

J. F. DAVEY.
PEGGING MACHINE.
APPLICATION FILED MAY 28, 1900.

973,009.

Patented Oct. 18, 1910.

3 SHEETS—SHEET 1.

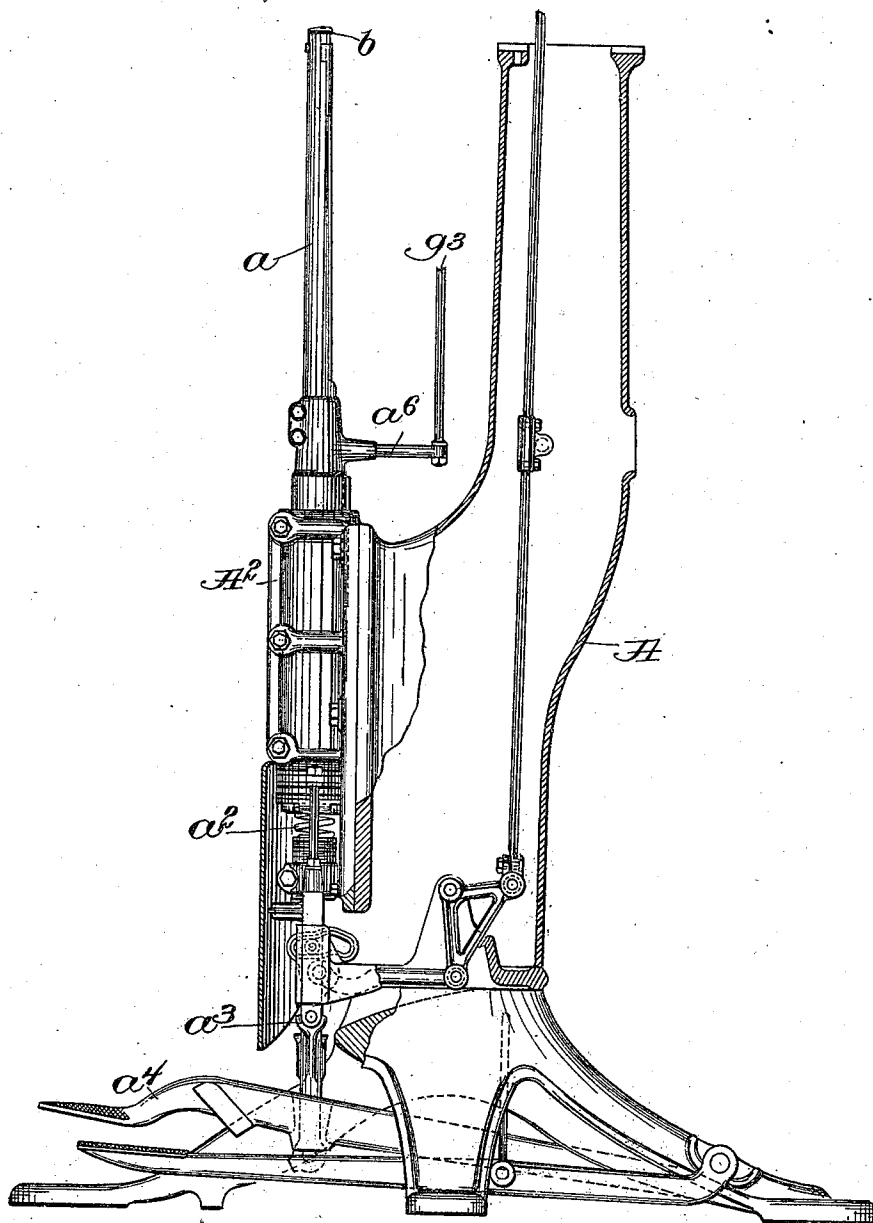


FIG. 1.

WITNESSES.
Nancy P. Ford
Joseph Maloney

INVENTOR
John F. Davey.
by J. P. and J. F. Swann
Att'ys.

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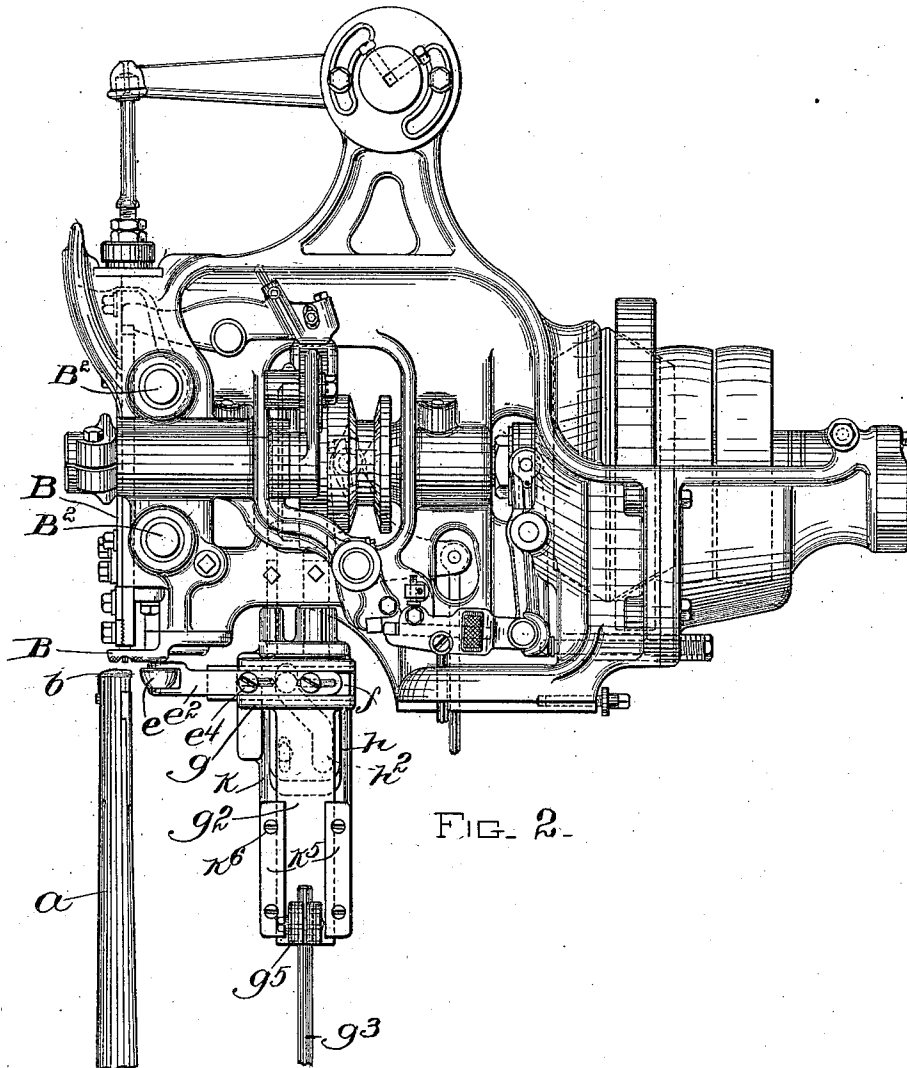


FIG. 2.

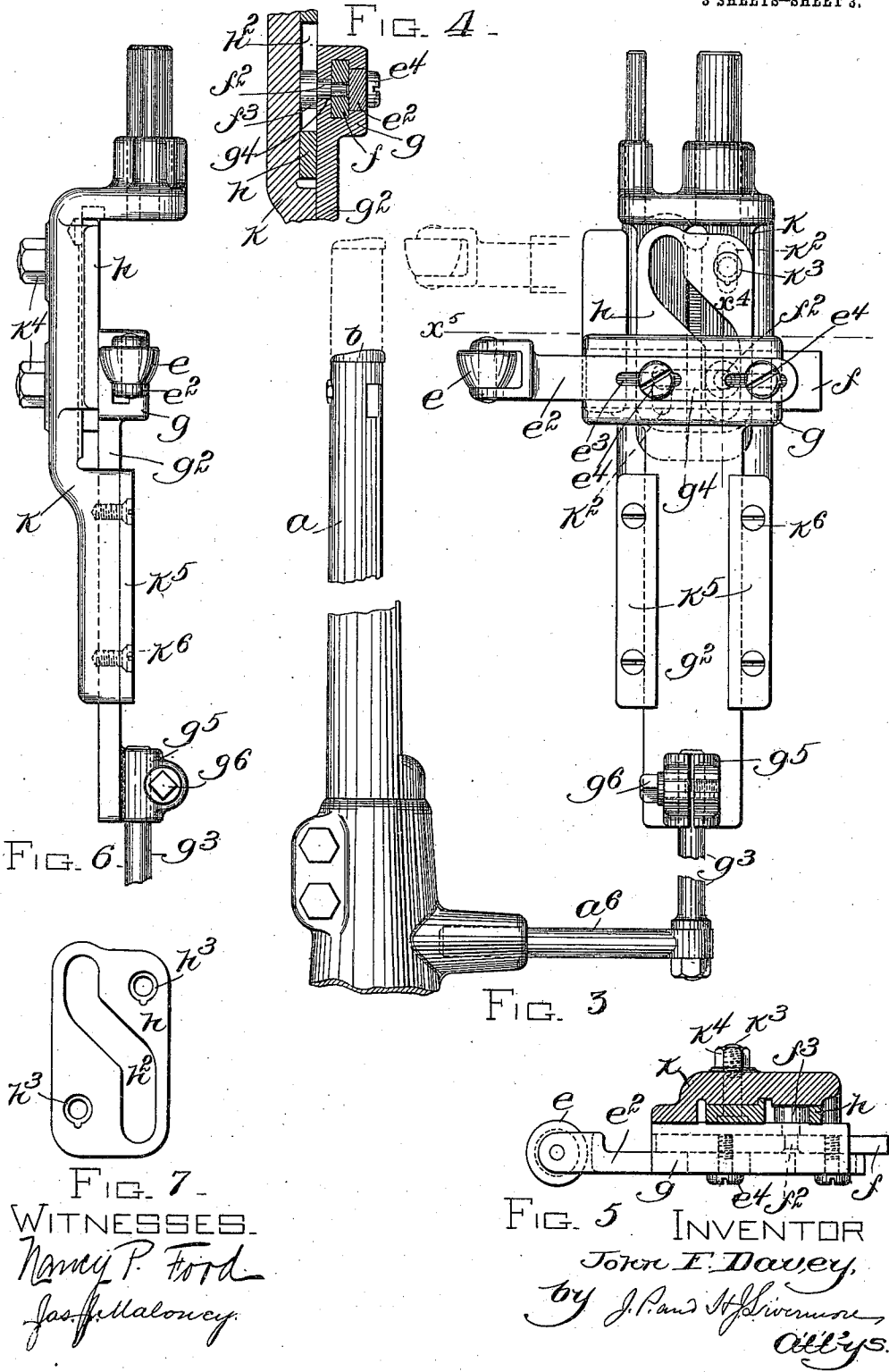
WITNESSES:
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Jaff Maloney.

INVENTOR
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by J. P. and J. F. Swann
attys.

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Patented Oct. 18, 1910.

3 SHEETS-SHEET 3.



UNITED STATES PATENT OFFICE.

JOHN F. DAVEY, OF BEVERLY, MASSACHUSETTS, ASSIGNOR TO UNITED SHOE MACHINERY COMPANY, OF PATERSON, NEW JERSEY, AND BOSTON, MASSACHUSETTS, A CORPORATION OF NEW JERSEY.

PEGGING-MACHINE.

973,009.

Specification of Letters Patent.

Patented Oct. 18, 1910.

Application filed May 28, 1900. Serial No. 18,239.

To all whom it may concern:

Be it known that I, JOHN F. DAVEY, of Beverly, county of Essex, and State of Massachusetts, have invented an Improvement in Pegging-Machines, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

10 The present invention relates to a pegging machine for pegging boots and shoes and is especially designed for pegging the heel portions only, it being practicable to simplify the construction and arrangement of the machine when used for this purpose only, since
15 the horn can be substantially straight and non-rotatable as the tip of the horn does not have to be inserted in the shoe under the forward part of the upper. Furthermore, it
20 is very desirable to fasten heel seats, that is, attach the heel portion of the soles, with wooden pegs as this facilitates the subsequent operation of fastening the heels themselves and prevents the liability of accidental injury due to the fact that the nails
25 which fasten the heels may be diverted and turned back or driven out through the heel by contact with metallic fastenings, if such metallic fastenings have been used.

30 In conjunction with this machine a gage of novel construction and arrangement may be used, the invention relating mainly to said gage which is arranged in such a way as to greatly facilitate the insertion of the work
35 in the machine, since it automatically positions the work without the exercise of judgment on the part of the operator. In this machine, as in others heretofore constructed, the work is held between the horn and the
40 nose plate of the machine, the horn being spring pressed upwardly; and to insert the shoe the horn is depressed to leave room to place the shoe upon the same. The gage is so arranged that it travels vertically with
45 the horn, and is also capable of a lateral movement independent of the horn, said lateral movement taking place in response to the downward movement of the horn, so that the gage is carried back out of the way of
50 the shoe which can thus be readily placed upon the horn. When, however, the horn is released and moves upward into its operative position, the gage is automatically re-

stored to its normal position, carrying the shoe to the proper position with relation to the horn, so that it is necessary only to place the shoe over the horn and then release the latter, the parts at once coming to the proper position for the operation.

A further feature of the invention consists in the arrangement of the gage whereby the said gage is caused to cooperate with the side of the shoe upper instead of with the edge of the shoe sole, so that the shoe can be properly positioned for pegging prior to the final trimming of the sole.

Figure 1 is an elevation partly in section of the lower portion of the machine showing the horn and the actuator for the cutting devices; Fig. 2 is an elevation of the upper part of the machine showing the upper portion of the horn and the gage for the material; Fig. 3 is an elevation of the horn and gage mechanism, the two positions of the gage being shown respectively in full and dotted lines; Fig. 4 a vertical section on the line x^4 of Fig. 3; Fig. 5 a horizontal section on the line x^5 of Fig. 3; Fig. 6 a front elevation of the gage alone; and Fig. 7 a plan view of the gage actuating cam detached.

The horn a is herein shown as a substantially straight vertical member non-rotatably mounted in the horn support A^2 , which support is suitably connected with the frame A of the machine, the said horn being normally pressed upward by means of a spring a^2 so as to hold the work supported thereon between the horn top or cover b and the nose plate B at the forward part of the head of the machine.

The awl, peg driving mechanism, etc., may be of any suitable or usual construction, and for purposes of illustration the head of the machine containing the said parts is herein shown as substantially like that shown and described in Patent No. 581,066, dated Apr. 20, '97, Davey and Ladd. The said head is supported upon the frame A and adjustable with relation thereto substantially as shown in the said patent, these parts requiring no further description, since they form no part of the present invention.

In the type of machine to which this invention relates, the work is fed between successive peg-driving operations, and, in the

construction chosen for illustration, the feed is produced by a lateral movement of the awl, the said awl, as well as the driver, being arranged to reciprocate in a laterally movable carriage B' which has sliding supports B² mounted in bearings in the stationary head of the machine, the lateral feed movement of the carriage taking place while the awl is in the work.

To insert or remove the work the horn *a* is capable of being depressed with relation to the nose plate B and is connected for this purpose with a horn depressing yoke *a*³ connected with a suitable treadle *a*⁴.

It has been the usual practice heretofore in operating pegging machines, nailing machines, and the like to position the shoes to be operated on by means of a gage which co-operates with the edge of the sole; and in cases where the pegs or other fastening devices have been driven along the heel portion of the shoe it has been necessary to trim the said heel portion prior to the pegging operation so as to position the pegs properly with relation to the upper, since it is customary in unfinished shoes to leave the heel portion untrimmed until the heels are fastened on. This trimming operation is an extra operation, rendered necessary to perform the pegging operation, since in any event the shoe has to be finally trimmed after the heel is in place. To obviate the necessity of this additional operation, the gage in accordance with the present invention is in substantially the same plane as the top of the work support, or slightly below the same so as to coöperate directly with the upper of the shoe it therefore being immaterial how far or how irregularly the sole projects beyond the said upper prior to the pegging operation. To this end the gage proper comprises the roll *e* supported in substantially the same plane as that of the work support, so as to lie just below the upper surface of the shoe sole when the shoe is inverted on the support, so that it will engage the upper at a point adjacent to the said sole where the said upper occupies substantially the same position relative to the line of fastening devices at all points. By thus positioning the gage it is obvious that the line of fastening devices will be regular throughout, and cannot vary with the variation in the angle of the upper after it leaves the edge of the sole.

Since the gage is intended to coöperate with the upper instead of with the sole, it is obvious that it must be moved out of the way when placing the shoe on the horn, since otherwise the gage would overlies the projecting sole and prevent the upward movement of the shoe with the horn when the latter is released prior to the operation of the machine. For this reason the gage, in accordance with the invention, is ar-

ranged to move laterally in response to the downward movement of the horn so as to leave room for the insertion of the shoe. It is desirable also that the gage should move downward with the horn so as to continually have the same vertical position with relation thereto and move back to its normal position as the horn rises, for the reason that when the shoe is placed upon the horn and the horn released, the gage itself will throw the shoe into the proper position, it being therefore unnecessary for the operator to carefully position the shoe with relation to the gage before starting the machine. As herein shown, the gage is mounted on a slide *f* which is laterally movable in a guide *g* formed at the top of a vertically movable slide *g*² which is connected by means of a rod *g*³ or otherwise with the horn, the said rod being shown as connected with a lateral arm *a*⁶ projecting rearwardly from the horn. To produce a longitudinal movement of the slide *f* and consequent lateral movement of the gage *e* with relation to the horn, the said slide is shown as arranged to coöperate with a stationary cam surface shown as the walls of a slot *h*² cut in a plate *h* which is stationary with relation to the head of the machine, the said slot being curved or inclined, as best shown in Figs. 2, 3, and 7, while the plate *f* is provided with a projection *f*² extending through a slot *g*⁴ in the plate *g* and provided with a roll *f*³ fitting the slot *h*² in the plate *h*. In the downward movement of the horn, therefore, the gage is moved from the dotted line position, Fig. 3, to the full line position in the said figure, so that ample space is left between the horn and the gage for the back part of the shoe upper. The shoe being placed upon the horn and the horn released, it is obvious that the gage will move forward, coming into contact with the shoe upper or counter and throwing the same forward into the proper position for the pegging operation. To prevent the gage from moving with relation to the horn, that is away from its proper gaging position, in response to slight variations in the vertical position of the horn due to the variations in the thickness of the material which is being operated upon, the edges of the slot *h*² are made substantially vertical near the top, as shown.

To initially adjust the gage, the gage proper or wheel *e* is mounted on a shank *e*² provided with slots *e*³ through which extend screws *e*⁴, the said screws being threaded in the plate *f*, it being obvious, therefore, that by loosening the said screws the shank *e*² can be moved longitudinally with relation to the plate *f* and fastened in any desired position. The plate *h* is shown as secured to a frame *k* suitably fastened to the head of the machine and projecting downward therefrom, the said frame having slots *k*²

to receive bolts k^3 having heads adapted to fit countersunk recesses h^3 in the plate, the said bolts being secured by means of nuts k^4 . The plate is thus capable of vertical adjustment with relation to the head of the machine to correspond to such vertical adjustment of the horn as may be necessary for different classes of work. It is obvious, moreover, that if desired the time of movement of the gage may be varied with relation to the time of movement of the horn by the vertical adjustment of the plate.

The means for vertically adjusting the horn are not herein specifically shown and described, since substantially the same means may be employed as are shown in an application of Ronald F. McFeely for Letters Patent of the United States, filed March 24, 1900, Serial No. 10020, or any other suitable means; this feature not forming any part of the present invention. The gage itself is also capable of vertical adjustment with relation to the horn, the slide g^2 being shown as provided with clamping ears g^5 whereby it is connected with the rod g^3 , the said clamping ears being drawn together by means of a bolt or cap screw g^6 . The frame k is shown as extended downward far enough to afford a guide for the slide g^2 , and is provided, for this purpose, with a channel to receive the said plate which is held in the said channel by means of overlapping plates k^5 secured to the frame k by means of screws k^6 .

It is to be understood that the term "pegging machine" as hereinbefore used is intended to include mechanism for driving fastenings of any kind or material, and is not intended to imply merely a machine for driving wooden pegs. So far as relates to the gage, moreover, it is obvious that the features of novelty thereof are not dependent upon the construction and arrangement of the particular machine herein shown and described. It is not, therefore, intended to limit the invention to the specific construction and arrangement herein shown and described, since modifications may be made without departing from the invention.

Claims.

1. In a pegging machine, the combination with the nose-plate; of a horn vertically movable with relation to said nose plate; and a gage to position the work as it is fed through the machine, said gage having a positive unyielding connection with said horn, so as to partake in the vertical movement thereof, and to be maintained in the proper gaging position.

2. In a pegging machine, a head; a work support vertically movable with relation to said head; and an edge gage to position work as it is fed through the machine, the said gage being positively and unyieldingly connected with said work support so as to re-

main in the same plane with relation to said work support throughout the vertical movement thereof.

3. A vertically movable work supporting member, and an edge gage positively connected with said work supporting member so far as relates to the movement thereof; and means for automatically producing a secondary movement of said gage relative to the work-supporting portion of said member in a direction different from the direction of movement of said work-supporting member.

4. In a pegging machine, the combination with the nose plate; of a horn movable toward and from said nose plate; and a gage to position the work as it is fed along in the operation of the machine, said gage being directly connected with the horn and located to engage the side of the upper of the shoe supported on the said horn.

5. In a pegging machine, the combination with the horn; of a gage for the material normally standing adjacent to said horn to position the material thereon; and means, operating in response to the movement of said horn preparatory to placing the shoe thereon, for moving said gage away from the horn, whereby said gage does not interfere with the removal or insertion of the material.

6. A vertically movable work support; a nose-plate between which and said work support the material is held during the operation of the machine; an edge gage for the material movable toward and from the work support to engage or disengage the material; and means for producing said toward and from movement of said edge gage, said means operating in response to the movement of the work support toward or from the nose-plate.

7. A vertically movable work-support; a gage carrier connected therewith; a gage longitudinally movable in said carrier; and means for producing the longitudinal movement of said gage in response to the movement of said carrier.

8. In a pegging machine, a movable work support; an edge gage for the material directly connected therewith whereby the contact surface of the edge gage is maintained in substantially the same plane as that of the work-supporting surface; and means for producing a movement of the gage in a direction different from the direction of movement of the work support.

9. In a pegging machine, a vertically movable work support; an edge gage; means for maintaining the contact surface of the edge gage in substantially the same horizontal plane as the top of the work support; and means for moving the edge gage toward the work support when the said support is raised.

10. In a pegging machine, a vertically movable work support; an edge gage; means for maintaining the contact surface of the edge gage in substantially the same horizontal plane as the top of the horn; means for moving the edge gage with relation to the work support in response to the movement of the said support.

11. A vertically movable work support; an edge gage automatically movable toward and from said support; and means for governing the movement of the edge gage whereby said gage is held stationary relative to the said work support during the range of movement thereof when the machine is in operation.

12. In a pegging machine, the combination with a depressible horn; of a gage adapted to travel vertically with said horn; and means operating in response to the upward movement of the said horn for producing a lateral movement of said gage with relation to said horn to carry said gage to its gaging position.

13. In a pegging machine, the combination with the depressible horn; of a slide connected with the said horn; a gage movable with relation to said slide; and a stationary cam surface adapted to cooperate with the said gage to produce a movement of said gage relative to said slide in response to the movement of the said slide, as said horn returns to operative position, as set forth.

14. In a pegging machine, the combination with a longitudinally movable work support; of a gage mounted on said work support and longitudinally movable therewith, means for producing a lateral movement of said gage in response to the longitudinal movement of the work support; and means whereby the time at which said lateral movement takes place with relation to the time of movement of the work support may be varied.

15. In a pegging machine, the combination with a longitudinally movable horn; of a gage mounted on said horn and laterally movable with relation thereto; a member provided with an inclined or cam surface said member being stationary with relation to the machine to cooperate with said gage; and means for adjusting the position

of said member to vary the position of the cam surface with relation to the horn, substantially as and for the purpose described.

16. In a pegging machine the combination with the stationary nose-plate; of a work support movable toward and from said nose-plate; a gage to position the work as it is moved along said work support in the operation of the machine, said gage being positively connected with said work support and movable therewith; and means whereby the normal position of said gage may be adjusted with relation to said work support.

17. In a pegging machine, the combination with the stationary nose plate; of a work support movable toward and from said nose plate; a gage connected with said work support and movable therewith; and means whereby the normal position of said gage may be longitudinally and laterally adjusted with relation to said work support.

18. In a pegging machine, a nose-plate; a horn to support the material in contact with said nose-plate during the pegging operation; a gage movable with the horn in the movement thereof relative to said nose-plate; and means, operating in response to the movements of the horn which take place prior to applying or removing the material, for moving said gage in a different direction.

19. In a pegging machine, a vertically movable work-support; an edge gage; means for maintaining the contact surface of the edge gage in a constant vertical relation to the top of the work-support; and means for moving the edge gage toward the work-support when the said support is raised.

20. In a pegging machine, a vertically movable work-support; an edge gage; means for maintaining the contact surface of the edge gage in a constant vertical relation to the top of the work-support; and means for moving the edge gage with relation to the work-support in response to the movement of said support.

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

JOHN F. DAVEY.

Witnesses:

HENRY J. LIVERMORE,
NANCY P. FORD.