

G. W. CONKLIN.
LIFTING BOARD FOR DROP HAMMERS.
APPLICATION FILED JAN. 7, 1909.

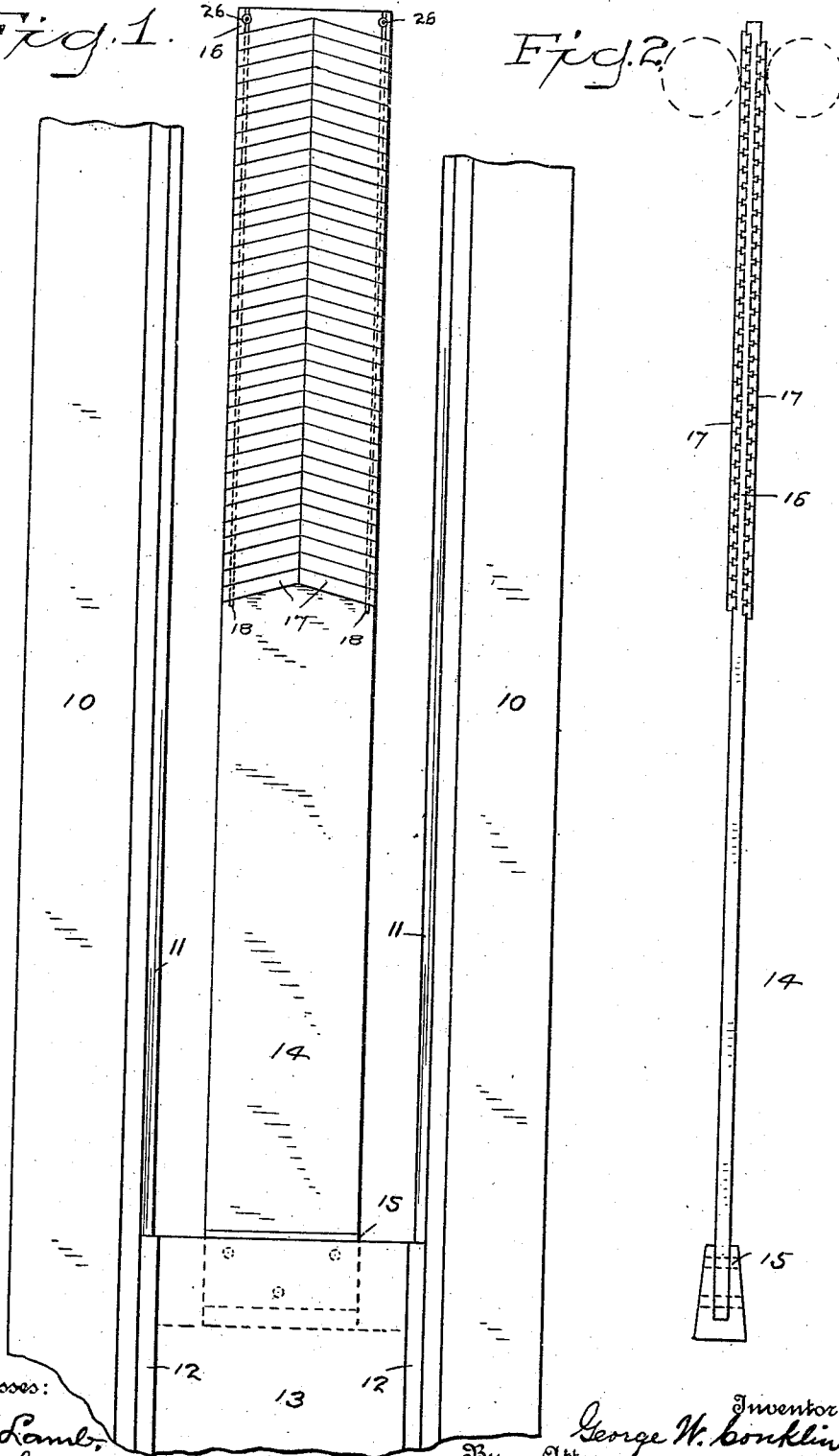
940,956.

Patented Nov. 23, 1909.

2 SHEETS—SHEET 1.

Fig. 1.

Fig. 2.



Witnesses:

H. A. Lamb,
S. W. Asherton.

By

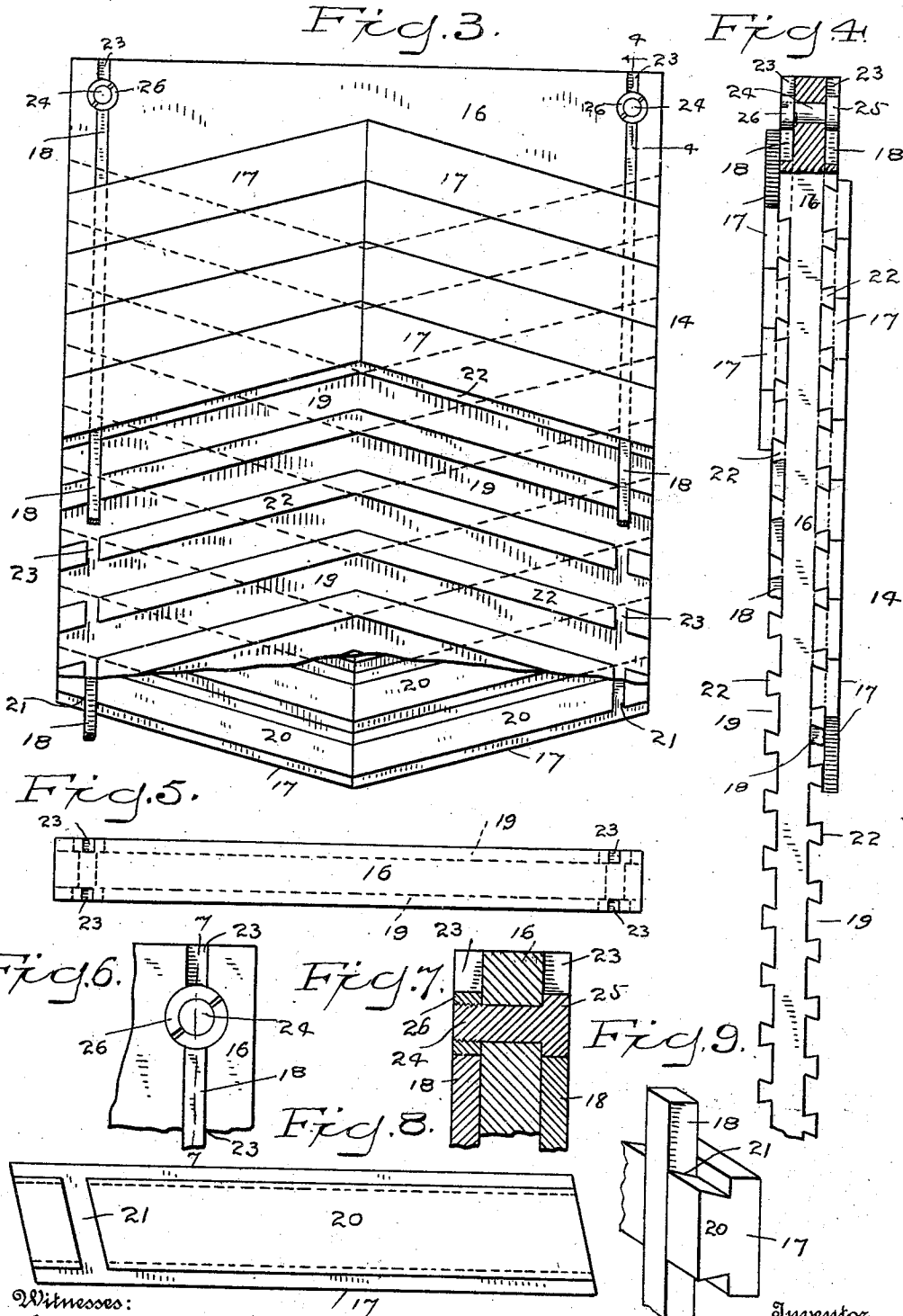
George W. Conklin
Attorney

J. M. Wooster

G. W. CONKLIN.
LIFTING BOARD FOR DROP HAMMERS.
APPLICATION FILED JAN. 7, 1909.

940,956.

Patented Nov. 23, 1909.
2 SHEETS—SHEET 2.



Witnesses:
H. A. Lamb,
S. W. Aikerton.

Inventor
George W. Conklin
By
Attorney
A. M. Wooster

UNITED STATES PATENT OFFICE.

GEORGE W. CONKLIN, OF SHELTON, CONNECTICUT.

LIFTING-BOARD FOR DROP-HAMMERS.

940,956.

Specification of Letters Patent.

Patented Nov. 23, 1909.

Application filed January 7, 1909. Serial No. 471,133.

To all whom it may concern:

Be it known that I, GEORGE W. CONKLIN, a citizen of the United States, residing at Shelton, county of Fairfield, State of Connecticut, have invented a new and useful Lifting-Board for Drop-Hammers, of which the following is a specification.

This invention relates to drop hammers and has for its object to provide lifting boards having engaging surfaces consisting of strips of non-metallic material, as for example wood or vulcanized fiber, which may be readily removed and replaced, thus enabling me to furnish lifting boards for hammers which will last as long as the hammers themselves, worn strips being replaced by new ones whenever required.

It is of course well understood that the lifting boards of drop hammers are ordinarily integral strips of wood which necessarily wear in use and require to be frequently replaced, thereby adding an important item to the cost of maintenance. My present invention enables me to do away with the expense and loss of time required to take down the machine and replace the lifting board with a new one, and furthermore to provide lifting boards which shall be relatively inexpensive to produce and shall combine the rigidity and durability of metal with greatly improved engaging surfaces which are gripped and held firmly by the lifting devices, which will last for an almost unlimited length of time for the reason that the engagement of the lifting devices is preferably across the grain of the wood and the independent strips of which may be readily and quickly replaced and without taking down the hammer, when they become worn.

With these and other objects in view I have devised the novel lifting board which I will now describe, referring to the accompanying drawings forming a part of this specification and using reference characters to indicate the several parts.

Figure 1 is a front elevation of so much of a drop hammer as is necessary to illustrate the use in connection therewith of my novel lifting board; Fig. 2 an edge view of the lifting board detached; Fig. 3 a detail front elevation of a portion of the lifting board on an enlarged scale, partly broken away; Fig. 4 an edge view of the lifting board, partly in vertical section; Fig. 5 a

plan view of the metal skeleton of the lifting board detached; Fig. 6 a detail elevation of a portion of the skeleton showing the means for locking the retaining strips; Fig. 7 a section on the line 7—7 in Fig. 6; Fig. 8 an inverted plan view of one of the engaging strips detached; and Fig. 9 is a perspective illustrating the engagement of a retaining strip with an engaging strip.

10 denotes the side pieces of a frame of a drop hammer which are provided with inwardly facing ribs 11 which are received by the ways 12 of the hammer, indicated by 13.

14 denotes the lifting board as a whole. At the lower end of the lifting board is a dove-tail block 15 which engages a corresponding groove in the top of the hammer. The lifting board comprises a metal plate which for convenience I term the skeleton and which is indicated by 16, engaging strips 17 and retaining strips 18. The operative or engaging portion of the skeleton is provided in each face with dove-tail grooves 19 which are preferably placed obliquely. These grooves extend from the edges of the skeleton inward to the center, the grooves upon one side preferably inclining upward from the edges to the center and on the other side inclining downward from the edges to the center, as clearly shown in Fig. 3, which is partly broken away. The engaging strips which may be made of wood, vulcanized fiber or any suitable non-metallic material are made of suitable size to engage each other closely and are provided on their inner sides with dove-tails 20 which engage grooves 19. The dove-tails of the engaging strips are provided with transverse grooves 21 and the ribs, indicated by 22, between the grooves 19 of the skeleton are provided with transverse grooves 23 in alinement therewith, said grooves 23 also extending to the top of the skeleton. The engaging strips are locked in place by the retaining strips 18 which are slid into the alined grooves 21 and 23 from the top. The lower ends of the retaining strips rest against the solid metal of the skeleton, as indicated by dotted lines in Fig. 1. In order to prevent the possibility of the retaining strips becoming loose and working up, they are locked in place by studs 24 which pass through the skeleton just above the retaining strips. One end of each stud is provided with a head 25 which is countersunk into the face of the skeleton

and the other end thereof is threaded and is engaged by a nut 26 which is countersunk into the opposite face of the skeleton.

In assembling, the dove-tails upon the engaging strips are slid into the dove-tail grooves in the skeleton from the edges, the inner ends of the engaging strips being chamfered off so that they will abut against each other, and the outer ends chamfered off so that they will lie parallel with the edges of the skeleton. The retaining strips are then slid into grooves 23 from the top passing through the alined grooves in the dove-tails of the engaging strips and the ribs between the dove-tail grooves of the skeleton. Studs 24 are then passed through the skeleton at the upper ends of the retaining strips and the nuts are turned to place thereby locking the studs in place, which in turn lock the retaining strips in place. It will be noted that the retaining strips and the dove-tails of the engaging strips interlock in such a manner as to make the board as a whole firm and rigid. The engagement of the dove-tails of the engaging strips with the corresponding grooves in the skeleton is close so that the engaging strips can have no lateral movement, endwise movement of the engaging strips being prevented by the retaining strips.

The use of my novel lifting board is the same as with ordinary lifting boards. The rollers of a lifting device are indicated by dotted lines in Fig. 2. As already stated, however, the general construction of the hammer and the operation of the lifting device is wholly immaterial so far as the present invention is concerned and is therefore not illustrated in the drawings.

Having thus described my invention I claim:

1. A lifting board of the character described, comprising a metallic skeleton having dove-tail grooves on opposite sides and non-metallic engaging strips having dove-tails engaging said grooves.

2. A lifting board of the character described, comprising a metallic skeleton having oblique dove-tail grooves on opposite sides and non-metallic engaging strips having dove-tails engaging said grooves.

3. A lifting board of the character described, comprising a metallic skeleton having oblique dove-tail grooves on opposite sides, the grooves upon one side inclining from the edges upward to the center and the grooves on the opposite side inclining downward from the edges to the center and non-metallic engaging strips having dove-tails engaging said grooves.

4. A lifting board of the character described, comprising a metallic skeleton having dove-tail grooves on opposite sides, non-metallic engaging strips having dove-tails engaging said grooves and means for locking the engaging strips against displacement.

5. A lifting board of the character described, comprising a metallic skeleton having dove-tail grooves on opposite sides, non-metallic engaging strips having dove-tails engaging said grooves, retaining strips for locking the engaging strips against displacement and means for locking the retaining strips.

6. A lifting board of the character described, comprising a metallic skeleton having dove-tail grooves on opposite sides, ribs between the grooves and transverse grooves in the ribs, non-metallic engaging strips having corresponding dove-tails and transverse grooves in the dove-tails in alinement with the grooves in the ribs and retaining strips in said alined grooves whereby the engaging strips are retained against longitudinal displacement.

7. A lifting board of the character described, comprising a metallic skeleton having dove-tail grooves on opposite sides, non-metallic engaging strips having corresponding dove-tails, retaining strips crossing said grooves and dove-tails to retain the strips against longitudinal displacement, and studs in the skeleton at the ends of the retaining strips for locking the latter in place.

In testimony whereof I affix my signature, in presence of two witnesses.

GEORGE W. CONKLIN.

Witnesses:

PEARL H. ROBINSON,
HARRY H. CATLIN.