No. 678,728. Patented July 16, 1901.

W. B. GEORGE.

FRAMEWORK FOR BUILDINGS.

(No Model.) (Application filed Mar. 18, 1901.)

2 Sheets—Sheet 1.

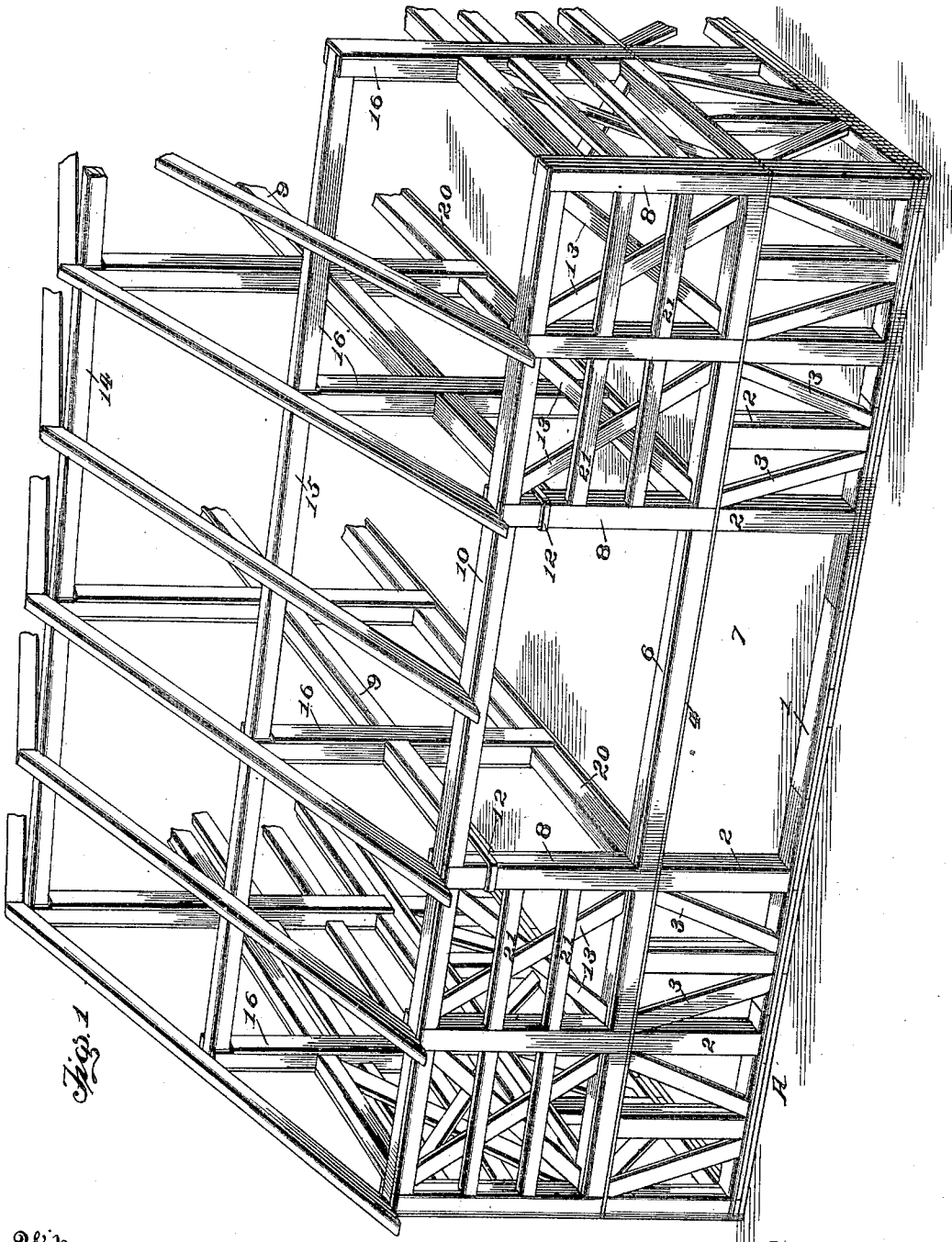


Fig. 1.

Witnesses.
Ralph S. Warfield.
Geo. H. Graves.

Inventor.
Walter B. George.
by Chas. G. & W. Du Bois & Co.
his Attorneys.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

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Fig. 3.

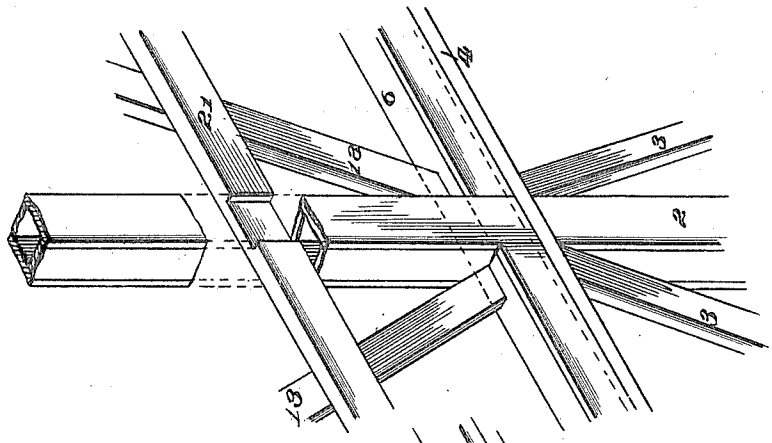
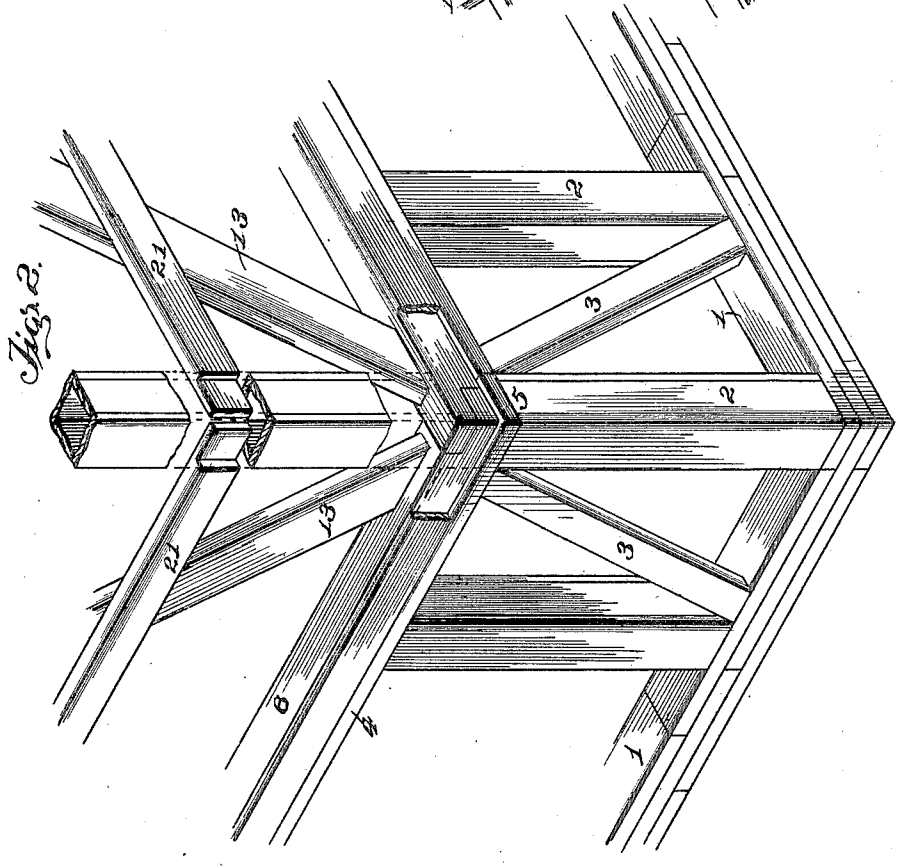


Fig. 2.



Witnesses.
Ralph S. Warfield.
Chas. H. Hamilton

Inventor.
Walter B. George.
by Chesa G. DuBois & Co.
his Attorneys.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

WALTER B. GEORGE, OF HOMER CITY, PENNSYLVANIA.

FRAMEWORK FOR BUILDINGS.

SPECIFICATION forming part of Letters Patent No. 678,728, dated July 16, 1901.

Application filed March 18, 1901. Serial No. 51,653. (No model.)

To all whom it may concern:

Be it known that I, WALTER B. GEORGE, a citizen of the United States of America, residing at Homer City, in the county of Indiana and State of Pennsylvania, have invented certain new and useful Improvements in Framework for Buildings, of which the following is a specification.

My invention relates to the construction of buildings, and more particularly to the framework thereof, the objects being to provide a strong and durable structure and one which fulfils every requirement and economizes both lumber and time as well.

Hitherto it has been the practice among builders when running up the framework or skeleton of a building to bore auger-holes in or chisel away the planks, logs, and ties wherever it was thought desirable, which not only wasted the lumber in many cases, but only served to weaken the structure when completed.

In my invention I avoid any cutting away of the lumber which will weaken the structure and in place thereof construct my framework in a manner which will give the greatest strength with the least amount of lumber.

My invention further consists in certain novel features of construction and combinations of parts, as will be more fully described hereinafter, and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a view in perspective of my improved framework. Fig. 2 is a detail showing the manner of supporting the structure upon the posts and the manner of constructing the corners, and Fig. 3 is a detail of one of the hollow posts.

A is the framework. This framework is commenced by laying down a sill 1, which consists of a log constructed of a number of planks of the required thickness and width to form a square log. Thus if the planks are two inches in thickness and six inches broad three of such planks laid one upon another and spiked together will form a log of the required dimensions. The outside planks are much longer than the planks composing the intermediate layer, and the upper planks are shorter than the lower row, although longer than the intermediate row, thus giving a laminated effect to the log and forming a very strong and durable sill. This sill may be supported above the ground upon suitably-built walls or piers, or a trench may be dug and the sill laid therein. At the corners of the building the sill is spliced, which affords a strong and accurate, yet simple, means of joining. Upon this sill, constructed as above, solid upright posts 2 are placed at frequent intervals and spiked or otherwise fastened to the sill 1, or these posts may be hollow, if desired, and constructed as those hereinafter described. Supported upon these posts is a cap-sill which is constructed of a solid plank 4, spiked or otherwise secured to the posts 2, or it may be constructed in the same manner as sill 1. At the corners of the building this plank is spliced, as shown at 5 in Fig. 2. Upon this cap-sill a solid square log 6 of less width than the cap-sill is secured, this log being spliced or mortised at the corners in the same manner as is the cap-sill 4 and constitutes a subsill upon the cap-sill 4. Between the sill 1 and the cap-sill diagonally-fitted braces 3 3 are secured at the meeting point of the posts 2 and the cap-sill and their lower ends abutting against the lower end of the next post and the sill 1 and there secured. The construction above described completes the framework for the lower story of the building, the ends being constructed in a similar manner, except that between two contiguous posts the braces are omitted in order to leave space for a door 7.

Hollow square posts 8 8 are constructed of plank suitably fastened together at their edges. These posts may be of any desirable length to form the upper story or stories of the building. At suitable points on the square sill 6 the hollow posts 8 8 are raised. The planks composing the inner and outer faces of the square hollow posts are longer than those composing the side faces thereof, and therefore embrace the square sill 6, to which they are spiked and which is received between them. These longer faces of the hollow posts rest at their lower ends upon the cap-sill 4, which although nearly flush with the square sill 6 at its outside edge extends quite a distance inward toward the interior of the building. The side faces of the hollow posts 8 8 rest on the subsill 6. At the

corners of the building the two adjacent faces of the hollow posts extend down to the sill 4, while the other two adjacent faces are supported on the subsill 6. Of course if the subsill is of less width than the posts, then notches to receive the subsill may be cut in the side planks composing the posts. By this means I obtain a stronger and lighter construction than heretofore and yet one which economizes lumber. These hollow posts are placed at suitable distances apart upon the cap-sill and subsill, to which they are secured in any preferred manner. To this subsill are mortised square ties 20 20 at suitable intervals, said square ties mounted upon cap-sills supported by posts in a manner similar to that above described. Supported on these posts 8 8 is an upper tie or wall plate 10, similar to the square sill 6, which plate 10 is received in and fits between the inner and outer sides of posts 8 8 at their upper ends in the same manner as does the square sill 6. Horizontal braces or rails 21 21 extend between the hollow posts in which the ends of the braces are received by mortises, or the braces may extend through the hollow posts, if desired, being mortised where the outer face of the post intersects the brace. Diagonal braces 13 13 are placed between the posts to support the upper tie or rail, in the same manner as heretofore described. These diagonal braces are behind the horizontal braces and rest upon the square sill 6. On the square ties, as well as at each end of the building, are mounted the hollow posts 16 16, which are to serve as central supports for the roof and by which the purlin-plate 15 is supported. These hollow posts are constructed like those heretofore described and extend from the square ties 20 20 to the ridge of the roof. Square girders 9 9 are placed above and parallel with the square ties. These square ties extend across the interior of the barn and serve as braces for the framework. They are solid and are secured to the posts 8 8 of the upper story by means of clips 12 12, passing around the hollow posts 8 8 and fastened thereto and to the girders, which latter engage the posts 8 8 a short distance below the upper tie 10. The girders intersect the hollow posts 16 16 and pass through them, so that the inner and outer faces of the posts extend up and are spiked to the girders, while the side faces of the posts 16 16 extend only between the square ties and the girders and then from the upper surface of the girders and lapping upon the purlin-plate, as shown in the drawings. The usual gable roof is now constructed on this framework, the roof consisting of A-shaped frames at the ends connected by a ridge-pole 14 and further strengthened by the purlin-plate 15, extending longitudinally of the building. These purlin-plates are supported by the hollow posts 16 16.

The various braces interposed between the sill and cap-sill and the subsill and upper tie serve to strengthen the structure, and the subsill on the cap-sill, as well as the upper tie and girders, have secured thereto planks cut and fitted between the hollow posts in order to properly finish up the framework in readiness to have the weather-boarding applied thereto. The diagonal braces extend the full length of the stories, and if it were necessary or desirable the framework could be carried up another story by the exercise of my invention together with a little mechanical skill. A framework structure thus made is firm and strong. The framework is now in readiness to have the weather-boarding applied thereto.

By means of my improved construction I can spike on more plank and make the log larger and stronger just where it needs the strength in crossing over the building and yet save timber, and that by means of this construction I can save one-half the timber formerly employed, as well as half the time employed in running up the framework.

It is evident that slight changes might be made in the form and arrangement of the several parts described without departing from the spirit and scope of my invention, and hence I do not wish to limit myself to the exact construction herein set forth; but,

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

1. In the construction of buildings, the combination with a lower sill, and a cap-sill, of supports connecting the two sills, a subsill on the cap-sill, posts mortised on the subsill an upper tie or wall plate supported by the posts, a purlin-plate, and a roof supported on said posts and purlin-plate.

2. In a framework, a lower sill, and a cap-sill supported above the lower sill, the cap-sill provided with a subsill thereon, an upper tie, posts extending between the upper tie and subsill, the posts mortised at each end to receive the tie and subsill, a purlin-plate, and a roof-frame built upon and supported by the upper tie and purlin-plate.

3. In a framework, a lower sill constructed of planks in such a manner as to give a laminated effect to the sill, a cap-sill supported a suitable distance above the lower sill, a subsill on the cap-sill, an upper tie which is in turn supported some distance above the cap-sill, and a roof-frame built upon and supported by the upper tie and purlin-plate.

4. In a framework, the combination with a lower sill, and a cap-sill supported some distance above the lower sill, of a subsill upon the cap-sill, the cap-sill and subsill being spliced at the corners of the building, posts mortised at their ends and fitting over the subsill, an upper tie supported in the mortised posts, purlin-plates, and a roof-frame supported on the upper ties and purlin-plates.

5. In a framework, the combination with a lower sill a cap-sill supported at some distance thereabove and a subsill on the cap-

sill, of a series of hollow posts on the cap-sill, the posts composed of planks secured together at their edges, an upper tie supported upon the upper ends of the posts, purlin-plates and a roof-frame built upon and supported by the upper ties and purlin-plates.

6. A framework comprising lower and upper sills, a series of posts supported on the upper sill, braces extending between the posts, cross-ties, a plurality of series of posts supported on the cross-ties, an upper tie supported by the first series of posts, girders supported on the posts extending from the cross-ties, purlin-plates supported on these latter posts, a roof-frame supported on the upper ties and purlin-plates, braces between the lower and upper sills, that portion between the two sills constituting the lower story, braces extending between the upper tie and upper sill, and planks for giving the framework a finished appearance.

7. In a framework for buildings the combination with a lower sill, of a cap-sill, posts and braces extending between the two sills for supporting the cap-sill, upper ties, posts between the cap-sill and the upper ties for supporting the latter, braces extending diagonally between the upper ties and cap-sill, and horizontal braces extending through the last-named posts for supporting the frame.

8. A framework for buildings comprising lower and upper sills, means for supporting and bracing the upper sill, upper ties, and means for supporting and bracing the ties, of cross-ties extending across the framework, posts supported on the cross-ties, girders supported by the posts and clamps on the girders, the clamps adapted to secure the girders rigidly to the means employed for supporting the upper ties.

9. The combination in a framework for buildings, of a hollow post comprising four strips secured together at their edges, a purlin-plate supported in these posts, the posts mortised to permit of a strong union between the purlin-plate and the posts.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

WALTER B. GEORGE.

Witnesses:
HUGH S. THOMPSON,
M. C. WATSON.