raising the cam, of course, releases the portions. A sectional view of the iron, with handle in position, is given in Fig. 2.

In order to adjust the handle it is removed from the iron, and the nut, at A, inserted in the square hole, C. This holds the nut as the handle is turned to regulate the binding pressure of the standards, and to adjust them for holes of varying distances apart.

We are informed that this device obtained the highest premium at the recent Mechanics' Fair in Boston. Patented through the Scientific American Patent Agency, July 14, 1874. For further particulars regarding sale of shop rights to manufacture on royalty, address the inventors, Messrs. Rathbun & Shaw, 209 Union street, Worcester, Mass.