

RECENT INVENTIONS.

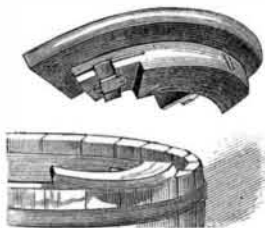
Combined Whip and Cane.

The object of this invention is to provide an improved combined whip and cane, so constructed that the whip can easily be pushed into the cane, which forms a casing for the whip when not in use. The cane is made hollow throughout its length to adapt it to receive the whip stock, to the upper end of which the lash is to be attached. The handle end of the cane is closed by a suitable head, and through the opposite end, which is open, the whip stock is passed into this hollow cane. At each end of the cane there is a latch, provided with a hook end, and pivoted in such a manner that the hook will be nearest the ends of the cane, and will pass through into the inner recess or cavity of the cane. At the opposite ends of the latches there are small heads pressed outward by springs. The whip stock is provided with an annular groove at the larger end. When the whip stock is within the cane, it is held by the latch at the larger end of the cane; when the whip is to be withdrawn, the head of the latch at the head of the cane is pressed inward. When the base end of the whip arrives at the smaller end of the cane, the latch at this end of the cane snaps into the groove, and holds the whip stock in place. This whip can be carried conveniently, and is not apt to be stolen, as it need not be left in the vehicle. This invention has been patented by Mr. T. R. Lawhead, of Paola, Kan.



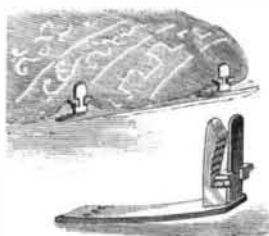
Combined Howel and Croze.

The engraving shows a howel and croze for coopers' use mounted on one stock, so that after the howel is formed the croze can be made without loss of time in changing tools, the arrangement being such that neither tool will act when the other is at work. The howel plane is located near the front end of the stock, and the croze plane near the rear end; and in order that the howel plane may be used first, and without the croze taking effect on the staves, the stock is crooked at or about a point midway between the planes, so that when one touches the circle for doing its work, the other will be clear of it, thereby enabling the work to be done by either one alone. The stock is a little longer than the ordinary howel plane stocks and croze plane stocks, and has a greater crook or curvature between where the two tools are located. The gauge of the stock is substantially the same as in other tools of this class. This invention has been patented by Mr. David J. Sessoms, of Blocker's, N. C.



Bed-Clothes Fastener.

This is a device for preventing the bed-clothes on a sleeping child or person from being worked off or displaced, so as to expose the body to cold. The fastener is more especially designed for protecting sleeping children who are kept covered with difficulty by simply tucking in the bed-clothes. Invalids suffering from fevers or otherwise disposed to be restless in their beds may use this fastener with great advantage. Ordinary jaw clamps are not sufficient of themselves to retain the bed-clothes in position on the bed, nor is simply tucking in the bed-clothes under the sides or edges of the mattress or bed, and this mode of securing the clothes in place has a restricting and oppressive effect upon the sleeper. The bed-clothes fastener shown in the engraving, while it insures a firm hold of the bed-clothes and is capable of being easily applied to the bed or mattress, has a yielding or spring-like action that will relieve the hold of the bed-clothes from restricting and oppressive effect upon the occupant of the bed while turning or moving about. These clamps are designed to be applied to opposite sides of the bed for gripe on the bed-clothes, and are provided with flexible strap connections for attachment to the mattress or bed. This useful invention has been patented by Mr. Allyn Cox, of New York city.



Hay Stacker.

This is an apparatus for elevating and stacking hay. It consists of a post having a revolving head on top, and provided with a rising and falling and rotating jib, carrying a tripping hay fork. The jib is provided with tackle for operating the fork, and to the head are attached ropes and pulleys for controlling and adjusting the jib. By revolving the head and fastening the guy ropes at the ground, and by

raising, lowering, or placing the loose jib at varying angles to the post, the hay may be stacked around the post at all suitable elevations. The tripping devices for detaching the load of hay lifted by the fork are similar to those already in use on various hay loading and unloading apparatus, the fork being tripped by pulling on a rope. In working the fork, the weight of it, when releasing the lifting rope from draught by the horse or animal to which it is attached, causes the proportion of the rope between the sheaves fixed to the jib to be bowed or drawn down, and the fork to be run back, when the fork is inserted in the hay, and draught applied to the lifting rope, which elevates the fork and runs it forward, when it is tripped to unload. When the apparatus is not required for use, it may be packed away in close compass. This hay stacker has been patented by Mr. James Wilson, of Marengo, Iowa.



Dress Form.

We give an engraving of a new dress form for exhibiting, fitting, and draping ladies' dresses. Its main purpose is to exhibit dresses, cloaks, and other garments to purchasers. One form will exhibit all kinds of garments, and will aid the purchaser in making suitable selection. The form takes up only a little space in the show window or in the shop, and supports the goods so that they may be seen at the best advantage. The device may be used to advantage by dressmakers in the fitting, draping, and general manipulation of dresses and cloaks. It can be quickly adjusted to any size or form. With a slight change in the shape, they may be used to exhibit men's, boys', and children's clothing. These forms are durable and inexpensive. Further information in regard to this useful invention may be obtained by addressing Therese R. Fischer, 69 E. Baltimore street, Baltimore, Md.



Comparison of English and American Railway Cars.

Mr. R. A. Proctor, who has traveled all over this country, and ought to know, if anybody does, what the merits of railway cars are, gives the following in *Knowledge*:

Every one who has traveled much both in Europe and in America, will agree with Mr. Sala's remark that "our present locked-in, boxed-up, stuffy, and narrow compartments are absurd, dangerous, and scandalous to us as a nation." Because when railway traveling was first introduced stage coaches were in fashion, the idea which a "slow" railway projector naturally formed was to make a train consist of a number of rather large stage coaches; and this arrangement, which was feeble-minded enough then, has remained in vogue for more than half a century.

Let me briefly enumerate a few of the advantages of the American system, and then I will touch on their more or less imaginary disadvantages:

First, you can get on board an American train or leave it when the train is moving pretty fast in perfect safety. I have run after a train and got in the rear car (with a helping hand from a brakeman) when it had attained a rate of certainly twelve miles an hour. I have never left one traveling at that rate, but by the rear car it could be done safely enough—at no worse expense than a sprawl.

Secondly, when on board you can choose any car or any part of any car to sit in; you can go to the smoking car, if you want to; or, if you like, you can visit the baggage van to see that your luggage is safe—all when the train is at full speed. I have walked the whole length of a train with both hands occupied by satchels, etc., stopping only when opening and shutting the car doors.

Thirdly, if pressed for time, you can, in nearly all parts of America, go on board without a ticket, and obtain one at the first visit of the conductor.

Fourthly, tickets are attended to while the train is traveling. There is no absurd stoppage at the last station but one and proclamation of "All tickets ready!" but, without delay of any sort, all tickets are collected *en route*.

Fifthly, the travelers by the train form a single community, with a force of conductors, brakemen, porters, and luggage men, so that if a disorderly or drunken person gets on board he must behave himself, at the risk of being turned off the train (in bad cases while the train is moving pretty fast, so that his exit is hasty and undignified, yet not unpleasant to those he had thought to annoy).

Sixthly, you generally travel in much more real privacy and comfort than in an English first-class carriage, not secured by a lawless fee to the guard. I used to find quite a rest in a railway journey between my lectures in America, with a little two-seat compartment to myself, all the passengers sitting in similar compartments facing one way; I could read or reflect undisturbed. Who can say quite as much of an English first-class carriage, if there are two or three

passengers on the opposite seats? It is true that part of this arises from the "stony British stare," which foreigners and Americans find so strange and so unpleasant. But "fix it how you will," you can never feel quite so much at ease facing several persons as when all face the same way. On one very special occasion, in America, when I had to travel in an ordinary car for several hours under circumstances which would have made staring excusable enough (not to make a mystery where there need be none, I was one of a wedding party of two), I was struck by the careful courtesy with which a two-seat compartment seemed to be regarded as if it were a private sitting room. I never more thoroughly recognized the innate courtesy of all Americans toward ladies than I did on that occasion. Of course, when traveling in an American car, a man may be addressed by a fellow passenger more freely than in England. But it is easy to answer pleasantly; and if the conversation wearies, either to close it or seek another place.

Seventhly, all the carriages are well warmed, and warmed quite safely. I speak without any prejudice in favor of car stoves; for in a railway accident in Missouri I made a much more intimate acquaintance with one than I cared for, and shall carry the marks of the encounter to the grave. But one cannot expect stoves to behave well when the car they are intended to warm is pitched over an embankment thirty feet high. Under all the usual conditions of travel they are perfectly safe traveling companions, and many a time and oft I have missed them when shivering in an English first-class carriage despite wraps and the abomination known as a foot-warmer.

Eighthly, in all cars there is a retiring room; in nearly all there is a supply of drinking water; and in many there are conveniences for washing, brushing, etc.

If American trains only consumed their own smoke, they would be perfection; as it is, there is a very serious drawback to American railway traveling in hot weather. To reach your journey's end with collar, cuffs, and shirt-front, which had been clean a few hours earlier, reduced to smoke-stained, cinder-dust strewn clouts, is not a pleasant experience. The fault is one which might be easily corrected.

Great Gold Bars.

We saw this week, at the Bank of California, says the *Mining and Scientific Press*, the largest gold bar ever cast in the United States. It was shipped to the bank by the North Bloomfield (hydraulic) Mining Company, of Smartsville, Nevada County, Cal. The value of the bar is \$114,000, and weight 511½ pounds troy. Its length is 15 inches, width 6 inches, and depth 7 inches. It contains 630 cubic inches of gold, and is worth about \$19 per ounce.

The mould for this bar was cast at the Nevada foundry of George G. Allan, Nevada City. The entire dimensions of the mould are as follows: On top, 17 inches long and 7 inches wide; on bottom, 16 inches long and 6 inches wide. It contains 715.20 cubic inches. The thickness of the sides is ¾ inch and bottom 1 inch. The mould weighs 138 pounds, and was cast expressly for making this bar. The castings were from iron produced at Clipper Gap, in this State.

The North Bloomfield mine, from which the gold came, is one of the most prominent hydraulic mines in California. The run is not an exceptional one, though the bar is. The line of the tunnel is cleaned up about twice a year, and this time they thought they would see what they could do in the way of casting a big bar. The bar is said to have been the result of a twenty days' run.

It was in 1873, if we remember aright, that the Spring Valley Mining Company sent down to this city a bar weighing 141 pounds, worth \$41,000. At the time they thought this the largest bar ever made, but at their request we made inquiries and found that Seligman & Co., bankers, of this city, had received one from Helena, Montana, worth an even \$50,000; the London and San Francisco Bank had one worth \$35,000, and the Mint and Bank of California had each had one worth \$40,000. The San Francisco Assaying and Refining Company had also had one worth \$41,000.

The Spring Valley people then went to work, and after thirty-five days' run, with 1,000 inches of water, with a partial clean up of 800 feet of head flume and 14 undercurrents, produced a bar worth \$71,273.15, weighing 299 pounds.

Since then, however, the Spring Valley Mine, Cherokee Flat, Butte County, shipped to this city a gold bar valued at about \$90,000, and that was considered an exceptionally large one. The North Bloomfield Company, considering it owned the biggest hydraulic mine in the State, thought it would make the biggest bar, with the result noted.

There is no special advantage in making bars so large, except in happening to have the gold to do it with. Smaller bars are more convenient to handle, and some people even prefer the metal in small circular shape, such as we are accustomed to see on bankers' trays. The big bar we refer to is on the way to the Mint, out on Fifth street, where it will soon be transferred into coin. The North Bloomfield and the Milton hydraulic mines, both under the same management, have produced this season about \$1,000,000 in gold, and the ground they are in is increasing in richness right along. This doesn't look much as though hydraulic mining was a dead industry.

ACCORDING to the Mississippi Handbook, there are 175,251 white and 251,488 colored children attending the free schools in the State, at a cost of \$830,701.