May 15, 1934. H. F. YOUNG 1,959,119

FLOOR CONSTRUCTION

Filed April 25, 1931

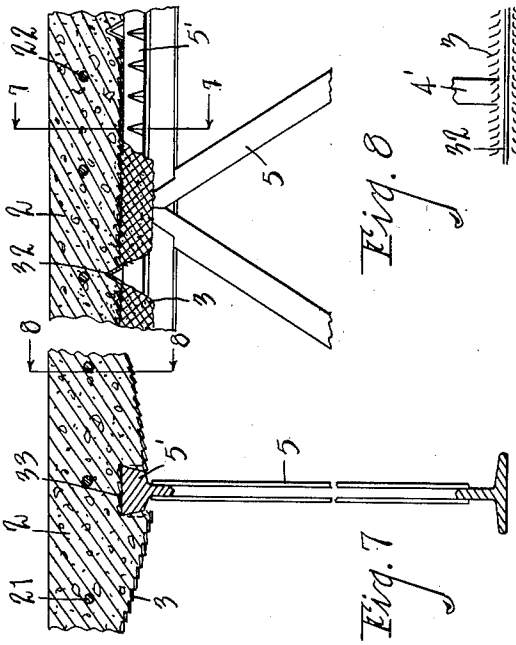


Fig. 7

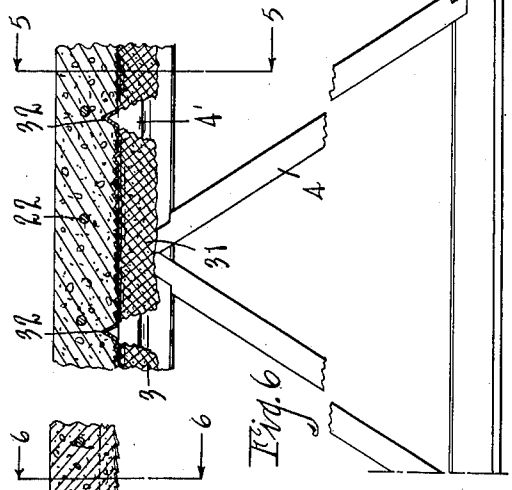


Fig. 6

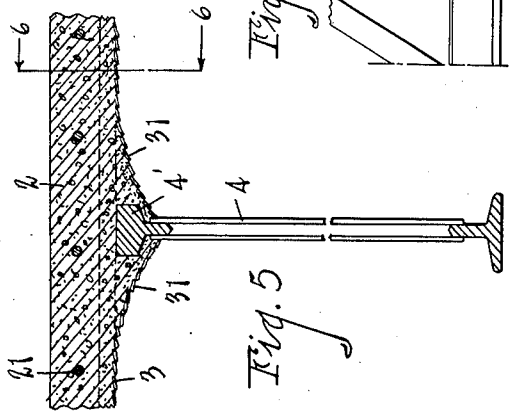


Fig. 5

Fig. 8

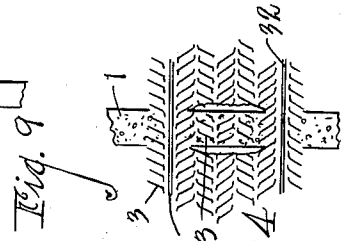


Fig. 9

Fig. 4

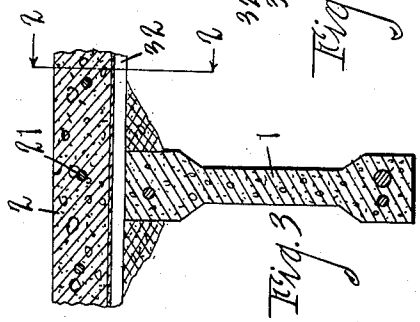


Fig. 3

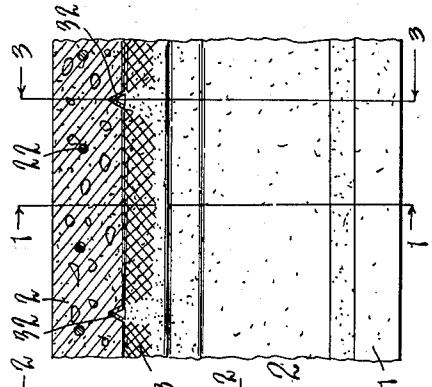


Fig. 2

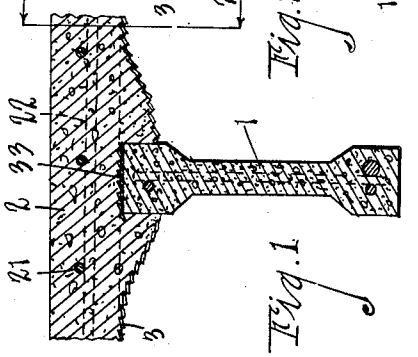


Fig. 1

INVENTOR
Howard F. Young
BY Cushman & Curtis
ATTORNEYS

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1,959,119

FLOOR CONSTRUCTION

Howard F. Young, Kalamazoo, Mich., assignor of one-half to Leonie S. Young, Kalamazoo, Mich.

Application April 25, 1931, Serial No. 532,836

2 Claims. (Cl. 72—70)

The objects of this invention are:

First, to provide a very simple, effective and cheap construction of concrete floor.

Second, to provide a concrete floor which lends itself very readily to manufacture and installation.

Third, to provide an improved union between steel or concrete joists and floor slabs.

Objects pertaining to details and economies of construction and operation will appear from the description to follow.

Preferred embodiments of my invention are illustrated in the accompanying drawing, in which:

Fig. 1 is a detail sectional view through a floor joist and floor slab, taken on line 1—1 of Fig. 2.

Fig. 2 is a detail longitudinal section on line 2—2 of Fig. 1.

Fig. 3 is a sectional view similar to Fig. 1, taken on line 3—3 of Fig. 2.

Fig. 4 is a detail plan view of the rib lath support as it rests upon the floor joists.

Fig. 5 is a detail broken sectional view of a modified form of the floor in which built-up steel girders or joists are used, the same being taken on line 5—5 of Fig. 6.

Fig. 6 is a detail sectional view on line 6—6 of Fig. 5 showing details of construction.

Fig. 7 is a detail sectional view similar to Fig. 5 of another modified form, taken on line 7—7 of Fig. 8.

Fig. 8 is a detail longitudinal sectional view on line 8—8 of Fig. 7.

Fig. 9 is a detail of the slitted rib lath as it is made use of in the structure appearing in Figs. 5 and 6.

In the preferred construction, 1 is an I-beam of concrete made in accordance with my invention described in my patent application filed Dec. 9, 1929, Ser. No. 412,654. 2 is the floor slab which is suitably reinforced by cross rods 21, 22. 3 is the rib lath, which is disposed in the base of the floor slab, chopped and deflected down at each side of the joist between the ribs 32 leaving a strip of the rib lath 33 on the head of the joist, the ribs not being broken.

Concrete is then poured in to form the slab, fills in the depression formed by the deflected lath, embraces the head of the joist, and locks the whole structure together so that the floor slab becomes a compression member. The cement poured in locks perfectly with the cement of the joist head, making substantially continuous monolith construction, although the joist is a preformed joist.

In the form of my invention shown in Fig. 5, a built-up bar joist 4 with head 4' is made use of and in place of chopping down the mesh of the rib lath 3 at each side of the joist head, the same is simply split above the joist head and the sides deflected down at 31 to engage underneath the head, as clearly seen in Fig. 5.

Still another modification of bar joist 5, having the head 5' made of a dove-tailed corrugated bar, is illustrated in Figs. 7 and 8. Here the mesh of the rib lath is cut down as in the first instance (see Figs. 1 to 3) and is numbered the same.

While I have described the use of a rib lath in this behalf, and the rib lath is of great advantage in that it facilitates the manipulation, I desire to state that plain expanded metal lath can be made use of by taking care in the severing of only a part and depressing the same at each side of the joist leaving a stock connection across the joist at intervals corresponding to the ribs.

From what I have stated, it will be observed that my invention is capable of considerable modification in use. I desire to claim the specific special forms illustrated and also to claim the invention broadly as pointed out in the appended claims.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent is:

1. A floor construction comprising a pre-cast concrete joist, a floor slab above the same, a rib lath reinforcement for the same slit at spaced intervals along the joist head and dropped between the ribs and depressed to form portions extending adjacent the head of the joist to provide a support and form for the slab, whereby the floor slab has downwardly projecting portions of concrete embracing the upper head portion of the joist and connected therewith by a cement to cement bond to form a compression member in conjunction therewith.

2. In a floor construction, the combination of a joist, a floor slab with a rib lath reinforcement, the mash being slit along the joist head at spaced intervals and dropped down at each side of the joist between the ribs and deflected down to provide a support and form adjacent the head of the joist for the floor slab, whereby the concrete of said slab embraces the head of the joist with a cement joint.

HOWARD F. YOUNG.