J. C. BACKUS.

CHECK LOCK.

APPLICATION FILED OCT. 21, 1920.

1,373,112.

Patented Mar. 29, 1921.

2 SHEETS—SHEET 1.

Fig. 1

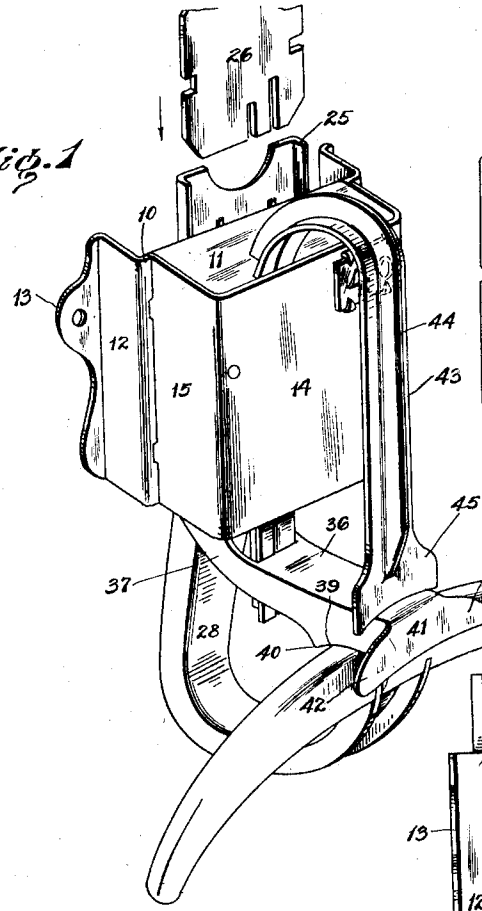


Fig. 4

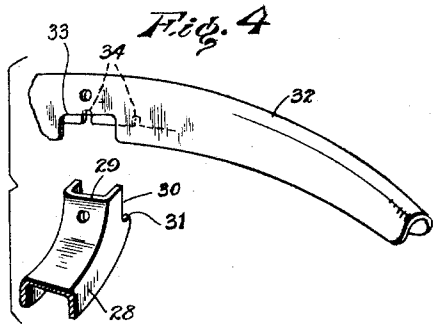


Fig. 2

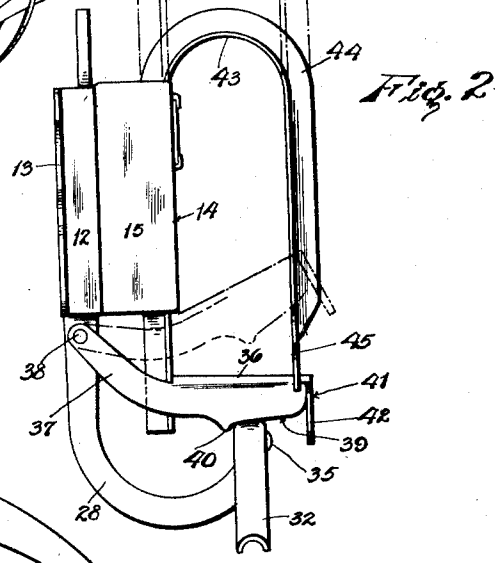
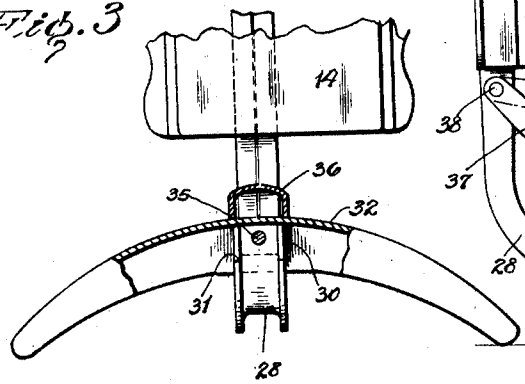


Fig. 3



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2 SHEETS—SHEET 2.

Fig. 5

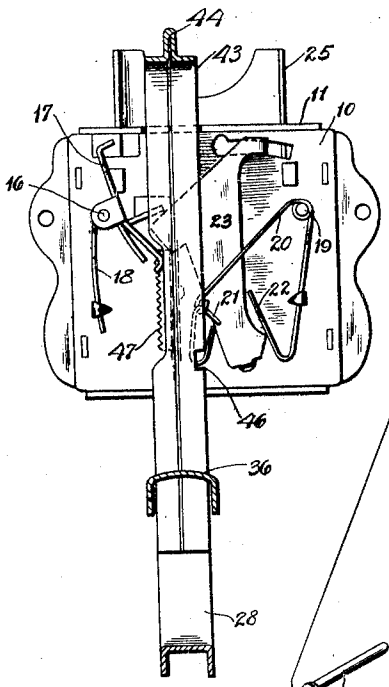


Fig. 6

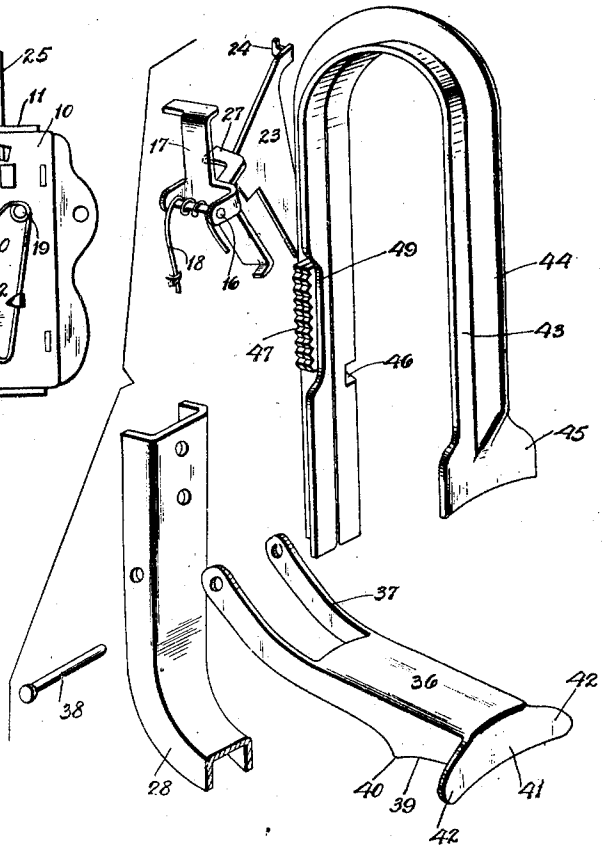
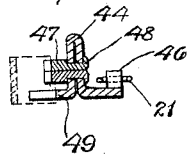


Fig. 7



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UNITED STATES PATENT OFFICE.

JOHN CLAYTON BACKUS, OF SMETHPORT, PENNSYLVANIA, ASSIGNOR TO BACKUS NOVELTY COMPANY, OF SMETHPORT, PENNSYLVANIA, A CORPORATION.

CHECK-LOCK.

1,373,112. Specification of Letters Patent. Patented Mar. 29, 1921.

Application filed October 21, 1920. Serial No. 418,362.

To all whom it may concern:

Be it known that I, JOHN CLAYTON BACKUS, a citizen of the United States, residing at Smethport, in the county of McKean and State of Pennsylvania, have invented certain new and useful Improvements in Check-Locks, of which the following is a specification.

This invention relates to an improved hat and coat lock and has as one of its principal objects to provide a device of this character the major parts of which will all be formed of sheet metal for thus eliminating the possibility of accidental breakage.

The invention has as a further object to provide a device of the above described character wherein by forming the parts of sheet metal, said parts will, as compared with cast metal construction, possess superior strength.

And the invention has as a still further object to provide a hat and coat lock employing a hook, a coacting latch, and a coacting lock bolt, and wherein the bolt will bear against the latch for holding the latch against pivotal movement and will also project through the latch for bracing the latch against sidewise movement.

Other and incidental objects will appear hereinafter.

In the drawings:

Figure 1 is a perspective view of my improved hat and coat lock,

Fig. 2 is a side elevation of the device,

Fig. 3 is a fragmentary front elevation partly in section to illustrate the mounting of the head upon the hook employed,

Fig. 4 is a fragmentary perspective view showing the manner in which the hook and head are formed so as to mate,

Fig. 5 is an elevation showing the cover plate of the casing removed,

Fig. 6 is a perspective view showing certain parts of the device disassembled, and

Fig. 7 is a detail section showing the mounting of the rack employed upon the lock bolt of the device.

The lock casing as well as the lock mechanism *per se*, as disclosed in the present instance, is substantially identical with the showing of Patent No. 920,105, issued to me May 4, 1909, and I shall accordingly now describe the casing and said mechanism only generally. As will be observed, the casing includes a back or base plate 10 having top and bottom forwardly directed flanges 11 while from the side margins of said plate extend rearwardly directed vertical flanges 12 having lateral ears or flanges 13 apertured for receiving suitable fastening devices for securing the casing to any suitable support. Closing the casing is a front cap 14 having side flanges 15 on which are formed spaced lugs inserted through suitable openings in the back plate 10 for removably securing the cap in position. Projecting forwardly from the back plate 10 is a pin 16 upon which is pivoted a dog or pawl 17 and coacting with said pawl is a spring 18. Projecting forwardly from the back plate is a second pin 19 over which is fitted a spring 20. Connected to one end of this spring is a link 21 while the opposite end portion of the spring is bent to provide a spring arm 22. Pivoted upon the back plate is a guard 23 pressed by the spring arm 22 into the path of the pawl 17. At its upper end said guard is formed with an extension 24 projecting rearwardly through a suitable slot in the back plate and secured to said plate at its rear side is a guide 25 adapted to freely receive a key check 26. The extension 24 of the guard projects into the path of downward movement of the key check so that said check will, when depressed, first swing said guard out of the path of the pawl and will then engage a trip 27 upon the pawl for swinging the pawl to inactive position and releasing the lock bolt employed. When this occurs the extension will engage in a suitable notch in the key check for locking the key against upward displacement.

The present invention has to do particularly with the peculiar construction of the hook, latch and lock bolt employed. Heretofore, these parts have been formed of cast metal, principally for the reason that it has been found impossible, due to the peculiar shape of said parts, to construct the parts of sheet metal. However, as the cast metal parts proved so unsatisfactory in practical use, said parts cracking comparatively easily and constantly becoming broken, it became imperative to construct the parts in such manner that they would not be subject to these defects. In the present invention, said parts are constructed of sheet metal, it having been found possible to form the parts according to the embodiment of the invention shown. A sheet metal hook 28 is employed. This hook is pressed from a

suitable sheet metal blank and is substantially channel shaped, the side flanges of the hook extending from end to end thereof. At its inner end the hook is secured to the back plate 10 of the casing, rivets or other suitable fastening devices being engaged through said plate and through the bottom web of the hook for firmly securing the hook in position depending from the casing. At its outer end the hook is formed with a vertically disposed tip 29 and the side flanges thereof are, as shown in detail in Fig. 4, provided with notches 30 defining shoulders 31 at their lower ends. Mounted upon the outer end of the hook is a longitudinally curved head 32. This head is also pressed from a suitable sheet metal blank and, like the hook, is substantially channel shaped in cross section. Toward the center of the head the side flanges thereof are gradually widened and medially of said head the innermost side flange thereof is provided with a notch 33 while in the outermost side flange of the head are formed, opposite the notch, spaced slots 34. The major width of the head is substantially equal to the major depth of the hook at its outer end so that the head may be fitted upon the hook to extend transversely thereof, the notch 33 snugly receiving the outer end portion of the hook therethrough so that the tip 29 projects between the side flanges of the head. The bottom wall of the notch 33 seats against the upper face of the hook while the shoulders 31 project through the slots 34 seating against the bottom walls of said slots so that the vertical walls of the notches 30 thus confront the inner face of the outermost flange of the head. As will thus be seen, the side flanges of the head will sustain said head upon the hook while said flanges will also coöperate with the hook for holding the head against transverse movement toward and away from the casing. Engaged through the head flanges and through the tip 29 of the hook is a rivet or other approved fastening device 35 firmly securing the head in position. Swingingly mounted upon the hook to extend transversely across the bight thereof is a latch 36. This latch is also pressed from a suitable sheet metal blank and is substantially channel shaped in cross section. At the inner end of the body of the latch, the side flanges thereof are extended to provide longitudinally curved arms 37 embracing the shank of the hook 28 immediately below the lower end of the casing and extending through said arms and through the hook flanges is a pivot pin 38 swingingly connecting the latch with the hook. At the outer end portion of the latch body the side flanges thereof are, as particularly shown in Fig. 2, widened somewhat, and are formed with inwardly and downwardly sloping edges 39 normally resting against the upper convex face of the head 32 and, at their inner ends, defining shoulders 40 lying close to the inner side face of the head. At the outer ends of the flanges of the latch, the body wall or web thereof is extended to form a laterally flared end plate 41 which is bent downwardly to abut said flanges so that the ends of said plate project laterally at opposite sides of the latch providing ears 42 which may be grasped for lifting the latch.

Mounted to coact with the latch 36 is a substantially U-shaped lock bolt 43. This lock bolt, like the hook 28 and latch 36, is also pressed from a suitable sheet metal blank and, as shown in Fig. 5, is substantially T-shaped in cross section, the intermediate portion of the blank being pressed up in overlapping relation to provide a medial longitudinal rib 44 from which extend in opposite directions lateral side flanges. As will be observed, the rib extends from the inner end of the bolt to a point near its outer end, the outer arm of the bolt being flared laterally at the adjacent end of said rib to form a head 45 having a concave lower edge adapted to fit the slightly convex body wall of the latch 36. The arms of the bolt are substantially parallel and the inner arm thereof is slidably received through suitable openings in the top and bottom flanges 11 of the base plate 10 of the casing, being retained by the cap plate 14 so that, as will be seen, the bolt is thus slidably mounted upon the casing for movement toward and away from the latch. As shown in Fig. 2, the inner arm of the lock bolt is somewhat longer than the outer arm thereof so that the lock bolt may be depressed to engage the head 45 of the outer arm with the latch at a point spaced laterally at the outer side of the plane of the head 32 of the hook while the inner arm of the bolt will be projected through the latch lying between the arms 37 of the latch and closely confronting the inner edge of the body wall or web thereof. The bolt will thus effectively lock the latch against upward swinging movement while the concave lower edge of the head will coact with the convex body wall or web of the latch for securing the latch against being forcibly moved laterally from beneath the head. However, to additionally lock the latch against lateral movement, the inner arm of the lock bolt is, as previously explained, caused to project through the latch so that, as will be seen, the lower end of said arm will be disposed to coact with the arms 37 of the latch for preventing distortion of the latch and its displacement from beneath the head 45.

Struck from one of the side flanges of the lock bolt at a point along the inner arm thereof is an eye 46 through which the link

21 upon the spring 20 is engaged so that said spring will, when the bolt is released, retract the bolt upwardly and mounted upon the rib 44 of said bolt at a point substantially midway between the ends of the arm is a rack 47. As particularly shown in Figs. 6 and 7 of the drawings, this rack is formed of companion sections arranged side by side in abutting relation resting against the rib 44 and extending from the inner edges of said sections are tongues 48 fitted through a suitable opening in the rib and overturned thereagainst. Thus, the rack sections are firmly secured upon the bolt and, as will now be noted, the side flange of the bolt adjacent the rack is, as best shown in Fig. 6, cut away as indicated at 49 so that the lower end of the pawl 17 may coöperate with the rack, this pawl being held in engagement with the rack by the spring 18. Accordingly, when the lock bolt is depressed, the pawl will serve to lock the bolt in depressed position while, when the key check 36 is inserted in the guide 25 and the pawl released, the rack 47 will engage at its upper end against the uppermost of the flanges 11 of the back plate 10 for limiting the lock bolt in its upward movement under the influence of the spring 20.

Having thus described the invention, what is claimed as new is:

1. A check lock including a hook, a pivoted latch coacting therewith, a lock bolt shiftable to closely confronting the latch at one point and project through the latch at another point, and means for locking the bolt when shifted.

2. A check lock including a hook, a pivoted latch coöperating therewith and having a convex face, a lock bolt shiftable to impinge the latch and having a concave face to fit the convex face of the latch for securing the latch against side movement, and means for locking the bolt when shifted.

3. A check lock including a hook, a pivoted latch coöperating therewith and having spaced arms, a substantially U-shaped lock bolt shiftable to impinge one of its arms against the latch and project the other of its arms between the arms of the latch, and means for locking the bolt when shifted.

4. A check lock including a hook, a bolt coöperating therewith and having a medial rib provided with an opening, a rack seating against said rib and formed of mating sections having tongues engaged through said opening, and a pawl to coöperate with the rack for locking the bolt when shifted.

5. In a check lock, a pressed substantially channel shaped hook having its side flanges notched at the free end of the hook to form a tip and to define shoulders at the lower ends of said notches, a pressed substantially channel shaped head receiving the tip between the side flanges thereof, one of the head flanges being notched to fit the hook and the other of the head flanges being slotted to receive the flanges of the hook seating against said shoulders, and means extending through said tip and the flanges of the head securing the head in position.

6. In a check lock, a hook, and a substantially channel shaped latch pivoted upon the shank of the hook to extend across the bight thereof coöperating with the hook.

7. In a check lock, a hook, a substantially channel shaped latch having its side flanges extended to provide arms embracing the hook shank, and means extending through said arms and the hook shank pivotally connecting the latch with said shank to coact with the hook.

8. In a check lock, a hook, and a substantially channel shaped latch pivoted upon the hook to extend transversely across the bight thereof and having its body wall extended to provide a head at the outer end of the latch.

9. In a check lock, a suspension hook, and a substantially channel shaped latch pivoted thereon and pressed from a sheet metal blank to provide arms embracing the hook and pivotally connected thereto.

In testimony whereof I affix my signature.

JOHN CLAYTON BACKUS. [L. S.]