

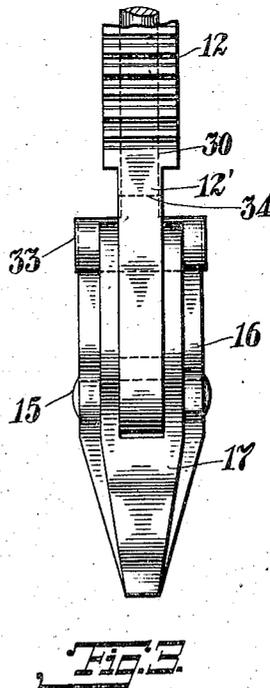
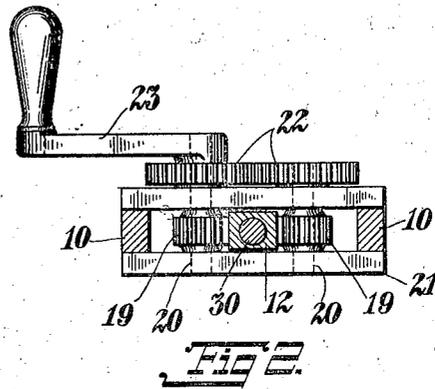
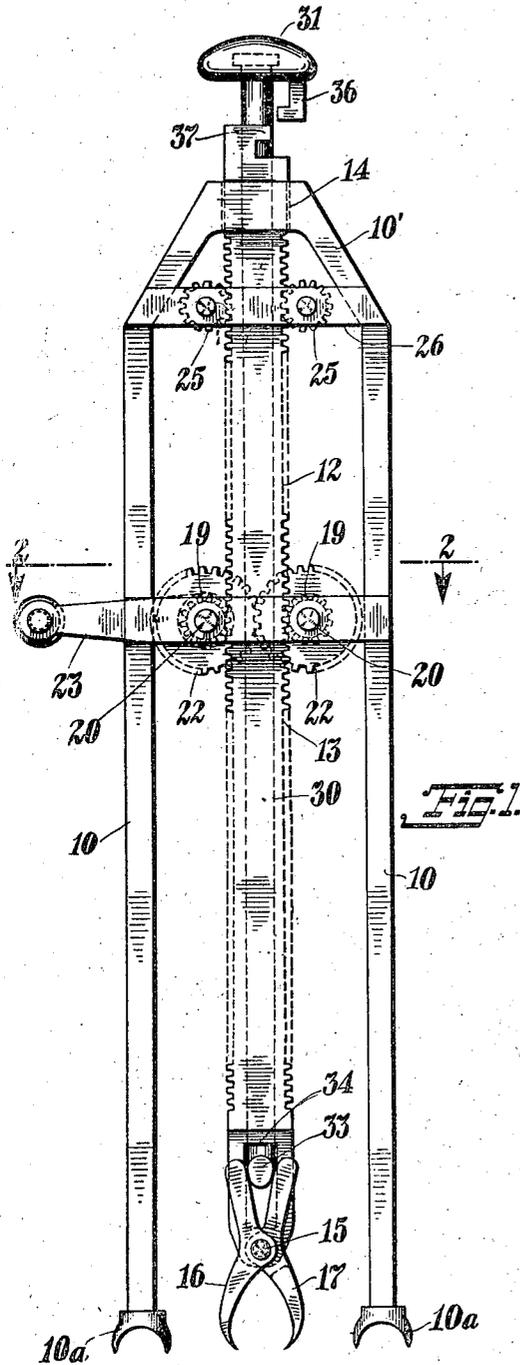
Nov. 18, 1924.

1,516,155

E. SANTARELLI

NAIL PULLING DEVICE

Filed July 17, 1924



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UNITED STATES PATENT OFFICE.

EMIDIO SANTARELLI, OF MONTREAL, QUEBEC, CANADA.

NAIL-PULLING DEVICE.

Application filed July 17, 1924. Serial No. 726,587.

To all whom it may concern:

Be it known that I, EMIDIO SANTARELLI, subject of Italy, residing at Montreal, in the Province of Quebec and Dominion of Canada, have invented certain new and useful Improvements in Nail-Pulling Devices, of which the following is a specification.

This invention relates to a nail pulling device and it has for an object to provide a simple and inexpensive device for use in pulling nails from boards, or woodwork generally, a further object of the invention being to provide a device of this sort which will work in places where devices now in use cannot be manipulated.

For further comprehension of the invention, and of the objects and advantages thereof, reference will be had to the following description and accompanying drawing, and to the appended claim in which the various novel features of the invention are more particularly set forth.

Fig. 1 of the drawing is a side view showing my improved nail puller.

Fig. 2 is a transverse sectional view taken on the line 2—2 of Fig. 1.

Fig. 3 is a fragmentary elevational view of the nail gripping device, this view being taken at right angles to Fig. 1.

As here embodied my improved nail pulling device comprises a frame consisting of the parallel legs 10 which are united at their upper ends by the arched member 10' and which are spaced laterally only a short distance from one another, and are preferably provided with pronged feet 10^a on their lower ends. Extending longitudinally of the frame, midway between the legs, is a bar 12 which is formed with rack teeth 13 on the two faces thereof which are turned toward the legs 10. This rack bar extends freely through a suitable guide aperture 14 in the frame member 10'. Pivoted as at 15 to the lower end of this bar are the co-operating gripping tongs 16 and 17 which have curved lower ends which are adapted to engage under the head of the nail, and whose upper ends are bifurcated as shown, and straddle the lower end of the bar 12, which lower end may be diminished in thickness as shown at 12'. The bar 12 is adapted to be given a longitudinal movement to pull the nail by means of the gear pinions 19 which engage the teeth 13 on opposite sides thereof and which are fixed on spindles 20 which are mounted in the cross

bars 21 which extend between, and are rigidly fastened to, the legs 10. Fixed to the spindles 20 are larger gears 22 which mesh with one another, one of these gears having a handle 23 fixed thereto for turning purposes. Adjacent the upper end of the frame I may provide the idler guide pinions 25 which engage the opposite sides of the bar 12 and which are suitably supported by a cross element 26.

To cause the tips of the tongs to be forced under the head of the nail to be pulled, a rod 30 extends freely through a longitudinal boring in the bar and has an enlarged head 31 on its upper end which projects beyond the frame member 10'. Fixed upon the lower end of this rod is a crosspiece 33 which projects between the upper ends of the respective tongs 16 and 17, the lower end of the boring terminating in a slot 34 in the narrowed portion 12' of the bar, through which slot the crosspiece 33 projects. The tongs are constructed to have the contiguous faces of the top portions thereof, inclined downward toward one another when their tips are spaced slightly apart to straddle a nail head, and when the rod 30 is hammered or forced downward the crosspiece 33 spreads these top portions apart and the tips of the tongs are caused to approach one another and thereby engage under the head of the nail. The head 31 may be rotatively mounted on the rod 30 and may have a hooked member 37 depending therefrom which may be engaged under a complementary member 36 on the upper end of the bar 12 to retain the rod 30 in its lowered position relatively to the bar, while the latter is being pulled upward by rotating the handle 33.

While I have illustrated and described a preferred embodiment of my invention it is to be understood that I do not limit myself to the precise construction herein shown, and that various changes and modifications might be made therein without departing from the spirit and scope of the invention as defined in claim.

Having thus described my invention, what I claim as new and desire to protect by Letters Patent of the United States is as follows:—

A nail puller comprising a frame, a nail gripping bar, a pair of nail gripping tongs pivoted to the lower end of said bar, and means for forcing the gripping ends

of said tongs toward one another, comprising a rod extending longitudinally through the bar and having a crosspiece on its lower end projecting between the upper ends of the said prongs, a head rotatably mounted on the upper end of said rod, and a hook depending from said head and adapted to engage a complementary part on said bar to hold the rod in position with the crosspiece on lower end thereof retaining the tongs in gripping relation to the head of the nail. 10

In testimony whereof I have affixed my signature.

EMIDIO SANTARELLI.