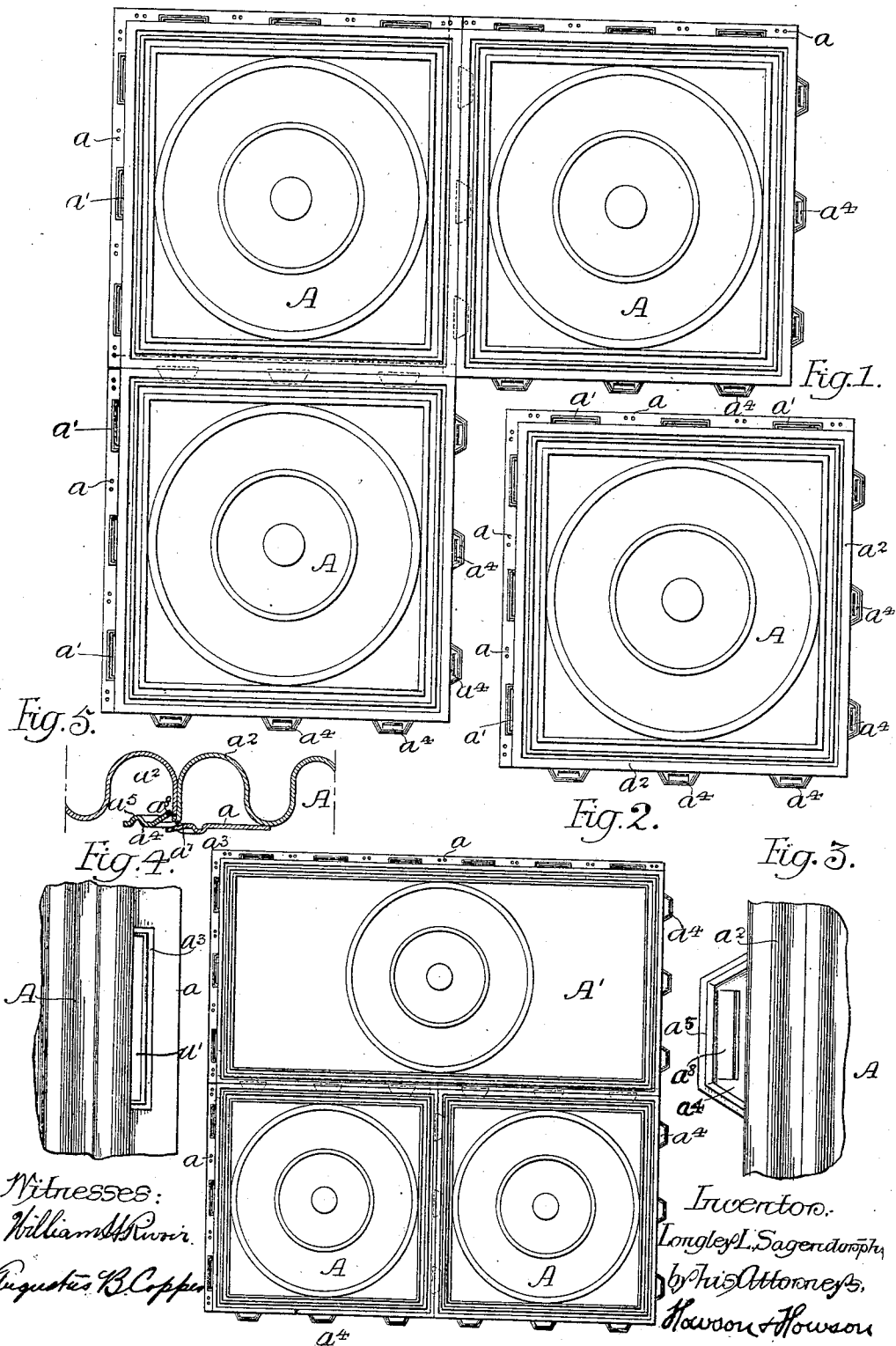


No. 855,816.

PATENTED JUNE 4, 1907.

L. L. SAGENDORPH.
CEILING CONSTRUCTION.
APPLICATION FILED JUNE 16, 1906.



Witnesses:
William H. Rorer.
Augustus B. Cooper.

Inventor:
Longley L. Sagendorph,
by his Attorneys,
Hawson & Howson

UNITED STATES PATENT OFFICE.

LONGLEY L. SAGENDORPH, OF PHILADELPHIA, PENNSYLVANIA.

CEILING CONSTRUCTION.

No. 855,816.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, LONGLEY L. SAGENDORPH, a citizen of the United States, residing in Philadelphia, Pennsylvania, have invented certain Improvements in Ceiling Construction, of which the following is a specification.

One object of my invention is to provide a form of ceiling consisting of a series of sheet metal plates of such construction as to permit of the various plates being so connected to each other as to require but a single set of furring strips for their support; the parts of the plates being so arranged, moreover, that the nails for holding said plates to the furring strips are completely covered when the ceiling is finished.

I further desire to provide a novel form of tongue and recess connection for metallic ceiling plates; the construction being such that the tongues and their cooperating parts shall be of a reinforced construction in order to prevent the possibility of their being accidentally bent prior to the assembling of the various plates to form a ceiling.

These and other advantageous results I secure as hereinafter set forth, reference being had to the accompanying drawing, in which:—

Figure 1, is a plan view of a portion of a ceiling constructed according to my invention, one of the plates thereof being shown as detached; Fig. 2, is a plan of a portion of a ceiling made of plates of different dimensions; Fig. 3, is a plan on an enlarged scale of a portion of a plate showing the preferred construction of tongue; Fig. 4, is a plan of a portion of a plate showing in detail the preferred construction of the nailing edge and recess for the reception of the tongue, and Fig. 5 is an enlarged vertical section of a portion of two plates of the construction shown in Figs. 3 and 4, illustrating these as connected to each other.

In the above drawing, A represents the individual rectangular plates forming the units of which the ceiling is composed and these usually consist of sheet iron stamped or pressed with a suitable design, though in the present instance they are formed with a nailing edge a around two of their sides. At intervals in each of these nailing edges there are formed elongated slots a' which extend partly in the said flat portion thereof and partly in the vertical portion of the adjacent bead a^2 ; the metal being cut on three sides of

the slot and the tongue a^7 so formed being bent inwardly so as to lie substantially horizontal. Around the three sides of each of the slots a' there is formed a depressed reinforcing bead a^3 , as shown best in Fig. 4, for the purpose of strengthening the adjacent portions of the said nailing edge. The other two sides of each of the plates A have no nailing edge but are provided with a number of projecting tongues a^4 , in the present instance three each on the two sides. These tongues preferably project for the same distance beyond the peripheral bead a^2 of the plate as do the nailing edges and are provided with an elevated bead a^5 extending adjacent to the edges of their three sides.

Each of the nailing edges has punched in it a number of holes for the reception of nails or staples and it will be seen that when the plates constituting the ceiling are assembled, the peripheral bead a^2 along one edge of a plate completely covers the nailing edge a of the plate adjacent to it, thus completely concealing any staples or nails used to hold the plate in position.

I so proportion the slots a' and tongues a^4 that after the latter have been placed in their respective slots, the two plates are locked together, that is to say, in order to separate them it is necessary that one of the plates be turned at an angle to the plane of the other plate, by reason of the fact that the raised edge a^5 of each tongue would otherwise strike the edges of the corresponding slot and prevent its withdrawal. The tongues a^7 formed by cutting the slots are so placed as to serve to a greater or less extent as supports for the tongues a^4 , particularly along those sides of the plate not supported by the furring strips.

It will be noted that by providing nailing edges on the two adjacent sides of a plate and tongues on the other two edges of the same plate, it is possible to form a ceiling not only of a series of plates of the same dimensions, but, in addition, it is also possible, as shown in Fig. 2, to make the ceiling of plates whose dimensions are multiples of each other;—thus in said latter figure a plate A' of a length double its width may be advantageously combined with other plates of the same width, but of half the length, and this without requiring in either case the cutting away of the nailing edges or tongues.

Not only are the actual joints between the

plates very perfectly concealed by reason of the fact that the beads a^2 very closely abut, but the nails or staples employed are also covered so that highly artistic results may be very easily and inexpensively attained. Moreover, since it is possible to employ but a single series of parallel furring strips in order to properly support a ceiling made of plates such as those shown, the expense of a given piece of work is much less than is ordinarily the case.

In order to lock the various plates to each other, I preferably provide each of the tongues a^4 with a barb-like auxiliary or locking tongue a^8 , as shown best in Figs. 3 and 5, made by forming a three-sided cut in each tongue a^4 and pressing the part so outlined up from the plane of said tongue so that it is inclined at an angle of about 35° to the same. The locking tongue so formed is to some extent yielding so that when the tongue a^4 is inserted in the elongated slot a' of another plate, it is temporarily bent or sprung toward the horizontal, though when said tongue has been entered to its full extent said locking tongue springs up as shown in Fig. 5, abutting against the inside surface of the bead a^2 . As a consequence, it is practically impossible to separate ceiling plates provided with this novel feature, which is especially valuable for holding together the adjacent edges of plates where these are not nailed to furring strips. In other words, if there be but a single set of furring strips extending parallel to each other, the use of the locking tongues a^8 on the tongues a^4 insures that the joints between the edges of plates extending at right angles to the lines of the furring strips will be necessarily perfectly made and permanently held together.

I claim as my invention:

1. A ceiling consisting of a series of plates of sheet material each provided with a peripheral bead extending around its edges, certain of said edges being provided with a projecting portion for the reception of nails and each of said portions being provided with a slot or slots and others of said edges being provided with a projecting tongue or tongues so spaced as to fit into the slot or slots in the nailing edges of another plate, said nailing edges extending under the peripheral beads of other plates, substantially as described.

2. As a new article of manufacture, a ceiling plate made of sheet material having on a side or sides a projecting tongue or tongues provided with a reinforcing bead and on another side or sides a nailing edge having a slot or slots also provided with a reinforcing bead, substantially as described.

3. As a new article of manufacture, a ceiling plate consisting of sheet material having a projecting tongue or tongues provided with a projecting reinforcing bead and also pro-

vided with a nailing edge having a slot for the reception of a tongue, said slot having adjacent to it a reinforcing bead projecting in a direction opposite to that of the bead on the tongue, substantially as described.

4. The combination of a plurality of ceiling plates of sheet material each having a peripheral bead, a portion of said bead on one plate being provided with a projecting nailing edge having elongated slots, and the adjacent portion of the bead of the other plate having projecting tongues placed to respectively fit into said slots, the plates being constructed to be locked together as long as they remain in the same plane, substantially as described.

5. As a new article of manufacture, a ceiling plate having in one side or sides a series of slots each with its cut out piece of metal extended from one side thereof, and on another side or sides a series of projecting tongues formed to fit the slots of another plate, substantially as described.

6. As a new article of manufacture, a ceiling plate having in one side or sides a series of slots, each with its cut out piece of metal extended from one side thereof, another side or sides of the plate being provided with a series of projecting tongues formed to fit the slots of another plate, said tongues and the slots each having peripheral reinforcing beads, substantially as described.

7. A ceiling consisting of a number of plates of sheet metal, each having in half of its sides a series of slots, each slot having its cut out piece of metal extended inwardly, the remaining sides of the plate being provided with projecting tongues, the tongues of one plate fitting into the slots of another plate or plates and being supported by the inwardly extended cut out pieces of metal of said slots, substantially as described.

8. As a new article of manufacture, a sheet metal plate having a projecting tongue and a struck up locking tongue on said first tongue, there being a slot in an edge of the plate for the reception of the projecting tongue of another plate, substantially as described.

9. The combination of a series of plates each having a number of slots formed in one edge or edges and a number of main tongues along another edge or edges, each of said main tongues having a struck up locking tongue and each fitting in the slot in another plate, each locking tongue being placed to prevent the removal of its main tongue from the slot after it has once been engaged by the same, substantially as described.

In testimony whereof, I have signed my name to this specification, in the presence of two subscribing witnesses.

LONGLEY L. SAGENDORPH.

Witnesses:

INGERSOLL OLMSTED, Jr.,
JOS. H. KLEIN.