Automatic Check Rein Attachment for Harnesses.

Scarcely any one accustomed to driving has failed to experience the annoyance of being compelled to alight from his wagon to uncheck and check his horse to allow the latter to drink. Every one who drives for pleasure would gladly escape this inconvenience, which, in muddy, rainy, or cold weather, is so disagreeable that we fear the wants of horses are often neglected on account of it. And those who make driving a business would, we should think, gladly avail themselves of so simple a device as we herewith illustrate, when once convinced that it would obviate the necessity of descending from their seats, either to check or uncheck their horses.

The neglect spoken of is probably suffered more by horses hired from livery stables than those owned by their drivers. Such horses will be far more likely to be attended to when this device is attached to their harnesses, as to water them will then give no trouble to their drivers.

The device detracts nothing from the ornamental appearance of the harness. It is entirely out of the way, and costs but little. The inventor informs us that, without advertising or attempting to make a business of selling the device in advance of facilities to manufacture, he has taken orders for a large number in the town where he lives, in the short time since he obtained his patent.

The terret, A, Fig. 2, is substituted for the ordinary check rein hook. It has a pivoted catch, B, made circular, except the recess at the bottom, and having a bevel edge which abuts against a corresponding bevel on the interior of the ring of the terret, so that it can swing backward, but cannot swing forward through the terret ring.

An elastic rubber cord, C, is fastened to the back strap of the harness, by means of a small catch or dog, D. The cord, C, passes forward over the back strap, or through it if made tubular, (as will be done on fine harnesses), till it reaches the terret ring, being somewhat stretched to give it the proper length and tension. At the end near the terret, it has attached to it a metal piece, E, the rear end of which is enlarged into a ball or knob, which, when pulled through the terret ring from the front, passes far enough back to let the pivoted catch plate, B, fall to its place, the recess in the bottom of the catch plate receiving the neck of the piece, E, while the ball engages the plate; so that the piece, E, cannot be drawn through forward again until the catch plate is raised. In an eye at the front end of the piece, E, is attached the snap hook, F, having a loop at the front end, through which the check rein passes.

Fig. 1.

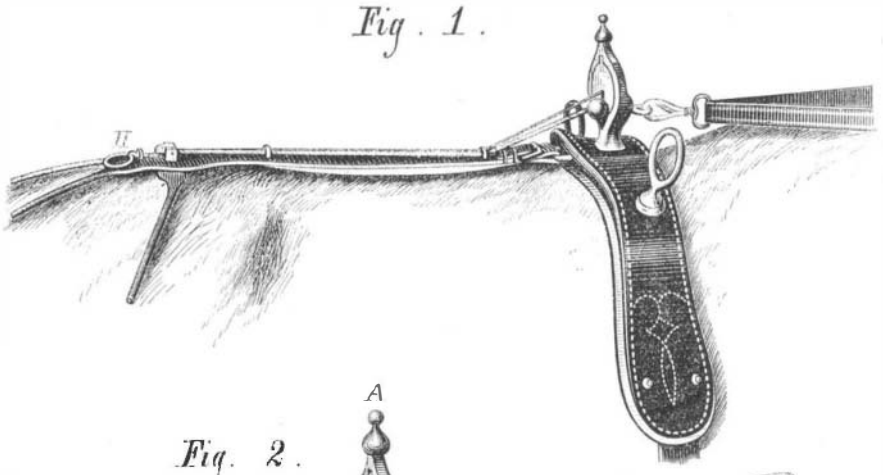
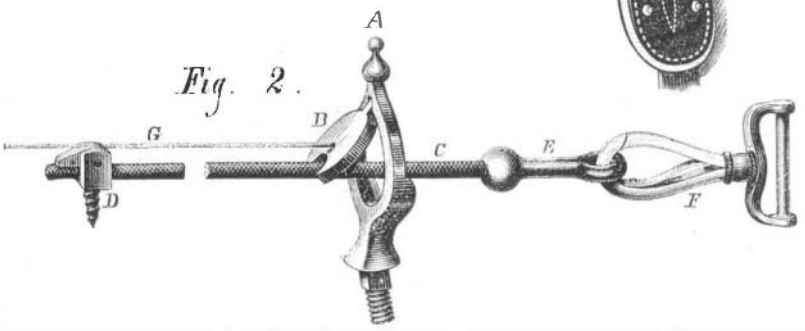


Fig. 2.



SCHOFIELD'S AUTOMATIC CHECK REIN ATTACHMENT.

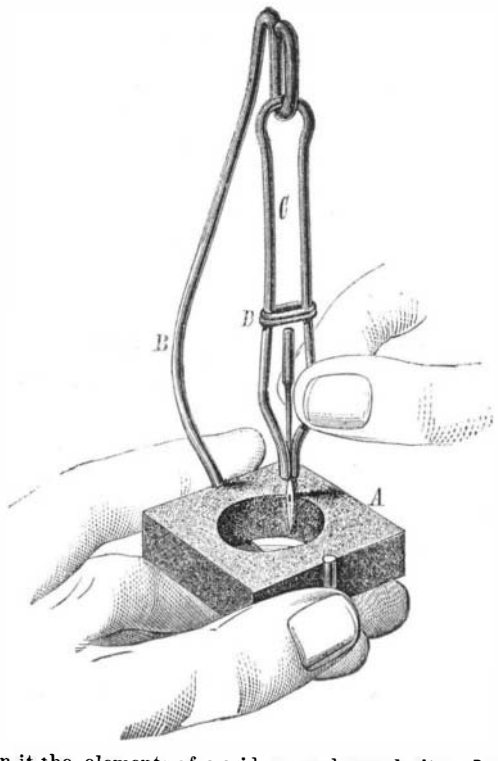
The cord, G, is attached to the catch plate, B, and when drawn backward, raises B and releases E. The horse can then lower his head to drink, and when he has finished drinking, by drawing upon the driving reins he is caused to raise his head, the elastic cord, C, retracts, carrying back the piece, E, through the terret, A, where it engages with the catch plate, B, and the horse is thus checked again. The cords run through loops on the back strap, or through a hollow tubular back strap, as above mentioned.

The cord, G, which is used to release the piece, E, has a ring, H, Fig. 1, at its rear end. A small hook is screwed into the butt end of the whip stock, by which this ring is easily reached, and the cord pulled to uncheck the horse.

This invention was patented November 7 and November 21, 1871, by John Schofield, of Worcester, Mass., who may be addressed (Box 709), for further information.

MECHANICAL NEEDLE SHARPENER.

This is a most ingenious little invention, and one which



has in it the elements of a wide spread popularity. It costs little, and does its work quickly and far more perfectly than it can possibly be done by hand. For sharpening sewing machine needles, or, in fact, any other needle or small pointed instrument, it appears just the thing that has been long needed.

In the engraving, A, represents a pedestal, made of fine emery cemented together, forming a solid stone. The pedestal is square, and has in the center a circular opening.

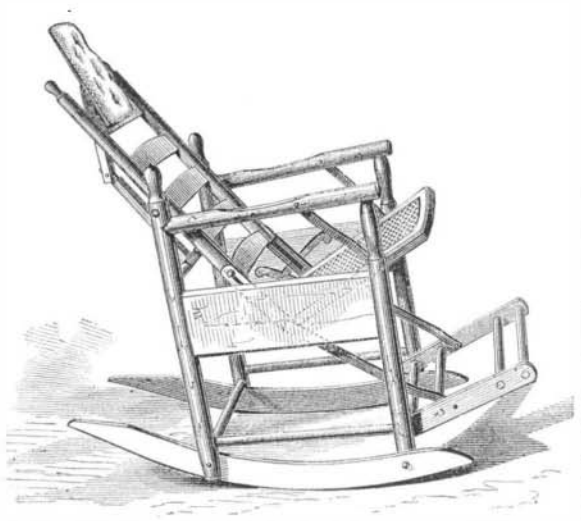
From the pedestal rises a curved standard, B, to which is linked the swinging clamp, C. The latter has two grooved jaws, which grasp the needle as shown, being held firmly together by the sliding loop, D.

The needle being clamped in the jaws, as shown, the swinging clamp and the needle are grasped by the thumb and finger of the operator, and swung rapidly around the inner wall of the opening in the pedestal. At each passage of the needle point, around and against the wall of the opening, it is ground evenly on all sides, and a few turns brings it down to a fine sharp point, the bevel being formed by the inclined position of the needle upon the face of the opening.

The invention was patented June 28, 1870. For further particulars address Currier, Philpot & Co., 5 Haymarket street, Boston, Mass.

HAUPT'S IMPROVED EASY CHAIR.

Next to a comfortable bed, an easy chair is one of the luxuries which adds as much to the comfort, of both the well and the sick, as any article of furniture in modern use. Much ingenuity has been expended to perfect this class of furniture, and there are many that "lap one like a mother," and



which are looked forward to with pleasant anticipation as the first haven of rest into which the weary sink, in the quiet evening hours at home.

Our engraving illustrates an addition to these modern comforters, which seems to possess all the requisites of ease and convenience sought in devices of its kind.

The back, seat, foot rest, and head rest, are all self-adjusting and actuated by the movements of the occupant, who is enabled to assume an erect, horizontal, or any intermediate position desired, with very slight exertion.

If the sitter desires to lean back, he places most of his weight on the rear end of the seat, and throws his body backward. This movement starts the pivots of the chair bottom that previously rested in depressions at the rear ends of grooves in the side pieces. The seat moves forward, its rear end descending into these grooves, its front end being raised by swinging braces hinged to the arms and seat. At the same time, the foot rest is moved forward by a rod jointed to the chair bottom and pivoted to the foot rest. The motion of the parts will cease when the movement of the sitter ceases, or will be reversed by his reverse movement.

The parts move harmoniously, smoothly, and easily, and the position of the sitter is changed with that facility which adds so much to the luxury of such chairs.

The invention was patented through the Scientific American Patent Agency by William W. Haupt, of Mountain City, Texas, October 17, 1871.

Science Perfecting Swimming.

Frederick Barnett, of Paris, has patented a novel yet simple apparatus for swimmers. The invention consists in supplying to man, by art, the apparatus which has been given to the frog by nature. For the hands, he has a large membranous fin which is held to its place by loops passing over the fingers and a strap around the wrist. The surface presented to the water by these fins is so large as to add greatly to the effectiveness of the strokes of the arm, but not so large as to exhaust the muscular power. Their effect is to very much reduce the effort usually required in swimming. But the greatest ingenuity is displayed in the form and fitness of the fins for the legs, which are attached to the ankles, and are so formed that they act upon the water, both in the movement of bringing the legs and throwing them back. They act so finely in treading water, as swimmers call it, that one can really walk, if not on the water, at least in it. The difference between swimming with this apparatus and without it, is very much like the difference between rowing a boat with a handle and the blade of an oar. The old swimmer has no trouble in using the fins at first trial, and is surprised to find with what strength he can swim without exhaustion. He easily swims twice as fast with the apparatus as without it, and with it he can sustain himself for hours upon the water, or swim many miles.

Tungsten Colors.

Fine colors are prepared from tungsten, which, being permanent and little acted upon by heat, can be used to advantage on many occasions. Tungstate of baryta is a pure white; tungstate of nickel, clear green; tungstate of chromium, dark green; tungstate of cobalt, violet; tungstic acid, a beautiful clear yellow, passing into orange. Tungstate of soda is not employed in colors, but is recommended for rendering fabrics uninflammable; for this purpose it is better to combine it with phosphate of soda. Metallic tungsten was at one time supposed to improve the hardness of steel, but we hear very little of its use for this purpose, and it seems more probable that the accidental admixture of manganese was the real indurating constituent. It is also claimed that tungsten largely increases the magnetic power of iron.

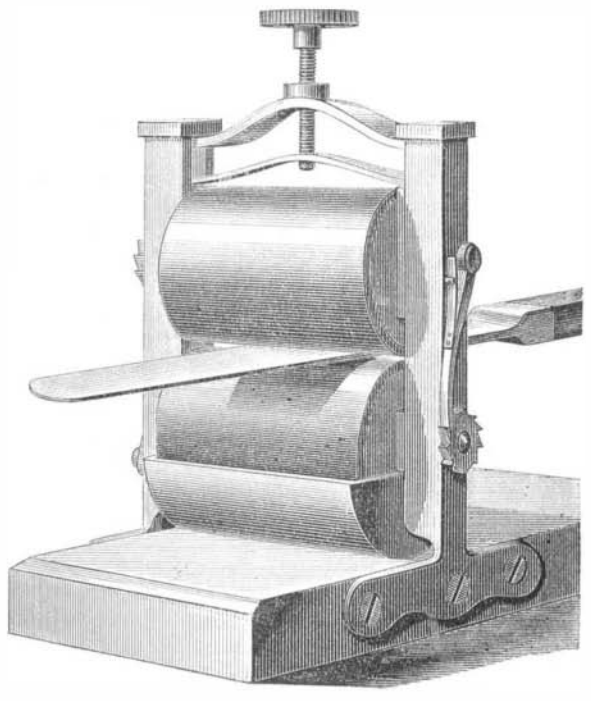
KNIFE CLEANER AND POLISHER.

This is a very neat implement, and we should judge a very efficient and convenient appliance for cleaning knives and forks, designed for hotels, restaurants, or private families.

The engraving illustrates the device so fully that only a few words of explanation are required.

Two elastic faced rollers are mounted in the uprights of a suitable frame as shown. The lower part of the bottom roller is inclosed in a trough for holding the brick dust, emery, or other polishing material. Each roller is controlled by a ratchet and pawl, so that it can only turn in a direction opposite to that in which the other can turn. The rollers are pressed together by a spring, which is adjusted to give the requisite pressure by a screw at the top of the frame.

In use, the knife to be cleaned is thrust in between the rollers, one of which turns while the other is held from turning by the ratchet and pawl. As the knife is drawn back again, the roller which first turned is held and the other one turns, each alternately turning and remaining stationary as the knife is drawn out and thrust in, and thus dividing the labor between the two strokes, rapidly cleaning the knife and giving it the required polish.



This knife cleaner is the invention of William S. Beebe Joseph T. Baynes, and Abraham King, whom address, for further information Watervliet, N. Y.