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### The Sun's Offer.

Since we noticed the offer made by the "Sun" for a feeding apparatus to its presses, we have been literally flooded with letters from inventors describing plans of their own, soliciting further information, &c. As our time is sufficiently occupied with attending to letters pertaining more especially to our own business, we have handed these over to Mr. Beach, who tells us that he has likewise been overwhelmed with similar communications. To explain the whole matter in a few words, we will say that the offer is not for a plan but a machine, which must be put in actual operation in connection with the "Sun's" presses, and that nothing short of this will receive any attention from the proprietor. Any one intending to compete for this prize should visit the establishment of the "Sun," in order to make the necessary examination of its presses, their mode of operation, &c.

### New Wheelbarrow.

An Englishman has invented a new wheelbarrow. The wheel is placed under, and sunk into the bottom, so that the weight rests on the wheel and not on the hand, and there is less oscillation. By means of this barrow it is stated that twice the usual weight can be wheeled.

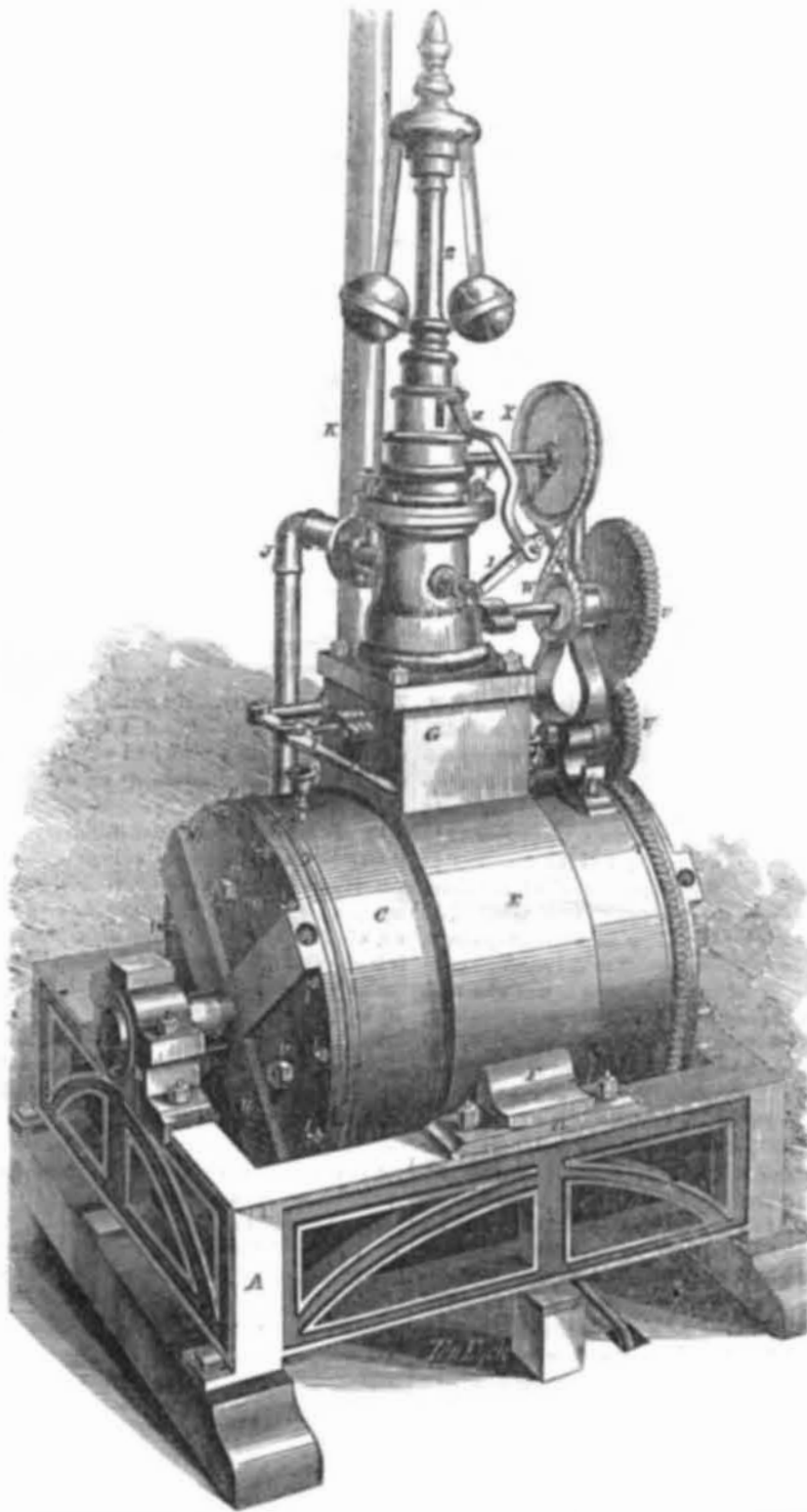
[We have seen the above in more than one of our exchanges, some, like the above, saying "the inventor was an Englishman," and others that "he was a Yankee." However new the arrangement may be, it is no improvement, and is inferior to the common barrow, which throws the weight upon the wheel, and not upon the arms. Its oscillation must also be far greater, instead of being less, because the present barrow places the person who wheels it at the long end of the levers, where he has the greatest command of the weight, and will do more work in the course of a day than with the wheel in the center, but will not perhaps be able to lift so much nor wheel it so easy for a short distance on a straight and level road.

### Plasters versus the Knife.

We were present a few days since to witness the removal of a large cancer from the breast of a female, without the use of the knife, by Dr. Gilbert, of this city, recently of New Orleans, to whom we have previously referred. The female had been under treatment about three weeks, and by means of the Doctor's plasters, the cancer had been wholly killed and was now almost ready to drop from her breast which in a day or two more it would have done. It was, however, removed with but little pain to the patient. We saw some other cases which the Dr. has under treatment, which are truly wonderful. We have no doubt of his ability to remove the most malignant cancers, provided application be made in season.

Two pieces of the Gobelin Tapestry have been sent for from France; they are to be used in decorating one of the Imperial residences. It was reported (who raised it?) when the tapestries came here, that they were to be presented to adorn the Presidential Mansion, at Washington, after the Exhibition was over.

### BRISTOL'S ROTARY STEAM ENGINE.—Fig. 1.



The annexed engravings are views of the Rotary Engine of R. C. Bristol, of Chicago, Illinois, for which a patent was granted on the 26th of last July; patents have also been obtained in France and England, and the patentee has the utmost confidence in its merits. Figure 1 is a perspective view; figure 2 is a vertical longitudinal section, and figure 3 is a transverse vertical section. The same letters of reference indicate like parts.

A is the frame of the engine; B B are the journal boxes for receiving the main shaft, S, to which the revolving part of the engine is secured; C is a cylinder; it is bored true, faced at the ends, and is surrounded by a steam case, E, which is furnished with two lugs, F F; the lower faces of these lugs are slightly convex and rest on suitable bearing plates, which are adjustable by set screws to adapt it to the bearing surfaces of the shaft, S. The double steam case, E, has passages, b b, (figure 2) both encircling the cylinder, but independent

of each other, the former communicating with the interior of the cylinder, through openings, c c, and d d, (fig. 2) and the latter communicating with the same by openings, c' c', and d' d', (same figure). On the top is the steam chest, G, which is supplied by steam from the boiler by pipe, J. K is the exhaust pipe, to receive the whole steam through the exhaust port, f, (figs. 2 and 3). N N' N'' N''' are four sliding pistons. They are set in the slots, i i i i, of the steam wheel, which is composed of cylinder, D, having a hub, g, secured on shaft, S. The cylinder, C, being stationary, by the steam acting inside of it on the sliders, N N' N'' N''', it moves the wheel composed of D, g, S, with its ends, arms, and sliders, forming the rotating parts of the engine. When the engine is running in one direction, it takes its steam by only one of the slide valve ports, and is shown in figure 2, to be taking it by the passage, e. When moving in a contrary direction it takes

[Continued on Second Page.]

### Economy of Baker's Furnace.

In the last number of the "Scientific American" we published an illustrated description of Baker's Patent Furnace, and stated that it was employed under the boilers at the Crystal Palace. Since that time, in the absence of Superintendent Holmes, who is out of the city, we have been furnished with a memoranda of its performance by his associate, Henry S. Babbitt.

The coal consumed by this furnace for the six days ending on the 29th ult., amounted to 33,863 lbs., the water evaporated by this quantity amounted to 388,000 (33,863 ÷ 388,000 = 11.457) or 11.457 pounds of water evaporated by 1 lb. of coal. This is the greatest amount of water evaporated by one pound of coal in a boiler, ever recorded. The best Cornish boilers with the best quality of coal evaporate 9 lbs. of water, nearly 2½ lbs. less. It comes within three pounds of the theoretical evaporation of water by the best quality of coal, in the laboratory.

The following memoranda, furnished by Mr. Amory, presents the results of a number of experiments, feeding with warm water without Baker's furnace:—

Navy yard at Washington, evaporation 7.538 lbs. of water to 1 lb. of coal.

Navy yard at Boston 6.712 to 1 lb. of coal. Trial by Engineers in Boston, at East Boston, 7.705.

Otis Tuft's boilers, 8.768.

Flour mill at East Boston, 7.

Ocean Mills, Newport, 7.

Portsmouth Mills, 6.260.

Atlantic Mills, 6.637.

East London Water Works, supposed to be the best in England, 8.217-1000.

All these establishments have many boilers supposed to be doing the best duty, we might give many inferior results. The trials of these have been made with the greatest care and so acknowledged."

The very best of these results, (Otis Tuft's boilers) amount to nearly three pounds less of water evaporation to the pound of coal, than the experiments at the Crystal Palace.

### Electrical Conductor—A Disputed Point.

In the "Scientific American" of the 29th ult., we stated that Robert Stephenson had made the remark that "an electric current could be sent with a double wire to any distance without any sensible diminution of force." We also stated that "so far as our knowledge extended this was destitute of any foundation in fact."

We have received a letter from James P. Duffey, of Philadelphia, who asserts that R. Stephenson is right, and the fact has been known to him for the past nine months, and was discovered by him while experimenting upon a new galvanic machine for medical purposes."

Our telegraph engineers are better qualified to decide this question than any other person or persons. It simply consists in this, "can an electric current be conducted to any distance without any sensible diminution of force by a double wire?" This also involves the question of using a single wire, whether it is as good as a double one. This question has nothing to do with multiplying the plates of the battery; we are well aware of the effect that would thus be produced; it merely relates to the double wire.

### The Present to Joseph E. Holmes.

We have received a note from L. H. Gibbs, stating that the present of the gold watch made to Mr. Holmes, was not by some exhibitors, as stated, but those who were employed under him, "honor to whom honor is due."

The Society of Industry in France has offered a prize of 1,000 francs for the best treatise on the potato.