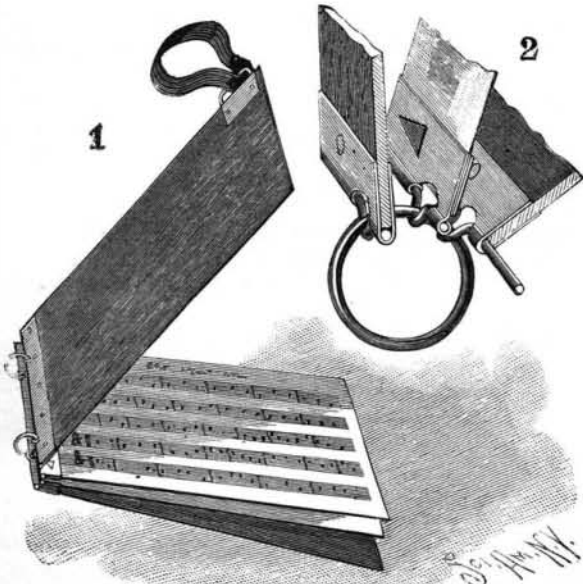


**A MUSIC BOOK OR FOLIO.**

The illustration represents a strong and cheap book or folio, made without the use of mucilage or glue. The covers of which are adapted to be folded back to back, and in which any desired number of sheets may be quickly and strongly fastened in place. The improvement has been patented by Mr. William H. Ayres, of Sackett's Harbor, N. Y. The covers are of board, having at their meeting ends strips of metallic binding, each strip being doubled over the edge of the board, while near opposite ends are eyes formed of wires, held in the loops of the strips. These eyes engage split rings, similar to the common key rings, and which serve as hinges for the covers; also serving as a means of attachment for the sheets of music held between the covers. The sheets are held at their ends between metallic strips, one of which has prods struck up from the body of the metal, to be passed through the sheets and through slots in an opposite strip, being then bent down upon the strip. One of the strips is adapted to hold in place a wire forming eyes adapted to engage



AYRES' MUSIC BOOK OR FOLIO.

the rings, as shown in the sectional view, Fig. 2, any number of the binding strips, holding sheets of music, being placed between the covers until the rings are full. On one of the covers, near its outer end, is a metallic strip carrying a keeper with an elastic band, which may be adjusted to fit over the end portions of the sheets and not obscure the music. The placing of music sheets in or the removing of them from this folio is readily effected.

**THE MYSTERIOUS TRUNK.**

A trick known by the name of the Indian Trunk, the Mysterious Trunk, the Packer's Surprise, etc., formerly had much success in theaters of prestidigitation. This trick, which may be presented in several ways, is consequently executed by different means, one of which we shall describe.

The following is in what the experiment consists: The prestidigitator has a trunk brought to him, which he allows the spectators to examine. When every one is certain that it contains no mechanism, a person comes upon the stage and enters the trunk. It is found that he fills it entirely, and the cover is shut down. A spectator locks the trunk and guards the padlock.

The trunk is afterward wound in all directions with rope, the intersections of the latter are sealed, and the whole is introduced into a bag provided with leather straps, and which may in its turn be sealed at each of its buckles. When the operation is finished, the spectators who have aided in the packing remain on the spot to see that nothing makes its exit from the trunk, which has been placed upon two wooden horses. The prestidigitator then fires a pistol over the trunk, which, when divested of its covering, ropes, and unbroken seals, is found to be entirely empty.

By what means has a human body been able to disappear without being perceived by the spectators who were constantly looking at the trunk, and, better still, by those who were handling it an instant before, and who still surround it?

The whole credit of the trick is due to the cabinet maker who constructed the trunk. The latter, in the first place, is exactly like an ordinary trunk, and the closest examination reveals nothing out of the way about it. Yet one of the ends, instead of being nailed, is mounted upon a pivot on the two long sides, so that it can swing. The swinging motion is arrested by a spring plate bolt. When the person in the interior presses upon a point corresponding to this bolt, the pivot becomes free and the end of the trunk swings.

The following is the way that the operation is performed in order that the spectators may not perceive the opening of the trunk. The operator's assistant takes his place in the trunk, which is closed and locked and the padlock sealed. Some obliging spectators then aid in tying the trunk, around which the rope is passed twice lengthwise, beginning at the side opposite the opening part. The rope is then passed over this part and runs in the axis of the pivots. Then the trunk, for the convenience of tying, is tilted upon the end where the rope passes. It is then that the assistant inclosed in the interior presses the bolt. The end of the trunk then has a tendency to open, and as the prestidigitator has taken care to tilt the trunk at a carefully marked point of the stage floor, the movable end meets in the latter with an exactly similar trap that opens at the same time, and it is through these two traps that the invisible vanishing takes place.

As soon as the assistant has passed through the trap, he pushes up the latter, and consequently the movable end of the trunk, which closes upon its spring plate bolt.

The time that it takes the man to pass through the trap is insignificant, and while the ropes are being crossed the operation might be performed several times. Afterward, there is nothing to be done but to proceed with the experiment as we have said, care being taken, however, not to abuse the complaisance of the spectators, and not to allow them to try the weight of the trunk.

When the vanished person descends beneath the stage, he is supported by some other individual if the theater is not well appointed, and by a trap with a counterpoise if the construction of the stage admits of it. This trap permits of expediting things in certain cases of the reappearance of the confederate, but is useless in the process described above.

Such is one of the artifices employed. Whatever be the process, the presentation of it is often complicated by causing the person who has vanished to reappear in a second trunk that has previously been ascertained to be empty and that has been sealed and enveloped under the eyes of the spectators. It will be easily comprehended that the operation here is inverse to

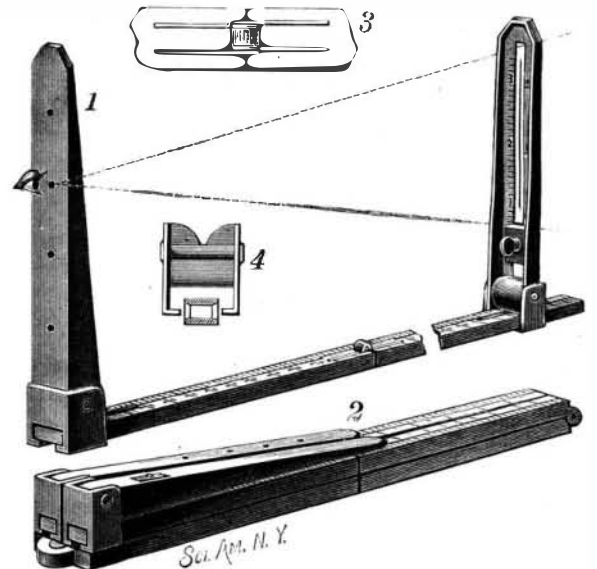
that of the first, and that the confederate beneath the stage awaits the proper moment to be lifted into the interior of the second trunk, whose movable end is opened outwardly by the prestidigitator at the desired moment.

Boxes with glass sides also have been constructed. The management is the same, but, as the person inclosed is visible up to the last moment, care must be taken to so pass the ropes as not to interfere with the trap of the trunk, which then consists of one of the sides, and which operates at the moment when the trunk, bound with ropes, sealed and laid upon this side, is about to be wrapped up.

This presentation has still more effect upon the spectators than the preceding, and seems to present greater difficulties.—*La Nature*.

**AN INSTRUMENT FOR MEASURING DISTANCES.**

This compactly folding instrument for measuring linear distances and vertical heights is styled by the inventor a "metroscope." It has been patented by

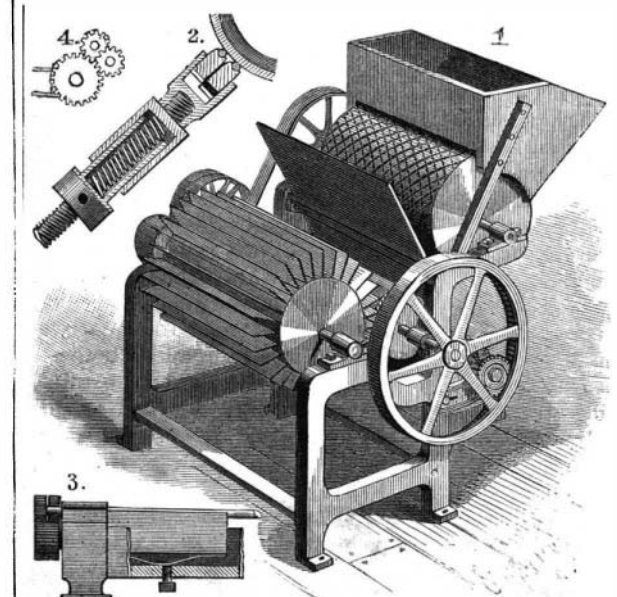


BAILLIE'S "METROSCOPE."

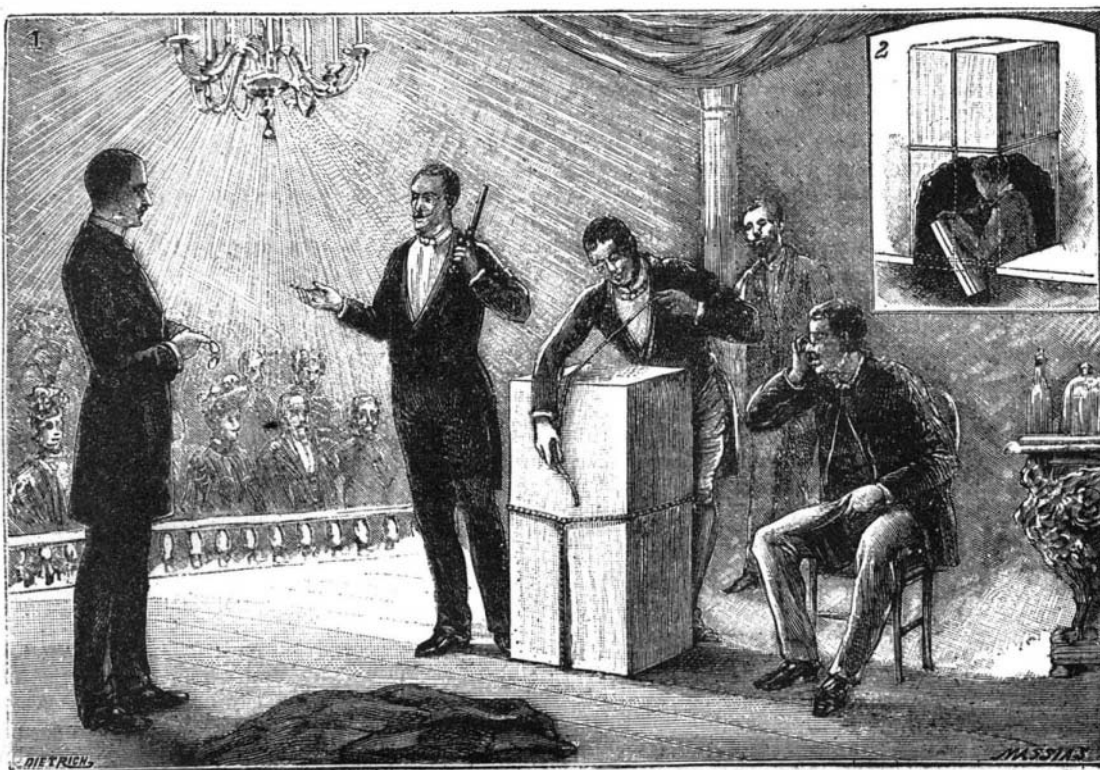
Mr. James L. Baillie, of Shawnee, Ohio, and is also adapted for use in drawing or painting, enabling the artist to produce the principal objects in exact proportional sizes. Fig. 1 shows the manner in which the instrument is used, Fig. 2 showing it folded, and Figs. 3 and 4 illustrating the construction of the hinge. A rule of the usual kind is employed, preferably an ordinary pocket rule, to afford a base or support for the height and distance measuring devices. Besides the usual middle hinge, it has other hinges to enable the members to be folded at right angles, these hinges being made narrow, occupying only the middle portion of the members, and permitting the slide to pass by them. A slide whose back supports uprights is mounted on each end of the rule, one of the slides carrying a vertical scale having a central longitudinal slot at one side of which the marks represent hundredths, while on the other side they represent inches and tenths of inches, showing the distance when using a ten foot pole. The other slide carries a sight plate having peep holes in the vertical plane of the slot in the first upright, the operator peeping through one of the holes and through the slot to the object sighted. A slide held to move on the scale may be fixed in any desired position by a set screw.

**AN IMPROVED ROLLER COTTON GIN.**

This machine is designed to quickly and thoroughly strip the seed from the lint of any grade cotton without danger of tearing or pulling the fibers apart. It has been patented by Mr. Frederick L. Montgomery, of No. 390 Eleventh Avenue, New York City. The



MONTGOMERY'S ROLLER COTTON GIN.



THE MYSTERIOUS TRUNK.