(No Model.)

A. T. SEARS.

SCAFFOLD.

No. 436,806. Patented Sept. 23, 1890.

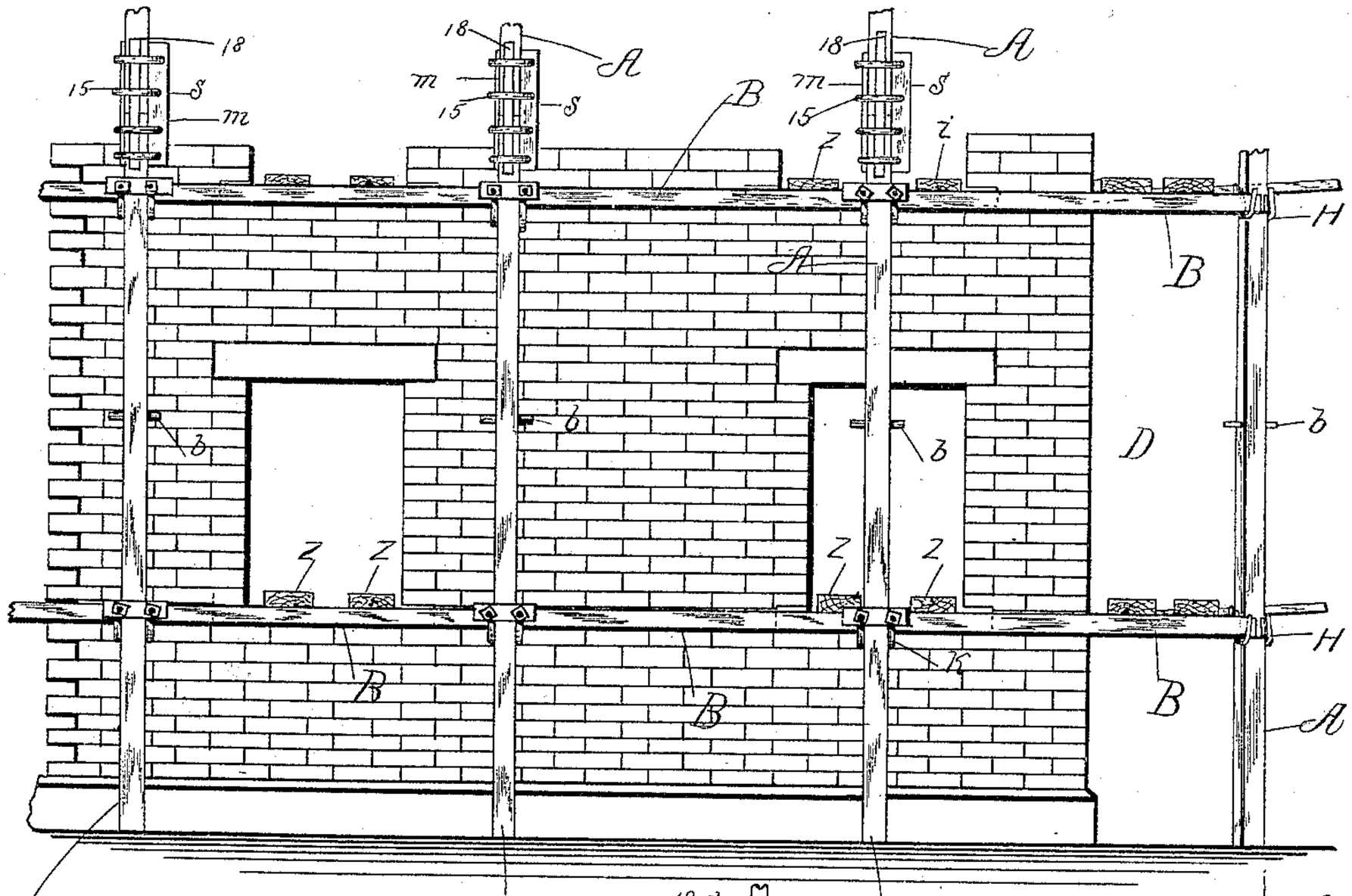

Fig. 1.

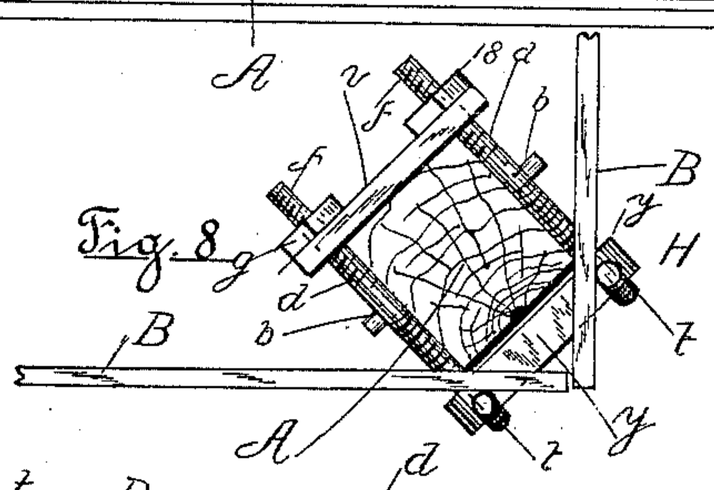

Fig. 8.

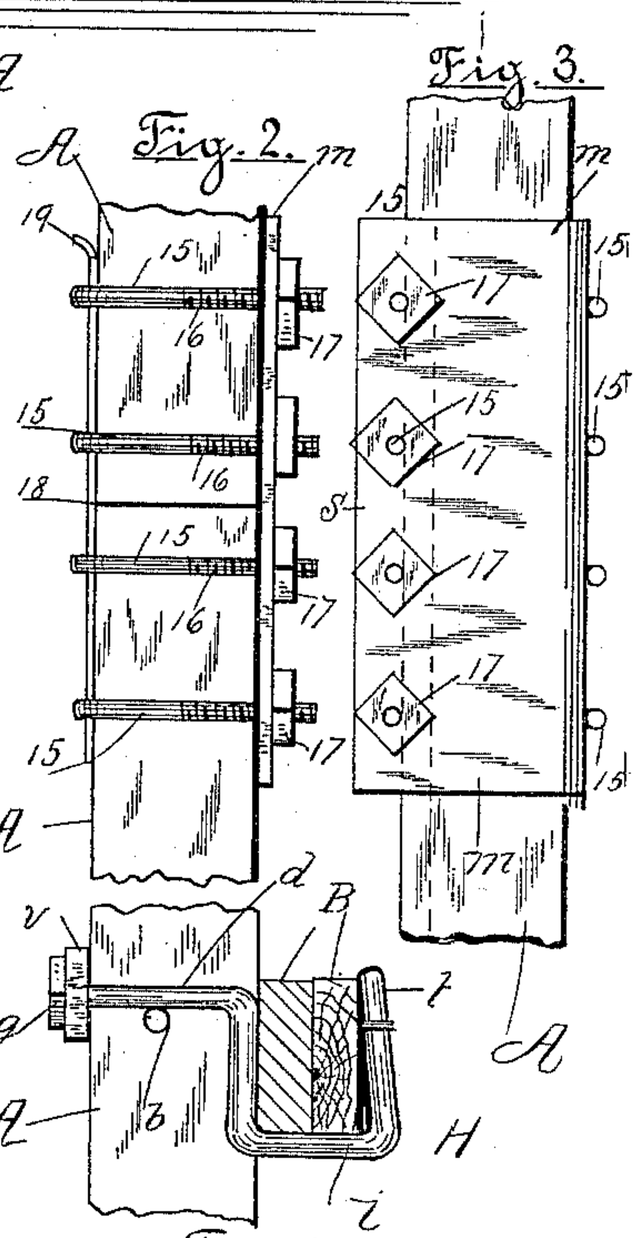

Fig. 2.

Fig. 3.

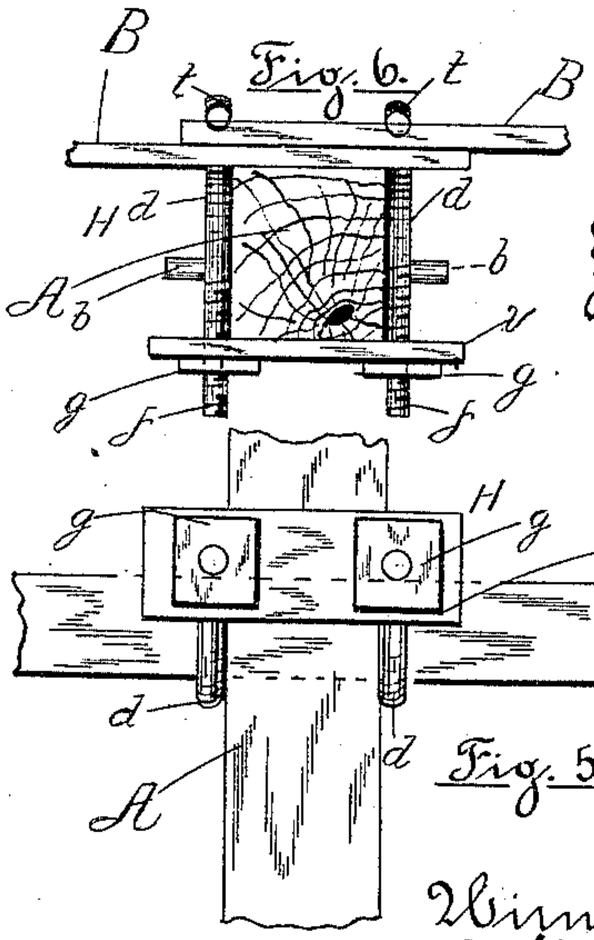

Fig. 6.

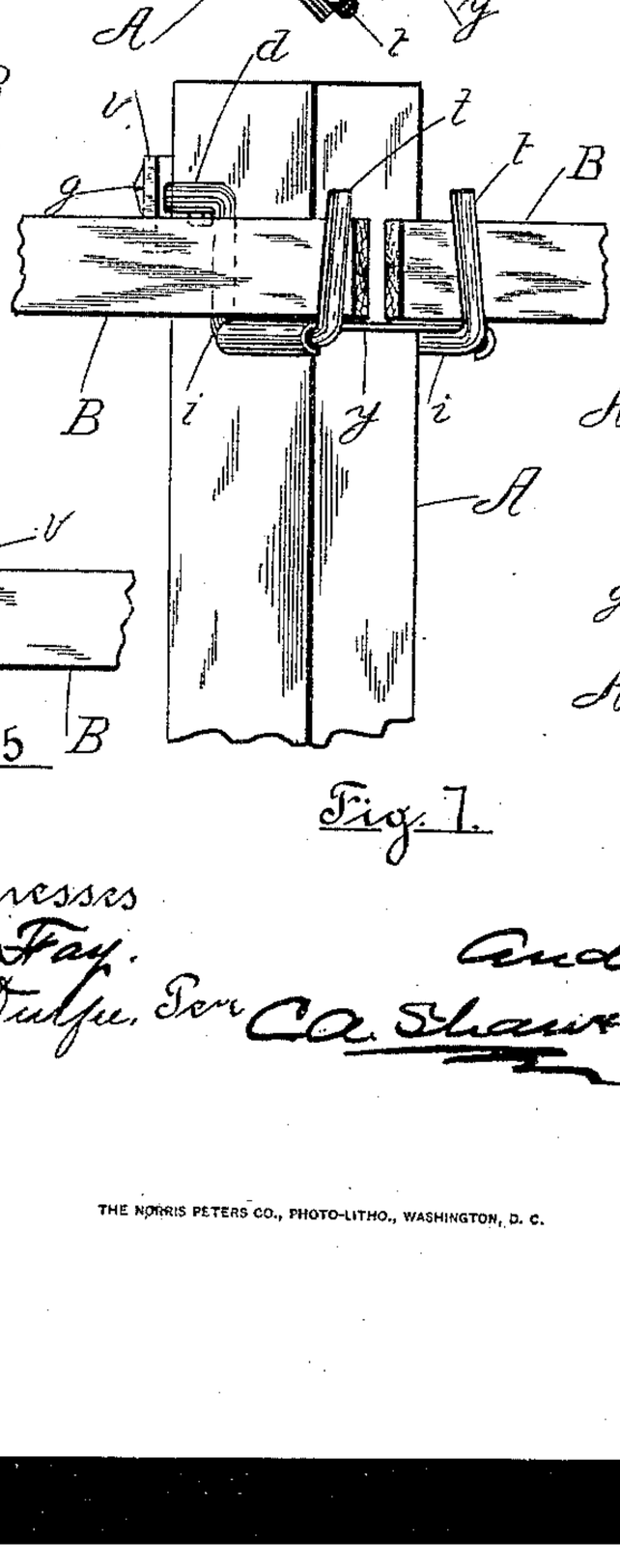

Fig. 7.

Fig. 5.

Fig. 4.

Witnesses
E. H. Fay.
M. Dalfie. Jer

Inventor
Andrew T. Sears,
by C. A. Snow & Co. Attorneys.

UNITED STATES PATENT OFFICE.

ANDREW T. SEARS, OF CAMBRIDGE, ASSIGNOR OF ONE-HALF TO FRANK D. MARDEN, OF BOSTON, MASSACHUSETTS.

SCAFFOLD.

SPECIFICATION forming part of Letters Patent No. 436,806, dated September 23, 1890.

Application filed February 27, 1890. Serial No. 341,963. (No model.)

To all whom it may concern:

Be it known that I, ANDREW T. SEARS, of Cambridge, in the county of Middlesex, State of Massachusetts, have invented certain new and useful Improvements in Stagings, of which the following is a description sufficiently full, clear, and exact to enable any person skilled in the art or science to which said invention appertains to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is an elevation showing my improved staging in use on a building; Figs. 2 and 3, elevations showing method of splicing the standards; Fig. 4, a side elevation of a portion of a standard, showing the ledger-board clamp; Figs. 5 and 6, respectively, a front elevation and horizontal section of the same; Fig. 7, an elevation illustrating means for attaching the ledger-boards at the corner of the building; and Fig. 8, a horizontal section of the same.

Like letters and figures of reference indicate corresponding parts in the different figures of the drawings.

My invention relates especially to staging or scaffolding for use by masons, carpenters, &c.; and it consists in certain novel features hereinafter fully set forth and claimed, the object being to produce a simpler, cheaper, and more effective device of this character than is now in ordinary use.

The nature and operation of the improvement will be readily understood by all conversant with such matters from the following explanation:

In the drawings, A represents the standards, and B the ledger-boards. The standards consist of beams or joists arranged vertically and at a suitable distance from the building D in the ordinary manner. At suitable distances on said standards, preferably every five feet of their length, laterally-projecting pins *b* are secured. The ledger-boards are arranged horizontally and connect the standards in the usual way, said boards being secured to the standards by clamps instead of nailing in the ordinary manner. These clamps H consist of two rods *d*, having an end screw-threaded at *f* to receive nuts *g*. The opposite ends of the rods are bent to form approximately U-shaped loops *i*, the breadth of said loops being sufficient to receive the overlapping ends of two ledger-boards, as shown in Fig. 4. The mouth of said loops is preferably slightly less in width than their bottom, the vertical arm *t* thereof being bent slightly inward, as best seen in Fig. 4. The horizontal portions of the rods *d* pass through a plate *v* of greater length than the diameter of the standards A, and the nuts *g* are turned onto said rods outside said plate. The clamps H are disposed in suitable positions on the standards, the rods *d* projecting on each side thereof toward the building and their horizontal portions resting on the pins *b*. The loops *i* thus extend beyond said standards. The ledger-boards connecting adjacent standards and having their ends overlapped are dropped into said loops. By turning up the nuts *g* tightly against the plate *v*, said ledgers are jammed against the standards and held firmly in position. The inwardly-turned arm *t* of the clamp tends to bite into the outer ledger and prevents accidental vertical movement thereof.

The pins *b* are employed as stops to prevent the clamp from slipping downward on the standards; but I do not confine myself to their use, as the nuts can be set up sufficiently tight to hold the ledger unless submitted to extraordinary weight.

The ledgers are secured to the building by braces *z*, and the put-logs supporting the planking are arranged thereon in the usual manner.

In securing the ledgers to the standards at the corner of the building, the clamp H is disposed on the standard with its bars *d* projecting outward from the building. An iron *y*, (see Figs. 7 and 8,) having hook-shaped ends, is then dropped into the loops *i* and rests on the bottom thereof with its hook ends embracing the rods *d*. This prevents said rods from spreading, and the ledgers may be dropped

into said loops at right angles to each other, as shown in Fig. 8, and clamped securely to the standard.

In jointing the standards to reach succeeding stories of the building a right-angle plate or iron *m* is employed, said plate inclosing two sides of the joist at the joint.

One arm of the plate is elongated to project beyond the edge of the standards, as shown at *s* in Fig. 3, said elongated portion being provided with a series of holes to receive one end of U-shaped clamping-rods 15. These rods have the ends disposed in the holes of the angle-iron screw-threaded at 16 to receive nuts 17. The rods embrace three sides of the standards, their free ends engaging the opposite face of the angle-iron, as shown in Fig. 3. By setting up the nut 17 said iron is clamped securely against the standards, forming a firm joint for the standard section, which precludes lateral movement thereof.

To impart greater rigidity to the joint, I sometimes interpose a plate 18 between the bottom of the U-shaped clamps and the standards, said plate having a lip 19 to prevent it from falling through said loops.

By the employment of my improvement a great saving in the cost of construction is effected, the necessity of nailing the standards and ledgers being avoided. The staging can also be much more readily taken apart and rebuilt than by the ordinary methods, and the same joist, ledgers, and planks employed numerous times without injury.

Having thus explained my invention, what I claim is—

1. In a scaffold, the combination of a standard, two horizontal clamping-rods disposed on opposite sides thereof and provided with screw-threaded ends, and vertical U-shaped loops at their opposite ends extending beyond the standard, a plate connecting said screw-threaded ends, a ledger-board disposed in said U-shaped loops parallel with said plate, and nuts on said rods, substantially as described.

2. In a scaffold, the combination of a standard, two horizontal clamping-rods disposed on opposite sides thereof and provided with screw-threaded ends and vertical U-shaped loops at their opposite ends, said loops extending beyond said standard and being contracted at their mouths, a plate connecting said screw-threaded ends, a ledger-board disposed in said U-shaped loops parallel with said plate, and nuts on said rods, substantially as described.

3. In a scaffold, the combination of a standard provided with lateral pins, two horizontal clamping-rods disposed on opposite sides of said standards above said pins and provided with screw-threaded ends, and vertical U-shaped loops at their opposite ends extending beyond the standard, a plate connecting said screw-threaded ends, a ledger-board disposed in said U-shaped loops parallel with said plate, and nuts on said rods, substantially as described.

4. In a scaffold, the combination of a standard, two horizontal clamping-rods disposed on opposite sides thereof and provided with screw-threaded ends, and vertical U-shaped loops at their opposite ends extending beyond the standard, a plate connecting said screw-threaded ends, a ledger-board disposed in said U-shaped loops parallel with said plate, nuts on said rods, and a connecting-bar disposed in said loops and provided with hooked ends for engaging the bottom thereof, substantially as described.

5. In a scaffold, the combination of a corner standard standing diagonally of the scaffold, two horizontal clamping-rods disposed on opposite sides thereof and provided with screw-threaded ends, and vertical U-shaped loops at their opposite ends extending beyond said standard, a plate connecting said screw-threaded ends, ledger-boards at right angles to each other having their ends projecting, respectively, through the loops of said rods, and nuts on said rods outside said connecting-plate, substantially as described.

6. In a scaffold, the combination of jointed standards, an angle-iron plate whereof one arm extends beyond the edge of the standard and is provided with a series of holes, U-shaped clamping-rods embracing three sides of the jointed standards, one end of each of said clamping-rods being screw-threaded and projecting through said holes, and their free ends engaging the opposite face of the angle-iron, and nuts on said rods, substantially as described.

ANDREW T. SEARS.

Witnesses:
O. M. SHAW,
K. DURFEE.