

(No Model.)

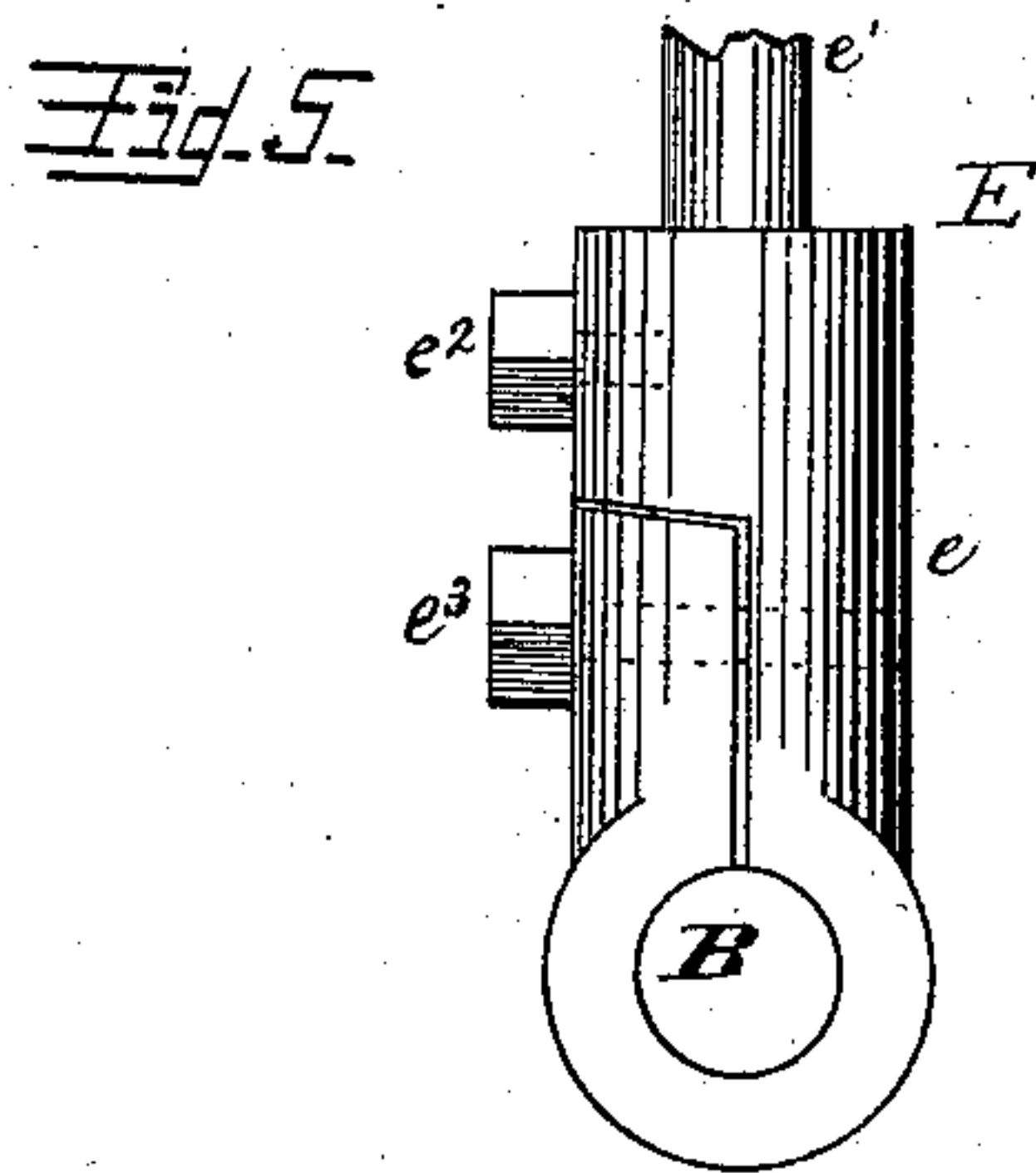
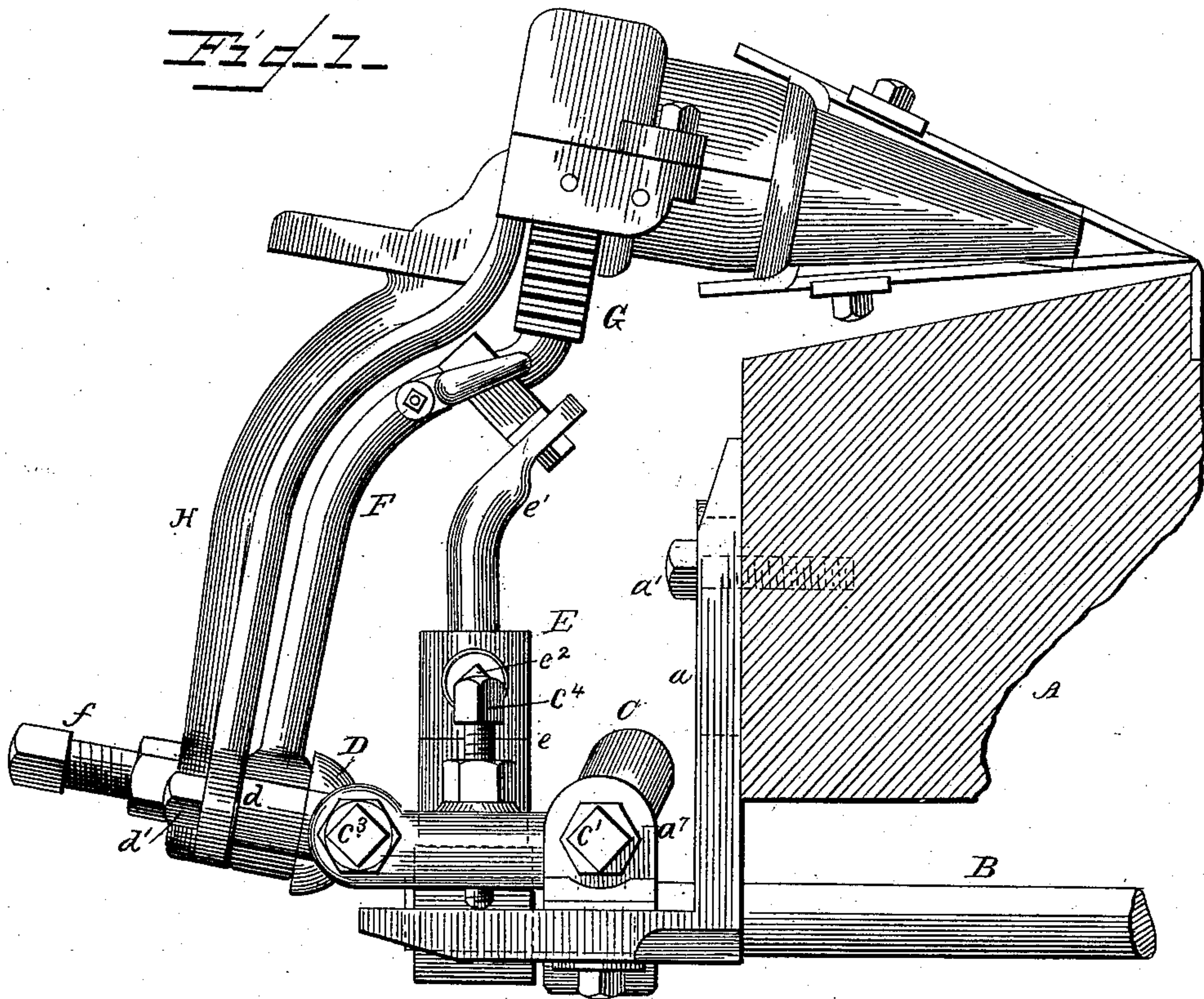
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S. H. SHURTLEFF & L. R. HAAG.

NAIL PLATE FEEDER.

No. 379,135.

Patented Mar. 6, 1888.



Witnesses
Edwin L. Yewell.
Chas. Helm.

Inventors
Seth H. Shurtleff.
Lewis R. Haag.
By their Attorney,
D. P. Gallatin

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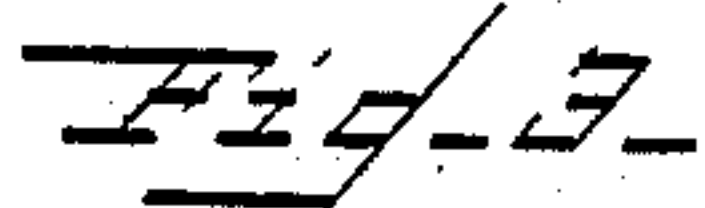
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UNITED STATES PATENT OFFICE.

SETH HARVEY SHURTLEFF AND LEWIS RUDOLPH HAAG, OF MIDDLEPORT,
OHIO, ASSIGNORS TO THE OHIO MACHINE COMPANY, OF SAME PLACE.

NAIL-PLATE FEEDER.

SPECIFICATION forming part of Letters Patent No. 379,135, dated March 6, 1888.

Application filed March 24, 1887. Serial No. 232,278. (No model.)

To all whom it may concern:

Be it known that we, SETH HARVEY SHURTLEFF and LEWIS RUDOLPH HAAG, citizens of the United States, residing at Middleport, in the county of Meigs and State of Ohio, have invented certain new and useful Improvements in Nail-Plate Feeders; 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.

This invention relates to feeding attachments for nail-cutting machines, which attachments are known in the art as "nail-plate feeders," and it has particular reference, first, to the construction of the bearing in which said shaft works, to permit adjustment of the latter; second, to the construction of the arm of the rock-shaft through which the vibration of the rack-standard and the oscillation of the barrel are effected; and, third, to the details of construction whereby adjustment of parts is permitted to adapt the feeder to different nail-machines, all as will be hereinafter described, and pointed out in the claims.

In the accompanying drawings, which form a part of this specification, Figure 1 represents a side elevation of so much of a feeder as is necessary to illustrate this invention; Fig. 2, a front elevation of the saddle and shaft-bearing; Fig. 3, a plan view of the same; Fig. 4, a plan and part sectional view of the shaft-bearing with the cap or box removed, and Fig. 5 a detail view showing the construction of the arm of the rock-shaft.

A designates a part of the bed of a nail-machine to which the feeder is attached, and which may be of any preferred construction.

a a designate two right-angled brackets, which are adjustably attached to the bed of the machine by bolts or screws *a' a'*, passing through slots *a² a²* in their vertical arms, whereby vertical adjustment of the brackets is permitted. On the horizontal arms of the brackets is supported a transverse bar or plate, *a³*, which carries the bearing *a⁴* for the front end of the rock-shaft B. This bearing *a⁴* consists of a cylindrical block which has a transverse opening through which the front end of the shaft passes, as indicated in Fig. 4. This block *a⁴* is seated in a socket in the plate *a³*,

and is secured therein by a cap, *a⁵*, which is bolted to the plate *a³*, as shown in Fig. 2. The plate *a³* and its cap *a⁵* are each recessed on their adjoining faces to form, when put together, an elongated opening which coincides with the opening through the block *a⁴*, to form a passage through all these parts for the shaft B. The block *a⁴*, being cylindrical, is adapted to turn in its seat in the plate *a³* and cap *a⁵* when for any reason it is desired to make a lateral adjustment at the rear end of the shaft B, which adjustment is also permitted by the elongated opening formed in the plate and cap *a³ a⁵*. The plate *a³* is clamped to the brackets *a a* by clamp screws or bolts *a⁶*, which pass through enlarged openings in the bracket-arms, whereby an adjustment of the plate in any direction in a horizontal plane is permitted.

The shaft B is secured against longitudinal movement by its arm E on one side of the plate *a³* and by a collar, *b'*, on the opposite side. The adjustability of these parts on the shaft, however, permits a longitudinal adjustment of the shaft when desired.

E designates the arm of the rock-shaft B, through which the vibration of the rack-standard F and its rack G is effected to impart oscillatory motion to the barrel in the usual manner.

To adjust the feeder to different machines it sometimes becomes necessary to raise or lower the barrel by using a longer or shorter barrel-stock, and in such cases it also becomes necessary to use a correspondingly longer or shorter arm on the rock-shaft, in order that the proper degree of oscillation of the barrel may be maintained. Therefore in order that such adjustments may be made without the necessity of taking off the arm and substituting another of the requisite length, we make it adjustable, such adjustability being provided for as follows: The arm E is made in two main parts, (marked *e* and *e'*.) The part *e* has in its upper end a socket, into which the part *e'* fits, and in which it is adjustable vertically, being held in adjusted position by a set-screw, *e²*, whereby the arm is permitted to be lengthened or shortened at pleasure to effect the proper adjustment. It is also sometimes necessary or desirable to adjust the arm radially or longitudinally, or both, on the shaft B, and

to provide for such adjustment the lower end of the part *e* is formed with a clamp-socket, which receives shaft. This clamp-socket is formed by bending the metal around upon itself, as indicated in Fig. 5. Then by means of a screw, *e*³, the clamp thus formed is tightened and the arm securely fastened on the shaft. In practice this is found far superior to the ordinary set-screw, for the reason that it is not only stronger, but it permits the arm to be securely fastened after the slightest adjustment, whereas the point of the set-screw, after forming a seat in the shaft, is apt to slip back into such seat unless the adjustment is sufficient to carry it entirely away therefrom, thus practically preventing the finer adjustments of the machine.

C designates the saddle, which is mounted between ears or bearing-lugs *a*¹ *a*¹ at the ends of the plate *a*³, being held therein by pointed screws *c*¹ *c*¹, which pass through said ears and extend into cavities or sockets in the ends of the saddle, as indicated in Fig. 3. The screws *c*¹ form pivots, upon which the saddle is allowed to rock to effect a vertical adjustment of the barrel, as will be hereinafter described. The saddle is curved or bent at its center to pass around the bearing *a*¹, and it has two forwardly-extending horizontal arms, *c*² *c*², between the ends of which is arranged a shaft, D, which is secured in position by pointed screws *c*³ *c*³, passing through the arms and entering cavities in its ends, as also shown in Fig. 3. These screws also form pivots upon which the shaft D may turn.

d *d* are two lugs on the shaft D, upon which is bolted the foot of the barrel-stock H by screws *d*¹ *d*¹, which pass through said foot and screw into said lugs, as indicated in Figs. 1 and 3. If the holes in the foot through which the screws *d*¹ *d*¹ pass be elongated in a horizontal direction, the barrel stock and its barrel may be adjusted laterally; but this is not new, and need not, therefore, be shown.

By bolting the barrel-stock upon the lugs *d* a space is left between it and the shaft D, and in this space the foot of the rack standard F is secured by a pointed screw, *f*, that passes through the foot of the barrel-stock and enters a cavity in the foot of the rack-standard, and which forms a pivot upon which the said rack standard vibrates. The barrel-stock and rack-standard, being both secured to the shaft D, are capable of being turned away from the machine without disengaging them.

Vertical adjustment of the barrel-stock and rack-arm and their connected parts is effected by means of a screw, *e*⁴, which passes through one of the arms of the saddle and bears upon the horizontal arm of the bracket *a*.

Having thus described our invention, we claim as new—

1. In a nail-plate feeder, the combination, with the brackets by which the feeder is connected with the nail-machine and with the rock-shaft of the feeder, of a transverse bar supported on said brackets, and a bearing for the rock-shaft supported by said transverse bar and capable of adjusting itself to a change in the angular direction of the rock-shaft, substantially as shown and described.

2. In a nail-plate feeder, the combination of the transverse bar or plate *a*³, supported at the front end of the machine, the rock-shaft B, and a bearing-block for the rock-shaft seated in said transverse bar or plate *a*³, and secured by a removable cap, *a*⁵, and capable of adjusting itself to a change in the angular direction of the rock-shaft, substantially as shown and described.

3. In a nail-plate feeder, the combination, with the rock-shaft B, of the plate *a*³, supported at the front of the machine and provided with a bearing for said shaft, the arm E, secured to the shaft at one side of said plate, and a collar on the opposite side, substantially as and for the purpose described.

4. In a nail-plate feeder, the combination, with the rock-shaft B, of the plate *a*³, supported at the front of the machine and provided with a bearing for said shaft, the arm E, and collar *b*¹, adjustably secured to the shaft on opposite sides of said plate, substantially as and for the purpose described.

5. In a nail-plate feeder, the saddle C, pivotally mounted on the brackets *a* *a* and having forwardly-extending horizontal arms *c*², the shaft D, pivotally secured between said arms and carrying the barrel-stock and rack-standard, and means, substantially as described, for adjusting said saddle in its bearings, as and for the purpose set forth.

6. In a nail-plate feeder, the combination, with the rock-shaft B and with the rack-standard, of the operating-arm E, adjustably secured to said shaft and capable of being lengthened or shortened, substantially as and for the purpose set forth.

7. The operating-arm E of the rock-shaft, made in two main parts, *e* *e*¹, adjustably secured together, and the part *e*, provided with a clamp-socket, whereby it is clamped to the shaft, substantially as and for the purposes set forth.

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

SETH HARVEY SHURTLEFF.
LEWIS RUDOLPH HAAG.

Witnesses:

WM. L. McMASTER,
G. W. GINTHER.