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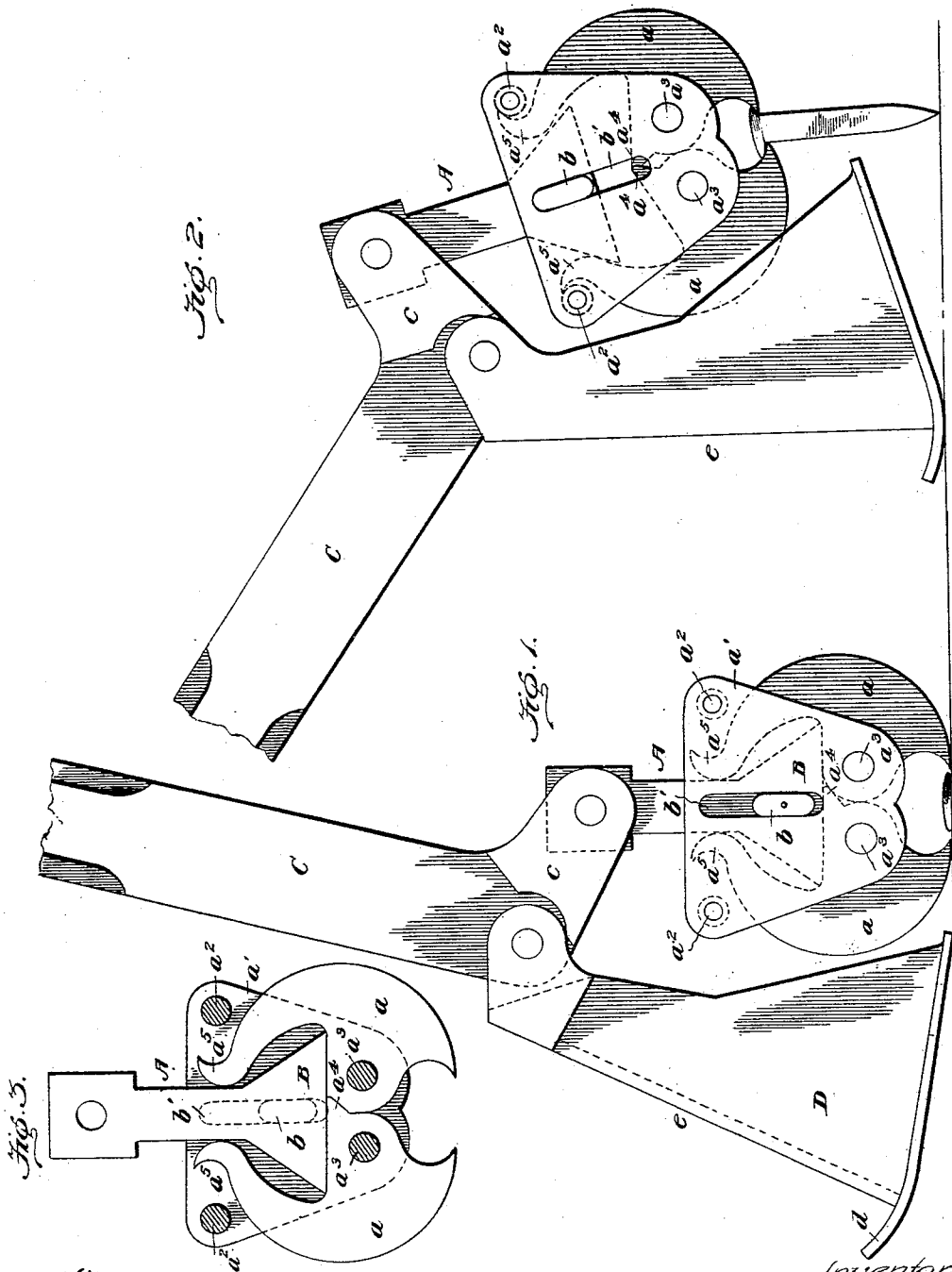
J. IVERSON & A. REH.

SPIKE OR NAIL EXTRACTOR.

(Application filed Aug. 19, 1898.)

(No Model.)



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UNITED STATES PATENT OFFICE.

JOACHIM IVERSON AND ADAM REH, OF WEST SUPERIOR, WISCONSIN.

SPIKE OR NAIL EXTRACTOR.

SPECIFICATION forming part of Letters Patent No. 616,618, dated December 27, 1898.

Application filed August 19, 1898. Serial No. 689,003. (No model.)

To all whom it may concern:

Be it known that we, JOACHIM IVERSON and ADAM REH, citizens of the United States, residing at West Superior, in the county of Douglas and State of Wisconsin, have invented certain new and useful Improvements in Spike or Nail Extractors; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

Our invention relates to an improved spike or nail extractor.

It has for its object, among other things, to promote effectiveness and to extract the nail or spike with a continuous pull and with facility and expedition.

It consists principally of a grapple composed of suitably-pivoted jaws or claws arranged in a carrier, preferably lateral plates, a wedge also arranged in said carrier and adapted to act upon the arms or rear end terminals of said jaws or claws, said wedge having pivotal or movable guides playing in slots in said lateral plates or carrier, a tilting or rocking "foot" or standard, and a lever fulcrumed in said foot or standard and angularly connected to said wedge.

While as to some details of construction the invention may be varied without departure from the spirit thereof, its scope will in general be compassed by the present description and accompanying drawings.

In the drawings, Figure 1 is a side elevation of the invention in its initial position. Fig. 2 is a similar view thereof, showing it as though in operation grasping and extracting a spike or nail. Fig. 3 is a detailed view disclosing more fully the grapple.

In carrying out our invention we provide a grapple A, composed of opposite jaws or claws $a\ a$, adapted to take under the head or flange of a spike or nail at their engaging ends and arranged in a carrier, preferably two lateral plates a', held together at their upper corners by suitable bolts or pins a^2, and having the bolts or pins a^3, connecting them together at their lower corners, serving as pivots for said jaws or claws. These jaws or claws are provided, respectively, just above their pivots with inwardly-extending projections or lugs a^4, projecting past or by one another, the function or purpose of which will appear hereinafter. The upper end terminals or arms of the jaws a are recurved, as at a^5, to engage or receive the intermediary portions of the bolts or pins a^2 of the plates or carrier a' to limit the engaging or lower ends of the jaws to the minimum distance of separation.

B is a wedge also arranged in the carrier, between the lateral plates $a'\ a'$, and adapted to engage the arms of the jaws or claws a, its inclined faces being presented toward said arms upon their inner sides, as shown, so, as is apparent, they will spread said arms as the wedge is lifted or moved upward and cause the lower engaging ends or edges of the jaws to approach each other, and consequently effect the clasping or clamping of an interposed article—as, for instance, the head of a spike or nail—below its flange.

The base of the wedge will engage the interpassing projections or lugs a^4 when the wedge is lowered or it is desired to release the hold of the jaws upon the gripped article or spike, the engaging edges or ends of the jaws thus being automatically spread or forced apart.

The wedge B is guided and to a certain extent limited in its movement in the carrier a by means of guides b, one pivoted to each side of said wedge and fitted or moving in elongated slots b' in the lateral plates of said carrier.

C is a hand-lever, and D is a rocking or tilting foot or standard upon which said lever is suitably pivoted or fulcrumed, said lever having its short angularly-arranged arm c adapted to receive and pivoted to the upper end of an extension of the wedge B, whereby it will be seen that the grapple in the act of withdrawing or extracting the spike or nail will be permitted to exert its pull or force thereon in a perpendicular or vertical direction while the lever is describing an arcuate movement as required for convenience and facility in actuating the same, as is obvious. Furthermore, by reason of this arrangement and articulation of parts the grapple, after having exerted the initial pull upon the nail or spike, is adapted to be brought without taking a new bite upon the nail or spike toward the foot or standard, and the extracting operation thus effected continuously, said

operation being completed by rocking or tilting said foot or standard.

To permit the foot or standard D to have the required tilting or rocking movement, as aforesaid, it is provided with an upward-curved runner-like base *d*, and to allow the carrier *a* or its lateral plates to bear against said standard as the grapple, with the spike or nail being extracted, is pulled or moved toward the standard the latter is suitably inclined, as at *e*, along the front edge of its lateral portions, as will be readily appreciated and as disclosed in Fig. 2.

Having thus fully described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. In a spike or nail extractor a grapple comprising the lateral plates, the jaws pivoted therebetween, projections extending inwardly above the pivots of the jaws and in the path of the wedge, upwardly-extending free arms, a wedge itself adapted to force said arms apart and to press said projections downward to alternately, and positively, close and open the jaws, respectively, and guides for said wedge, substantially as described.

2. The combination of the grapple comprising the carrier or lateral plates provided with elongated slots, the jaws or claws pivoted between said plates and having inward-extending projections, and the wedge adapted to actuate said jaws or claws and to bear upon said projections and having pivoted guides moving in said slots of said lateral plates, the standard or foot, and the hand-lever fulcrumed upon said standard and having an angularly-arranged arm connected to said wedge or an extension thereof, substantially as set forth.

In testimony whereof we affix our signatures in presence of two witnesses.

JOACHIM IVERSON.
ADAM REH.

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