(No Model.) 2 Sheets—Sheet 1.

V. MOESLEIN.

METALLIC CEILING.

No. 542,569. Patented July 9, 1895.

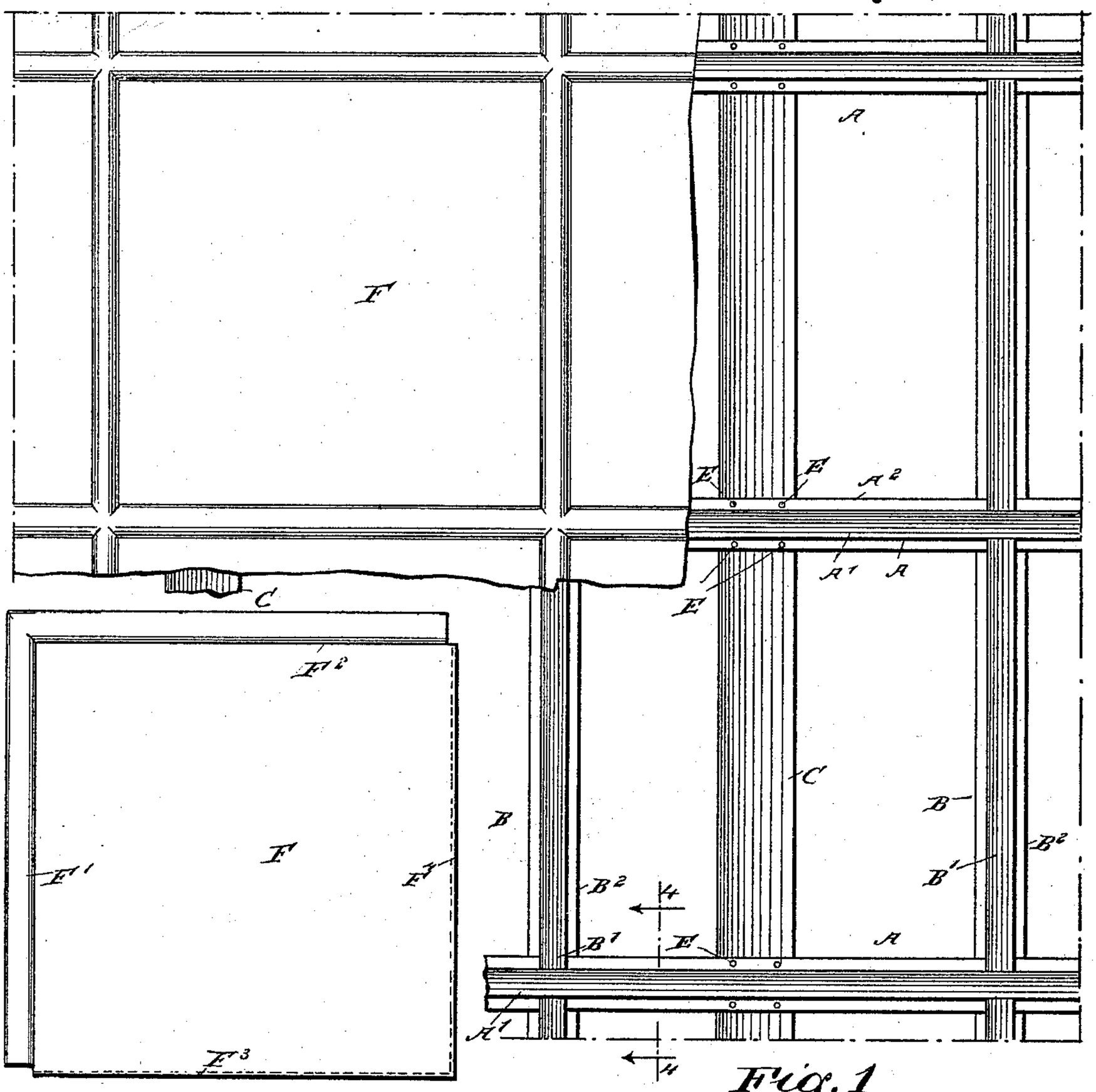

Fig. 1

Fig. 2

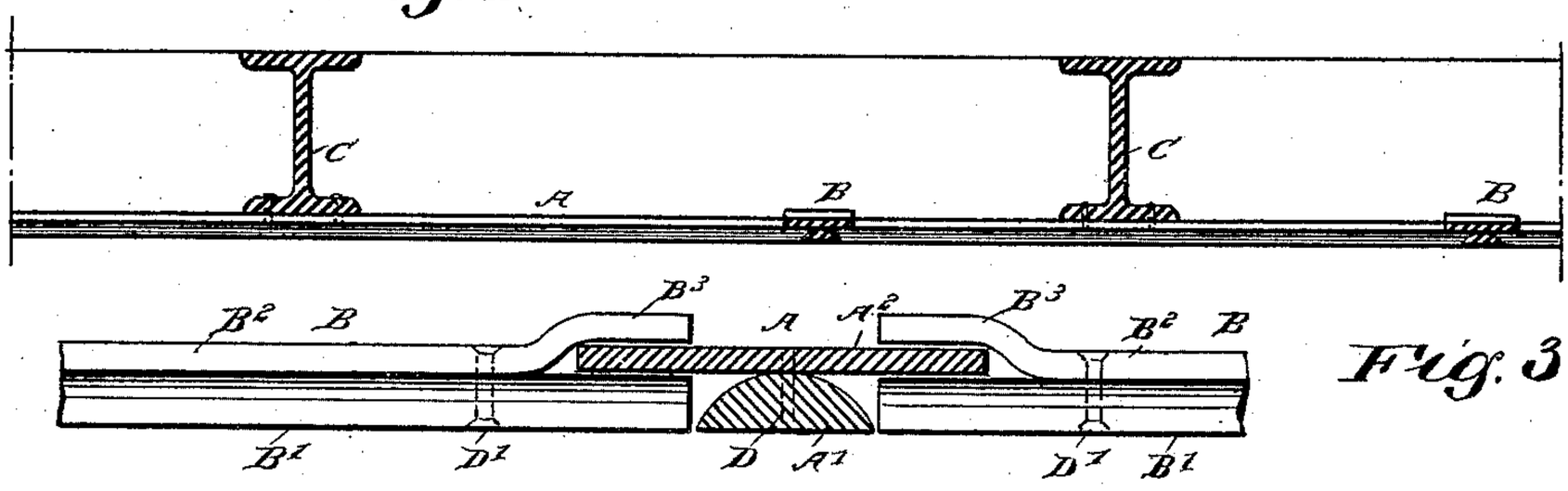

Fig. 3

Fig. 4

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(No Model.)

2 Sheets—Sheet 2.

V. MOESLEIN.

METALLIC CEILING.

No. 542,569. Patented July 9, 1895.

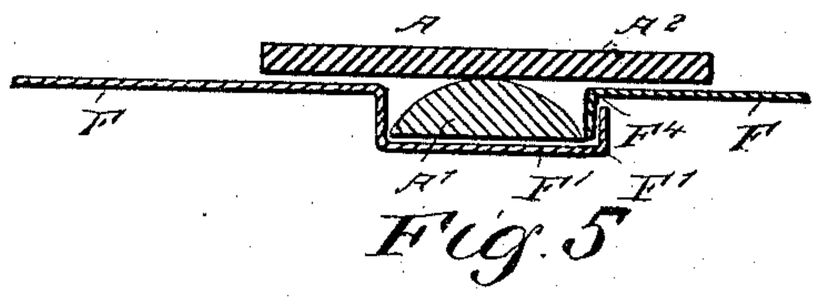

Fig. 5

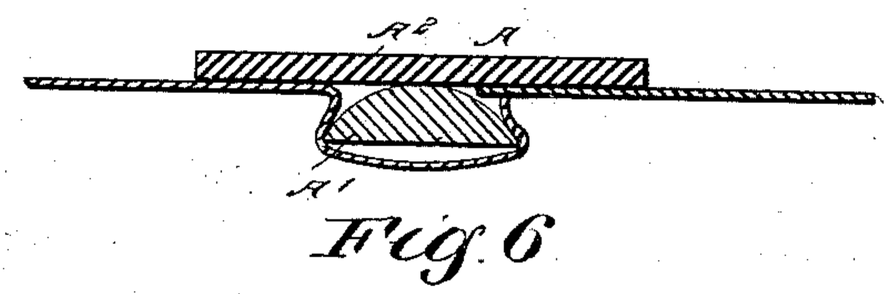

Fig. 6

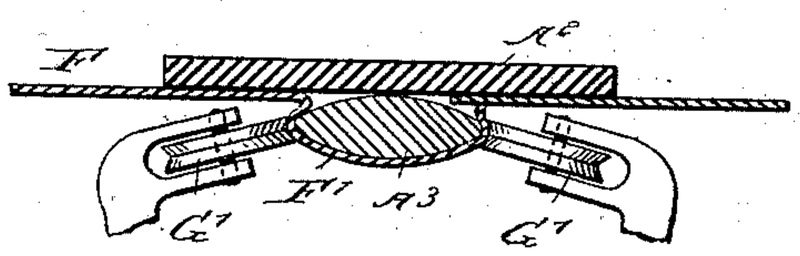

Fig. 7

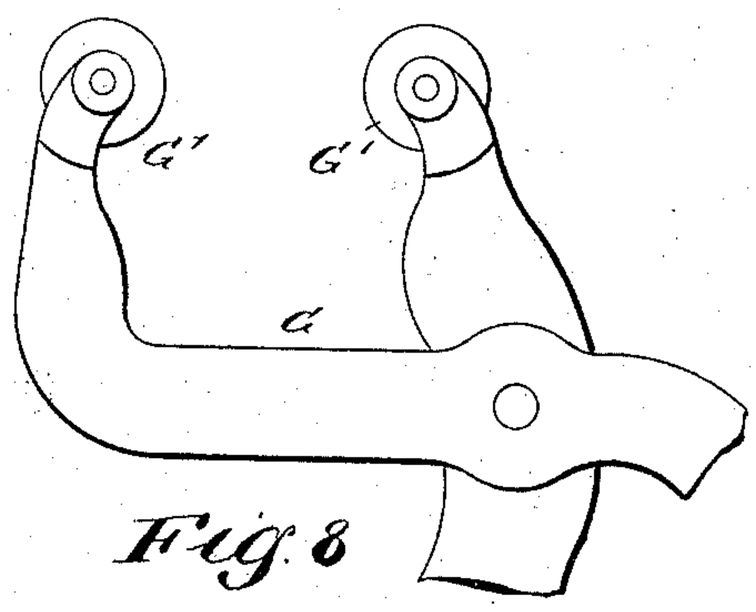

Fig. 8

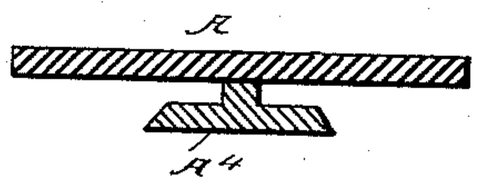

Fig. 9

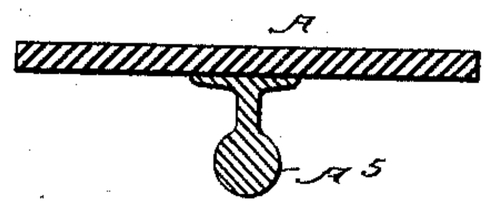

Fig. 10

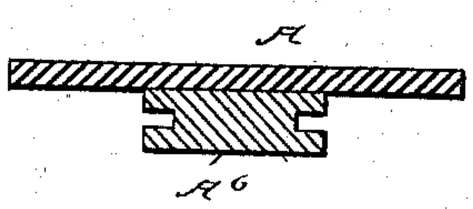

Fig. 11

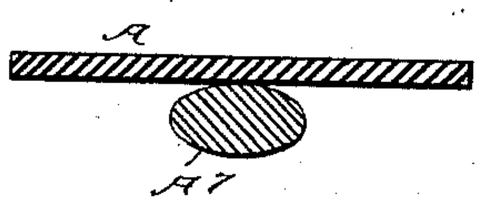

Fig. 12

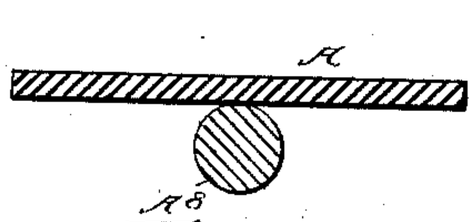

Fig. 13

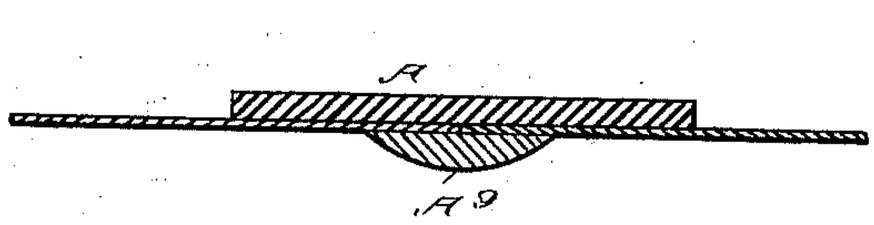

Fig. 14

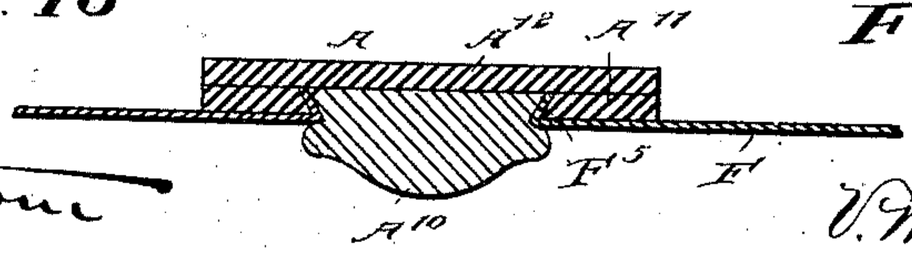

Fig. 15

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UNITED STATES PATENT OFFICE.

VALENTINE MOESLEIN, OF NEW YORK, N. Y.

METALLIC CEILING.

SPECIFICATION forming part of Letters Patent No. 542,569, dated July 9, 1895.

Application filed March 5, 1895. Serial No. 540,643. (No model.)

To all whom it may concern:

Be it known that I, VALENTINE MOESLEIN, of New York city, in the county and State of New York, have invented a new and Improved Metallic Ceiling, of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved metallic ceiling formed in such a manner as to permit of conveniently fastening the panels in place on a metallic furring-frame secured to the joists and without the use of the wooden furring-strips heretofore employed, at the same time forming perfect and very secure joints.

The invention consists of certain parts and details and combinations of the same, as will be fully described hereinafter, and then pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is an under side view of the improvement as applied and with parts broken away. Fig. 2 is a plan view of one of the panels. Fig. 3 is a longitudinal section of the improvement as applied. Fig. 4 is an enlarged transverse section of the same on the line 4 4 of Fig. 1. Fig. 5 is a similar view of the same with the panels in position and before crimping. Fig. 6 is a like view of the same after crimping. Fig. 7 is a like view of the same with a modified form of rail and a crimping-roller applied. Fig. 8 is a plan view of the crimping-tool, and Figs. 9 to 15 are cross-sections of modified forms of the strips forming the furring-frame.

The improved metallic ceiling is provided with a furring-frame preferably made of metal and provided with longitudinal strips A and transverse strips B, of which the longitudinal strips A are secured to the under side of the joists C, as hereinafter more fully explained, while the transverse strips B are supported on the longitudinal strips A.

Each longitudinal strip A is provided with a panel-supporting or crimping-rail A′, preferably made half-round in cross-section, as shown in Figs. 4, 5, and 6, but other forms may be employed, as illustrated in Figs. 7, 9, 10, 11, 12, 13, 14, and 15. This rail A′ is fastened by rivets D or other means to an attaching-strip A^2 forming the body of the strip A and secured by rivets or bolts E to the metallic joists C, as is plainly illustrated in Figs. 1 and 3. The rail A′ forms with the strip A^2 a recess for the edges of the panels to support the latter on the frame, or the said rail may be formed with grooves, as shown in Figs. 9, 11, and 15, for instance, to receive and support the edges of the panels. The other strips B are similarly constructed, each being made, however, in sections, and each section has a supporting or crimping rail B′ and an attaching-strip B^2 fastened together by rivets D′ or other suitable means. The ends B^3 of the attaching-strips B^2 are bent upwardly, so as to allow sufficient space between the same and the end of the rail B′ for the passage of the side edge of the attaching-strip A^2 to support each section of a transverse strip from the longitudinal strips, as will be readily understood by reference to Fig. 4.

As shown in Fig. 1, the transverse strips B are supported from the longitudinal strips A between the joists C, and the panels F are of such a size relative to the squares formed by two adjacent transverse strip-sections and the corresponding longitudinal strips that each panel covers such square. Each panel F is provided on two adjacent sides with the U-shaped flanges F′ and F^2, and on their other two sides with the upturned flanges F^3 and F^4, respectively, as is plainly shown in Fig. 2. The flanges F′ or F^2 are adapted to fit under the attaching or crimping rails A′ B′, respectively, as plainly indicated in Fig. 5, so that the flange F′ of one panel interlocks at its outer edge under the flange F^4 of the next adjacent panel, and in a similar manner the flange F^2 of one panel F interlocks with the flange F^3 of the next adjacent panel.

Crimping-rollers G′ of a crimping-tool G, made in the shape of a pair of shears, engage the sides of the flanges F′ and F^2, so that the flanges are crimped under the rail A′ and interlocked, as is plainly illustrated in Figs. 6 and 7. Thus a very secure joint is made between the flanges F′ F^4 and F^2 F^3 and the rails A′ and B′, respectively, and at the same time the panels are securely fastened in position on the under side of the furring-frame.

The ridges formed by the flanges on the rails form a highly-ornamental border for the

panels, and these ridges may be decorated with rosettes or other similar designs attached to the flanges.

As illustrated in Fig. 7, the rail A^3 is almond-shaped in cross-section, and the flanges F′ and F^2 are crimped on the said rail in a similar manner to the one described above in reference to the half-round rail. In this case the flanges F^3 and F^4 are dispensed with and the plain edges of the panels are supported by the flanges F′ F^2.

As shown in Fig. 9, the rail A^4 is an inverted-T shape, and in this case plain panels may be employed and set with their edges on the horizontal ends of the rails, the latter being decorated in any suitable manner. In this case no crimping takes place.

As shown in Fig. 10, the rail A^5 is made in the form of an inverted railroad-rail, and the flanges F′ and F^2, instead of being U-shaped, are correspondingly formed, so as to be crimped on the rail.

In Fig. 11 the rail A^6 is formed on opposite sides with notches or grooves for the reception of the edges of the panels.

The rail A^7, as shown in Fig. 12, is made oval in cross-section, and the flanges are crimped thereon, as previously described. The cross-section may be circular, as shown in the rail A^8 in Fig. 13, or half-round with the flat side uppermost, so as to form a recess and support for the plain edges of the panel.

The rail A^{10} in Fig. 15 is provided with grooves in its sides and the panels F are formed with bent-up flanges F^5 to engage an enlarged side rail A^{11} on the fastening-strip A^{12}.

Having thus fully described my invention, I claim as new and desire to secure by Letters Patent—

1. A metallic ceiling, comprising a furring frame formed of longitudinal and transverse strips, each provided with a crimping rail, and panels crimped upon the said rails, substantially as herein shown and described.

2. A metal ceiling, provided with a furring frame for supporting the panels, the said frame comprising longitudinal and transverse strips each provided with a crimping rail on its under side, upon which the panels are crimped, substantially as shown and described.

3. A metallic ceiling provided with a furring frame for supporting the panels, the said frame consisting of longitudinal and transverse strips, each provided with a crimping rail on its under side, the transverse strips being in sections and having their ends bent upwardly to receive the side edges of the longitudinal strip between it and its crimping rail, substantially as described.

4. A metal ceiling comprising a furring frame having longitudinal and transverse strips each provided with a rail, and panels formed with flanges adapted to be crimped on the said rail, substantially as shown and described.

5. A metallic ceiling, comprising a frame formed of longitudinal and transverse strips, each provided with a crimping rail, and panels provided with approximately U-shaped flanges adapted to receive and to be crimped around said rails, substantially as described.

6. A metallic ceiling, comprising a furring frame formed of longitudinal and transverse strips provided with half round crimping rails on their under sides, and panels provided with approximately U-shaped flanges adapted to receive and to be crimped around the rails, substantially as described.

7. A metallic ceiling, comprising a frame formed of longitudinal and transverse strips provided with crimping rails on their under sides, and panels provided on two adjacent sides with approximately U-shaped flanges and in the other two sides with upturned flanges, the U-shaped flanges being adapted to receive and to be crimped upon the rails, substantially as described.

8. In a metallic ceiling, a panel provided on two adjacent sides with approximately U-shaped flanges adapted to be crimped upon a rail and on the other two sides with upturned flanges adapted to interlock with the U-shaped flanges of the adjacent panel, substantially as described.

VALENTINE MOESLEIN.

Witnesses:
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C. SEDGWICK.