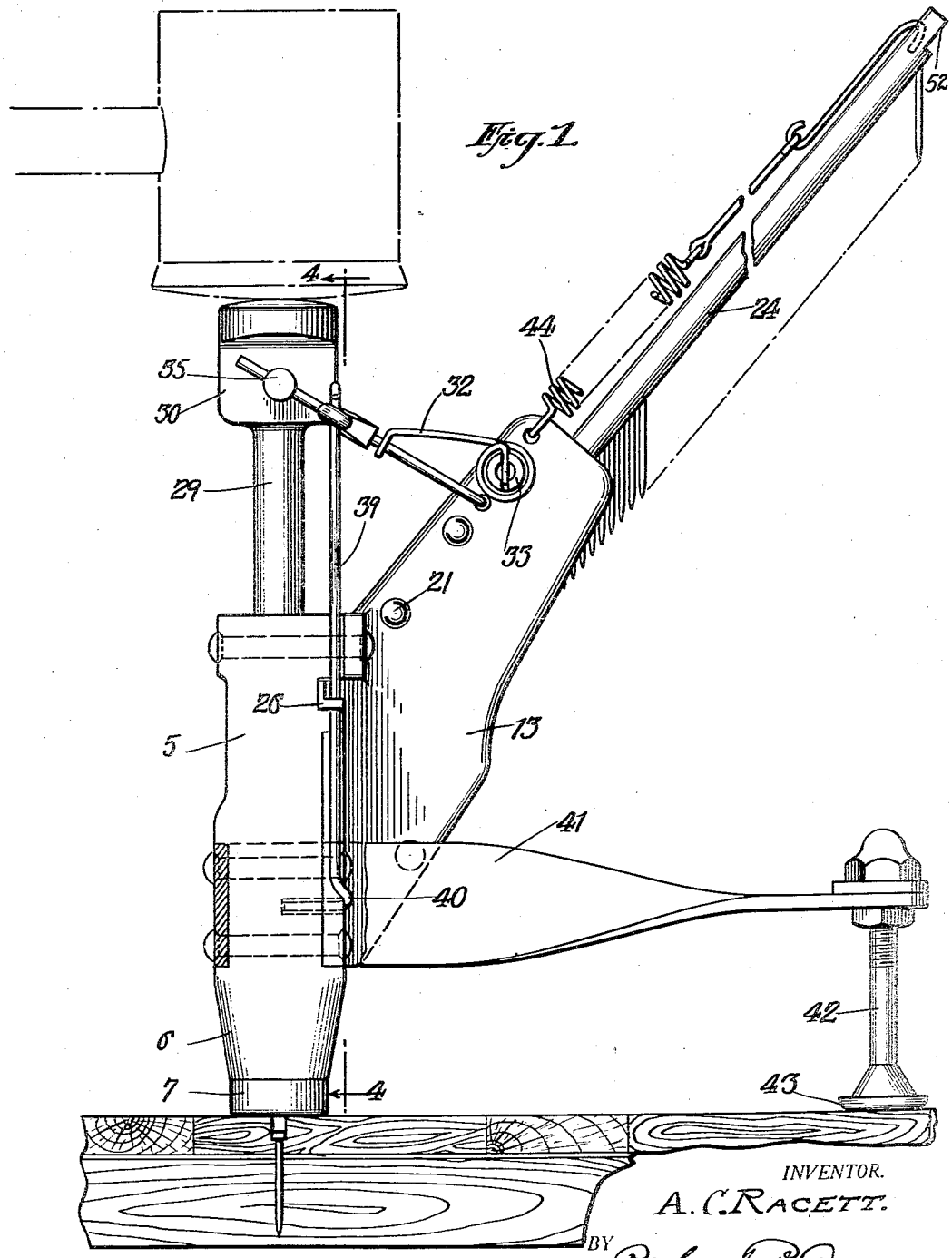
Oct. 21, 1924. 1,512,134

A. C. RACETT

NAILING MACHINE

Filed Oct. 23, 1922 3 Sheets-Sheet 1



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Filed Oct. 23, 1922 3 Sheets-Sheet 2

Fig. 2.

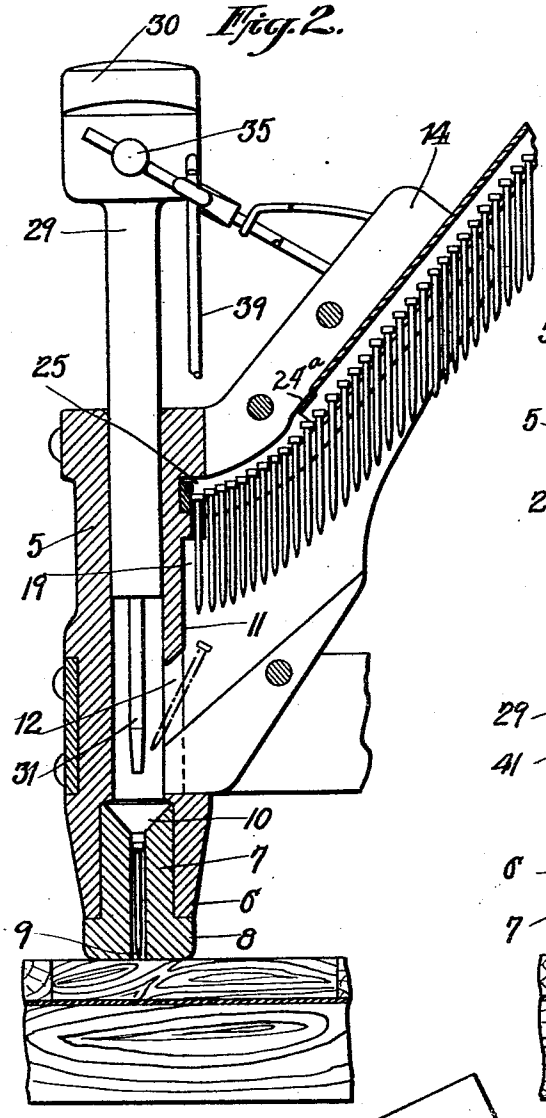


Fig. 3.

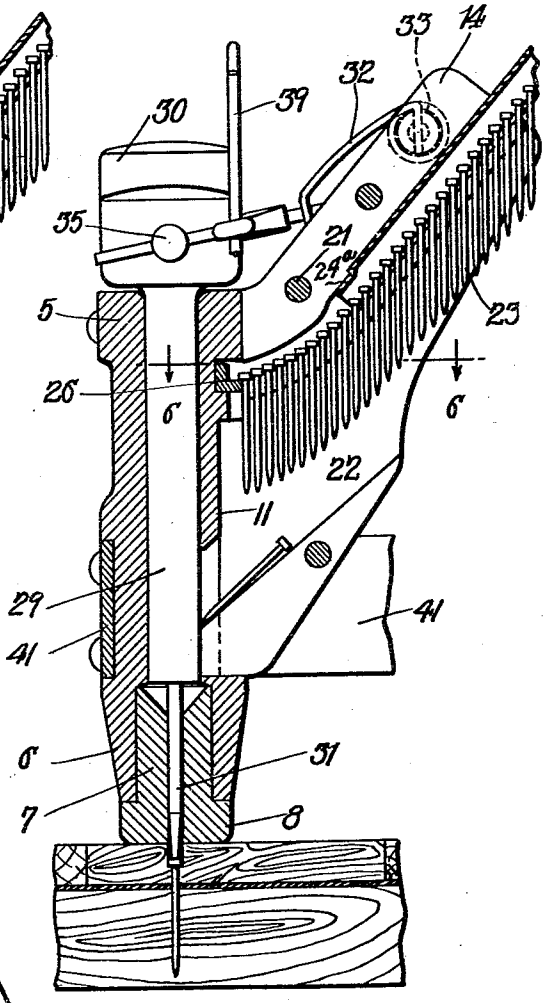


Fig. 8.

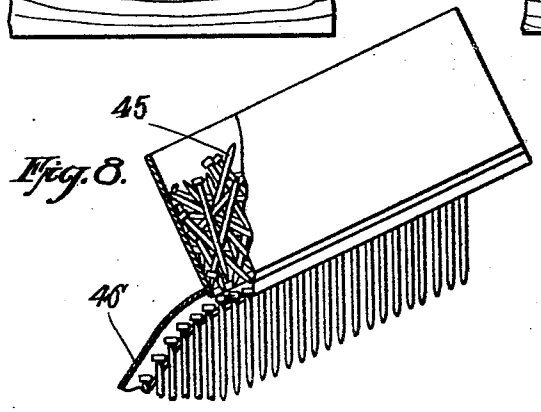
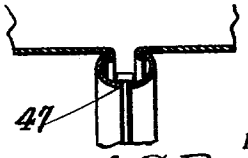


Fig. 9.



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Filed Oct. 23, 1922 3 Sheets-Sheet 3

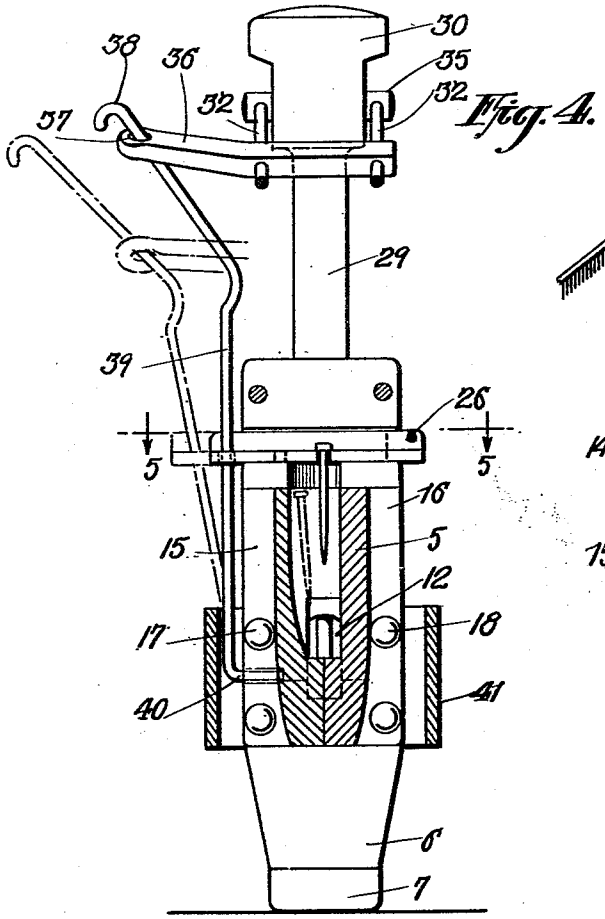


Fig. 4.

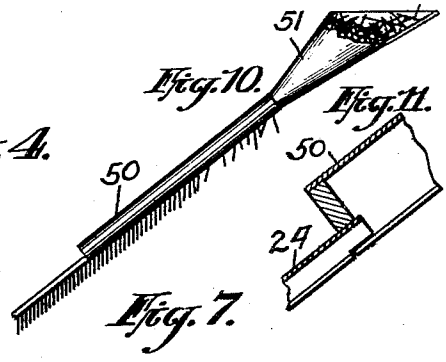
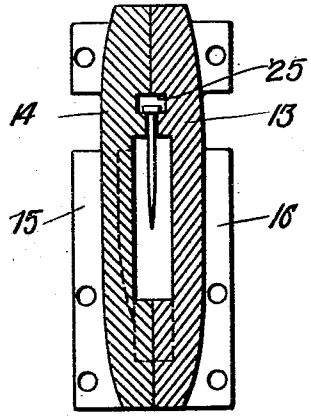


Fig. 10. Fig. 11.

Fig. 7.



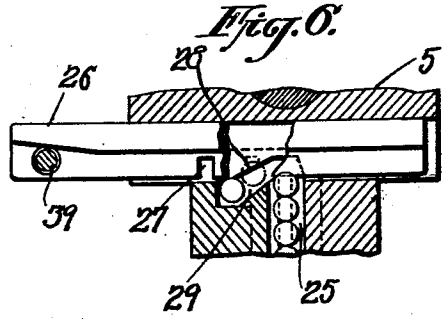


Fig. 6.

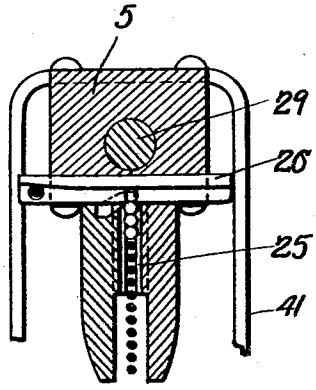


Fig. 5.

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Patented Oct. 21, 1924.

1,512,134

UNITED STATES PATENT OFFICE.

ARCHILL C. RACETT, OF BROOKLYN, NEW YORK.

NAILING MACHINE.

Application filed October 23, 1922. Serial No. 596,405.

To all whom it may concern:

Be it known that I, ARCHILL C. RACETT, a citizen of the United States, residing at Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Nailing Machines, of which the following is a specification.

This invention relates to nailing machines or devices and more particularly to a novel and improved automatic nail feeding and driving mechanism wherein a continuous nail driving operation may be effected with rapidity and skill and with absolute accuracy as is required in the laying of parquet floors.

The primary object of my invention is the provision of an automatic nail feeding mechanism in combination with a driver or piston so arranged as to drive the nail with accuracy and precision including a novel and improved feed and guide for the nails as the same are lodged in position to be struck by the piston.

Another and equally important object of my invention is the construction of an automatic nail feeding and driving device of the character above specified wherein the parts are extremely simple in construction, easily assembled, highly efficient in operation and use, practical, durable, permitting of extreme accuracy in parquet floor laying and otherwise so constructed at a minimum cost whereby its commercial possibilities are greatly increased.

I accomplish the above objects and others which will become more apparent as the description proceeds and when taken in connection with the accompanying drawings, showing a preferred embodiment of my invention, and wherein:

Figure 1 is a side view of the device.

Figure 2 is a vertical section showing the feed guide and its relation with the piston.

Figure 3 is a similar view to that shown by Figure 2 illustrating the driving operation.

Figure 4 is a front view, partly in section.

Figure 5 is a view taken substantially on the line 5—5 of Figure 4.

Figure 6 is a further section taken substantially on the line 6—6 of Figure 3.

Figure 7 is a view in cross section of the guide block.

Figures 8 and 9 are details of a self feeder or loader.

Figures 10 and 11 are detailed views of a modified form of nail feeder or loader.

Referring now to the drawings wherein like reference characters designate corresponding parts throughout the several views, 5 designates a cylinder or casting, preferably of metal, bored internally and tapering at its lower end 6. A bushing 7 having a shoulder indicated by numeral 8 fits within the bottom of the casting 5, said bushing having a vertical aperture 9 extending therethrough and a bevelled head 10 in the top thereof to direct and guide the nails in position just before they are struck by the hammer mechanism, subsequently to be referred to. The bushing above referred to is preferably replaceable and may be variously constructed to receive different sized nails as may be required.

The rear wall 11 of the casting 5 is provided with a substantially rectangular slot 12 through which the nails are guided to the bushing and in position to be engaged by the hammer.

Secured to the rear of the casting 5, I have provided a guide consisting of a pair of complementary plates 13, 14 provided with vertical flanges 15, 16, secured by bolts 17, 18, or other fastening elements to the rear undercut portion 19 of the casting 5. As clearly shown by Figures 1, 2 and 3 of the drawings, the said plates 13, 14 extend rearwardly and upwardly at an angle of substantially 60° from the vertical. The plates 13 and 14 are also secured to each other by suitable fastening elements 21 and are undercut on their inner faces so as to provide a chute or guide 22 for the passage of the nails 23 from the feed tube 24 subsequently to be referred to. The respective plates are also provided with grooves 25 to receive the heads of the nails which slide downwardly from the feed tube 24 positioned in the upper end of the respective plates as clearly shown by Figure 1 of the drawings. The lower end of the feed tube 24 is provided with a depressed portion

24ª which fits into a groove and consequently prevents the tube from turning and thereby permits of the proper feeding of the nails 23 in the manner subsequently to be referred to.

In the rear side of the casting 5 and above the undercut portion 19, I have provided a transverse groove or slot 25 in which a feed slide 26 is adapted to operate, said slide being L-shaped in cross section and provided with a slot 27 substantially intermediate the ends thereof. The corresponding front edges of the plates 14 and 15 are grooved to form a slot 28 which registers with the slot 25 for directing the nails to the feed slide 26. The feed slide 26 is also provided with a cam surface 28 to engage the nails as the same are fed to the slide and during the transverse movement thereof, the nails may fall through the vertical recess 29 down to the feed slide or chute 22 and then into the bushing.

Within the casting or cylinder 5, I have provided a piston or plunger 29 having a striking head 30 at the upper end thereof and a spindle at the lower end for engaging the head of the nails into the bushing 7. A coil spring 32 connected to a stud 33 on each of the plates 13, 14 extends through a pin 35 transversely of the head 30 and normally maintains the plunger in its raised or elevated position. A link or bent bar 36 retained by the springs 32 is provided with an aperture 37 in the end thereof for connection with the hooked end 38 of the feed slide operating lever 39 which extends vertically through an aperture in one end of the feed slide, the lower bent end 40 of the operating lever 39 being secured in a slot in the side of the casting. Since the upper end of the operating lever is bent outwardly, it will be readily recognized as the piston descends when the head 30 is struck by the mallet or hammer that a reciprocating motion is imparted to the feed slide 26 so that in each operation a nail will be fed through the vertical slot 29 to the chute 22 and consequently to the bushing 7 above referred to. A flat metallic strap 41 is secured in any well known manner to the casting just above the tapered lower end thereof, said strap being provided with a pair of inverted threaded bolts 42 or other level retaining and supporting members having bevelled heads 43 thereon so that the device may be gripped by the hand and slid along the floor as necessity may require during the nailing operation. It should be noted that the feed tube 24 is provided with a slot in the bottom thereof throughout its entire length so that the nails may be fed properly to the guide and feed slide at each successive reciprocation or operation of the piston, the said feed tube being preferably held secure in position by a coil spring 44 connected to the attached plates 13 and 14. While various forms of nail feeding devices or mechanisms may be utilized in connection with my device, a preferred form of feeding mechanism consists of a magazine 45 formed with a chute 46, said chute having a slot 47 in the bottom thereof corresponding with the slot in the bottom of the feed tube 24 so that the nails may be automatically fed to the feed tube 24 during the operation of the device. As a modified form of feeding device I have illustrated in Figures 10 and 11 a simple yet highly efficient construction consisting of a tube 50 provided with a slot in the bottom thereof, the upper end of said tube being provided with a funnel shaped mouth 51 into which the nails are deposited and when shaken, fall downwardly into the tube 50 so that the heads of the nails are held in the groove. The upper end of the tube 24 is provided with a recess 52 which fits into the lower end of the tube 50 so that the nails may pass downwardly by gravity and fed in the manner above illustrated and described.

While I have illustrated and described my invention with some degree of particularity, I realize that in practice various alterations therein may be made. I therefore reserve the right and privilege of changing the form of the details of construction or otherwise altering the arrangement of the correlated parts without departing from the spirit of the invention or the scope of the appended claims.

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

1. A nailing machine of the class described comprising a cylinder having a driving element operable therein, a grooved guide connected to one face of the cylinder, a feed tube attached to the upper end of the guide for successively feeding nails to the guide and cylinder, resilient members connecting the upper end of the driving element and the guide, a transversely operable feed slide disposed at the lower end of the guide and on one face of the cylinder, an operating lever connected to said feed slide and the resilient members, said feed slide having a notch therein to permit the nails to drop successively to the interior of the cylinder and a nail positioning element in the lower end of the cylinder.

2. A nailing machine of the class described comprising a cylinder having a driving element operable therein, said cylinder having a slot in the rear face thereof communicating with the interior thereof, a grooved guide extending into the said slot, a feed tube secured in the upper end of the guide for successively delivering nails thereto, spring controlled means connecting the upper end of the driving element with the

guide, a transversely operable feed slide positioned on one face of the cylinder and at the lower end of the groove of the said guide, means connecting the feed slide with the spring controlled means to reciprocate the same upon each operation of the driving element, said slide having a notch and a cam surface for directing the nails singly into the cylinder, and a bushing in the lower end of the cylinder for positioning the nails beneath the lower extremity of the driving element.

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

ARCHILL C. RACETT. [L. S.]

Witnesses:

MARY E. VEEN,

CHARLES H. VEEN.