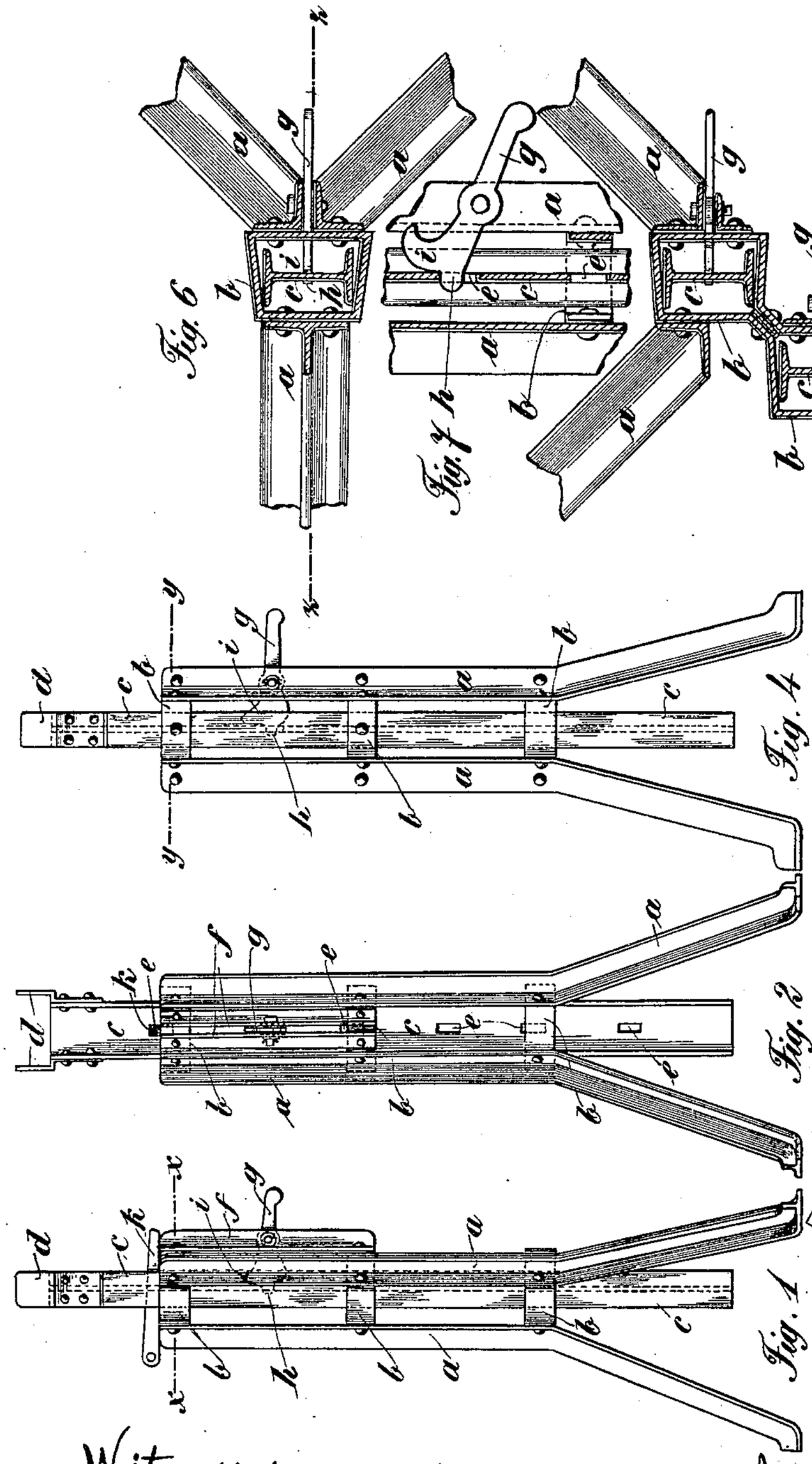
No. 631,954. Patented Aug. 29, 1899.

A. CSORBA.

ADJUSTABLE SCAFFOLD AND SCAFFOLD FRAME.

(Application filed Nov. 17, 1898.

(No Model.) 4 Sheets—Sheet 1.



Witnesses.
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(No Model.) 4 Sheets—Sheet 2.

Fig. 9

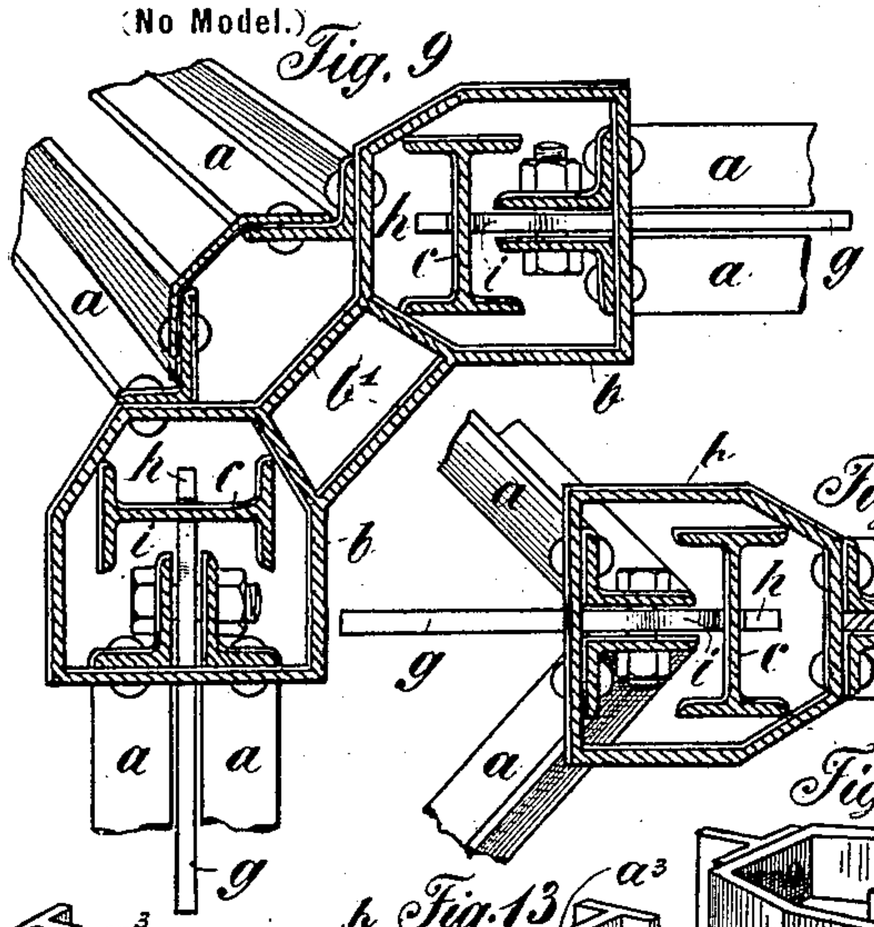


Fig. 10

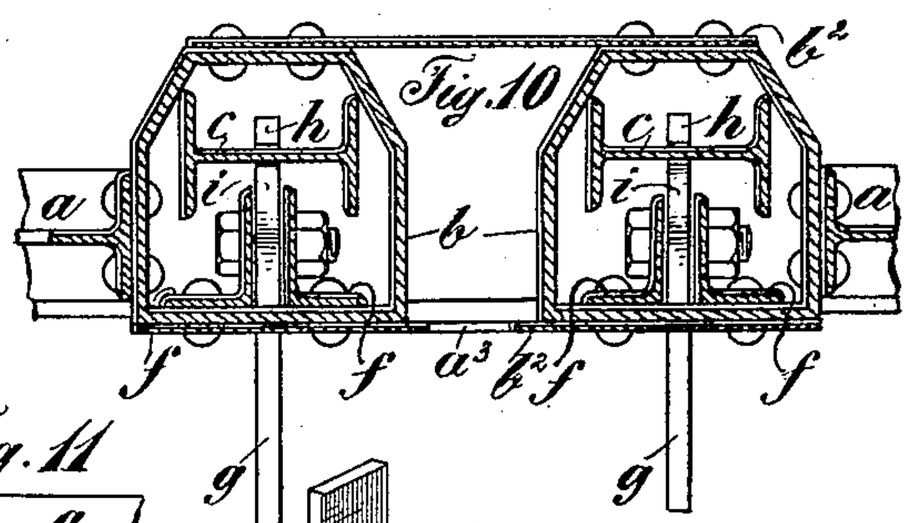


Fig. 11

Fig. 12

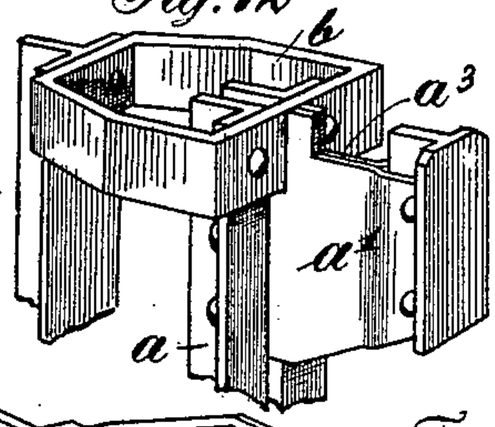


Fig. 13

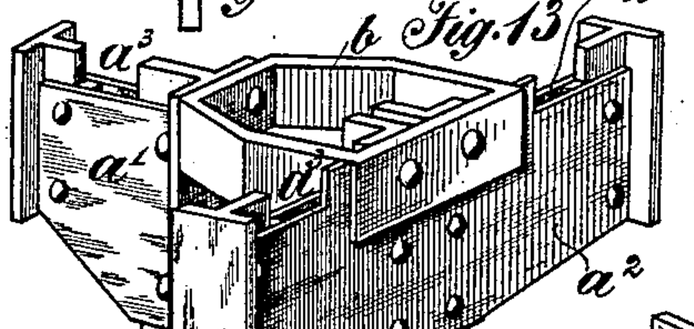


Fig. 14

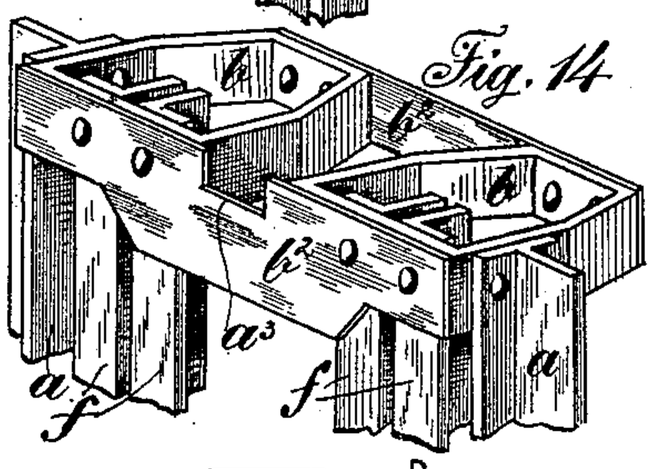


Fig. 15

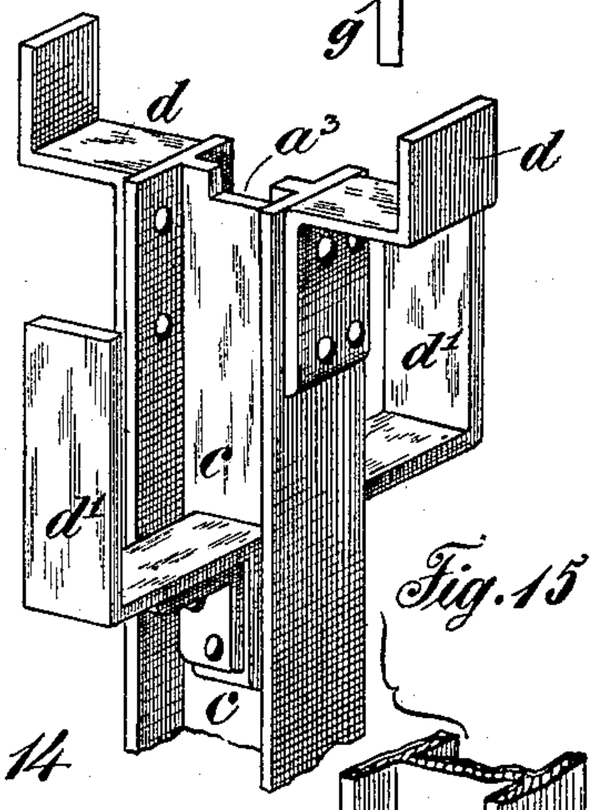


Fig. 16

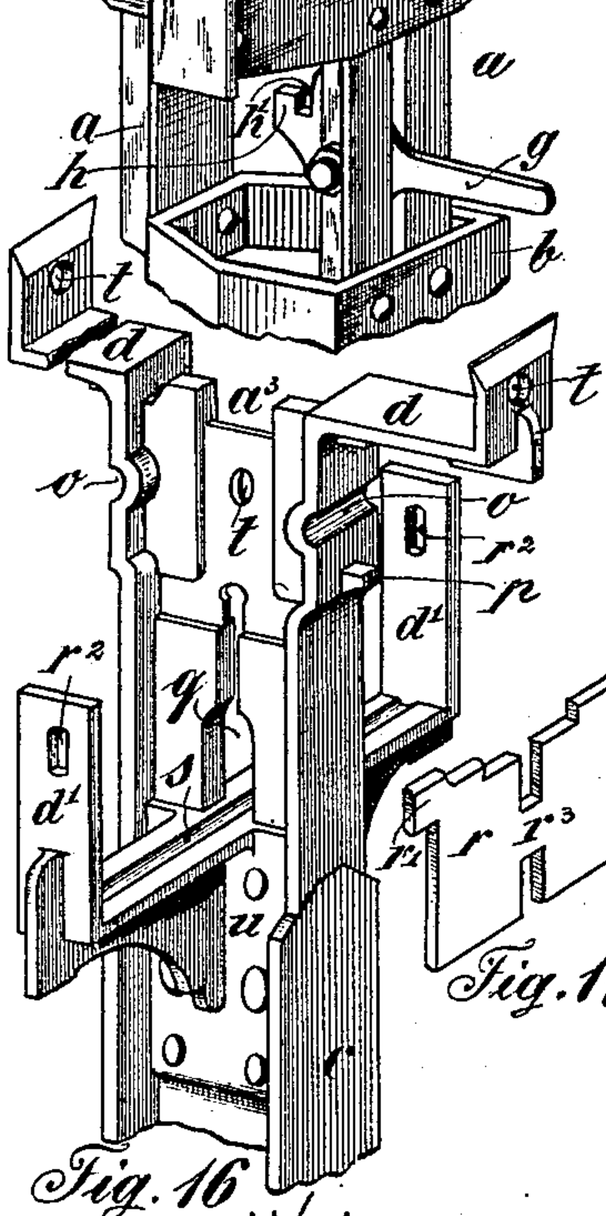


Fig. 17

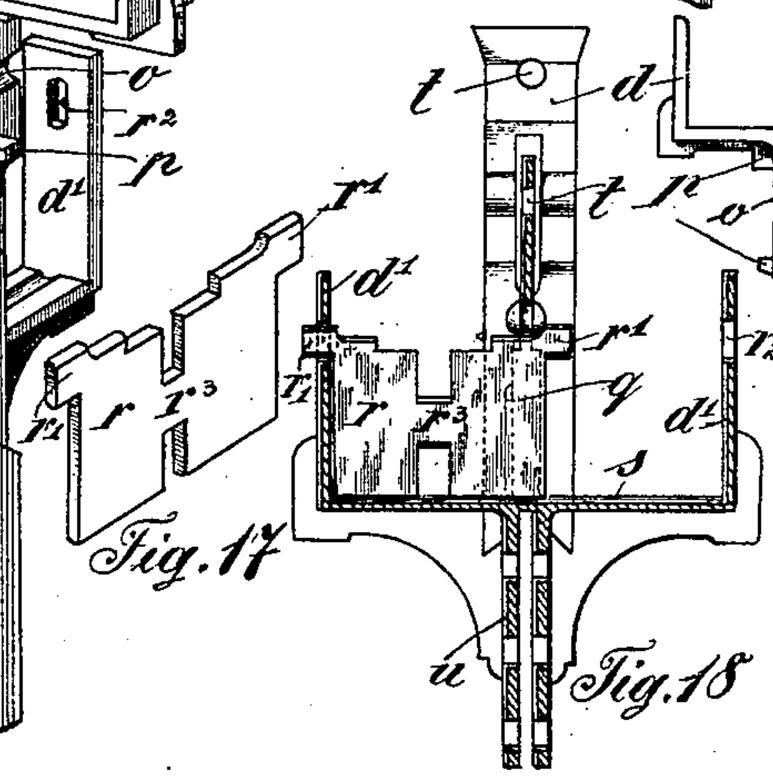
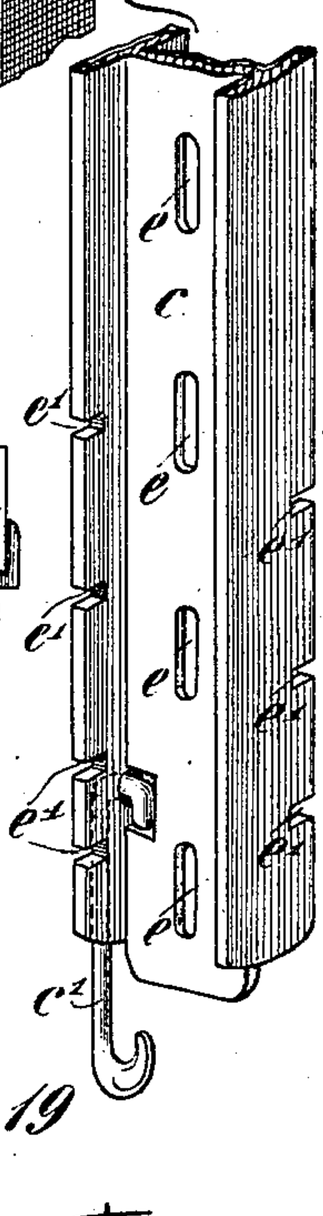


Fig. 18

Fig. 19



Witnesses.
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A. CSORBA.

ADJUSTABLE SCAFFOLD AND SCAFFOLD FRAME.

(Application filed Nov. 17, 1898.)

(No Model.) 4 Sheets—Sheet 3.

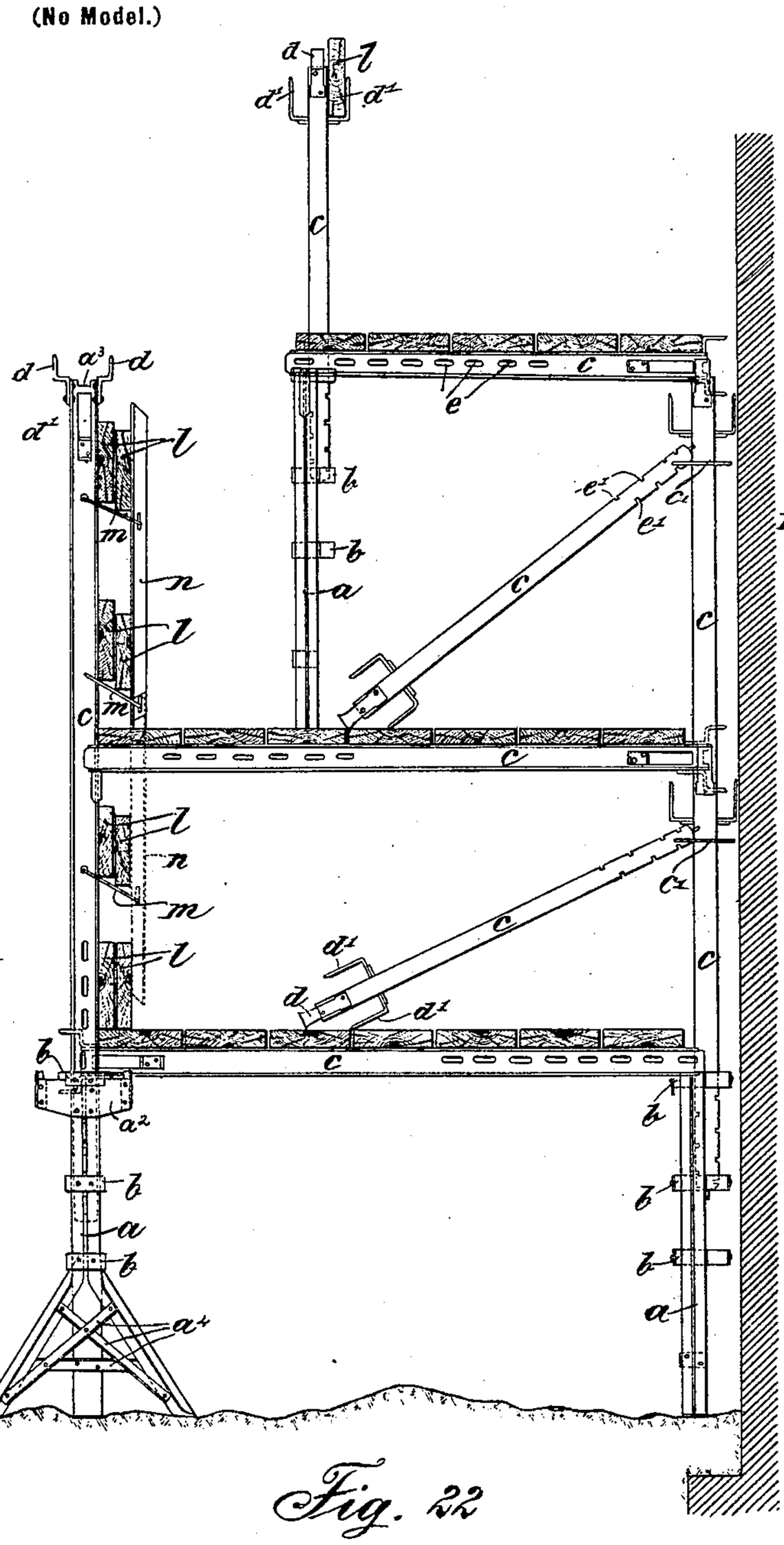

Fig. 22

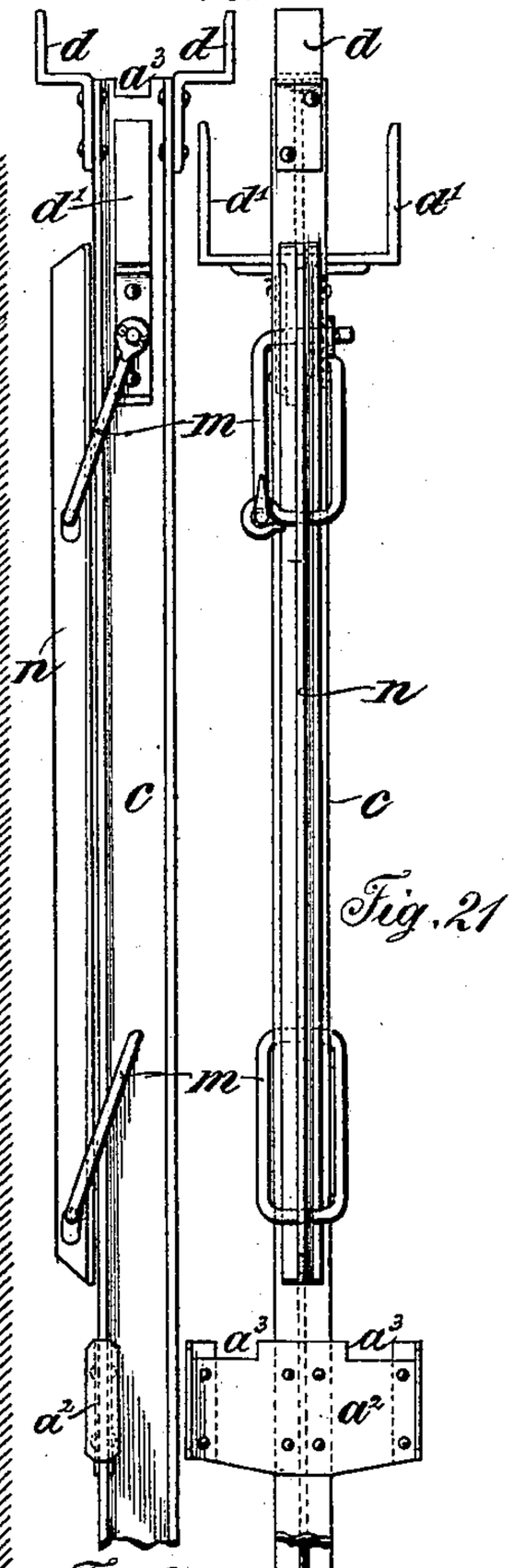

Fig. 20

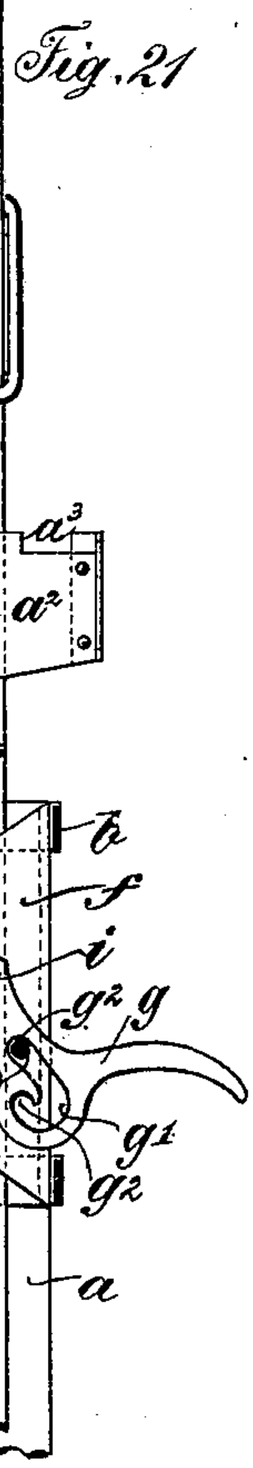

Fig. 21

Witnesses.
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No. 631,954. Patented Aug. 29, 1899.

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ADJUSTABLE SCAFFOLD AND SCAFFOLD FRAME.

(Application filed Nov. 17, 1898.)

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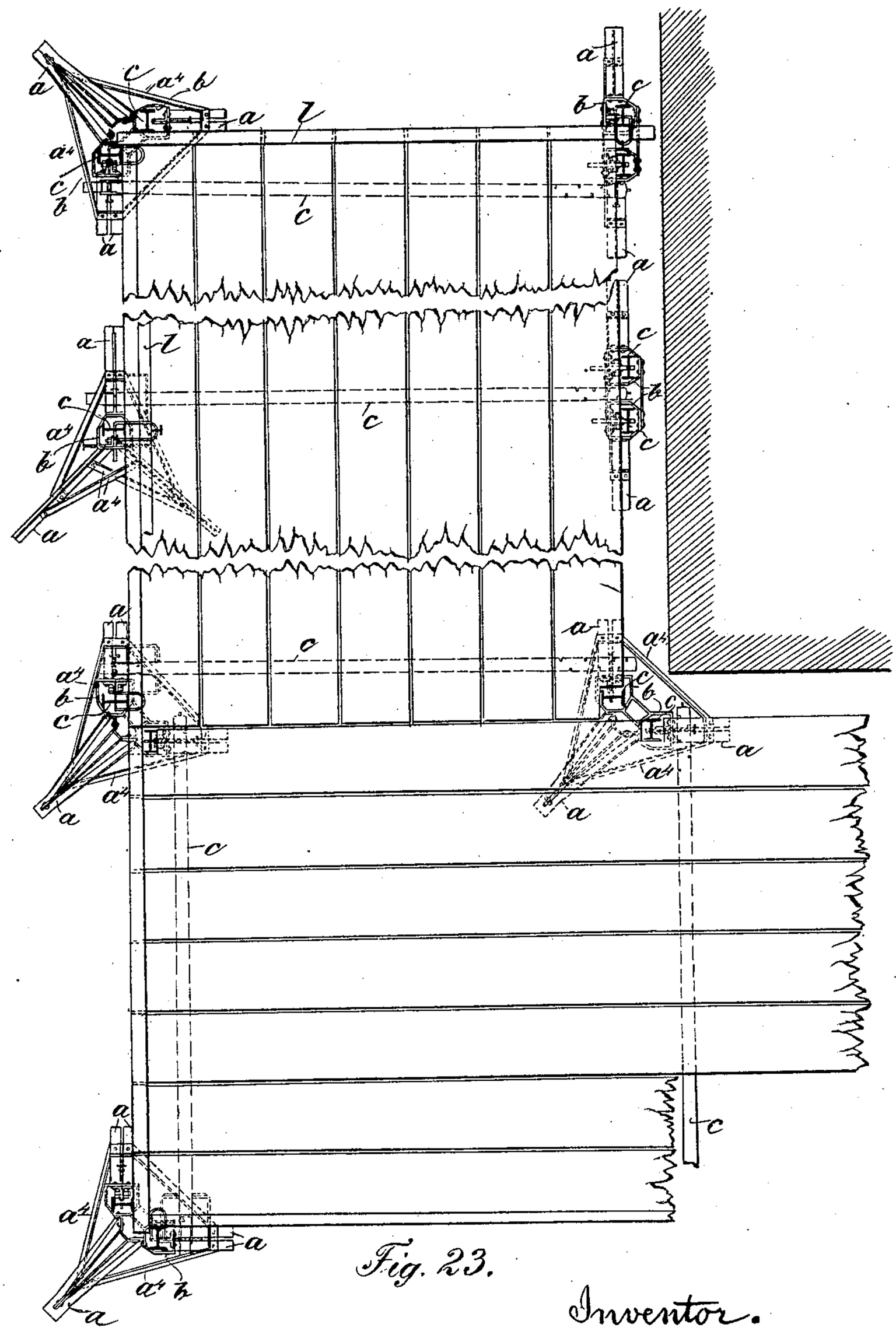

Fig. 23.

Witnesses.
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UNITED STATES PATENT OFFICE.

ANDREAS CSORBA, OF MISKOLCZ, AUSTRIA-HUNGARY.

ADJUSTABLE SCAFFOLD AND SCAFFOLD-FRAME.

SPECIFICATION forming part of Letters Patent No. 631,954, dated August 29, 1899.

Application filed November 17, 1898. Serial No. 696,687. (No model.)

To all whom it may concern:

Be it known that I, ANDREAS CSORBA, a subject of the Emperor of Austria-Hungary, residing at Miskolcz, Austria-Hungary, have invented certain new and useful Improvements in Adjustable Scaffolds and Scaffold-Frames, of which the following is a specification, such as will enable others skilled in the art to which it appertains to make and use the same.

The object of my invention is to provide a scaffold of strong construction and great stability which may be quickly put up and as quickly taken apart and which may be thus used over and over again and built to any desired height.

To such ends my invention consists of the construction, combination, and arrangement of the several parts thereof shown and described in the following specification, of which the accompanying drawings form a part, wherein similar letters of reference designate like or equivalent parts wherever found throughout the several views, and in which—

Figure 1 is a side view of one form of the foot-frames of my improved scaffold, having three legs. Fig. 2 is a front view of Fig. 1, and Fig. 3 is a top view of Fig. 1. Fig. 4 is a side view of a similar foot-frame, except that it has four legs instead of three; and Fig. 5 is a bottom view of Fig. 4. Fig. 6 is a top view of the top of another form of foot-frame having three legs and substantially square hollow central connecting-irons, while Fig. 7 is a side view of Fig. 6 in section on the line $z\ z$ thereof. Fig. 8 is a top view of a foot-frame with four legs provided with double connecting-irons or annular rings, so as to receive two standards instead of one, as in the case of the constructions before referred to. Figs. 9, 10, and 11 are top views of the top portion of different forms of foot-frames, and Figs. 12, 13, and 14 are different forms in detail of certain portions of the upper framework of the scaffold. Fig. 15 is a detail view, broken in two, of the upper portion or head of certain of the standards of the scaffold which are used to extend it upward from the foot-frames or as cross-braces. Fig. 16 is a view of another form of standard-head. Fig. 17 is a detail view of a lock-plate to be used in connection with the head shown in Fig. 16, and Fig. 18 is a view of Fig. 16 with the plate shown in Fig. 17 in position in such head, and Fig. 19 is a view of a head differing only slightly from that shown in Figs. 16 and 18. Fig. 20 is a side view of one of the upper standards used on the outer side of the scaffolding, provided with an attachment for holding railing or guard planks in place; and Fig. 21 is a front view thereof in place in a foot-frame provided with a self-locking catch or supporting and lifting device. Fig. 22 is a side view, and Fig. 23 a top plan view, of my improved scaffolding complete.

Referring to the drawings, the lower or ground section of my improved form of scaffolding consists of foot portions composed of one or more feet a, provided with connecting-irons b, having perpendicular passages through the same adapted to receive standard-irons c, which are provided with lower and upper supporting-heads a^2, d, and d' of any suitable shape, preferably of the forms shown. The standard-irons c are usually of the **I** form shown and are provided with slots e, passing through the central web, adapted to receive the lifting point or lug h of a suitable lifting lever g, which is in each case supported upon a pivot carried by one of the foot portions a. These lifting levers g may be of any desired form, but are usually either of the plain form shown in Fig. 1 or of that shown in Fig. 7, where the lever is provided with a backwardly-turned upper lip i to give a closer grip upon the standard-iron c and may in some cases be provided instead of with a plain hole to receive the pivot with a curved slot g', g^2, and g^3, through which such pin passes, whereby when the weight of the standard-iron is supported by such lever the lever will be locked by the weight against accidental displacement, as shown in Fig. 21.

A certain number of the standards c are provided with only one set of supporting-heads d. Others are provided with side slots e' instead of central slots and with link-hooks c', pivoted thereto adjacent to the end unprovided with the head or heads $d\,d'$, or either or both, as shown in Figs. 15 and 19, and are also provided at the end adjacent to the link with a pin or stud to enter the slots e. A certain number of such standard-irons c are also provided with parallel bars n, linked thereto by links m, so as to be movable to-

ward and away from the standard in the same manner as is one bar of a parallel ruler to and from the other. Certain of the supporting-heads *d* are provided with sharpened edges, below which are securing-holes *t*, Fig. 16, below which are grooves *o* in the standards *c* to receive the studs. Various other holes or slots are provided in the supporting-heads and also in the standards *c*, as shown, at various points to facilitate putting together of the scaffold for all heights, shapes, and sizes of buildings or scaffoldings, and locking-plates *r*, having lugs *r'* and central slots r^8, (shown in the lower views of the heads shown in detail,) by which the ends of sleepers to hold the planking are kept in place. Keys *k* (shown in Fig. 1) are provided to put through the slots *e* on top of the hollow connecting-irons *b*.

To erect the staging, the foot portions are placed in the proper positions with the standards *c* in place therein. The lifting-levers *g* are then depressed so as to bring one of the slots *e* above the top of the top connecting-iron and the key *k*, inserted through such slot *e*, as shown in Fig. 1. The lifting-lever is then actuated so as to catch in the next lower slot *e*, when the standard *c* is again lifted by the lever *g*, and this operation is repeated until the standards are at the required height. The inner and outer standards are then connected by cross-standards, also marked *c*, Fig. 22, by locking the head and bottom ends to the inner and outer upright standards either by suitable bolts or interlocking of the heads, and longitudinal floor-boards are laid on these cross-standards, and after these floor-boards are laid some of the standards which have the sharp-edged supporting-heads and the link-hooks at the other end are placed in a slanting position, so as to dig the sharp edge of such head into the floor-boards, and the other end being forced down against the inner upright standards the link-hooks are locked into the slots to receive them in the said inner uprights, whereby the scaffolding will be braced solidly and thus made rigidly secure. When it is desired to have a guard-rail at the outer edge of the scaffolding, those standards having the parallel bars *n* are used for the outer standards and planks *l*, slipped between the bars *n* and the standards *c*, so as to rest on the links *m*, whereby their own weight will serve to hold them rigidly in place, and thus the scaffold will be made more rigid still. Additional stories of scaffolding of narrower form may then be erected on top of this bottom portion, as shown in Fig. 22, by the use of single or plural base or foot portions resting on the floor boards or planks, and by adding standards interlocked together by the head portions thereof a rigid scaffolding can be carried up in a very short time to any desired height and as quickly taken apart and removed when desired.

All the various heads or interlocking parts are made of the forms shown, and various lengths of standard are provided in large number by which innumerable forms and shapes of scaffolding can be made, so that such scaffolding can be used in any and every place where a scaffolding is desired and may be made of extreme lightness or heaviness, according to the weight it is to bear.

Many changes and modifications other than those shown may be made in the construction of my said scaffolding or in the construction or arrangement of the various parts thereof without departing from the scope of my invention, as I do not intend to limit myself to the exact form of construction of the whole or any part thereof or the manner of combining the parts thereof shown and described herein.

What I claim, and desire to secure by Letters Patent, is—

1. A scaffolding having feet or supporting portions provided with annular connecting-rings for the reception of sliding standards, standards supported in the rings of the foot portions, means for locking the standards in the rings at any desired height, supporting-heads carried by the standards, or the foot portions or by both, cross-standards for locking the inner and outer standards of the scaffolding together, forming supporting-sills for the flooring of the scaffolding, and a suitable flooring for the scaffolding, the cross-standards and the upright standards being substantially of the same form and interchangeable, substantially as shown and described and for the purposes set forth.

2. In a device of the class described, the combination with a plurality of plural-footed foot portions provided at the top with annular rings for the reception of standards, means for locking the standards at any desired height in the annular rings, cross-pieces provided with heads *d* adapted to interlock with the standards to form floor-sills, and brace-pieces of like form having the heads *d* and *d'* provided with sharpened points at one end, and attaching-hooks *c'* adapted to enter holes in the standards, substantially as shown and described and for the purposes set forth.

3. In a device of the class described, the combination with a plurality of supporting foot portions, of adjustable standards supported thereby, and provided with heads *d* and *d'*, locking-plates *r* fitting in the heads *d'* and cross sills or pieces locking the standards together, substantially as shown and described and for the purposes set forth.

4. In a device of the class described, a combined scaffold standard, sill, or brace provided with a head *d* sharpened at the edges, having the holes *t* and grooves *o*, a head *d'* located below the head *d* and at right angles thereto having the holes r^2, and groove *s*, an opening *q* through the standard above the groove *s*, and two locking-plates *r* having the

lugs r' and slots r^3 adapted to rest in the groove s, substantially as shown and described and for the purposes set forth.

5. In a device of the class described, the combination with suitable supporting foot portions, of standards supported thereby, sills connecting the standards together and interlocking therewith, side bars n, attached to the standards by links m, and guard-rails l inserted between the side bars n and the standards, substantially as shown and described and for the purposes set forth.

6. In a device of the class described, the combination with standards adapted to be adjustably supported in suitable foot portions, of heads d and d' secured thereto at the top at an angle one to the other, and heads a^2 located below the heads d', substantially as shown and described and for the purposes set forth.

7. In a device of the class described, the combination with a standard c having the perforations e, of a foot portion adapted to receive the perforated portion of such standard, and a pivoted locking-lever pivoted to the foot portion and having a lug h adapted to enter the perforations e so as to support the standard at any desired height in the foot portion, substantially as shown and described and for the purposes set forth.

8. In a device of the class described, the combination with a standard c having the perforations e, of a foot portion adapted to receive the perforated portion of such standard, and a pivoted locking-lever g pivoted to the foot portion and having the upwardly-turned lug h, the shoulder i, and the curved slot g', g^2 and g^3 through which the supporting pivot-pin passes, so as to support the standard at any desired height in the foot portion, substantially as shown and described and for the purposes set forth.

9. In a device of the class described, the combination one with the other of a plurality of standards provided with slots e and e', and with heads d and d', substantially as shown and described and for the purposes set forth.

In witness whereof I have signed this specification in the presence of two witnesses.

ANDREAS CSORBA.

Witnesses:
PETER N. AKERS,
LOUIS GERSLER.