E. F. WILCOX.

BUILDING CONSTRUCTION.

APPLICATION FILED MAY 22, 1911.

1,053,462. Patented Feb. 18, 1913.

Fig. I.

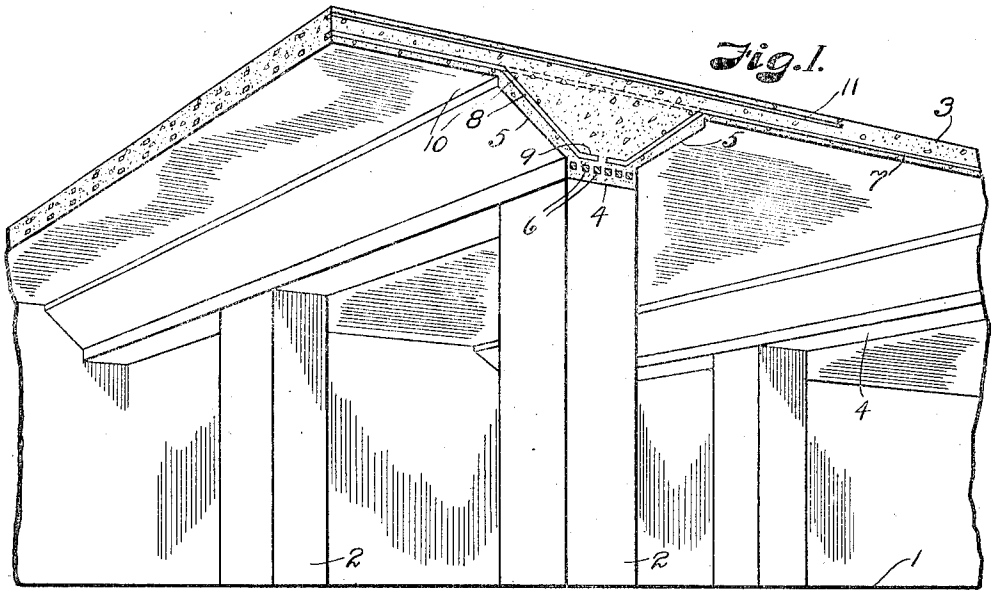


Fig. II.

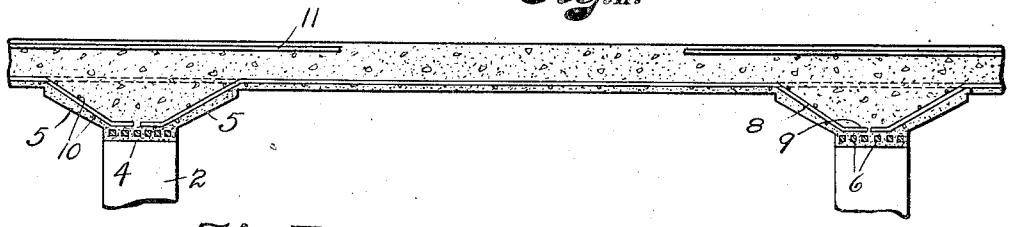


Fig. III.

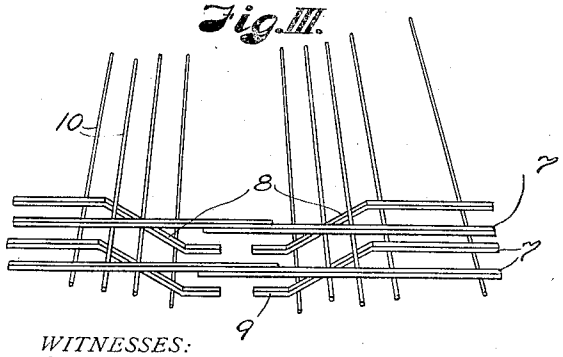
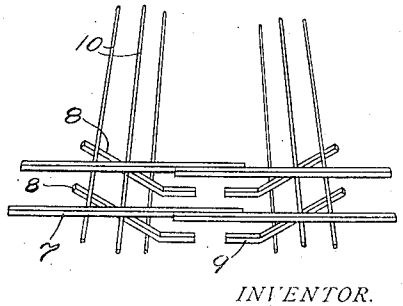


Fig. IV.



WITNESSES:

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BUILDING CONSTRUCTION.

1,053,462. Specification of Letters Patent. Patented Feb. 18, 1913.

Application filed May 22, 1911. Serial No. 628,811.

To all whom it may concern:

Be it known that I, ELBERT F. WILCOX, a citizen of the United States, residing at Kansas City, in the county of Jackson and State of Missouri, have invented certain new and useful Improvements in Building Construction; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

My invention relates to concrete building construction, and more particularly to floor beams and reinforcing therefor; the principal object of the invention being to provide a beam of novel contour and construction, whereby the effective span of a floor slab between parallel beams of a structure may be reduced. In accomplishing this object, I provide the improved details of structure, hereinafter described and illustrated in the accompanying drawings, in which:—

Figure I is a perspective view of a floor and supporting beams, constructed in accordance with my invention. Fig. II is a cross section of same, showing the reinforcement for the beams and floor slabs. Fig. III is a detail view of the reinforcing bars. Fig. IV is a similar view showing a modified form of reinforcing bars.

Referring more in detail to the parts:— 1 designates the lower floor of a building, upon which a number of concrete columns 2, are supported. Seated on columns 2, and supporting an upper floor 3, are the reinforced concrete beams 4, each of which has the corbel sides 5 extending throughout its length and projected outwardly and upwardly at an angle, to meet the floor. Extending longitudinally through the lower portion of each of beams 4, are reinforcing bars 6, and extending through the floor slabs are the usual reinforcing bars 7, which extend, and preferably lap over the beams. Extending over the beams 4, and some distance beyond the outer edges of corbel 5, are bars 11 which are provided in the usual manner to offset the reverse moment in the slab, which occurs over the supports. Extending through the corbel members 5, of the beams 4, at an angle to the slab bars 7 are bars 8, which preferably have their lower ends turned into the beam body to form the horizontal sections 9.

The bars 8 may be independent of the slab bars, as illustrated in Fig. IV, but it is more economical and convenient to form them by bending the ends of the slab bars 7, as illustrated in Fig. III, the method of forming the corbel bars being immaterial, however, as the same result is produced with either method.

In arranging the corbel reinforcement, I prefer to place the downwardly angling bars alternately with the slab bars, and also to cross the corbel and slab bars with smaller spacing rods 10.

It is obvious in the construction described, that by providing the beam with corbel sides, its supporting area is extended laterally so that the effective span of the floor slab is reduced and the thickness of the floor slab and the reinforcement for the slab may be reduced, in comparison with that of the slab used with ordinary beams having the same space between the center lines.

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

1. In building construction, a slab, a concrete beam having a corbel merging into the slab, transverse bars extending through the slab and corbeled beam, transverse bars extending horizontally through the slab and at an incline through the beam corbel, bars extending longitudinally through the base of the beam, and transverse bars extending through the upper portion of the beam and into the slab, above the first named transverse bars.

2. In building construction, a slab, a concrete beam having a corbel merging into the slab, transverse bars extending through the slab and corbeled beam, transverse bars ex-

tending horizontally through the slab and at an incline through the beam corbel, bars extending longitudinally through the base of the beam, and short transverse bars extending through the upper portion of the beam and into the slab, above the first named transverse bars.

In testimony whereof I affix my signature in presence of two witnesses.

ELBERT F. WILCOX.

Witnesses:
MYRTLE M. JACKSON,
ARTHUR W. CAPS.