Improved Bow Iron.

The ordinary method of constructing carriage bows requires considerable skill, and takes a good deal of time to fit them all properly. Usually the bows are made of wrought or malleable iron, and the subject of this invention is to simplify as well as reduce the cost of construction.

The irons, shown covered with leather in the engraving, are received in a casting, A, which is for convenience formed of two pieces, or sides, fastened together, but it may be made of one single piece as well. The bows are made of stout hoop iron, and the ends inserted between the sides, A, and there secured by rivets. As one of the bows must be stationary, ribs are cast on one of the sides, A, which forms a sort of pocket in which the end of the bow is received; thus holding it in the proper position.

It is claimed that this plan of making the bow iron is much cheaper and better than the common one.

It was patented Jan. 16, 1866, by H. M. Bidwell, of New Haven, Ct., whom address for further information.

BIDWELL'S BOW IRON.

Photography on Silk

The following formula for printing on silk is one that, on the whole, has given me the greatest satisfaction, and is identical with the one published by me two years ago:—

Pour 20 ounces of boiling water on 100 grains of chloride of ammonium, and 60 grains of Iceland moss.

When nearly cold filter and immerse the silk in it for 15 minutes. To sensitize, immerse the silk in a 20-grain solution of nitrate of silver for 16 minutes. Let the nitrate bath be rather acid. When dry, prepare for printing by attaching the silk to a piece of cardboard a little smaller than itself, by turning the edges over and fastening with small bits of gummed paper. Slightly overprint. Wash in two or three changes of water, and tone in a gold bath made thus:—20 ounces of water, 2 drachms acetate of soda, 4 grains chloride of gold, and a few grains of common whiting. Filter and keep for 24 hours before using. Let the prints be toned slightly bluer than they are required to be when finished. Rinse them in water, and fix in a solution of hypo., 4 ounces to the pint of water. 20 minutes is ample time for fixing. Wash well.—*H. Cooper, Photographic News.*

White Enameled Plates for Photography.

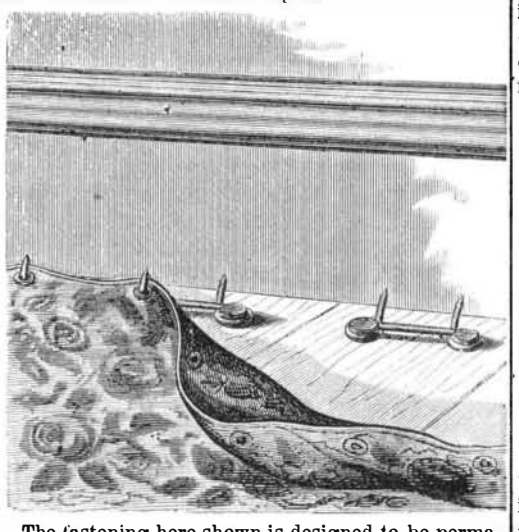
In a paper read before the Philadelphia Photographic Society by Mr. Wenderoth, he gives the following as the method by which he prepares white tablets for photographs. He coats the plate—a ferrotype or a glass plate—with a solution of albumen one ounce, water five ounces. He then adds to plain collodion so much fine precipitated chalk as will make a covering so thick as to prevent the plate from being seen through it. It should be poured on in the same manner as ordinary collodion, and care taken to prevent lines from being formed. Before coating, the collodion should be well shaken up, and then allowed to subside for a minute or two, to allow the heavy particles to fall to the bottom. When quite dry, coat with twelve parts of albumen and eight parts of water, adding two grains of chloride of ammonium to each ounce of the solution. Sensitize for one minute in a seventy-grain ammonia-nitrate of silver bath, then fume, print, and tone in the usual manner.

Stomatoscope.

"Among other novelties noticed in the *Med. Times and Gaz.*, is "a new instrument, to be termed the *stomatoscope*, exhibited last week to the Paris Surgical Society by its inventer, Professor Burns, of Breslau. A platinum spiral were (inclosed in a box-wood cup, to prevent the transmission of heat), brought to a red heat by the passage of an electric current from two of Middeldorps' elements, is placed in the mouth behind the teeth. The light reflected by a very small mirror is sufficiently intense to render the jaw transparent, so as to allow of the vessel proceeding to the roots of the teeth, the smallest specks of caries, etc. becoming visible. By reason of the transparency, even the labial coronary artery may in some subjects be seen at the level of the commissure, and its course followed. The instrument is therefore likely to form a useful means of exploration in dental affections.

ANDREWS & BURNHAM'S CARPET FASTENING.

Tacking down carpets is an antiquated and bad practice which ought to be abolished. Both the carpets and the floors are injured, thereby, and in some dwellings that have been occupied for years the boards are iron-clad. Tacks are always difficult to remove, and are, in many ways, not necessary to dwell upon, a weariness and vexation of spirit.



The fastening here shown is designed to be permanent. When once affixed to the floor it remains there and the carpet is slipped over it. It would be a great improvement in this fixture to have eyelets in the carpet which would prevent the wires from holding on one or two threads. A tack holds not so much by its body as its drawing into the wood. Carpets so put down can be taken up easily, swept, and put down again without going through the great labor of drawing tacks. We have no doubt but that housekeepers will appreciate this invention.

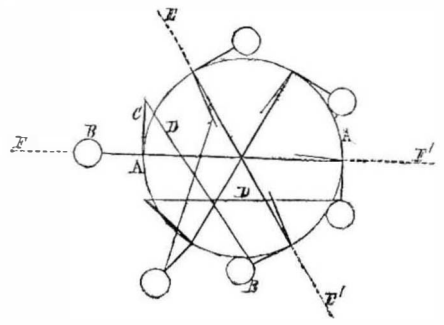
Patented August 29, 1865; address for further information J. P. Burnham, 1,159 Prairie avenue, Chicago, Ill.

Correspondence

Perpetual Motion.

Messrs. Editors:—The idea of perpetual motion is so fascinating to some that I am induced to throw a little light on one that has occupied a considerable attention—the one called Leache's, and exhibited along the Canada line. A friend of mine, Mr. B., saw it, and believed and invested in it. He examined every part and pronounced it a genuine "perpetual motion." He then without L.'s knowledge came to my shop and built a larger one with a 30-inch wheel.

I inclose a diagram and description of this wonder:—



A A represents the balance wheel; B the motive balls; C the angle irons connecting balls to the wheel and to each other; D D are the cords connecting the angle irons. D is represented only on part of the balls. It was supposed that the balls would fall out when at the point, E, but they would not until near the point, F. Now, when the balls, B, fall off from the rim of the wheel, they would, by aid of the cords, D, draw in the opposite ball, but it would not "come to time;" only two balls would remain out while four were in, and the wheel would not stir.

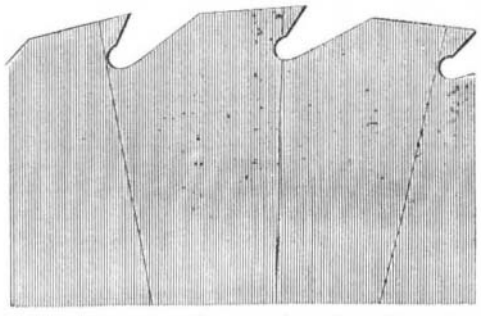
So much for this one; others compare favorably with it. S.

Brattleboro', Vt., April 27, 1866.

[This is one of the oldest forms of the delusion.—Eds.

Sawing Lumber.

Messrs. Editors:—In the Scientific American of March 31, page 212, I see an article from F. M. E., asking for information in regard to running circular saws. I have to say, that, first of all, the saw should run true on the mandrel, which is not always the case. The saw should range into the carriage half an inch in twenty feet. The mandrel should have nearly one-eighth of an inch end play. The guides should be one-sixteenth of an inch from the saw, or a little nearer, perhaps, in hard wood. The teeth should be



one inch and a quarter long, or deep, from the point. The under side of the tooth should range about eight inches from the center for hard wood, and ten inches for soft wood; or, if a large saw, twelve inches will not be too much.

I use a patent gummer, and cut out no more between the teeth than is necessary, leaving the tooth as strong as possible, as in the diagram. The top of the tooth should range one-fourth of an inch below the point of the next tooth back of it. I stand on the front side of the saw to file, and file all the teeth alike, nearly square across, but not quite, making the corners of the teeth on the side of the saw toward the carriage a trifle the shortest; this contracts the range of the saw into the carriage. When the teeth wear off on the side, pointed like a pegging awl, they must be swedged out or filed off and set again.