Sept. 18, 1934. K. P. BILLNER 1,973,743

FLOOR CONSTRUCTION

Filed Feb. 26, 1931

Fig. 1

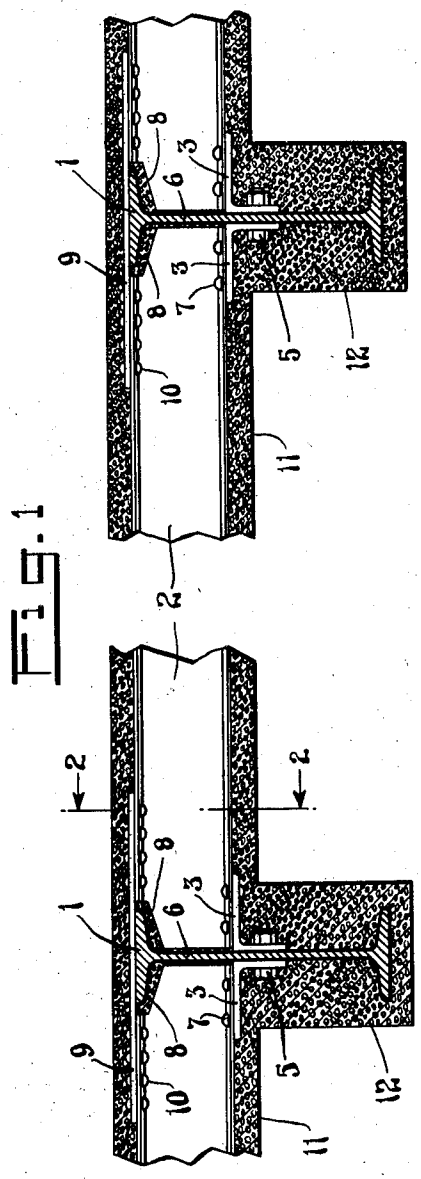
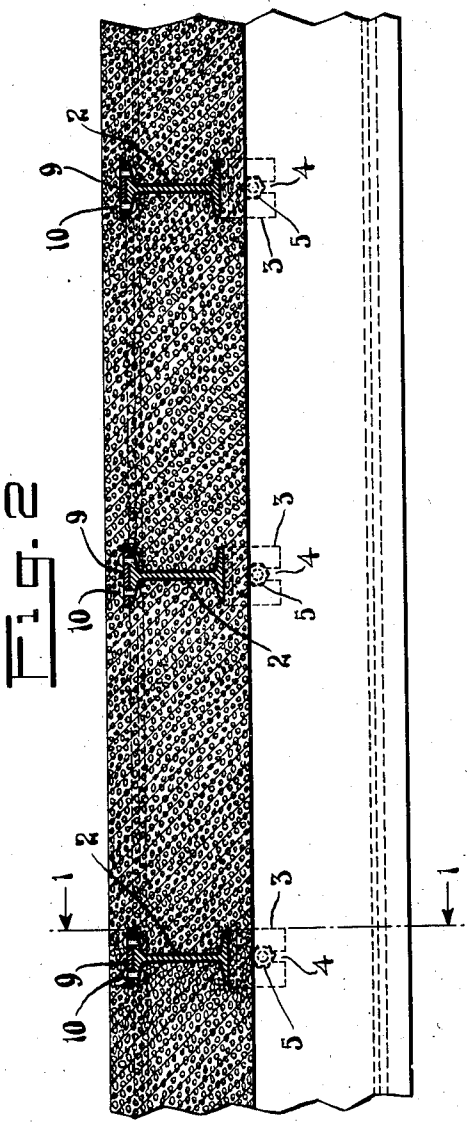


Fig. 2



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FLOOR CONSTRUCTION

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Application February 26, 1931, Serial No. 518,341

2 Claims. (Cl. 72—71)

My invention relates to new and useful improvements in floor construction and my object is to provide for a floor construction of simple form, of light weight, high structural strength and which can be set up quickly and economically.

In order that the invention may be better understood attention is directed to the accompanying drawing, forming a part of this specification and in which

Figure 1 is a sectional view of my improved floor construction in its preferred form taken on the line 1—1 of Figure 2, and

Figure 2 a section of the same taken on the line 2—2 of Figure 1.

My improved floor construction involves the use of longitudinal elements 1—1 and transverse elements 2—2. Longitudinal elements 1—1 may extend either longitudinally or transversely of the building in which the floor is to be constructed and are supported by the usual side walls or by suitable pillars or piers. Preferably the elements 1—1 are I beams arranged a substantial distance apart, say from twelve to thirty feet.

The transverse members 2—2 are also preferably I beams as shown placed closer together and extending at right angles to elements 1—1. A convenient spacing of the elements 2—2 may be from two to eight feet apart depending upon their load carrying capacity. The elements 2—2 rest upon angle irons 3—3 which are slotted at 4, straddling a bolt 5 by which angles 3—3 may be firmly secured to the web 6 of the adjacent I beam 1. The members 2—2 are secured to the angles 3 by rivets 7 or in any other suitable way.

The I beams 2—2 are cut away at 8 as shown so as to clear the upper flange of the I-beams 1 and the two adjacent members 2—2 are connected together by a plate 9 and rivets 10. The plates 9 preferably rest upon the upper flange of the I beam 1. The ends of the members 2—2 preferably abut against the web 6 of the I beam 1 or they may be slightly separated from this web as shown.

A filling 11 of a suitable light concrete is now cast around the steel structure thus formed by means of suitable molds (not shown) for the purpose. The concrete projects at 12 to surround the dependent part of the I beams 1—1 to thus give a finished appearance to the ceiling below. The light concrete 11 may be of any suitable type, the preferred form being a porous concrete having numerous cells or pores therein and constructed in accordance with the patent to Aylsworth and Dyer, No. 1,087,098.

Having now described my invention what I claim as new therein and desire to secure by Letters Patent is as follows:

1. A floor construction comprising heavy longitudinal I beams spaced relatively far apart, brackets secured to said beams, light transverse I-beams spaced relatively close together and carried by and secured to said brackets with their upper faces substantially in line with the upper faces of the longitudinal beams, a plate connecting each pair of transverse beams and a filling of light weight concrete surrounding and imbedding all of said beams so as to give a finished appearance to the ceiling below.

2. A floor construction comprising heavy longitudinal members in the form of I-beams spaced relatively far apart, brackets secured to the webs of the longitudinal members, light transverse members supported by and secured to said brackets and being cut away to accommodate the upper flange of the adjacent I beam whereby the upper faces of said transverse members will be in substantially the plane of the upper faces of said longitudinal members and a filling of light weight concrete surrounding and embedding said longitudinal and transverse members so as to give the finished appearance of a beamed ceiling below.

KARL P. BILLNER.