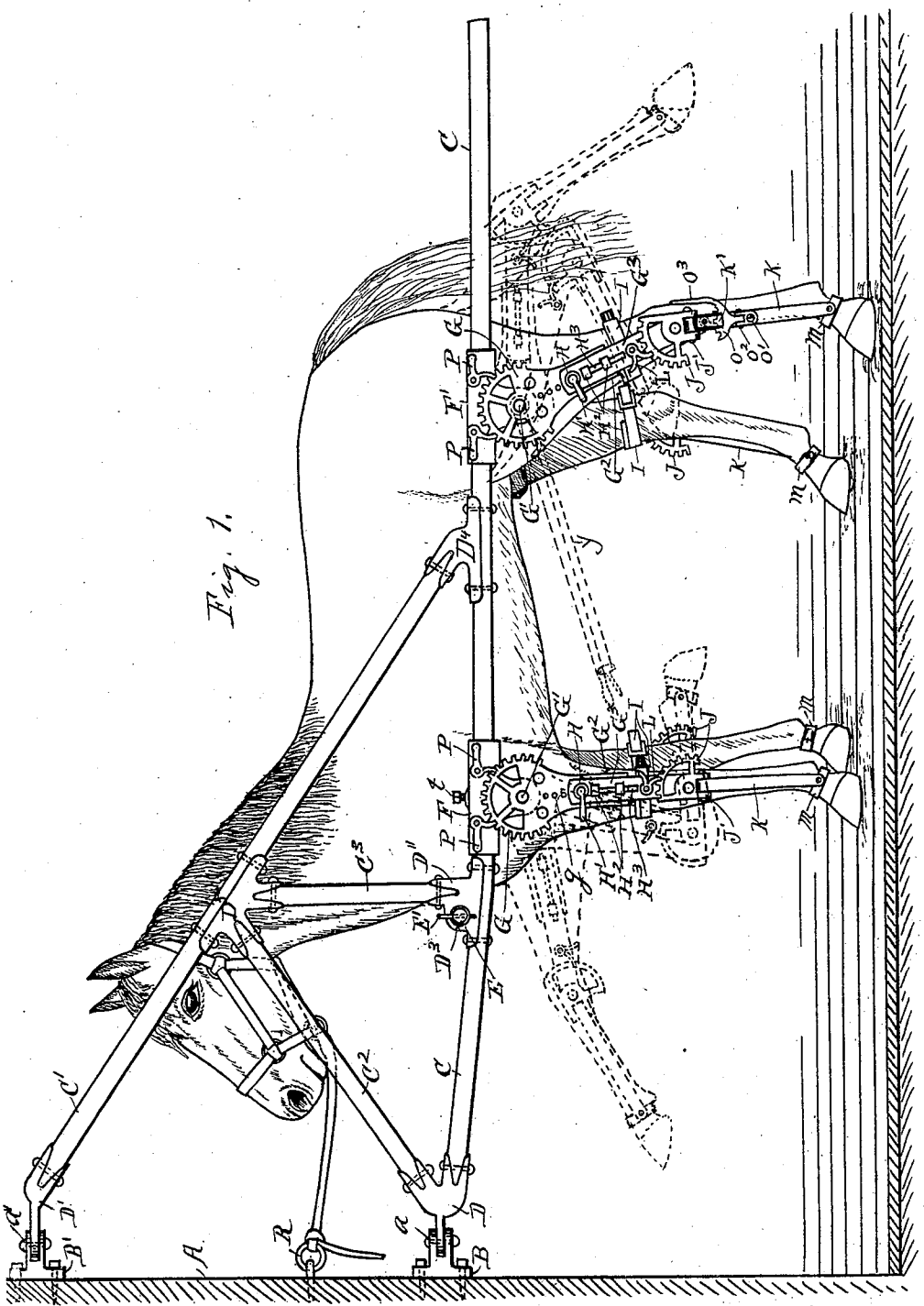
(No Model.) 2 Sheets—Sheet 1.

G. BARCUS.

HORSESHOEING APPARATUS.

No. 590,800. Patented Sept. 28, 1897.

Fig. 1.



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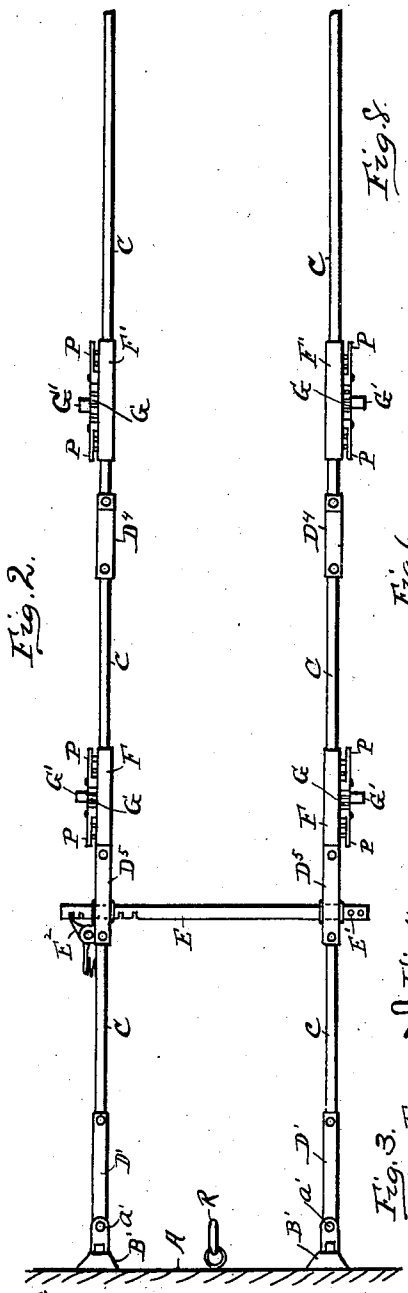


Fig. 2.

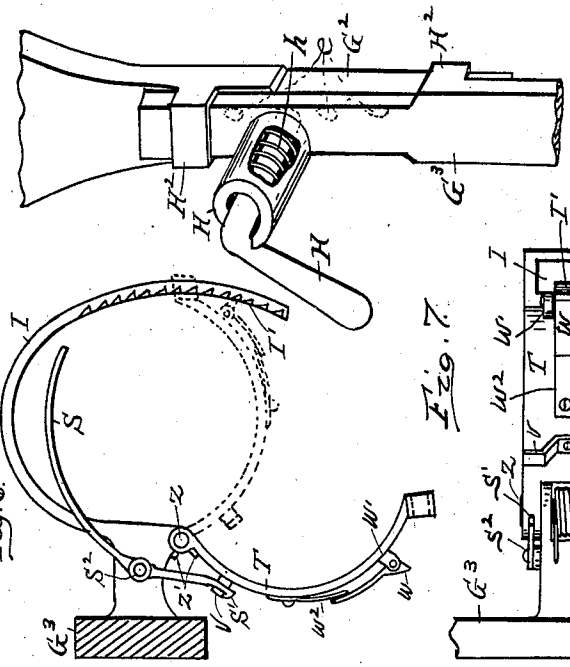


Fig. 5.

Fig. 6.

Fig. 7.

Fig. 4.

Fig. 3.

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UNITED STATES PATENT OFFICE.

GEORGE BARCUS, OF RENSSELAER, INDIANA.

HORSESHOEING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 590,800, dated September 28, 1897.

Application filed January 4, 1897. Serial No. 617,956. (No model.)

To all whom it may concern:

Be it known that I, GEORGE BARCUS, a citizen of the United States of America, residing at Rensselaer, in the county of Jasper and State of Indiana, have invented certain new and useful Improvements in a Horseshoeing Apparatus, of which the following is a specification, reference being had therein to the accompanying drawings and the letters of reference thereon, forming a part of this specification, in which—

Figure 1 is a side elevation of my improvement, showing the method of attaching the same to a horse. Fig. 2 is a plan view of the mechanism, looking at it from the top. Fig. 3 is a rear view of the parts designed for attachment to one of the rear limbs of the horse. Fig. 4 is a side view of a latch-lever intended to be applied to the hub of the upper segment-arm, as indicated in broken lines in Fig. 1. Fig. 5 is a detail perspective view of a keeper for engaging the rear of the hock-joint of the horse to hold the devices in place on the limb of the horse when the said joint is bent as shown in broken lines in Fig. 1. Fig. 6 is a plan view of a spring-clamp for attaching the upper portion of the device to the horse's limb. Fig. 7 is a side view of said spring-clamp; and Fig. 8 is a detail perspective view of a portion of one of the upper segment-arms, showing the means for adjusting the length of said arm to adapt it to the size of the horse's limb.

This invention relates to certain improvements in a horseshoeing apparatus by means of which the horse may be held firmly and safely while being shod or otherwise treated, which improvements are fully set forth and explained in the following specification and claims.

Referring to the drawings, C C are a pair of parallel bars, made preferably of metal and having their inner ends pivotally connected to the side wall of the building A at *a* through the medium of the hinge B D. For maintaining said bars C C in a substantially horizontal position the proper distance from the floor and for increasing their strength they are each provided with braces C′ C^2 C^3, all connected together and with said bars by means of proper junction-pieces D D′ D^4 D^5, the inner end of the brace C′ being pivotally connected to the side wall of the building at *a*′ by means of the hinge B′ D′, said hinges permitting a horizontally-swinging movement of the outer ends of said bars C C, so they may be opened apart from each other to admit a horse to enter between them. In order to secure the said bars the proper distance apart and in close proximity to the horse, a cross-bar E is used, located immediately in front of the horse next his breast, and has at each end pass-eyes D^3, one of which is shown in Fig. 1. Each end of said cross-bar is provided with pin-holes, as shown in Fig. 2, for the reception of a pin E′ at one end and a pawl E^4 at the opposite end, by means of which said bars C C are maintained the proper distance apart. The pawl E^4 automatically locks one end of said cross-bar to its bar C, and a pin E′ is passed through one of the pin-holes in the opposite end of said cross-bar to hold the bars C C closed against the sides of a horse.

For attaching the device to the limbs of a horse to hold them in any position desired while the process of shoeing is going on four similar sets of compound segmental arms are used, secured to the sides of the horse's legs by means of spring-clasps, as shown in Fig. 1, and as they are substantially alike or similar to each other a description of one will be sufficient for all.

Looking at Fig. 1, G^2 and G^3 represent the two parts of the upper arm G^2 adjustably connected together, as shown particularly in Fig. 8, so the two parts may be adjusted as to length to correspond with the length of the horse's leg. The means for adjusting said arms as to length is shown in Fig. 8, the arms having the boxes H^2, respectively, in which the ends of the said arms respectively enter and slide. For holding the arms G^2 G^3 adjusted part G^3 is provided with a cranked bolt H′, arranged in a barrel H, and has a coil-spring on its part within said barrel for spring-pressing said bolt forward to enter the holes *e* of part G^3. The inclined upper end of barrel H furnishes means for withdrawing said bolt by turning the cranked end of bolt H′, and the vertical offset of said inclined end of said barrel permits said bolt to drop and enter one of said holes *e* for the purpose specified. The upper end of the part G^2 of said

arm is pivotally connected to the side of a box F (if it be the forward arm) opposite the fore leg or to box F′ (if opposite the hind leg) on a trunnion G′, which is intended to be located opposite the joint in that part of the leg. The upper end of said part G′ of said arm terminates in a toothed segment G, which engages the oppositely-arranged pawls P for holding said segment turned to any position desired, said pawls being pivotally connected to the outer side of said boxes. The lower end of arm G^3 has pivotally connected to it the arm K through the medium of segment J, which extends down to the horse's ankle and is attached thereto by means of a clasp I, which is hereinafter particularly described.

The arm K has pivotally connected to it on its outer side, near its upper end at O′, the toothed segment O. (Shown more particularly in Fig. 5.) Said segment has a joint O^2 in its shank, adapting said segment to have lateral movement when not restrained by the keeper K′. Said segment is provided with an inwardly-projecting arm O^3 for extending around behind the hock-joint when the device is applied to the hind leg to prevent the device from sliding upward on the leg when the leg is in a bent form. This arm O^3 is omitted when the device is applied to the fore leg of the horse.

A pawl P′ engages the teeth of segment O to hold its arm O^3 in contact with the leg of the horse. The toothed segment J is pivotally connected to the outer lower end of arm G^3 and has jointed to it at J′ transversely to its point of pivot with arm G^3 the arm K, by means of which connection the joint of the horse at that point may have some lateral movement. The segment J is held turned in any desired position by means of a pawl L. The arm G^3 is attached near its lower end to the leg of the horse by means of a spring-clasp. (Shown in detail in Figs. 6 and 7.) This clasp consists of the curved horizontally-extending arm I, attached firmly to the inner side of arm G^3, and is provided on its inner side at its outer end with ratchet-teeth I′.

T is a spring-latch pivotally attached to arm I at Z by means of a pin having a coil-spring thereon (shown at Z′) for throwing said latch forward when released.

S is a lever pivotally connected at S^2 to arm I. The inner end of said lever terminates in a hook S′ for catching over a stud V, attached to the outer side of the said latch I to hold said latch open, as shown in Fig. 6. When said clasp is applied to the horse, his leg will first engage the outer curved end of lever S and move it backward, which will cause the hook S′ on its inner end to release latch T, so it may take the position shown in broken lines in said Fig. 6 and be held in such position by means of the spring-catch W, attached to its side, engaging the ratchet-teeth I′ of arm I, said arm passing through an eye in the outer end of latch T, so as to prevent arm I from being disconnected from said latches, thus securely clasping the leg of the horse and holding it secured to the arm G^3. The horse's leg may be released by pressure on the latch W sufficient to cause it to be released from the ratchet-teeth I′ on arm I.

It is intended to secure the boxes F to the bars C C; but the boxes F′ are intended to be adjustable along on said arms to accommodate them and the parts connected with them to the size of the horse to which the device may be applied, and the said bars C C and their braces may be made either of square metal or of pipes, like gas-pipe, as may be desired; but it is intended that the bars C C shall be made of round rods or gas-pipe, so the boxes on them may partially rotate to give lateral movement to the arms pivotally attached thereto.

In operation the two bars C C are spread apart far enough at their free ends to freely admit a horse, the cross-bar E being first put in place and the pawl E^4 placed in the outer hole of said cross-bar. The horse is then led in and tied to the wall, with his breast against the cross-bar, as shown in Fig. 1. The bars C C are then closed near enough together to come in contact with the sides of the horse. The pin E″ and pawl E^4 lock the said bars in that position. The arms G^2 G^3 K are then immediately secured to the horse's legs by means of the clasps I, holding them secure, so he cannot kick or fall down, and rendering it impossible for him to make any resistance or struggle, as he cannot bend his leg-joints and is helpless.

By releasing the pawls P the leg, if it be the hind leg, may be moved rearward so segment G may turn on its trunnion G′, and when the leg has been moved far enough the pawls P are caused to engage the teeth of said segment and hold the arms G^2 G^3 K and the horse's leg thereto attached in a bent position, as shown in the broken lines in Fig. 1.

The bend of the hock-joint is made by releasing pawl L, so arm K and segment J, attached thereto, may turn on the point of pivot of said segment, and when the leg is bent to the proper position, as shown in said broken lines, said pawl L is caused to engage the teeth of segment J, and thus cause the leg of the horse to be held in its proper bent position for placing shoes on its foot. For the fore leg the operation is substantially the same, but as the knee bends forward the operation of segment J is reversed and the arm O^3 and its parts are omitted.

In case the horse is fractious and will not permit its legs to be readily and easily bent as described the lever y may be applied by placing its hub y'' over the trunnion G′ of segment G and in such manner that its latch y' will engage the teeth of said segment, when by operating said lever said segment and the arms attached to it may be operated as stated.

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

1. In an apparatus for shoeing horses the combination of a supporting-frame, a box arranged to be adjustable along on said frame, a compound arm pivotally attached to said box and adapted to assume the positions of the animal's leg, means for securing said lever in its several positions, means for securing the different parts of said lever to the leg of the animal and the means for adjusting the length of said arms, all arranged to operate substantially as and for the purpose set forth.

2. In an apparatus for shoeing horses the combination of a supporting-frame adapted to be pivoted to a proper support, boxes arranged on the horizontal bars of said frame and adapted to be adjustable thereon, an arm pivotally attached to said box having its upper end terminate in a toothed segment, pawls adapted to engage the teeth of said segment, the means for adjusting the length of said arm, a toothed segment pivotally attached to the lower end of said arm, a pawl for engaging the teeth of said segment, an arm pivotally attached to said last-named segment but in a transverse direction to the pivot of said segment, and the means for attaching said arms to the leg of the animal all arranged to operate substantially as and for the purpose set forth.

3. In an apparatus for shoeing horses, the combination of a supporting-frame adapted to be pivoted to a proper support, a cross-bar for adjustably connecting the two parts of said frame immediately in front of the horse, sliding boxes on the horizontal bars of said frame, an arm pivotally connected to said sliding box and having its upper end terminate in a toothed segment, and adjustable as to length, pawls attached to said box and adapted to engage the teeth of said segment, a segment pivotally attached to the lower end of said arm, a pawl for engaging said last-named toothed segment, an arm pivotally connected to said last-named toothed segment transversely to the pivot of said segment, an arm pivotally attached to said last-named arm and having its upper end terminate in a toothed segment, and having a transverse joint between its ends, and having a laterally-extending arm for engaging the hock-joint of the horse, and the means for attaching said parts to the horse's leg, all arranged to operate substantially as and for the purpose set forth.

4. In an apparatus for shoeing horses the combination of supporting-frame portion adapted to be pivoted to a proper support, a cross-bar for connecting the horizontal bars of said frame and holding said bars connected at a point substantially opposite the breast of a horse when placed between said bars, sliding boxes on said frame-bars, arms pivotally attached to said boxes, the pivotal points of said arms being arranged opposite and corresponding to the joints of the horse's leg, and adapted to assume the different positions of the horse's leg, the means for locking said arms with the supporting-frame to hold the horse's leg in any desired position, and the means for securing said arms to the limb of the animal all arranged to operate substantially as and for the purpose set forth.

5. In an apparatus for shoeing horses the combination of the frame comprising the horizontal bars C C, and braces C′, C^2, C^3 and pivotally attached to a suitable support and having the cross connecting-bar E for adjustably connecting the two parts of said frame, the adjustable boxes F′ having the pawls P, P, arm G^2 having a toothed segmental head G, arm G^3 and the means for adjustably connecting said arms, toothed segment J pivotally connected to the lower end of arm G^3, arm K pivotally connected to said segment J transversely to the pivot of said segment, pawl L, segment O pivotally connected to arm K by a universal joint, and having the laterally-extending arm for engaging the hock-joint of a horse, keeper K′, pawl P′ and the means for securing the said arms to the limb of an animal all arranged to operate substantially as and for the purpose set forth.

6. In an apparatus for shoeing horses the combination of the arms G^2, G^3, curved arm I having the ratchet-teeth I′, latch T having the catch V and latch W, and the curved lever S having its rear end provided with a hook S′ for engaging catch V all arranged to operate substantially as and for the purpose set forth.

7. In an apparatus for shoeing horses the combination of the arms G^2, G^3, K and segment J, toothed segment O pivotally connected to arm K by a universal joint, and having the laterally-extending arm O^3 for engaging the hock-joint of a horse, and the means for securing said arms to the leg of a horse, all arranged to operate substantially as and for the purpose set forth.

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