H. LLOYD.

RIVETING MACHINE.

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1,020,918.

Patented Mar. 19, 1912.

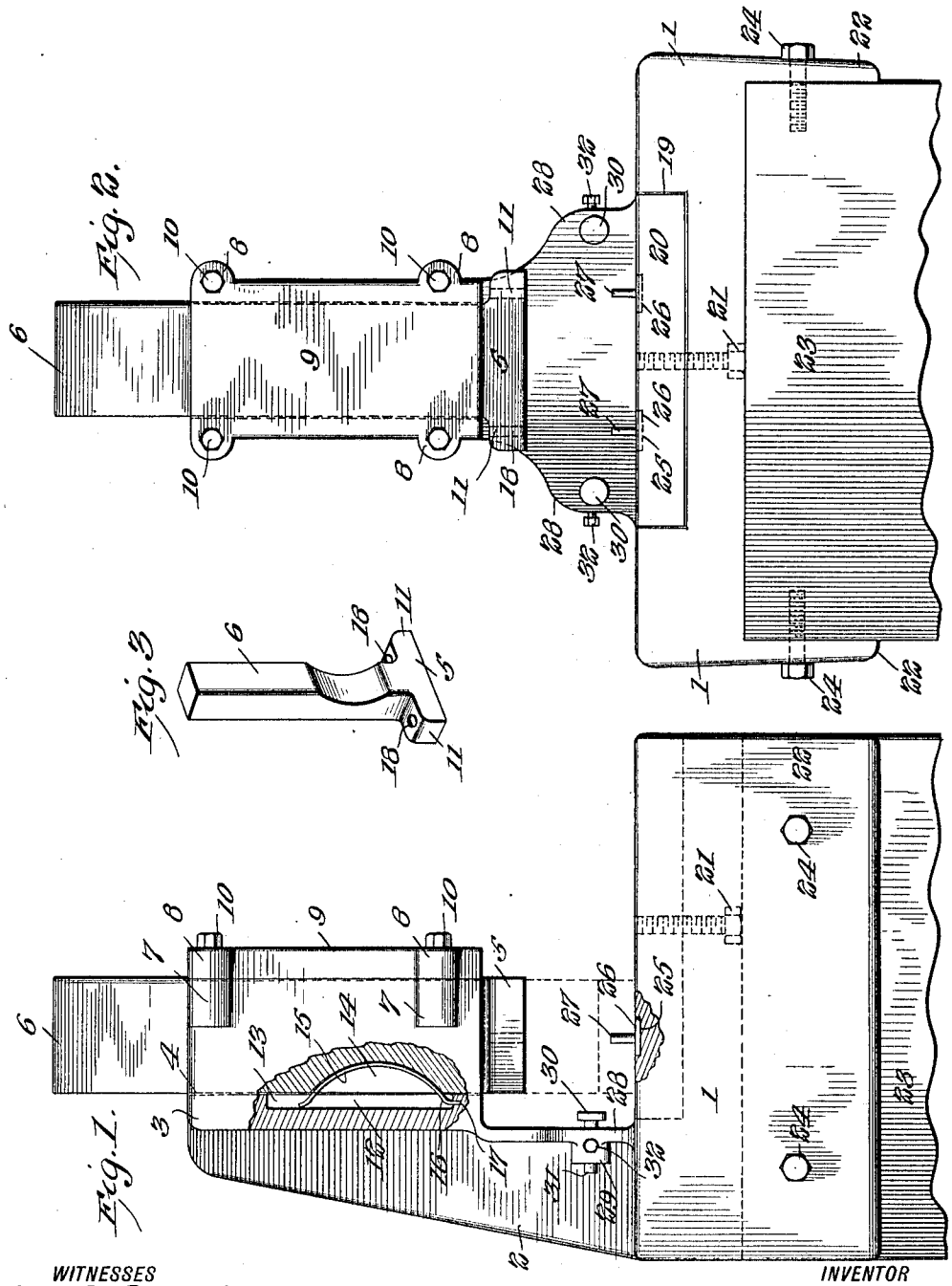

Fig. 1.

WITNESSES

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RIVETING-MACHINE.

1,020,918. Specification of Letters Patent. Patented Mar. 19, 1912.

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To all whom it may concern:

Be it known that I, HENRY LLOYD, a citizen of the United States, and a resident of Lexington, in the county of Fayette, State of Kentucky, have invented a new and useful Improvement in Riveting-Machines, of which the following is a specification.

My invention is an improvement in riveting machines, and has for its object the provision of a simple, easily operated device of the character specified for setting a plurality of rivets, and wherein the rivet is utilized to form the opening for receiving the same.

In the drawings: Figure 1 is a side view of the improvement, with parts thereof broken away; Fig. 2 is a front view; and Fig. 3 is a reduced perspective view of the plunger or hammer.

The present embodiment of the invention comprises a frame consisting of a base 1 provided at one side with a standard or upright 2. The upright is provided with an overhanging or lateral enlargement 3 having in its face a vertical slot or guideway 4. A plunger comprising a head 5 and a stem 6 is mounted for sliding movement in the slot or guideway, the stem 6 being reduced to engage therewith. The enlargement 3 is provided with lateral lugs 7 at its corners, and each lug is recessed and registers with a similar lug 8 on a cover or holding plate 9 seated over the slot or guideway. Cap screws 10 are passed through perforations in the lugs 8 and are threaded into the recesses of the lugs 7 to hold the plate 9 in place. The stem 6 fits the guideway closely, and the hammer or head extends on each side of the stem, as indicated at 11 in Fig. 3. The rear wall of the slot or guideway 4 is recessed, as indicated at 12, and the end walls 13 of the recess are perpendicular to the bottom thereof. The rear face of the stem 6 is grooved or recessed longitudinally at 14, the bottom of the recess being curved or arched. A plate spring 15 is arranged in the recesses, the said recesses registering when the plunger is elevated. One end 16 of the spring is seated in a notch 17 in the lower end wall of recess 12, and the arched body of the spring seats in the recess 14 when the plunger is raised. The arrangement is such that when the plunger is depressed the curved or arched bottom wall of the recess or groove 15 acts in the manner of a cam to force the spring toward the standard, thus straightening the spring. The recess 12 is of sufficient length to prevent this movement of the spring, and it will be evident that the spring will hold the plunger raised, but will yield to permit the said plunger to descend.

Each of the lateral extensions 11 of the plunger is provided with a vertical opening 18, and the upper face of the base 1 is recessed or grooved at 19 directly below the plunger, and from the front wall of the said base to the standard, to receive a die plate 20. The die plate is held in position by a screw 21 which is passed from the under face of the base through an opening and into a threaded opening in the plate. The base is provided at each of its sides with a depending flange 22 and the machine is held by a support 23. The upper end of the support fits between the flanges 22 and screws 24 are passed through the flanges and engage the support to hold the machine in place. The die plate is also provided with circular recesses 25 in its upper face, and in alinement and co-axial with the openings 18 of the plunger for receiving the head 26 of a rivet 27.

The standard 2 is provided with lateral flanges or wings 28 below the plunger, and each flange or wing is provided with a bearing 29. A gage comprising a head 30 and a stem 31 is provided for each bearing, and the stem is passed through the bearing and is held in adjusted position by a set-screw 32.

In operation, a rivet is placed as indicated, with the head in a recess 25 and with the stem of the rivet extending upwardly. The material to be riveted, as, for instance, a hoop, is placed with the ends overlapping on the rivet, that is, with the upper end of the rivet in engagement with that portion of the material through which it is desired to pass the same. The gages 30 are previously adjusted, so that the material is held in proper position with respect to the rivet, and secured in adjusted position by the set-screws. The plunger meanwhile occupies the position shown in full lines in Fig. 1. The plunger is now depressed by pushing down on the upper end of the stem with the hand until the plunger is in contact with the material on the rivet, as shown by dotted lines in Fig. 1. The end of the stem is now struck with a hammer or like instrument, and the stem of the rivet

is forced through the material, entering the opening 18. The two rivets required to hold the hoop are thus placed at one operation. The plunger is then raised until the spring slips into the groove of the plunger, and the hoop is moved outwardly, carrying the rivets until the heads rest on the outer end of the die plate. The stems of the rivets may now be upset by a hammer or the like, and the machine is ready for the next hoop. The machine is especially adapted for work of the above mentioned kind, since all of the rivets are placed at once.

I claim:

In a riveting machine, a frame comprising a base and a standard, a die on the base having on its upper face a pair of spaced depressions for receiving the heads of a pair of rivets, a plunger slidable on the standard toward and from the die and having openings coaxial with the depressions of the die for receiving the stems of the rivets, laterally movable gages on the standard for properly positioning the article with respect to the depressions and the openings, and means for securing the gages in adjusted position.

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Witnesses:

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."