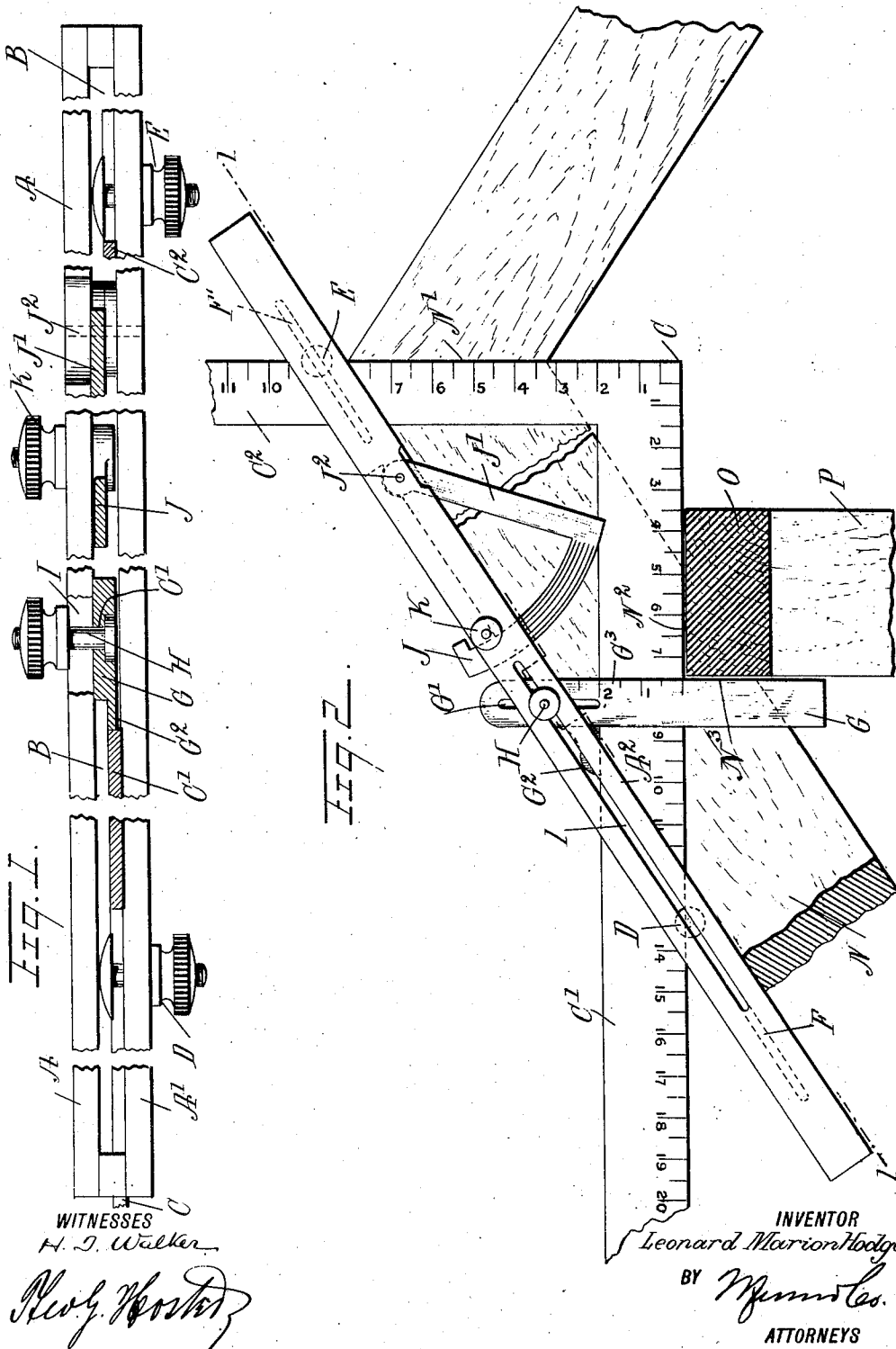


1,038,368.

2 SHEETS—SHEET 1.

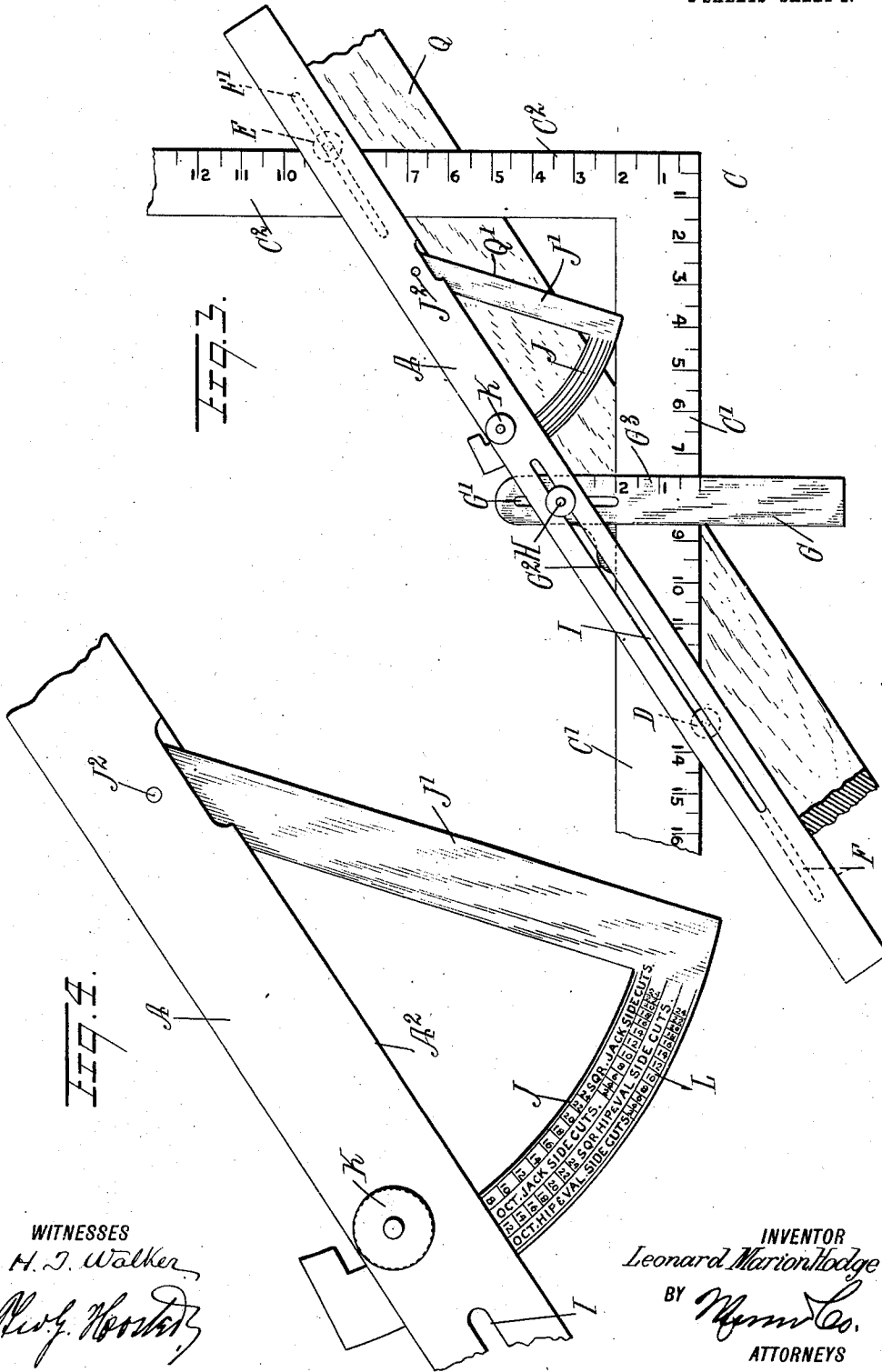


L. M. HODGE.
 ATTACHMENT FOR SQUARES.
 APPLICATION FILED AUG. 30, 1911.

1,038,368.

Patented Sept. 10, 1912.

2 SHEETS—SHEET 2.



UNITED STATES PATENT OFFICE.

LEONARD MARION HODGE, OF SAN JOSE, CALIFORNIA.

ATTACHMENT FOR SQUARES.

1,038,368.

Specification of Letters Patent.

Patented Sept. 10, 1912.

Application filed August 30, 1911. Serial No. 646,822.

To all whom it may concern:

Be it known that I, LEONARD MARION HODGE, a citizen of the United States, and a resident of San Jose, in the county of Santa Clara and State of California, have invented a new and Improved Attachment for Squares, of which the following is a full, clear, and exact description.

The invention relates to drawing instruments, and its object is to provide a new and improved attachment for steel squares such as are used by carpenters and other mechanics, and arranged to permit the user to set the attachment on the square for forming with the latter a templet, to indicate at one and the same time three cuts, namely, the seat, the plumb and the side bevel, necessary to complete a jack or a hip rafter, none of the cuts interfering with the functions of the other or the convenient handling of the tool.

For the purpose mentioned use is made of a stock having clamping devices for clamping the stock to the members of a square, a graduated straight arm held on the stock and provided with an angular foot adapted to rest on one edge of one of the members of the square to hold the arm at a right angle to the said square members, and a graduated segmental arm mounted to swing on the said stock and adapted to be fastened thereto.

A practical embodiment of the invention is represented in the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a sectional elevation of the attachment in position on a square, the section being on the line 1—1 of Fig. 2; Fig. 2 is a side elevation of the attachment in position on a rafter, plate and stud; Fig. 3 is a like view of the same as applied to a jack rafter for making a side cut; and Fig. 4 is an enlarged side elevation of part of the stock and the graduated segmental arm.

The stock A is in the form of a straight bar, provided with a longitudinal slot B for the passage of the members C' and C² of an ordinary steel square C, such as is used by carpenters and other mechanics. Clamping screws D and E are held in longitudinal slots F and F' formed in the portion A' of the stock A, and the said clamping screws D and E are adapted to engage the members C' and C² of the square C to securely

fasten the same in position on the stock A. When the clamping screws D and E are loosened, the stock A and the square C can be adjusted one relative to the other so as to bring the side edge A² of the stock A in the desired position relative to the linear graduations marked on the members C' and C² of the square C, as indicated in Fig. 2. The edge A² intersects the 12-inch mark on the member C' and the 8-inch mark on the member C², but the stock A can be adjusted relative to the square C to indicate any desired proportion. A straight arm G is provided with a slot G' adapted to be engaged by a clamping screw H, also passing through a longitudinal slot I formed in the stock A, so that the arm G can be adjusted to any desired position lengthwise of the stock A and also shifted laterally relative to the stock A owing to the slot G'. On one side of the arm G is arranged an integral foot G² standing at right angles to the arm and adapted to rest on the inner edge of the member C' or C² so as to hold the arm G at a right angle to the member C' or C² with which the foot G² is in engagement at the time. The arm G is also provided with a linear graduation G³, indicating inches. A segmental arm J is adapted to pass laterally through the slot B and is provided with a radial arm J' pivoted at its free end at J² on the stock A, and the said segmental arm J is adapted to be clamped in position on the stock A by a clamping screw K held on the said stock. The segmental arm J is provided with graduations L indicating the side cuts of the different forms of rafters, as will be readily understood by reference to Fig. 4.

In using the attachment to form a hip and valley roof having a rise of 8 inches to one foot of run, the stock A is attached to the square C with the edge A² at the 12 and 8 inch marks on the graduations of the members C' and C² of the square C, as indicated in Fig. 2. It is understood that when the stock A and the square C are adjusted one relative to the other to the desired position, then the stock A and the square C are firmly fastened together by the clamping screws D and E. The square C is now placed against the side of the rafter N, as plainly indicated in Fig. 2, with the stock A resting on the top edge or back of the rafter. The outer edge of the member C² of the square C now gives the plumb cut N' at the ridge, and

the outer edge of the member C' gives the seat cut N², while the outer edge of the arm G gives the plumb cut N³ for the plate O which plate O is supported on the studs P.

5 It is understood that the arm G is adjusted so that its foot G² rests on the inner edge of the member C', and the graduation G³ indicates that the rise at the heel or outside of the plate is to be three inches. It is also

10 understood that the amount of the rise is read with the zero of the graduation G³ at the outer edge of the member C' and with the three inches intersecting at the inner edge A² of the stock A.

15 When it is desired to cut jack rafters for a square roof then the segmental plate J is adjusted on the stock A until the numeral 8 for "Sqr. jack side cuts" on the graduation L coincides with the inner edge A² of the

20 stock A, as indicated in Fig. 4, and when the attachment and square are now placed in position on the rafter Q, as indicated in Fig. 3, then the cut Q' along the outer edge of the radial arm J' is the desired one for a

25 jack rafter. By a similar use the device may be adjusted to lay out the hip, that is, by adjusting the stock on the member C' of the square C until the stock coincides with the 17-inch mark instead of the 12-inch

30 mark, the adjustment on the member C² remaining the same at 8 inches. The arms G and J are now readjusted and the arm J set according to the divisions for "Sqr. hip and valley side cuts" on the graduation L. The

35 device is now ready for use in exactly the same way as when laying out common and jack rafters.

It is understood that by the arrangement described the attachment when once set and

40 fastened in place on the carpenter's ordinary square forms a templet for readily drawing the desired cuts without interference of one edge with another.

Having thus described my invention, I

45 claim as new and desire to secure by Letters Patent:

1. An attachment for squares, comprising a stock provided with clamping means for fastening the stock to a square, a graduated

straight arm adjustably held on the said 50 stock and provided with an angular foot adapted to rest on an edge of the square to hold the said arm at a right angle to the square, and a segmental graduated member formed at the end of a radial arm pivoted 55 at its free end intermediate the ends of the stock and adapted to be fastened thereon.

2. An attachment for squares, comprising a stock slotted to receive the square and provided with clamping means for adjustably 60 clamping the stock to the square, the stock having a longitudinal slot, at a point between its ends an arm associated with the stock and having a linear graduation and provided with a longitudinal slot, said arm 65 also having an angular foot at a point between its ends adapted to rest on an edge of a square to hold the arm at a right-angle to the square, and a clamping screw engaging the said stock and arm and extending 70 through the said longitudinal slots thereof.

3. An attachment for squares, comprising a stock provided with clamping means for clamping the stock to a square, said stock having a longitudinal slot at a point be- 75 tween its ends, an arm associated with the stock and having a linear graduation and provided with a longitudinal slot, said arm also having an angular foot adapted to rest on an edge of the square to hold the arm at 80 a right-angle to the square, a clamping screw engaging the said stock and arm and extending through the longitudinal slots thereof, a segmental arm carried by one end of a radial arm, the opposite end of which 85 radial arm is pivoted on the stock intermediate the ends of the latter, said segmental arm having a graduation representing cuts for rafters, and a clamping screw for fastening the segmental arm in adjusted 90 position on the stock.

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

LEONARD MARION HODGE.

Witnesses:

F. FLEMING,

ETHEL B. SMITH.