

No. 656,298.

Patented Aug. 21, 1900.

J. T. O'BRIEN.

SCAFFOLDING.

(Application filed Nov. 28, 1899.)

(No Model.)

2 Sheets—Sheet 1.

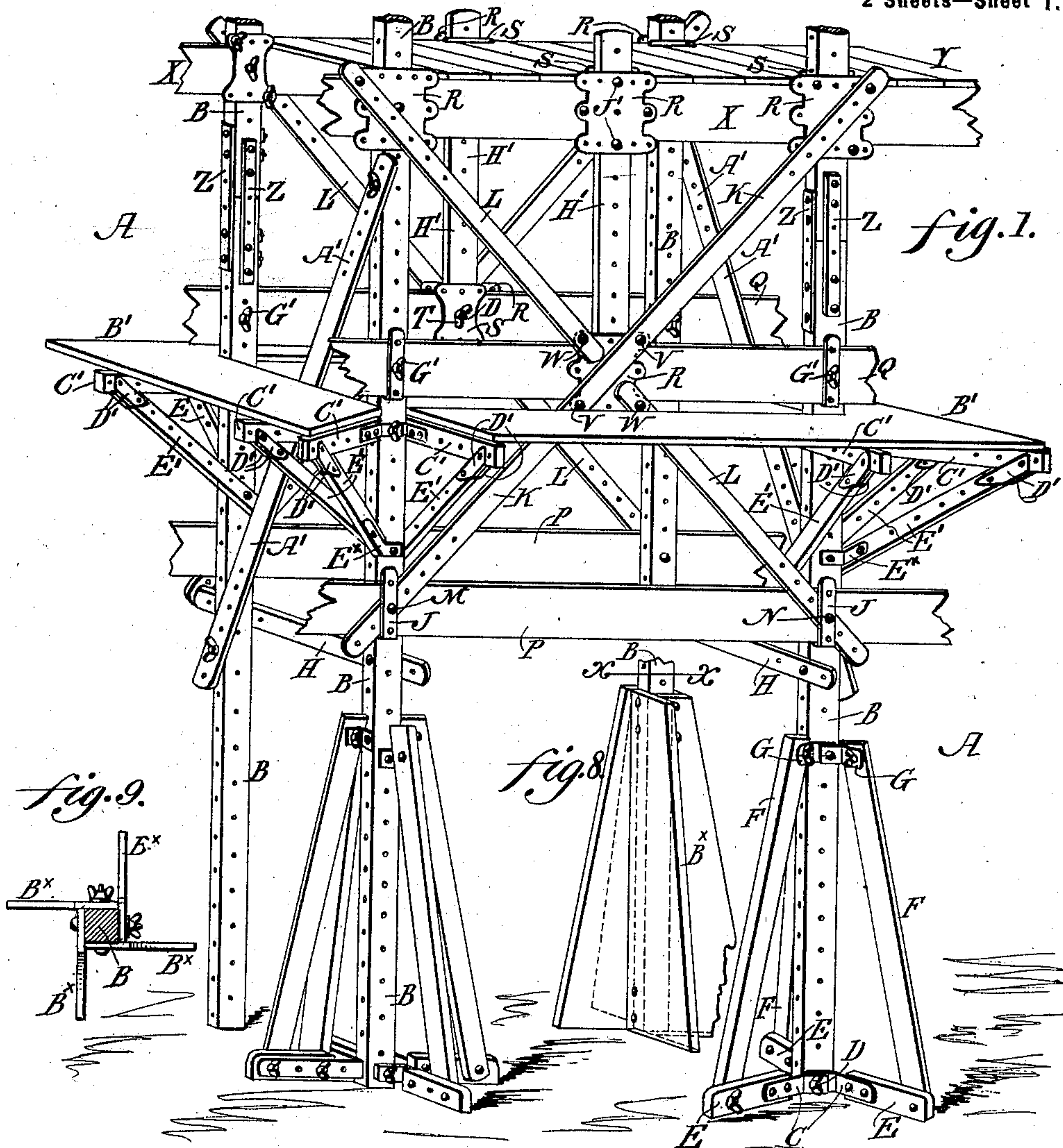


fig. 9.

fig. 8.

fig. 2.

fig. 3.

fig. 4.

fig. 5.

fig. 6.

Witnesses
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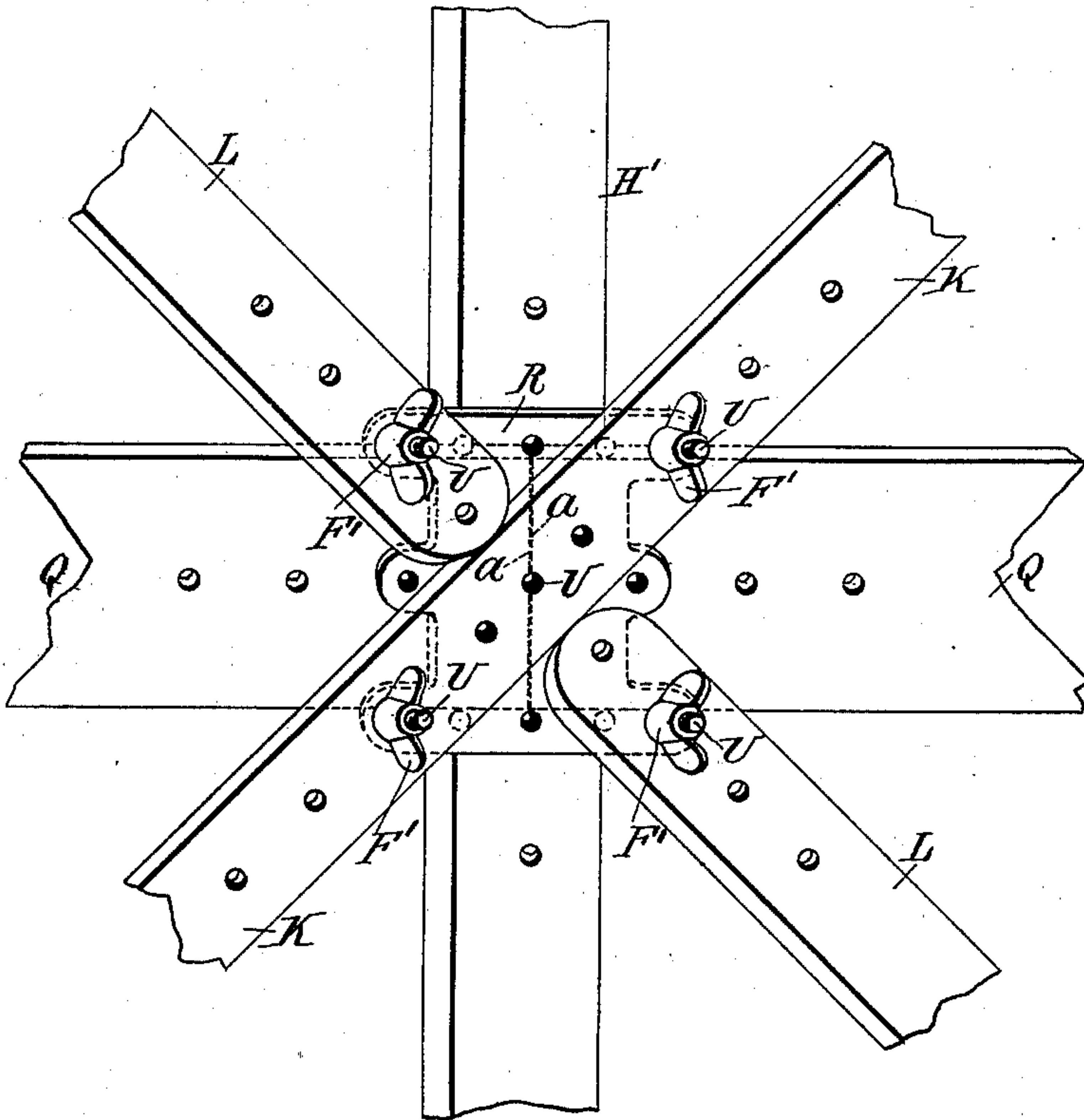
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2 Sheets—Sheet 2.

Fig. 7.



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UNITED STATES PATENT OFFICE.

JOHN T. O'BRIEN, OF PHILADELPHIA, PENNSYLVANIA.

SCAFFOLDING.

SPECIFICATION forming part of Letters Patent No. 656,298, dated August 21, 1900.

Application filed November 28, 1899. Serial No. 738,532. (No model.)

To all whom it may concern:

Be it known that I, JOHN T. O'BRIEN, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Scaffoldings, which improvement is fully set forth in the following specification and accompanying drawings.

My invention relates to a scaffolding; and it consists of a novel construction and manner of assembling braces, ledgers, ties, extension-irons, and their adjuncts whereby the scaffolding can be readily erected and taken down and readily assembled according to requirements and without necessitating the employment of skilled labor.

It further consists of novel details of construction, all as will be hereinafter fully set forth, and particularly pointed out in the claims.

Figure 1 represents a perspective view of a scaffolding embodying my invention. Fig. 2 represents a perspective view of a pair of binding-ties shown in detached position. Fig. 3 represents a perspective view of an angle iron or tie whose members extend substantially at right angles to each other. Fig. 4 represents a perspective view of binding-ties having the members thereof extending at an obtuse angle to each other. Fig. 5 represents another form of a binding-tie. Fig. 6 represents a perspective view of a clamp for securing in position adjacent parts. Fig. 7 represents, on an enlarged scale, a perspective view of a portion of the scaffold. Fig. 8 represents another form of foot composed of boards bolted to an upright. Fig. 9 represents a section on line *x x*, Fig. 8.

Similar letters of reference indicate corresponding parts in the figures.

Referring to the drawings, A designates a scaffolding, the same consisting of the uprights B, to the lower portion of which are attached the obtuse-angled ties C, which are held in position by suitable threaded bolts and thumb-nuts or other fastening devices D and have secured thereto the laterally-extending base-bars E, to which are attached the inclined upwardly-extending braces F, which are secured at their lower portion to the obtuse-angled ties C by any suitable means, as threaded bolts and thumb-nuts, said braces

being secured at their upper ends to said uprights in any suitable manner, as by the irons G. Each pair of uprights is strengthened by the sectional ties H, which are suitably secured thereto and extend in one direction, while in the opposite direction said uprights are braced by the ledgers P, which rest in the brackets J, which receive the lower ends of the braces K and L, which latter are secured in position by the fastening devices M and N, respectively, said fastening devices passing through the brackets J, the braces K and L, and said laterally-extending ledgers P, which are located oppositely to each other and extend at an angle to the members H.

Q designates a pair of ledgers extending in a similar direction to the ledgers P, located above the latter, and each having secured to a side thereof the binding-tie R, said ledgers Q having located on the opposite sides thereof the binding-ties S, said ties being held in position by means of the thumb-nuts T on the threaded bolts D.

It will be noted that the braces K and L extend in a diagonal direction and across the binding-tie R, said brace K being held in the desired position relative thereto by means of the fastening devices V, while the ends of the brace L, which terminate adjacent said plate R, are held in position by means of suitable fastening devices W. The upper end of the brace K and the upper end of the upper brace L engage suitable fastening devices on the plate or binding-tie R, whereby they are held rigidly in position, said upper binding-tie having opposite thereto a similar tie S, which is held in place by the means seen in Fig. 2, said means also serving to hold in position the upper part of the ledger X, upon which latter the platform Y can be placed, if desired, or, if necessary, the scaffolding can be continued up farther in substantially the manner already described, according to requirements.

The uprights B can be extended upwardly indefinitely by the employment of the splicing or extending irons Z, the same being strengthened by means of the braces A'.

B' designates a lower exterior platform which is supported on the arms C', the latter having connected with each side thereof the clamps D', the lower ends of which engage trusses E', which latter are secured to the up-

rights B by means of the angle-irons E^x, the upper portion of said trusses and arms C' being secured in assembled position according to requirements.

- 5 In some instances I prefer to hold the diagonal braces K and L in the desired position relative to the adjacent binding-tie R by means of the thumb-nuts F', (seen in Fig. 7,) it being also apparent that the thumb-nuts
10 G' may be employed to hold the ledgers Q in position, if desired.

- In order to give the requisite strength to the structure, an intermediate upright H' is employed, the lower end of which latter being secured to the binding-ties R and S in
15 any suitable manner, while the upper portion thereof is secured to the upper tie R by means of the fastening devices J' or their equivalents.

- 20 The binding-tie R is employed for trussing when a wide section is necessary to allow a space below to overcome obstruction, it being seen that said trussing supports the scaffold above and is necessary to complete the
25 scaffold in uniform section.

- The binding-tie S is used in connection with the binding-tie R when light scaffolding is erected as a back structural connection, it being noted that the binding-tie R is provided with upper and lower and intermediate rows of openings, which are adapted to be used according to the various requirements.
30

- In Figs. 8 and 9 I have shown a convenient form of foot, which consists of boards B^x, cut as described and bolted to the upright B by means of threaded bolts and thumb-nuts.
35

- The irons seen in Figs. 3 and 5 may be employed in place of those seen in Fig. 4, according to requirements.
40

- When the ends of a ledger Q or X terminate, as indicated in dotted lines at a in Fig. 7, it is apparent that said ends will abut against each other, as seen in said figure, and in order to firmly secure the ledgers Q or X to the intermediate uprights H' the bolts U (seen in Figs. 2 and 7) are of sufficient length to reach from a plate R to a plate S and project beyond the latter sufficiently to receive a nut T, it being noted that the lower bolts U not only serve to tighten the several parts together, but in addition thereto act as supports for the end portions of the ledgers Q or X to rest upon, thereby vastly increasing the
50 stability of the structure.

- In Fig. 1 the ledgers Q and X are each represented as in one length—that is to say, no joint exists, as at a in Fig. 7.

- The uprights, ledgers, braces, and ties constitute a comparatively-rigid structure, and the construction of the feet set forth permits a certain amount of adjustment as to each upright, adapting the whole to uneven ground.
60

- It will be apparent that changes may be made in the exact manner of assembling the fastening devices and locating the same with

respect to each other and without departing from the spirit of my invention. I therefore reserve to myself the right to make all such changes in the structural details thereof which may come within the spirit of the same. 70

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is— 75

1. A scaffolding consisting of a series of uprights, ledgers and braces, feet for said uprights formed of base-bars extending laterally from the uprights, lower angle-irons common to said uprights and base-bars and to which the latter are pivotally connected, braces pivoted to the outer portion of said base-bars and inclining upward and inward, upper angle-irons to which the upper ends of said braces are pivoted connecting them to the uprights, said upper and lower angle-irons being adjustable relatively to each other along the uprights. 80

2. A scaffolding consisting of a plurality of uprights, feet therefor, parallel ledgers, arranged on opposite sides of said uprights, brackets secured to said uprights, said ledgers being supported in said brackets binding-ties secured to substantially the central portion of every alternate one of said ledgers, braces diagonally arranged and engaging said binding-ties, the lower extremity of said braces being secured to said brackets while the upper extremity of said braces is secured to binding-ties arranged in substantial alignment with said brackets and means for holding the parts in assembled position. 90

3. A scaffolding consisting of uprights, ties extending in one direction thereof, ledgers extending at a right angle to said ties, brackets secured to said uprights, diagonal braces and binding-ties therefor, certain of said ledgers and braces being supported in said brackets. 105

4. A scaffolding consisting of a plurality of uprights, feet therefor, ties for said uprights, brackets supported upon the latter a plurality of ledgers secured in said brackets, a platform supported across certain of said ledgers, diagonal braces for said ledgers, certain of said braces extending diagonally across the scaffold, the opposite diagonal braces terminating at substantially the center of said scaffolding binding-ties common to said ledgers and braces, and fastening devices therefor. 110

5. A scaffolding consisting of a plurality of uprights, feet therefor, ties and ledgers for said uprights, trusses supported upon said uprights, arms projecting from the latter, clamps common to said arms and trusses, and an outer platform supported upon said arms, in combination with brackets secured to said uprights, said ledgers being supported in said brackets, binding-ties located at the center and outer portions of said ledgers, a brace extending at an angle from one of the lower brackets across a central binding-tie, and having its upper extremity secured to an 125

outer binding-tie, and sectional braces extending at an angle to said first-mentioned brace and fastening devices for holding said parts in assembled position.

5 6. A scaffolding consisting of a plurality of uprights, ties and ledgers therefor, diagonal braces common to said ledgers and uprights, brackets secured to the latter and adapted to support said ledgers and braces a platform
10 supported on certain of said ledgers, trusses secured to said uprights, arms projecting from the latter, clamps common to said arms and trusses, and an outer platform supported upon said arms.

15 7. In a scaffolding, a plurality of uprights, feet therefor, a plurality of ledgers, brackets extending from said uprights and supporting said ledgers, the intermediate portion of every alternate ledger having a binding-tie
20 secured thereto, a diagonal brace extending from the lower bracket across said central binding-tie and having its upper end secured to an upper binding-tie, a lower sectional brace extending at an angle from a lower
25 bracket and terminating at said central binding-tie, an upper sectional brace extending in line with said last-mentioned brace, and having its lower end secured on said central binding-tie, and its upper end secured to an
30 outer binding-tie, outer braces A' secured to said uprights, and transverse ties H, extending at an angle to said ledgers.

8. In a scaffolding, a plurality of uprights, feet for the lower portion of said uprights,
35 said feet being formed by the base-bars E, angle-irons C common to said base-bars and uprights, braces F extending from said base-bars to said uprights, angle-irons G common to said braces and uprights, brackets J attached to the latter, ledgers P and Q, sup-
40 ported in said brackets, an upper set of ledgers X, binding-ties for holding said ledgers in position, diagonal braces K extending from the lower of said brackets to the upper of
45 said binding-ties, sectional braces L extending across said first-mentioned brace, outer braces A' and transverse ties H, extending at an angle to said ledgers.

9. In a scaffolding, a plurality of uprights,

feet therefor, brackets J attached to said up- 50
rights, ledgers supported in said brackets, ties H secured to said uprights, and extend-
ing at an angle to said ledgers, outer braces A', diagonal braces K and L, binding-ties
therefor, certain of said latter braces being 55
supported in said brackets fastening devices for holding said braces in position, trusses E' secured to said uprights, arms extending from said uprights and supported upon said
trusses, a platform supported upon said arms, 60
and a platform supported upon said upper ledgers.

10. In a scaffolding, a plurality of uprights, brackets thereon, ledgers supported in said
brackets, the intermediate ledger being made 65
in sections, the juxtaposed ends thereof meeting at substantially the center of said scaffolding, binding-ties R and S located adjacent said ends, means for holding said ties in
position, and diagonal braces for said scaf- 70
folding.

11. In a scaffolding, a plurality of uprights, ledgers supported thereon, binding-ties R and S for intermediate ledgers, means for holding
said ties in position, diagonal braces, means 75
for securing said braces to said binding-ties, and means for securing the outer portions of said braces in proximity to said uprights.

12. A scaffolding consisting of a series of up-
rights, brackets secured to the latter, ledgers 80
supported upon said uprights, diagonal braces for said uprights, certain of said braces being supported in said brackets, feet for said up-
rights formed of base-bars extending laterally from the uprights, lower angle-irons common 85
to said uprights and base-bars and to which the latter are pivotally connected, braces pivoted to the outer portion of said base-bars and inclining upward and inward, upper
angle-irons to which the upper ends of said 90
braces are pivoted connecting them to the uprights, said upper and lower angle-irons being adjustable relatively to each other along the uprights.

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