

## APPARATUS FOR STUFFING HORSE COLLARS.

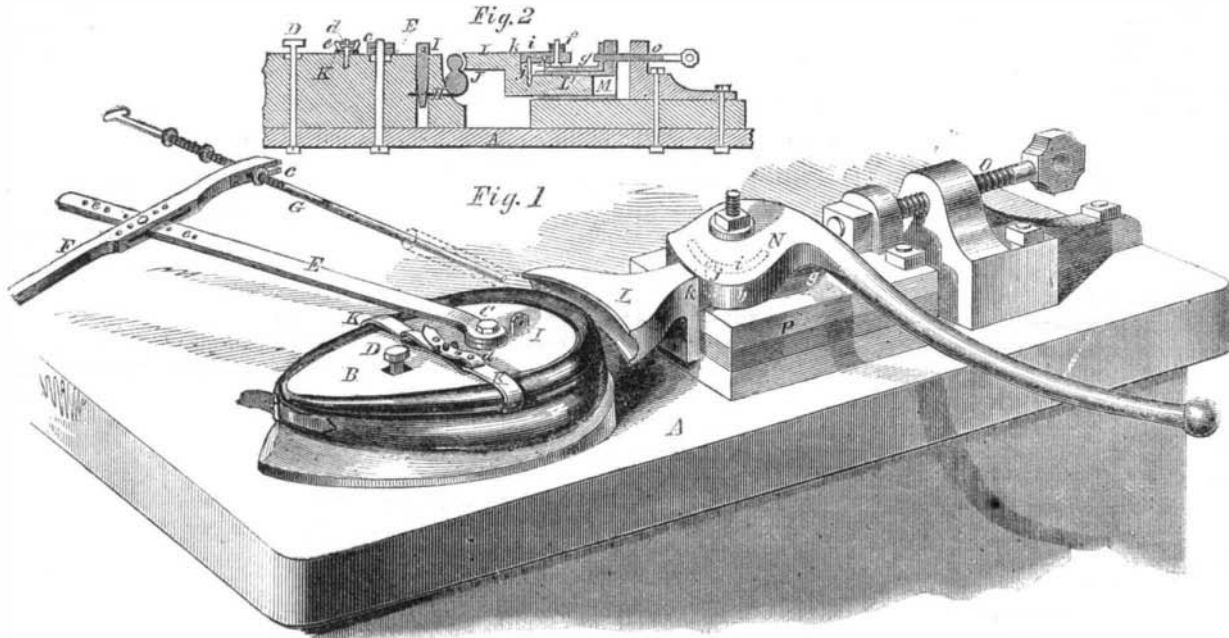
In making horse collars, the stuffing requires so great muscular strength that many mechanics are unable to work at it continuously. To facilitate this hard labor by means of levers, the apparatus illustrated in the annexed cuts has been devised.

Upon the solid table, A, the collar-block, B, is secured by two pins, one of which, I, acts as a pivot, and the other, D, drops into one of a series of holes in the table, made in a curve concentric with, I, so that the block

TESTING A BRIDGE.—Before the great Victoria Bridge at Montreal was accepted by the contractors, it was put to the severe test of a loaded train weighing the enormous load of one tun to the square foot. While in the first tube only, the deflection of that tube was  $\frac{7}{8}$ ths of an inch; the adjoining empty tube being lifted in the middle  $\frac{3}{8}$ ths. On the load being placed half over both tubes, the deflection was the same in each,  $\frac{3}{8}$ ths of an inch; and when run wholly upon the second tube, the result was the reverse of that in the first. The

the lower pad is raised as its upper surface is worn away by means of the screws, *n n*, pressing against the plate, *k*. The knives are cleaned by rubbing them between the pads, I I. In introducing them, the upper pad is raised by placing the hand upon the lever, H, and pressing it upward, and when the knife is between the pads the upper one is pressed down upon it by means of the lever. The knife should be moistened in order that the polishing powder may adhere to it.

The patent for this invention was issued Nov. 8, 1859,



## HABBERTON'S APPARATUS FOR STUFFING HORSE COLLARS.

may be turned about the pivot, I, and held in place by the pin, D. The collar is fastened to the block by means of the hook, H, Fig. 2, which has a slot near its inner end through which the wedge shaped pin, I, passes and presses it very firmly to its hold on the collar. The bar, E, is connected to the collar-block by the pivot, C, and has the lever, F, hinged upon it by a movable pin pinned to it. The lever, F, also has several holes so that the place of its fulcrum may be varied at pleasure. It is connected at its end by a slot with the stuffing rod, G. The collar being secured to the block, the operator introduces a quantity of hair or other elastic material used in stuffing, and presses it in with the rod, G, by acting upon the longer end of the lever, F.

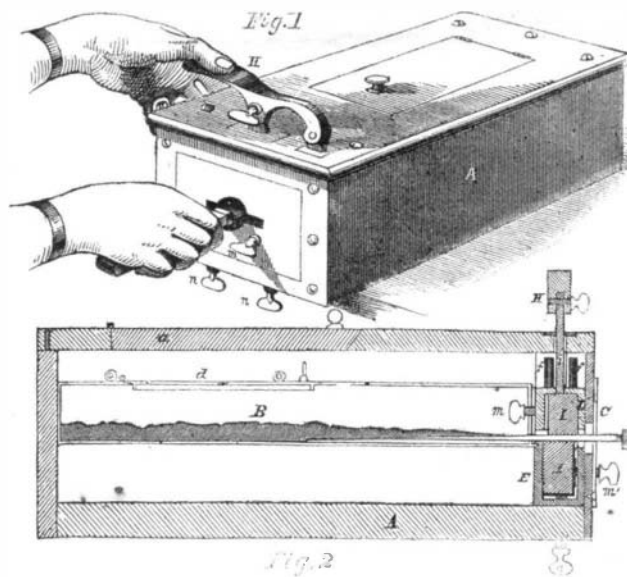
For fashioning the collar in proper form, the concave, L, is formed and secured to the table in a manner to permit it to have a horizontal reciprocating motion. Its inner part, L, slides smoothly in the block, P, and is carried back and forth by means of a pin, j, which passes into a curved eccentric slot in the lever, N. The lever and concave are both secured to a plate which slides in a dove-tail groove in the top of the block, P, which plate is adjusted and held in place by the set screw, O. As each portion of the collar is filled, it is pressed into shape by bringing the concave, L, against it with force by means of the lever, N, and as the filling proceeds, the pin, D, is withdrawn, and the collar block is turned upon the pivot, I, to bring the other portions of the throat of the collar successively under the action of the concave, L. To fill the opposite side of the throat of the collar the position of the lever, F, is reversed. In filling the sides of the collar, these are secured to the block by means of the hooks, K, the ends of which are held together by the adjustable strap, d, and set screw as shown. All except the throat of the collar is filled by using the stuffing rod in the hand without the aid of the lever.

The patent for this invention was issued, through the Scientific American Patent Agency, Jan. 3, 1860, and persons desiring further information in relation to it, will please address the inventor, William S. Habberton, at Mount Carmel, Ill.

final test was the long central span (330 feet), where the deflection was only  $1\frac{1}{8}$  inches. In no instance was the deflection greater than  $\frac{1}{8}$ ths more than what was expected.

## IMPROVED KNIFE-CLEANER.

The apparatus from which the drawings were made for the accompanying cuts, presents more the appearance of a parlor ornament than of a kitchen utensil.



## M'NAMEE'S KNIFE-CLEANER.

It consists of a neat box, A, made of mahogany or other wood, with the tin box, B, occupying the middle portion. A door, a, is made in the box, A, and a door, b, in the box, B, for the introduction of fine emery or other suitable scouring powder into the box, B. In the end of the box an opening, c, is made sufficient to admit the blade and shoulder of a knife, which opening is surrounded by the metallic plate, C. Within the box opposite the opening are two india-rubber pads, I I, the lower one fastened in a stationary metallic socket, E, and the upper one in a metallic socket, D, which has a vertical motion in which it is guided by the rods, f f. The socket, D, is connected with the lever, H, by the rod, i, and is pressed down by spiral springs. The india-rubber pads are held in the sockets by the screws, m and m', and

and persons desiring further information in relation to it will please address the inventor, J. McNamee, at Easton, Pa.

## THE CORT FAMILY AND THE BRITISH GOVERNMENT.

—A pension of £150 per annum has been granted by the queen to the daughters of Henry Cort, whose inventions in the manufacture of iron have done so much for the growth and prosperity of England. The SCIENTIFIC AMERICAN has, on more than one occasion, directed attention to the benefits which Henry Cort conferred upon his native country by his inventions, and shown how he had been so deeply wronged by some of the brutal officials of the British government; the paltry pension of £150 per annum to his aged descendants may afford a balm to the consciences of its aristocratic rulers, but it places their justice and generosity in a most unenviable light. It must be understood that this pension is not from the privy purse of the queen, but the pension fund, which is under the control of the sovereign, with the advice of the ministers.

A GOOD NEIGHBOR.—Our neighbor, the New York Dispatch—an interesting and valuable journal—in noticing the SCIENTIFIC AMERICAN, says:—“The proprietors of this invaluable publication have sent to this office the first volume of their new series, elegantly and substantially bound. Of the merits of the SCIENTIFIC AMERICAN it is unnecessary to speak. It is too well known to need a word of praise at our hands. It is an honor to American intelligence, invention and skill. Its readers are among the most cultivated minds of the country, who look to it as the exponent of every useful art and science. It is nobly sustained, but we would that its present circulation were doubled, trebled—yea, quadrupled. It cannot have too many friends. Its editors are industrious, talented, enterprising; and their writings, in terseness and vigor, will compare with those of any similar journal in either hemisphere. In fine, we look upon the SCIENTIFIC AMERICAN as one of the best, if not the best, of the hebdomadales of its class published.”