

it carefully over the parts to be burnished, changing the surface of the calico on the finger very often. Should any of the other parts of the frame be touched by the damp calico, it will be necessary to again apply the oil brush to remedy the accident, and a small camel's hair brush will sometimes be needed to touch in small imperfections. Although it is thought that every particle of grease has been wiped off, yet it is necessary the next morning, before laying the gold, to go over all the parts required for burnish clay. This is done to prevent the possibility of any gold adhering, as it would have to be glass-papered off before putting on more preparation. The frame is then gilded as before described, and the gold skewed into the bottoms of the ornaments; after which, if there are any faults in the gilding, they can be rectified by taking a small camel's hair brush, and wetting it in the mouth, apply it to the spot, and lay gold enough to cover it. The frame must then be *finish sized* once, as before mentioned.

(To be continued.)

SAFETY DOUBLE HOIST.

A noticeable feature in this hoist is the saving of the time ordinarily consumed after raising a load, in bringing the hook and chain down again for the succeeding load. The hoisting chain is double ended, the hook on one end raising as the other descends.

Thus the advantage occurs in transferring goods downwards, that one hook is always left at the top of the hoistway, ready for lowering the succeeding load. The double-ended chain is "pitch-chain," having links of precisely uniform dimensions, made to fit into and engage with corresponding recesses and projections in the hoisting sheave over which it works. The hoisting sheave, or chain wheel, is central in the machine, and is screw-threaded to traverse like a nut upon the screw-thread cut on the shaft of the sprocket or rope wheel. When hoisting or lowering upon one hook, the chain sheave is automatically braked against a



left-hand ratchet wheel and disk brake; and against a right-hand ratchet and brake when the other hook is used. The operator can use whichever hook is nearest to hand. He can pull the hand rope either to hoist or to lower. He may "let go" whenever it suits his convenience, and the load will take care of itself; remaining in suspension until hoisting or lowering is resumed. Although the lowering motion is self-checked, so that the load cannot possibly run away, a considerable speed, but still a safe one, may be obtained in lowering, by imparting velocity to the sprocket wheel, which is purposely made heavy to act as a fly wheel, for fast lowering.

The safety and despatch afforded by this little hoist, make it a decided economizer of time and labour. Larger sizes are in course of preparation, as also a full line of platform elevators possessing equally marked advantages.

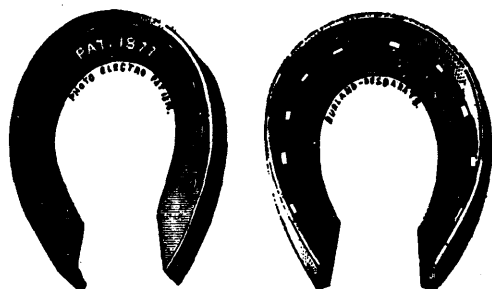
NEW CONTINUOUS CALK HORSE SHOE.

When a prominent horseman states that in the city of New York there are not ten horses in a hundred that have been upon our street pavements one year that have sound feet, and when eminent veterinary surgeons say that nearly all of their business comes from the present mode of shoeing horses, it becomes a matter of serious consideration to owners of horses to know whether there is a way of avoiding the evil. The remedy seems to lie in the adoption of a shoe of standard form adapted to the peculiarities of the horse's foot and capable of being easily applied by any blacksmith. A shoe which, we are informed, fulfils all requirements has been recently patented in the United States.

Fig. 1, in the engraving, represents the shoe as seen from the top, showing a level bearing surface. Fig. 2 shows the under or calk side of the shoe.

Fig. 1

Fig. 2



This shoe is made from an L shaped bar of steel, the steel being, by a patented process of manufacture, completely enveloped in a coating of tough iron, which renders it capable of being bent hot or cold, and imparts to it the desirable qualities of lightness, strength, durability, and elasticity. The bars being cut into suitable lengths and the ends of the pieces sheared off, they are then bent into shape around forms or dies made from drawings of the foot; the nail holes are then punched, and the shoe is complete.

The shoe has a continuous calk, which is similar in form to the crust or wall of the hoof, and is, therefore, the most natural, and, as stated by the manufacturers, the most efficient shape for a horseshoe. The upper surface of the shoe has a narrow beveled edge or rim, which takes the place of the clip in the ordinary shoe.

It is stated that the peculiar form of the shoe adapts it to all kinds and conditions of feet. The manufacturers state that it has cured tender feet, when existing, in every instance where the shoe has been tried; and the change which takes place in the tender footed animal, that has had an old shoe replaced by this, is said to be quite remarkable. While formerly he gave expression to the uneasiness and pain from which he suffered, by frequently shifting his weight alternately from one foot to the other, with the new shoe he stood squarely upon his feet without a sign of discomfort, showing clearly that he was at his ease.

The many advantages claimed for this shoe cannot be well enumerated here, but we are informed by the manufacturers that it is largely in use, and is giving excellent satisfaction.—*Scientific American*.

NOTE.—We furnish this simply for information; it is a patented invention.—Ed. S. C.

INSTANTANEOUS PHOTOGRAPHS.—The success of Mr. Muybridge of this city, in taking a number of instantaneous photographs of a horse at full speed have attracted much notice, not only at home but also abroad. M. Marey, in *La Nature*, who has made extended investigations upon the subject of the analysis of animal motions, appears to have been greatly struck by the pictures of Mr. Muybridge, and believes that his success provides an admirable means of studying in every successive position of motion the very difficult problem of the flight of birds. "What beautiful zootropes," he suggests, "might be obtained by this method. We might see in their true paces all sorts of animals; it would be a sort of animatic zoology. As to artists, it is a revelation for them; for it furnishes the true attitudes of motion; those positions of the body in unstabled equilibrium in which a model cannot 'pose.'" In connection with this last point, it may be of interest to notice that many of the attitudes exhibited by Mr. Muybridge's pictures are very unlike the stereotype ideal.