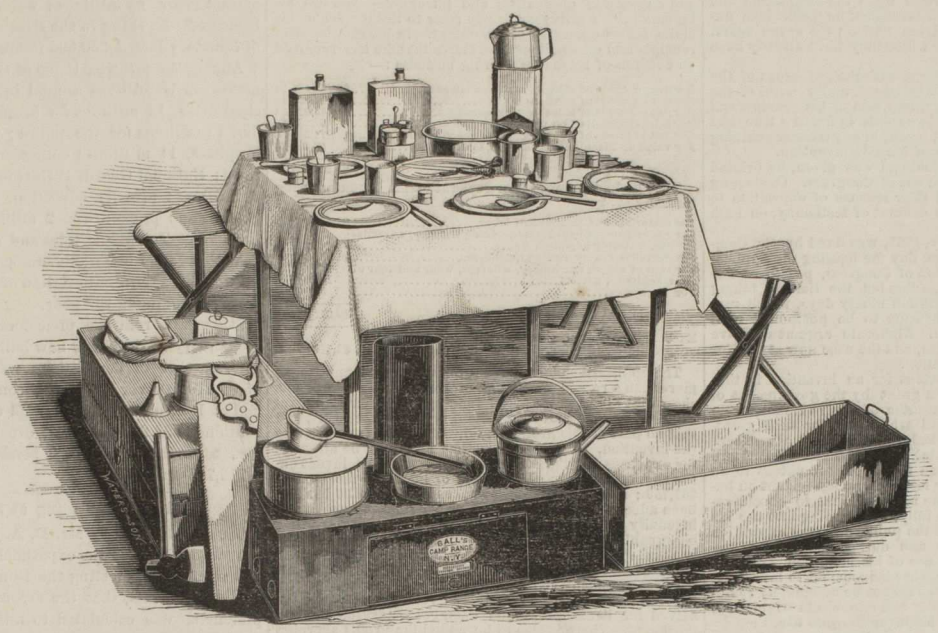
Improved Camp Chest and Cooking Range.

The combined camp chest, table and cooking range here illustrated, was invented by Horace W. Ball, of this city. We have examined it, and consider it a remarkably ingenious and convenient arrangement. The table is entirely detached from the chest, and while it folds into a very small space, is peculiarly rigid and strong when put together. The articles seem to be all of excellent quality and calculated to prove serviceable in actual use; the reputation of the eminent firm who offer the chest for sale being a guarantee for fidelity in this respect.

The great features of this combination camp chest and cooking range are: First, The table, with legs detached, folds and is made to fit in the lid of the chest, occupying a depth of two inches only, and yet is firm and immovable when placed. Second, The range is constructed for boiling, frying and stewing at the same time. The capacity of the boiler is 10 gallons; when not in use, the range, with the top reversed—being made equal to the dimensions of the chest—can be placed inside, and the interior affords space for packing the utensils, precisely as if it were a tin lining for the case. The camp chest is a strong box of black walnut with padlock; dimensions, 15 inches wide; 12 inches high; and 34 inches long. It contains all necessary culinary utensils, besides 3 camp stools and a hatchet and saw.



BALL'S COMBINED ARMY CAMP CHEST AND STOVE.

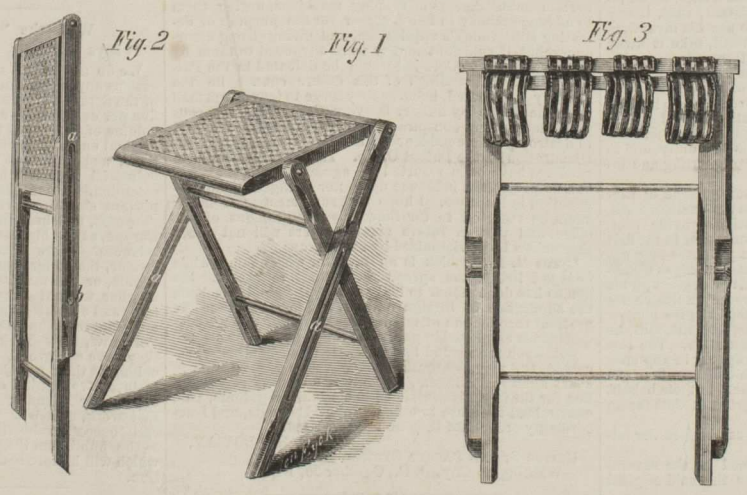
A patent for the portable camp range was granted through the Scientific American Patent Agency, and application has been made for a patent on the table and chest. The chest, with its contents complete, is manufactured and sold by Ball, Black & Co., 565 Broadway, New York, and further information in relation to the matter may be obtained by addressing the inventor, Horace W. Ball, at the same place.

Messrs. Ball, Black & Co., have completed the manufacture of a magnificent camp chest for Major Gen. Wool. It contains complete sets of breakfast, dinner and supper service, liquor flasks, tea kettles, stove and boiler, canteens, hatchet, twelve camp stools, wash-bowl and a complete set of cooking utensils.

Improved Camp Stool.

The accompanying engravings illustrate a very ingenious improvement in camp stools. From the form into which it folds it is peculiarly adapted for packing in chests or trunks for army purposes or for traveling. The legs are framed together in two pairs or leaves, each of which is hinged to the seat, as shown in Fig. 1. In the legs of one leaf are long slots, *a a*, through which stout screws, *b b*, are passed into the legs of the other leaf; connecting the two leaves together by a hinged joint. As the stool is folded up, the screw slides down the slot, permitting the parts to be brought into a flat plate, as shown in Fig. 2.

Fig. 3 represents a modification of the stool with cloth bands for the seat in place of the cane bottom represented in Figs. 1 and 2; the construction otherwise being essentially the same.



ASHOLD'S FOLDING CAMP STOOL.

A patent for this invention was granted through the Scientific American Patent Agency, Sept. 17, 1861. Information concerning the purchase of rights or stools should be addressed to A. & A. C. Ashold, Garrettsville, Ohio.

DE BRAME'S SKELETON CANNON—SUCCESSFUL EXPERIMENT.

On Saturday, the 26th ult., public notice and invitation were given to witness experiments with the skeleton revolving rifled cannon of Mr. J. A. De Brame, illustrated on page 385 of the last volume of the Scientific American. The place chosen for the trial was the flat shore on South Bay, directly below East New York, Long Island. The day was unfavorable on account of frequent showers, and a large concourse of spectators expected from the city were thus prevented from attending. Nevertheless, not to disappoint us entirely in the object of our visit, the gun was brought out during a fair interval in the afternoon, and seven rounds were fired in rapid succession at an elevation of 2° 30′. The target was 15 by 20 feet; the distance, as near as we could measure by pacing, was 1,300 yards—some said it was 1,500 yards. Of the seven shot fired, six struck the target. One was very nearly a center shot; two were richochet; the seventh struck near the mark. Several military officers from the encampment at East New York were present, and all pronounced the practice excellent, considering the circumstances under which the shooting was conducted.

With respect to the rapidity of the firing, all present were astonished. The gun was charged much faster than the time of burning required for the igniting fuses. While down examining the target, one round at 9° elevation was fired by request over our heads, for the purpose of obtaining some idea of the range. This shot passed out to a distance of several miles in the bay. The shot were lead cones of 4 lbs. weight each, and the charge of the powder was four ounces, which was contained in a pasteboard cartridge (bullet and charge in one case), very convenient for loading.

The cannon was a 4-pounder, mounted upon a common 6-pounder carriage. This gun is composed of two principal parts; one a large bronze revolving charge cylinder having six chambers; the other, a fixed steel barrel. The chambers are charged from the back end, and each is successively rotated and brought into line with the steel barrel in front, and discharged with a fuse thrust into the priming opening directly behind. A screw lever on the bolster of the gun closes the breech behind with half a turn, and a key is inserted into a hole in the periphery of the cylinder to hold it in position when firing. The charge cylinder is thus composed of a single piece which is not liable to get out of order. This cylinder is 9 calibers in length; the six chambers extend through its whole length, and are open behind for charging. The caliber is $2\frac{12}{100}$ths inches; the length of the fixed steel barrel is 2 feet 8 inches, 4 inches only of which are perfectly close; the rest of its length is a skeleton barrel having longitudinal slits between the ribs. The close barrel of this gun is 14 calibers in length; common field guns have close barrels 7 and 18 calibers long. It is claimed that in 14 calibers' length of close barrel the force of the powder is completely expended upon the shot, and beyond this the length of barrel should only have the smallest amount of frictional surface possible; hence the open spaces in the barrel of this cannon. The increased length of barrel beyond 14 calibers is for guiding the shot, thus securing greater accuracy in firing. A considerable portion of the residue of the powder is driven out through the open spaces of the barrel; it therefore does not foul readily, and it seldom requires sponging; it never becomes overheated.

This piece of ordnance was constructed for the patentee by A. & F. Brown (who conducted the firing), corner of Hester and Elizabeth streets, this city, and it is certainly a very ingenious, and, we should presume, will prove a very effective war engine.

The catalogue of the library of the British Museum fills 300 volumes.