May 9, 1933. H. J. BAKER 1,907,707

CONCRETE FORM

Filed May 27, 1929

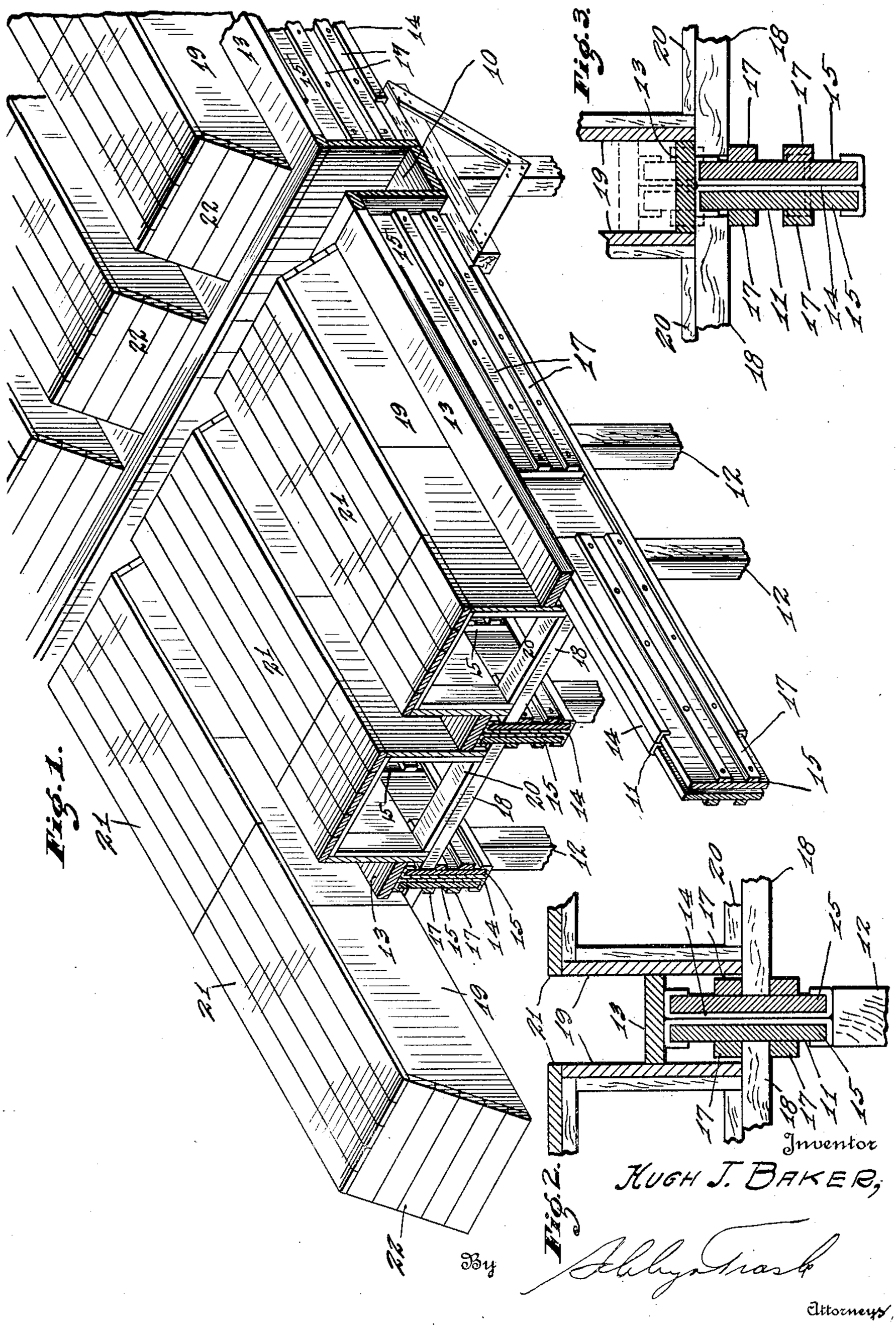

Fig. 1.

Fig. 2.

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CONCRETE FORM

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My invention is concerned with forms to be used in the production of poured concrete floor slabs having integral ribs or joists on their lower surfaces, which ribs or joists extend between supporting girders or walls; and it is my object to produce a form construction which will be flexible and easily altered to suit changes in specifications of the floor slab with respect to length of span and depth, width, and spacing of the ribs or joists. More specifically, it is my object to provide a form construction in which many of the same parts can be used irrespective of changes in the floor slab specifications.

I accomplish my object by providing form-supporting beams which are adapted to extend between the girders in the respective planes of the floor ribs. Resting on the top of each of these beams is a board which forms the lower surface of the floor-rib. The vertical faces of each rib are formed by sides which may extend downward below the board forming the lower surface of the rib and rest upon supports extending between adjacent beams. Covers or lids, which form the lower surface of the floor, extend between and rest upon the sides of adjacent rib-forms.

The accompanying drawing illustrates my invention: Fig. 1 is a perspective view showing a portion of a complete floor form with parts thereof broken away; and Figs. 2 and 3 are transverse sections through the forms adjacent one of the floor-ribs to illustrate the manner in which different depths of ribs are secured.

In the construction of ribbed-slab concrete floors of the type with which my invention is concerned, there are usually parallel spaced girders provided by girder-forms 10. My invention is not concerned with the construction of these girder-forms. In erecting my form after the girder forms 10 are located, I first put in place beams 11 which extend at spaced intervals between adjacent girder forms. These beams may be supported at their ends from the girder forms and at intermediate points by shores 12. The beams 11 are disposed in the plane of the floor ribs and are covered by a board 13 which forms the bottom face of such rib.

The beams 11 are desirably formed in such a manner that their effective length can be quickly varied to suit different girder-spacing. To this end, I may form the beam of a central metal portion 14 into which telescope end portions 15, conveniently of wood. Desirably, the central beam-portion 14 is formed of an I-section piece of structural steel of the type generally known as "metal lumber". Such material is of the shape clearly illustrated in Figs. 2 and 3 and provides on opposite sides of the central web two grooves in which the end portions 15 may be slidably received. It will be evident that by moving the end portions 15 in and out of the center-section 14 the effective lengths of the beam 14 may be varied as desired.

Extending longitudinally on the outer faces of the end-sections 15 are strips 17 forming steps upon which rest laterally extending supports 18 for the floor form. Desirably, there are two of the strips 17 on each of the beam portions 15, these strips being unsymmetrically disposed about the longitudinal center-line of the board for a purpose which will be brought out hereinafter. The sides or upright form-parts 19 which form the vertical faces of the floor-rib rest upon the supports 18, the lower edges of the sides 19 of adjacent joist-forms being separated by means of spreaders 20. Lids 21 rest upon the upper edges of the sides 19 and form the lower surface of the floor. Closing the space between the ends of the sides 19 of adjacent joist-forms there extend end pieces 22 which are usually inclined to produce a girder which is wider at the top than at the bottom.

The sides 19 and lids 21 are desirably sectional in order to provide readily for different rib-lengths. The sections of the sides and lids meet on lines transverse to the joist as is clear from Fig. 1; and by providing sections of a few different lengths, it is possible to produce a form for any usual girder spacing.

The two strips or steps 17 upon which the ends of the supports 18 rest are provided for the purpose of varying the depth of the floor rib. As shown in Fig. 1, the supports 18 rest on the upper strips 17, and it will be evident

that by placing the supports 18 on the lower strips 17 a shallower rib will result. Such an arrangement is illustrated in Fig. 2. By inverting the beams 11, to bring them into the position illustrated in Fig. 3, two different rib-depths may be provided as a result of the unsymmetrical disposition of the strips 17. Desirably the strips 17 are so disposed that the rib-depths produced differ by a regular interval, conveniently two inches.

It will be evident that where my invention is employed the same parts can be used to produce floors having ribs of different lengths and different depths. Should the joist-length to be produced vary over an exceptional range, it may be desirable to employ beam portions 15 of varying lengths.

I claim as my invention:

1. In a false-work for concrete floors, a form-supporting beam, said beam being formed of a center section and two end sections, said center section comprising a member of general C-shaped cross-section the two longitudinal edges of which are spaced apart, said end sections being slidably received within said center-section, said end sections, between the longitudinal edges of said center section, being provided with one or more form-supporting steps unsymmetrically disposed relative to the longitudinal center-line of said end-sections, whereby the heights of the upper surfaces of said steps may be changed by inverting the beam.

2. In a false-work for concrete floors, a form-supporting beam, said beam being formed of a center section and two end sections, said center section comprising a member of general C-shaped cross-section the two longitudinal edges of which are spaced apart, said end sections being slidably received within said center-section, said end sections, between the longitudinal edges of said center section, being provided with one or more form-supporting steps.

3. The invention set forth in claim 1 with the addition that said center section comprises two of said C-shaped members disposed oppositely, each of said end sections comprising two members slidably received respectively in the two members of said center section.

4. The invention set forth in claim 2 with the addition that said center section comprises two of said C-shaped members disposed oppositely, each of said end sections comprising two members slidably received respectively in the two members of said center section.

In witness whereof, I have hereunto set my hand at Indianapolis, Indiana, this 18th day of May, A. D. one thousand nine hundred and twenty-nine.

HUGH J. BAKER.