

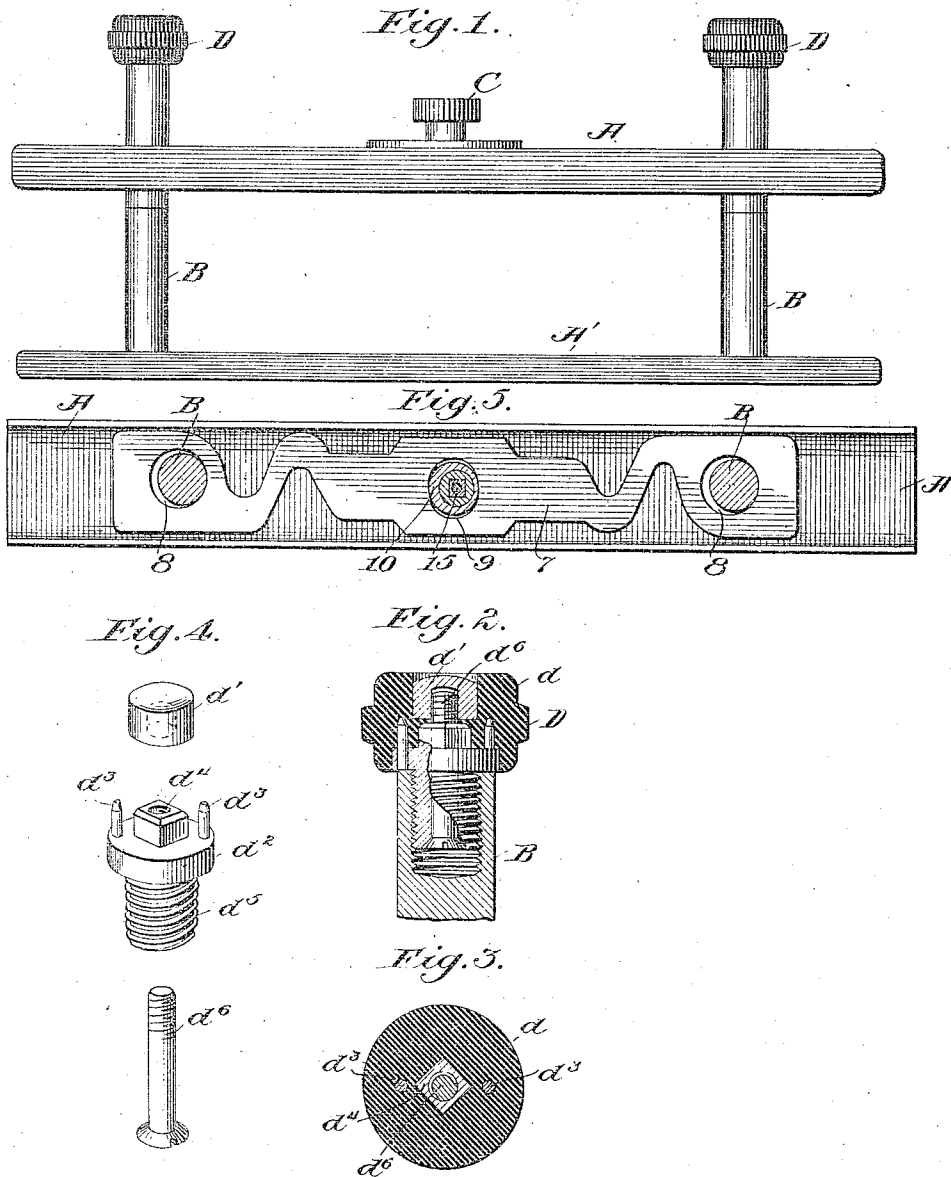
G. A. SHOEMAKER & E. C. HOLLAND.

BALL-CAP FOR BINDER POSTS.

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979,713.

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UNITED STATES PATENT OFFICE.

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BALL-CAP FOR BINDER-POSTS.

979,713.

Specification of Letters Patent.

Patented Dec. 27, 1910.

Application filed February 11, 1907. Serial No. 356,756.

To all whom it may concern:

Be it known that we, GEORGE A. SHOEMAKER and ELIAS C. HOLLAND, citizens of the United States, residing at Benton Harbor, in the county of Berrien and State of Michigan, have invented certain new and useful Improvements in Ball-Caps for Binder-Posts, of which the following is a specification.

Our invention relates particularly to that class of binders wherein the binding posts are rigidly secured to one binding bar, and extend through and beyond the other binding bar. In this class of binders, great difficulty is experienced in preventing the mar-
ring of desks and tables by contact with the protruding ends of the binding posts. It is to overcome this annoyance that our invention is intended.

In the accompanying drawings, our improved ball cap is shown in its preferred form with the upper and lower clamping bars of a temporary binder.

In the drawings, Figure 1. represents an elevation of the clamping bars, binding posts, and our improved ball caps connected therewith. Fig. 2. is an enlarged sectional view of our improved ball cap taken perpendicularly through the center of the cap. Fig. 3. is a cross-sectional view of our ball cap taken horizontally through the center of the same. Fig. 4. presents details of construction of our ball cap. Fig. 5 illustrates a form of lock which may be used in a binder of this type.

More particularly described, A. A' represent the clamping bars.

A' represents the bottom bar or the one to which the posts B. B. are rigidly secured and A. represents the movable or locking bar which is perforated and adapted to slide upon the posts B. B. The binding posts of the binder are represented by B. B. as just named.

C. represents a thumb piece by means of which the bar A is clamped to the posts in any desired position through the medium of any suitable perforated mechanism contained within said bar, and we cite for instance one form of mechanism suitable for our purpose, as that described in United States Letters Patent issued to George A. Shoemaker, assignor to Metal Sectional Furniture Company, Number 820827, issued May 15th 1906.

Within the hollow bar A, we place a locking bar 7, designed to slide loosely therein. This locking bar is fitted with perforations 8, 8, corresponding in position with the position of posts B, B, and the correspondingly punched bar A. These perforations 8, 8, are slightly larger in diameter than the diameter of the posts B, B, which may pass loosely through them. Through a desirable perforation in the tube 6 and into a corresponding perforation 9 in the bar 7, is placed an eccentric 10. This eccentric 10 is secured by means of a screw 15 to the thumb screw C by which the said eccentric is actuated. This lock briefly described, consists of a spring bar 7 lying within a suitable channel in the locking bar A and is perforated at 8, 8 to permit the passage of the posts B B. Another perforation 9 is cut in the center of the said spring bar within which is fitted an eccentric 10 operated by a screw shaft 15 which protrudes through the top of the locking bar A and has fitted to its outer projection the thumb screw C. By turning the thumb screw C, the spring bar 7 is made to move laterally within the locking bar A and frictionally engage the posts B B by reverse movement of the thumb screw C, the said locking engagement is released.

D. represents our ball cap and is described as follows: A threaded shank d^5 is intended to engage with suitable threads in the upper end of the posts B. B. Surmounting this shank d^5 , is a cap or plate, d^2 , upon which is surmounted a squared block d^4 . These three parts, the shank d^5 , the cap d^2 and the block d^4 , are preferably formed of one piece of material, and through the said parts, a longitudinal perforation is made to admit a screw d^6 . Projecting from the face cap, d^2 , are two pins, d^3 , d^3 . A cap, d , constructed of rubber or some other resilient material and so shaped as to fit upon the squared block d^4 , and receive the cap d^2 within a countersink in the said cap d , is placed upon the said cap, d^2 , and the block d^4 . The pins, d^3 , d^3 are forced into the material of the cap d when the same is placed upon the block d^4 . A nut, d^1 , is fitted within a countersink in the upper surface of the cap d and lies below the upper surface of the said cap d . It is designed to engage the screw d^6 , which passes through all of the parts of said cap, and is designed to hold the same together. The cap d , as a whole, is designed

to engage the upper or perforated ends of the binding posts B. B., but preferably by the engagement of the threaded shank *d*⁵, with suitable thread cut in the upper ends of said posts B. B. Any other form of suitable connection may be used if desired.

We would not be confined in our invention to the particular description herein described, the intent of our invention being to cover all forms of construction wherein the exposed portions of the ball cap or free end of the binding posts, B. B., are constructed wholly of rubber or other resilient or non-scratching materials.

15 What we claim as our invention is:

1. The combination in a binder with binding posts, clamping bars one of which is rigidly secured to said binding posts, and the other fitted with perforations and movable upon said binding posts, a lock fitted within said movable bar, of ball caps consisting of a threaded shank adapted to engage corresponding threads in the free ends of said binding posts, a plate surmounting said shank, a resilient cap adapted to engage said plate, and means to prevent the lateral rotation of the said resilient cap upon said plate.

2. The combination in a binder with binding posts, clamping bars one of which is rigidly secured to said binding posts, and the other fitted with perforations and movable upon said binding posts, a lock fitted within said movable bar, of a ball cap consisting of a shank adapted to engage the free end of said binding posts, a plate surmounting said shank, pins projecting from the upper surface of said plate, a resilient

ball cap adapted to be forced upon said pins and engage said plate, a means for firmly binding all of said parts together. 40

3. The combination in a binder with binding posts, clamping bars one of which is rigidly secured to said binding posts, and the other fitted with perforations and movable upon said binding posts, a lock fitted within said movable bar, of a ball cap consisting of a shank adapted to engage the free end of said posts, a plate surmounting said cap, a pin projecting from the face of said plate, a squared block surmounting said plate and being contiguous therewith, a resilient ball cap adapted to engage said squared block and said plate, said parts being longitudinally perforated, a screw passing through said perforation and adapted to engage a nut fitted within a suitable countersink in the surface of the said resilient ball cap substantially as described and for the purposes herein set forth. 45 50 55 60

4. The combination in a binder with binding posts, clamping bars one of which is rigidly secured to said binding posts, and the other fitted with perforations and movable upon said binding posts, a lock fitted within said movable bar, of ball caps consisting of a threaded shank adapted to engage the free ends of said binding posts, a plate fixed to said shank and a cap of resilient material attached to the said plate. 65 70

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