S. B. MOORE.

FLOOR SYSTEM.

APPLICATION FILED JULY 2, 1920.

1,376,152. Patented Apr. 26, 1921.

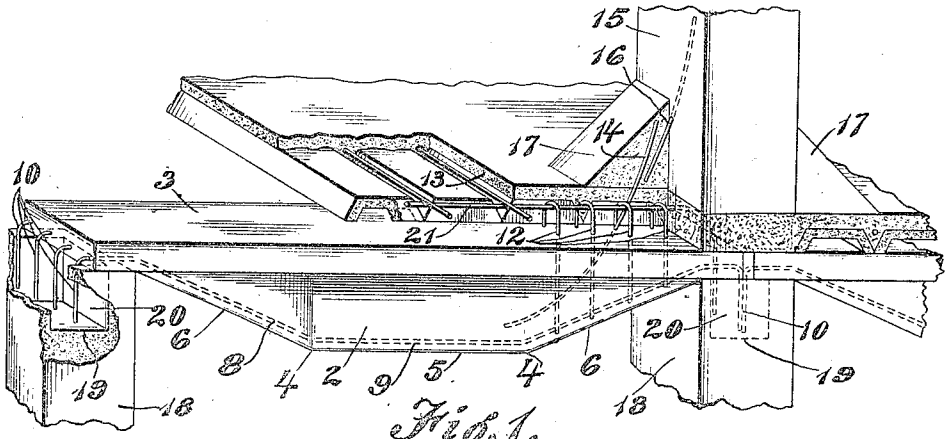

Fig. 1.

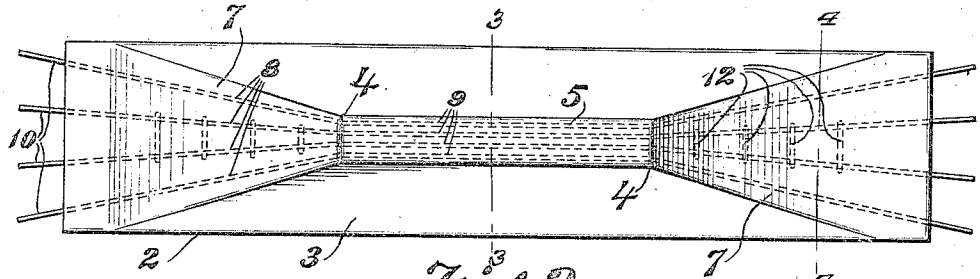

Fig. 2.

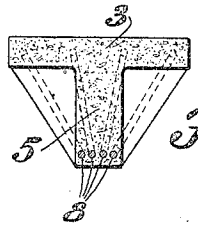

Fig. 3.

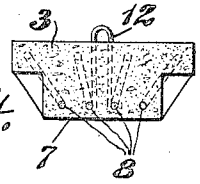

Fig. 4.

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UNITED STATES PATENT OFFICE.

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FLOOR SYSTEM.

1,376,152. Specification of Letters Patent. Patented Apr. 26, 1921.

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To all whom it may concern:

Be it known that I, STUART B. MOORE, of Houston, in the county of Harris and State of Texas, have invented certain new and useful Improvements in Floor Systems; and I do hereby 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.

My primary object is the production of improved composition T-beams to be used as girders and cross beams in conjunction with upright columns to constitute a floor support. I also provide improved bonds between the beams and the poured flooring and the columns.

Figure 1 shows the T-beam, column and flooring as assembled. Fig. 2 is a bottom plan view of the T-beam. Fig. 3 is a cross section on line 3—3, Fig. 2 and Fig. 4 a cross section on line 4—4.

The beam 2 is made of concrete with steel reinforcing rods, these rods taking the form which the finished unit is to assume. The top 3 of the beam is flat. Between points 4, 4 the beam is of T-shape in cross section as shown in Fig. 3, the free edge of its stem 5 being parallel with the top 3.

From points 4 toward the adjacent ends of the beam the stem is tapered as at 6 until it converges with the under face of the top 3. Also from points 4 toward the adjacent ends of the beam the stem is flared as at 7, the sides of these flared portions terminating at the side edges of the top 3 at the points where the taper 6 converges with the under face of the top.

I make the beam in the form described by arranging the reinforcing rods 8 so that they will describe the contour the beam is to assume. They are shown extending adjacent the parallel portion of the stem, as at 9, and bent to form the taper 6 and spaced apart to form the flares 7. They are shown extending from the ends of the beam as at 10.

The unit beam thus formed previous to its installation in the floor system changes in form with the character of stress. At its ends it is a flat slab to provide its shearing value at the points where it is supported by the columns. Intermediate its ends it is formed to resist flexure due to direct compression.

As shown in Fig. 1 the beam is equipped near each end with metallic stirrups 12 which are united to the reinforcing rods 8 and project upwardly from the top of the beam into the poured flooring indicated at 13. Any suitable units may connect the beams and constitute the base on which the poured flooring rests.

I also provide the beam at each end with a rod 14 shown curved upward and projecting from the top of the beam. A column section indicated at 15 is formed with a downward projecting rod 16 adapted to overlap the rod 14. A composition filling 17 covers these rods and the two elements constitute a sway bracing.

The supporting column 18 is preferably hollow as made and installed. A plastic concrete composition is poured into it to about the point 19, leaving an open end 20. Tie wires 21 are inserted in the open end and bent laterally so as to project through the stirrups 12 and lie within the flooring 13. The extremities 10 of rods 8 are bent into the opening 20. When the flooring is poured the spaces 20 in the tops of the columns are also filled; and the sway bracing, provided by composition 17 with rods 14 and 16 embedded therein, is then added.

It is my purpose to make the side girders in the same manner as the cross beams herein described.

I claim as my invention:—

1. In a floor system, a beam of concrete and metallic rods, said beam being of T formation at its central portion to provide a stem having its free edge parallel with the top of said beam, said rods extending through said stem near its edge, said stem being tapered and flared toward its ends, and said rods lying adjacent the surfaces of said tapered and flared ends.

2. The combination with a composition beam of T shape at its central portion and having its stem tapered and flared toward its ends and having a rod projecting upward from its end, of a column having a rod

projecting therefrom and overlapping said former rod, and a composition covering said rods to constitute a sway bracing.

3. The combination with a column having an open upper end, tie wires projecting into said open end and bent laterally therefrom, of a beam of T formation supported by said column and having tapered and flaring extremities, and a poured flooring supported by said beam into which said tie wires project.

In testimony whereof I have signed this specification.

STUART B. MOORE.