

STRANGE DEVICES

By JAMES SCOTT.



WAS permitted the pleasant opportunity to describe and illustrate in THE STRAND MAGAZINE for March, 1895, under the heading "Eccentric Ideas," some peculiar notions of mankind. Although I then exemplified that much inventiveness appertained to humanity, I was careful to point out the considerable difference existing between an "idea" and an "invention" in the true meanings of those words. I then dilated upon some very novel suggestions, and referred to their ludicrousness and impracticability. Now I propose to occupy the reader's time and patience by parading before him the particulars of several really novel ideas which have developed into actual inventions. In my selection I have made as great a variety as possible, and am satisfied that, in nearly every case, the articles must have been as efficient in practice as they are ingenious in conception.

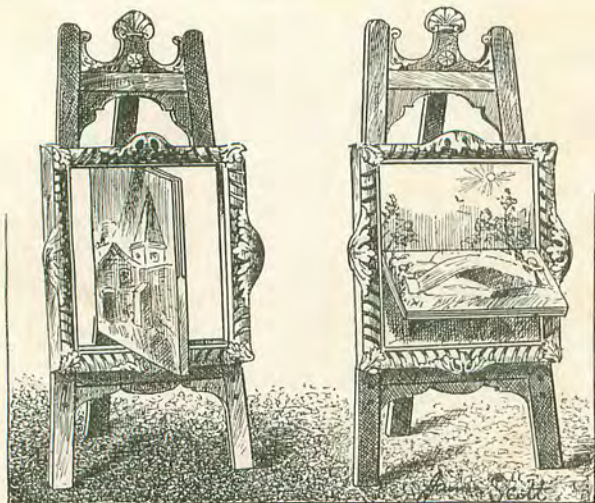
The simple yet effective contrivance depicted in No. 1, which is an invention by a private conjurer, deserves a greater publicity than it has hitherto secured.

Of course, just as a joke will lose its essential qualities when explained, so a trick or illusion may appear to have been less interesting when a detailed account of its inner working is provided. But I can assure the reader that the deception, aided by this invention, was, and would still be, very startling, notwithstanding the simplicity of the means employed to deceive.

The conjurer drew a large cloth off an easel, upon which was reclining a good oil-painting set in a massive gilt frame. He lifted the top of the frame forward to the extent of a few inches, and also passed a long stick behind the easel in order to show that it bore no connection with other parts of the stage. He then recovered it with the cloth, which he almost instantly again removed, revealing quite a different picture in the frame. This performance he repeated until he had changed the pictures three times, thus showing four different paintings in the same frame without having removed the latter from the easel.

Every few moments he passed the stick behind the picture, and also showed that the covering-cloth contained nothing whereby aid was offered in the deception. As may have already occurred to the reader who has examined the illustrations, the picture consisted of a pivoted board having a drop flap affixed to it in front, and one attached behind, on the surfaces of which were painted four distinct subjects. The first time the cloth was replaced, a spring was touched, and, consequently, a flap fell as in the right-hand frame; at the second stage in the performance the whole picture revolved, as in the left-hand frame; whilst upon the third repetition being made, another flap fell.

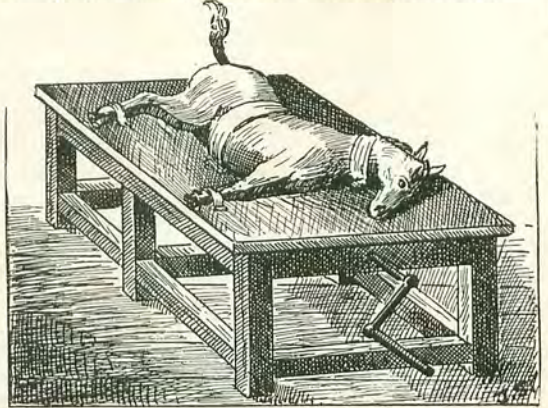
What made the trick the more surprising was the fact that the picture itself was greater in width



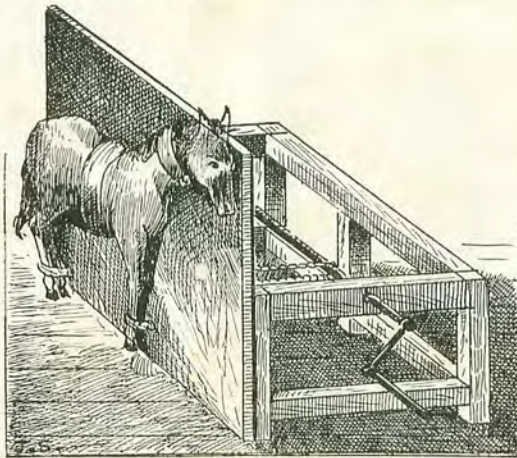
NO. 1.—THE TRANSFORMATION PICTURE.

than the space between the legs of the easel, and also that the top of the frame was also lifted forward, conveying the wrong idea that the front supports continued completely from top to bottom behind the frame. The truth was that the easel's front legs broke off just below the top of the frame, and just above the bottom of it, the two parts being connected by a frame of iron, which allowed sufficient opening wherein the picture could revolve. Of course, it would never do, if this deception is henceforth repeated, to shift the frame forward if any portion of the audience should command a view from an elevation above the top of the picture. I suggest that some enterprising amateur conjurer may profitably adopt this contrivance, as well as another, hereafter explained, and call it "THE STRAND MAGAZINE Picture Trick," having an enlarged copy of the cover for the first picture shown.

ings. In the first, the horse is shown as having been strapped to the table-top, which has been placed perpendicularly for the purpose. By simply turning one or more handles, the table-top is turned to a horizontal position, and finally slid into its proper place, as in the following drawing.



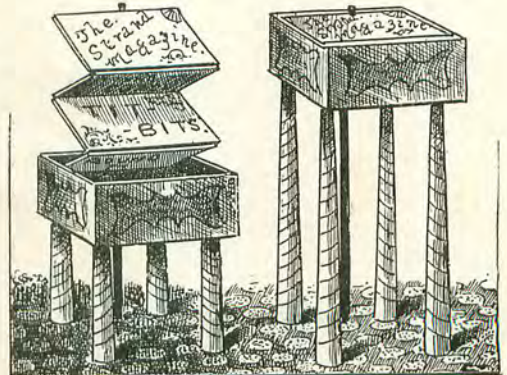
NO. 3.—OPERATING-TABLE FOR A HORSE—READY.



NO. 2.—OPERATING-TABLE FOR A HORSE—PREPARING.

An advertising invention, which had a decidedly pleasing effect upon those who observed it, is illustrated in my next drawing. Everyone must be aware of the fact that if a length of paper or card be rolled up, it is possible, by withdrawing the inner end of the roll, to extend it to the form of a long coil, such as appears at each corner as a support to the box, in the right-hand part of my illustration. It is possible, also, to re-close such a coil to its original shape. The device shown has a thin metal rod running right from the bottom of the box, down within each coil, and those rods are connected with a small tank beneath the flooring, the tank being supported upon very long chair-springs. A fifth rod, at the back, and not con-

Notwithstanding the easy control that man has been enabled, by a proper exercise of his superior mental qualities, to effect over horses, I fear that very few men could achieve the conspicuously difficult manœuvre of handling a sick horse as he would a sick human being. To lift a horse on to a table, for instance, would prove an embarrassing, if not totally impossible, task if the process were undertaken without the aid of some kind of mechanism. The ingenuity of man has, however, obviated the depressing necessity for handling horses and cattle in this manner, as may be seen by a reference to my second and third draw-



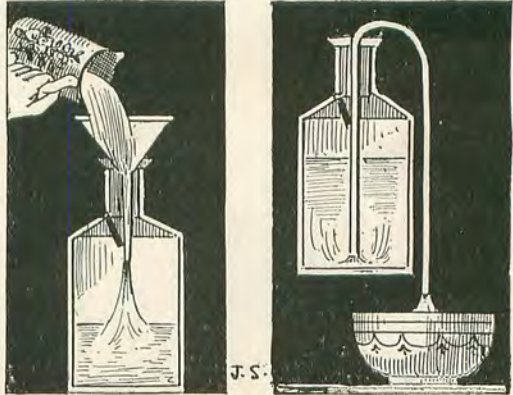
NO. 4.—CURIOUS ADVERTISING DODGE.

nected to the tank, has its upper end united to the back edge of the lid (of course, it is not a proper lid), and stands thus quite rigid. Upon allowing water to run through a pipe ending above the hidden tank, the water received in it gradually increases its weight, and bears it downwards. The consequence is that the four rods and box are lowered automatically, and a set of hinged boards, one of which is that united to the rigid back rod, are gradually revealed to view. Of course, they are hitherto lying quite flat in the box, but cannot follow it downward.

The merit of some of the articles dealt with in this paper is that—although they are, I hope, interesting to the general reader—they are yet capable of being utilized by some of those persons who may be on the look-out for something not too widely known.

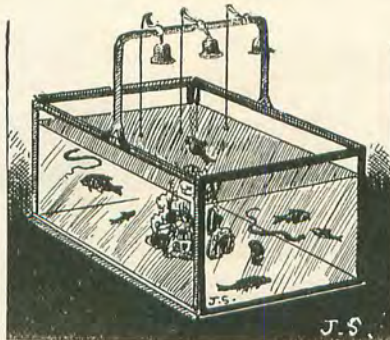
Cats and dogs and horses are not the only creatures possessing reasoning powers. As a matter of fact, an apparently dull form of life, fish to wit, have been trained in a manner which should leave no doubt concerning their latent discrimination. I have heard of more than one instance in which the bright and familiar gold-fish has had its mild intelligence so developed as to induce it to ring a bell when it needed some trifling luxury. That which I consider to be the best innovation contrived for this purpose is illustrated in my next drawing. Three bells were properly balanced upon a rod, as shown, and cords, which just contacted with the water, hung from them. By placing an insect, or some equally tempting morsel of food, lightly on the lower end of the string, a fish will naturally grab it. Care must, of course, be exercised in order to prevent the string as well from being swallowed. The moment the insect is seized by the fish, the bell tinkles, and the fish associates the sound with the meal—a result which seems to contradict the common statement that fish have no sense of hearing. By adhering to this tuition for some time, the fish will become accustomed to hear the bell ring as every welcome tit-bit is secured, and will eventually, on occasions when no such trifle has been placed on the string, still tug at it, and produce the familiar sounds. Then will be

the time for impregnating the mind of the fish with the necessity of pulling the string whenever it desires food. Place the insect in the water, apart from the string. Probably the next time it hungers for luxuries, it will again pull the string. Of course, should the fish become dilatory in this respect, the original process of attaching the insect to it must be resumed; but it has transpired that when once the ring has been responded to promptly, it has been continued. This is a far less objectionable way of rendering an aquarium interesting than by inserting electric lights within the interior of the fish, and making them transparent. I am determined to experiment personally in this undoubtedly patience-trying business, for I am convinced that not only instinct, but reason, guides the fish in its performance.



NO. 6.—A MYSTERIOUS BOTTLE.

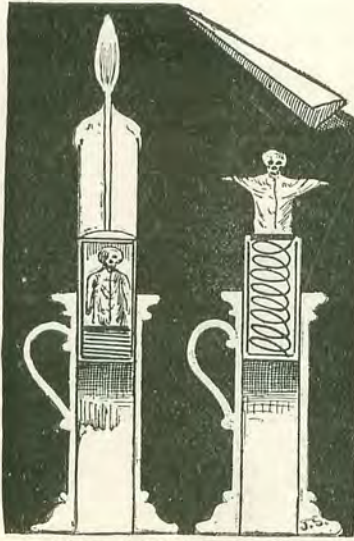
Here comes a description of the trick to which I referred when writing just now concerning the transformation picture. An opaque glass bottle is filled with water in the direct view of the spectators; yet when it is reversed, without having been corked, it still retains its contents. The accompanying drawing (a sectional sketch) explains the simple contrivance used. In the first half of the illustration a funnel is shown inserted in the bottle. It has pushed downwards a valve, hinged on a spring, and situated at the bottom of the neck. The short black line indicates it. After the bottle has been filled, and the funnel withdrawn, the valve springs upwards, and,



NO. 5.—A BELFRY FOR FISH.

consequently, prevents the water from returning when the bottle has been reversed. In order to show that water is actually within the bottle, it is only necessary to insert a bent tube, as shown in the right-hand half of the drawing, and give a preliminary suck at its lower end, when all the contents will be withdrawn.

I turn to a clever contrivance, shown in my next drawing, invented by a man as a rather peculiar surprise for a friend. He made that friend a present of some coloured wax candles, one of which contained the affair shown. The receiver was very fond of having a few candles of the coloured kind placed about his drawing-room, in candelabra, and was intensely surprised one night when one of those which he had thankfully accepted from his friend exploded with a loud "bang," after having burnt down about half-way, and revealed to view a miniature ghost, with outstretched arms, which had issued from the remaining portion of the candle. To say that the man was puzzled by so extraordinary an apparition is to incompletely describe his feelings. I wonder how the reader would accept such a crisis. I know that I should have been *very much* astonished. Yet the effect was produced in an exceedingly simple manner, as can be understood by examining the drawings. The lower half of the candle really consisted of a thin cardboard case, containing a spring and a small "ghost" with spring-arms, which would fly apart immediately upon being released from their bondage. A small portion of gunpowder, separated by a disc of paper from the head of the "ghost," completed the apparatus. The outside of the cylinder was waxed to appear as but the continuation of the candle. When the flame burnt to the powder it naturally caused it to explode,



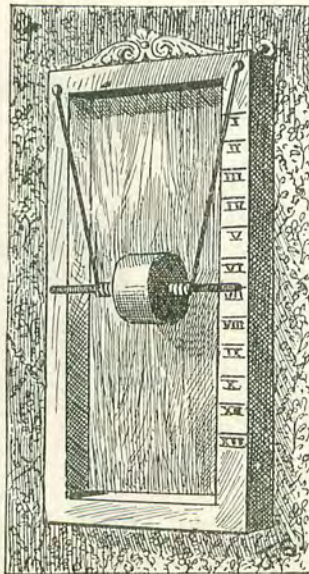
NO. 7.—A GHOST IN A CANDLE.

and simultaneously with the discharge the spring forced the little image upwards. This device would make an effective toy, I am inclined to think, as the cylinder could be used as often as required, by fixing a half-candle properly to the top of it and concealing the join.

Of curious clocks so much has been said at various times that I felt inclined to omit the next illustration; but perhaps it may interest some readers, and for that reason I crave for it a place of honour in these columns. A small circular box, partitioned into several compartments, was suspended by two strings to an ordinary frame, backed by a wood panel. The hours were indicated along one side of the frame. The interior divisions took a similar form to those used in water wheels, and in each, at alternate ends of those divisions, was a very small hole. Water was sealed up in one compartment, and would be uppermost when the drum was at the top of the panel. It would slowly trickle into the next compartment below it, in front, and, on account of the leverage exerted by its weight, the drum would gradually revolve downwards.

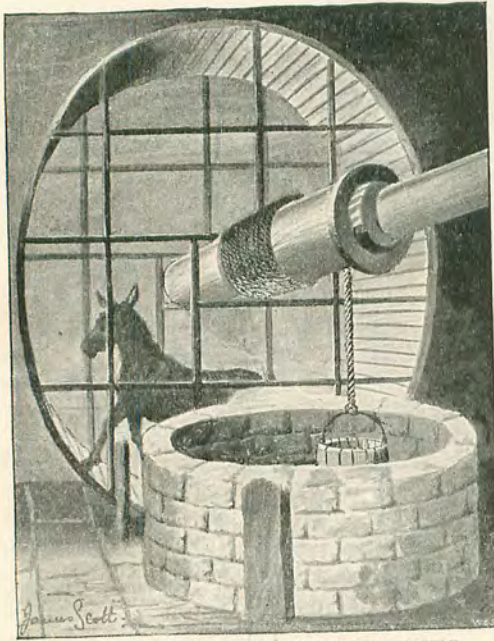
It was rewound to the top when another journey was necessitated. There is a very similar invention in the South Kensington Museum, I believe. I am given to understand that at a very remote date they were comparatively popular. What a primitive method when compared with the elaborate forms of mechanism now employed to denote time!

I believe that the custom of utilizing dogs for the purpose of turning spits, and thereby roasting huge joints of meat or game, is now an obsolete one; but the practice of applying the services of a donkey to the kind of work conveyed in my next drawing is, I believe, still in vogue at Carisbrooke Castle, in the Isle of Wight,



NO. 8.—A WATER CLOCK.

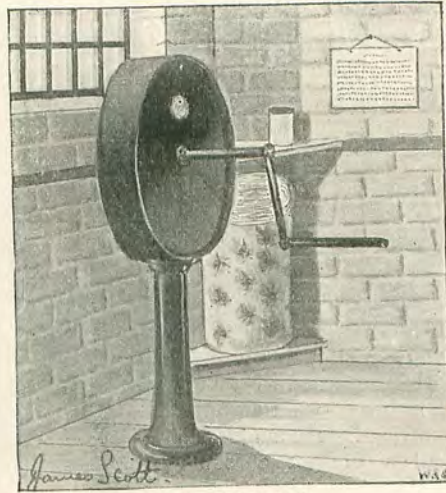
The forbearing animal is inserted within a huge wheel having a suitable footway, and his attempted progress, instead of carrying him forward, has the tantalizing effect (to him, no doubt) of merely causing the wheel to revolve. The wheel is connected to an immense crank, around which winds a rope



NO. 9.—THE DONKEY WHEEL, CARISBROOKE CASTLE.

bearing a bucket, which dips into the water contained in a well 200ft. deep and 12ft. across its mouth. An interesting fact in connection with this well is that when a pin is allowed to fall upon the surface of the water, which is at a distance of about 180ft. from the top of the well, the sound caused by its contact is distinctly audible.

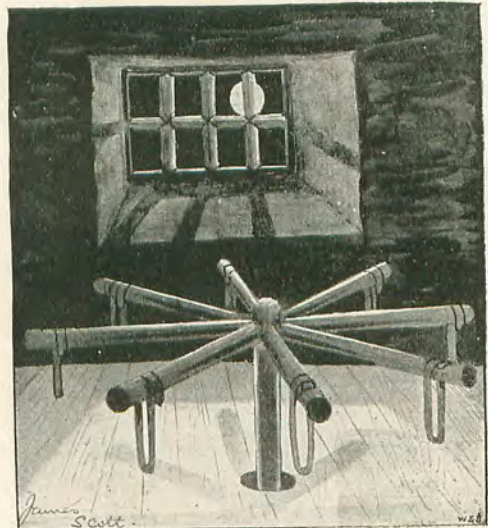
I will now give the reader an idea of what two devices, which still stand in some gaols, are like, although I must point out that the punishment itself has long been discontinued. The crank, No. 10, was an article devised to weary the limbs of the fellow sentenced to undergo its treatment. The labour consisted of turning the handle several hundreds of times daily, and the enormous amount of energy thus exercised was absolutely wasted, as no other return than the punishment of the criminal was secured. A glass-covered dial fitted into the iron drum registered the number of revolutions, so that there was no available way of deceiving the authorities in the matter. The interior consisted of a large



NO. 10.—THE CRANK.

amount of uncoiled machinery, and the long handle testifies to the obnoxious desire of the inventor, for it must be apparent that to turn so large a handle, the movement must have burdened every muscle in a man's body.

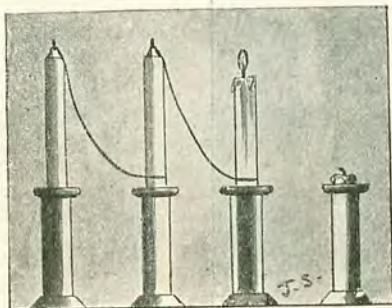
The capstan, depicted in No. 11 drawing, was an equally peculiar device, and it was necessary to employ sixteen men in connection with it, eight of whom handled the poles, while the remaining half of the number were belted to the straps (shown dangling from the poles), and occupied a position midway between their fellows. The punishment consisted of walking round and round the central upright, meanwhile pushing and pulling the poles,



NO. 11.—THE CAPSTAN.

according to the respective tasks of the men. In connection with the matter, I am much indebted to the Chaplain of Oxford Prison for informing me, in a recent reply to a query addressed by me, that the object of the contrivance was to pump water from the adjacent river into tanks situated beneath the Anglo-Saxon tower which contains it. I am also told by him that its use was abolished on account of the splendid opportunity it afforded prisoners for indulging in the forbidden pleasure of talking; and one can well understand that the heavy tramp of sixteen men in close proximity to each other was capable of drowning the sound of a whispered conversation only audible to the strained ears of those engaged upon the monotonous task of propelling the apparatus.

It may be a relief to turn now to more cheerful subjects, and, perhaps, by way of contrast with the last article enumerated, the simplicity of the twelfth device illustrated by me may appear more vivid. Certainly it was an artful scheme for providing means of illumination during the night, notwithstanding the fact that it entailed the use of a large number of candlesticks. The sketch is almost self-explanatory; but, maybe, a few additional words will not prove unnecessary. Who the originator of the arrangement was, I am unable to say. I have heard it

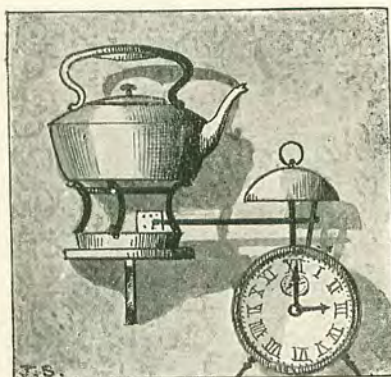


NO. 12.—SELF-LIGHTING CANDLES.

imputed to a poet, who desired less interruption during his night work, preferring, very reasonably, to be able to write down his inspirations continuously, instead of being frequently called upon by necessity to light a fresh candle. Pieces of twine were fastened from one candle to its nearest fellow, and so on; and then one ignited. When its flame reached the loop of twine, the latter naturally caught fire, and a tongue of flame would creep up to the

adjoining candle, lighting it in the manner desired. The scheme is a pretty example of the brilliancy of simplicity in idea, as compared with the complicated arrangements often devised to secure simple results.

I end my present paper with a drawing of an invention which is calculated



NO. 13.—AN AUTOMATIC KETTLE-BOILER.

to conjure up the delight experienced by indulging in a hearty breakfast at the termination of a sound and refreshing sleep—a very rare blessing, I believe. A few years ago there was publicly exhibited an invention fulfilling identical purposes to those expected from the device I now refer to, but which differed from it in that it was worked by electricity, whereas the one depicted in my thirteenth drawing was controlled by a purely automatic action. One end of a stiff wire was connected to the hammer of the alarum; and to its opposite extremity was attached a receptacle for a few matches, which engaged with a roughened surface situated immediately in contact with a spirit-saturated asbestos tank. At whatever hour the clock was timed to ring the bell, the violent to-and-fro motion of the hammer caused the matches to be rubbed against the material prepared for them, and consequently they ignited and set fire to the spirit, which, in its turn, boiled the water contained in the kettle, thus rendering great service to the aroused owner, who was in a position to make his tea, coffee, or cocoa as soon as he had dressed himself.

I find it far more pleasant to speak of serviceable outcomes of ingenuity, than by dwelling, as I did a few months ago, on notoriously nonsensical schemes,