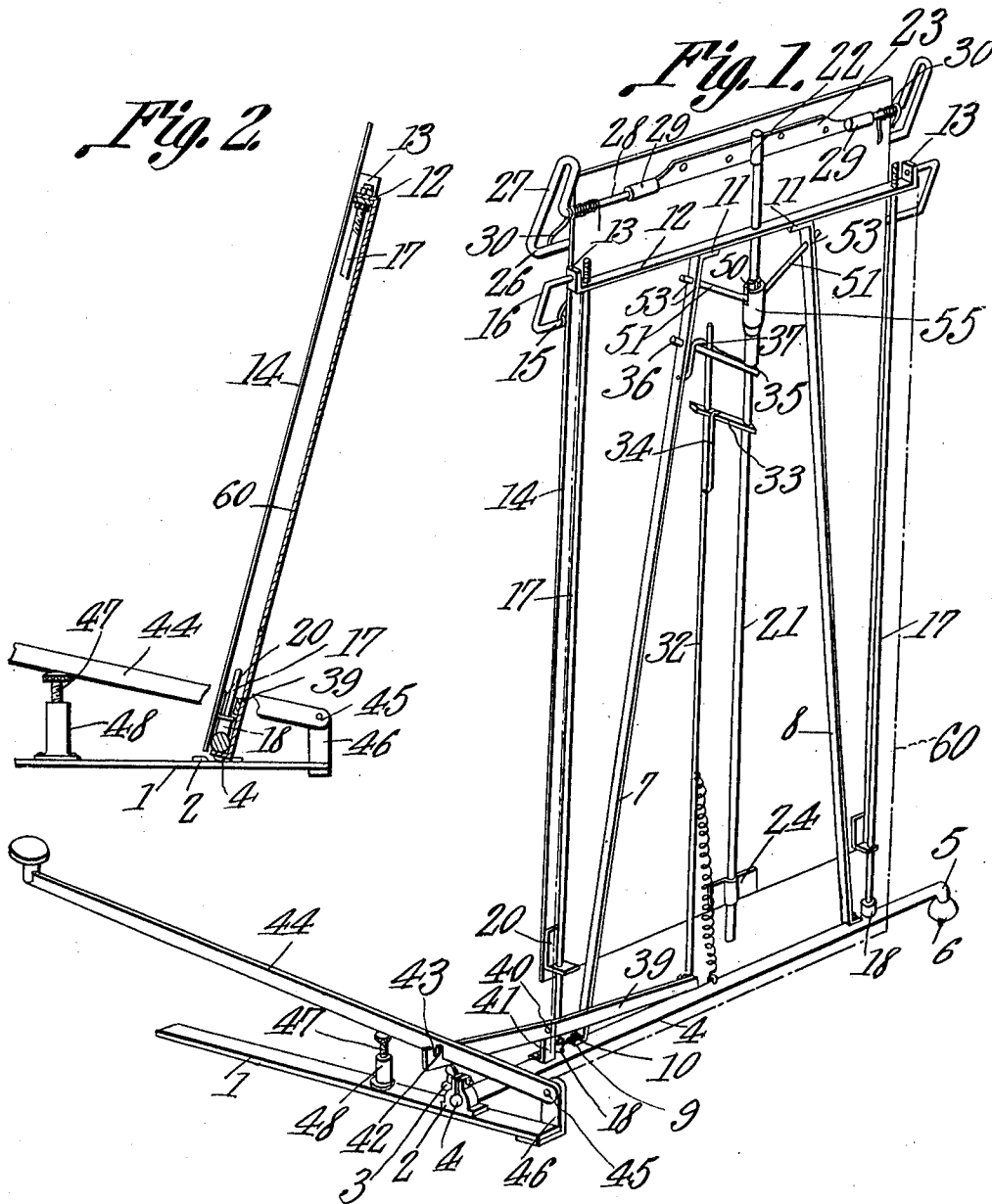


B. F. COLE.
COPY HOLDER.
APPLICATION FILED APR. 16, 1910.

980,206.

Patented Jan. 3, 1911.

2 SHEETS—SHEET 1.



Witnesses

J. H. Smith
W. H. Clark

Benjamin F. Cole,
Inventor

by *C. A. Snow & Co.*
Attorneys

980,206.

Patented Jan. 3, 1911.

2 SHEETS—SHEET 2.

Fig. 3.

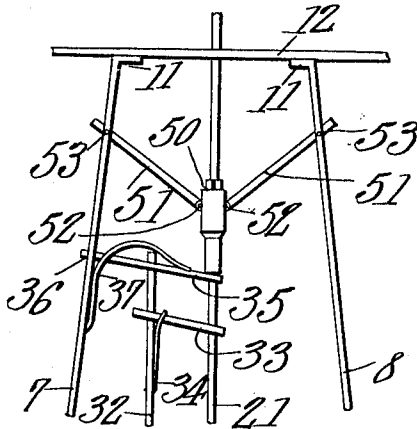


Fig. 4.

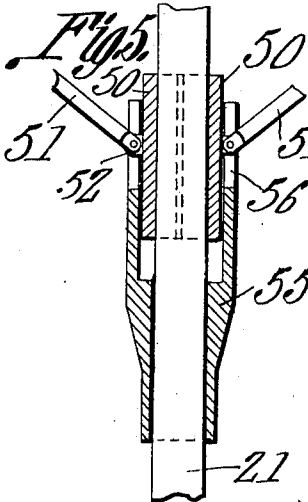
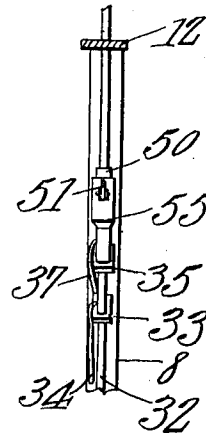


Fig. 6.

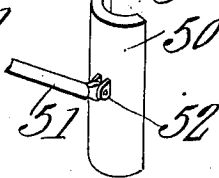


Fig. 7.

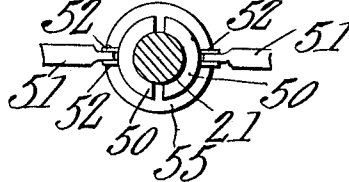
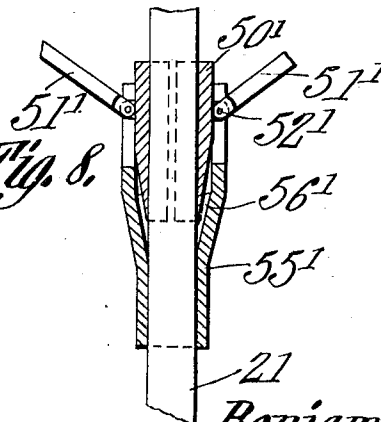


Fig. 8.



Witnesses

J. H. Clarke
W. H. Clarke

Benjamin F. Cole,
Inventor

by *C. A. Snow & Co.*
Attorneys

UNITED STATES PATENT OFFICE.

BENJAMIN F. COLE, OF KINGWOOD, WEST VIRGINIA, ASSIGNOR OF ONE-HALF TO NEIL J. FORTNEY, OF KINGWOOD, WEST VIRGINIA.

COPY-HOLDER.

980,206.

Specification of Letters Patent.

Patented Jan. 3, 1911.

Application filed April 16, 1910. Serial No. 555,925.

To all whom it may concern:

Be it known that I, BENJAMIN F. COLE, a citizen of the United States, residing at Kingwood, in the county of Preston and State of West Virginia, have invented a new and useful Copy-Holder, of which the following is a specification.

This invention relates to copy holders of the general type wherein a vertically movable copy holder plate or support is employed.

In copy holders of the character indicated, as usually constructed, the copy holding plate or table is fed vertically to the necessary height and is then released and permitted to drop by gravity onto one or more buffers. In spite of the use of the buffers the plates usually drop with a clatter and jar which is not only annoying but is likewise detrimental to the copy holder itself.

One of the objects of the present invention is to provide means for controlling the copy support or plate so as to avoid the disadvantages of copy holders as usually constructed.

Further objects of the invention are generally to improve and simplify the construction of copy holders as well as to increase their efficiency in operation and to decrease the expense attending their manufacture and use, as well as to render them neat and attractive in appearance.

With the foregoing and other objects in view which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of invention herein disclosed can be made within the scope of the claims without departing from the spirit of the invention.

In the accompanying drawing forming part of this specification;—Figure 1 is a perspective view of a copy holder constructed in accordance with the present invention. Fig. 2 is a vertical section through a portion of the copy holder. Fig. 3 is a detail view looking at the rear upper portion of the copy holder. Fig. 4 is a vertical section, partly in elevation through the mechanism shown in Fig. 3, taken at a right angle to said figure. Fig. 5 is a vertical section showing in detail the construction of brake mechanism for controlling the downward

movement of the copy support. Fig. 6 is a detail view of one of the brake shoes shown in Fig. 5. Fig. 7 is a horizontal view through the construction shown in Fig. 5. Fig. 8 is a vertical section showing in detail a modified construction of the brake mechanism.

Like reference numerals indicate corresponding parts in the different figures of the drawing.

The copy holder of the present invention is constructed with a side bar 1 which serves to maintain the copy holder in upright position. Mounted upon the upper surface of the side bar 1 is a clamp or vise member 2 in the form of a split ring having a wing bolt or the like extending therethrough as indicated by the reference numeral 3. Fitted into the clamping member or vise 2 is a transverse bar 4 which preferably is circular in form at the portion which extends into the vise 2. At the end thereof opposite the clamp or vise 2, the transverse bar 4 is bent downwardly as indicated at 5 and is provided with a ball or other suitable bearing member 6. The transverse bar 4 carries the copy holding plate or frame and when it is desired to adjust the copy at any desired angle with respect to the vertical, the wing bolt 3 is loosened and the transverse bar 4 is rotated within the vise or clamping member 2 until the desired angle of the copy is reached, after which the bolt 3 is tightened up to hold the copy securely in adjusted position. Extending upward from the transverse bar 1 is a pair of converging frame members 7, 8 each of which at its lower end is angularly bent as indicated at 9 and secured to the transverse bar 4 by means such as a bolt 10. At their upper ends, the converging frame members 7 are angularly bent as indicated at 11 and are bolted to a transverse member or cross piece 12 provided at the outer end thereof with upstanding ears or lugs 13. Vertically slidable in front of the frame members 7 and 8 and cross pieces thereof is a copy holder support or plate 14 across the front of which extends an indicating bar 15 which serves to demarcate the line which is to be copied. The spacing bar 15 is provided at the ends thereof with hanger arms 16 which are connected with the upstanding ears or lugs 13 of the cross piece 12.

The means for guiding the copy plate or

support 14 in its vertical movement preferably comprises a pair of vertically extending rods or bars 17 each of which is seated at its lower end in a socket member 18 mounted on the transverse bar 4 and at its upper end is connected in any suitable manner with the cross piece 12. The copy support or plate 14 adjacent the lower corners thereof is provided with angular members or brackets 20 which are perforated and embrace or fit around the vertically extending rod 17 so as to cause the plate or support 14 to be guided in its vertical movement upon the rod 17.

The plate or support 14 is further guided in its vertical movement by means of a rod 21 which is movable with said plate or support and is fixed in any suitable manner at its upper end in a socket member 22 secured to a cross piece 23 which is bolted to the upper end of the plate or support 14. At its lower end, the rod 21 extends through a strap member 24 which is fixed to the plate 14 in any suitable manner. Intermediate its upper and lower ends, the bar 21 extends through a perforation in the cross piece 12. The action of the bar 21 fixed to the plate 14 and of the bar 17 fixed to the transverse member 4 is to hold both the upper and the lower ends of the plates 14 in proper position during the vertical movement thereof.

The means for holding the copy on the plate 14 preferably comprises a cross bar 26 which extends across the front face of the plate 14 so as to clamp the upper end of the copy. At the sides thereof the cross bar 26 is provided with loop members 27 which terminate in the journal members or trunnions 28 which are fitted into sockets 29 in the ends of the cross plate 23. For the purpose of holding the cross bar 26 yieldingly against the front face of the plate 14, springs 30 are employed, said springs being formed of a piece of wire wrapped into coils, one of the terminals of the spring bearing against the rear face of the plate 14 and the other terminal bearing against the cross bar 26 so as to throw the same against the front face of said plate 14.

The means for elevating the copy support or plate 14 includes a push bar 32 with the upper end of which is pivotally connected a clutch member 33 having a spring 34 for normally holding it in operative position. The free end of the clutch member 33 is formed with a perforation which engages the bar 21 of the plate 14. The clutch member 33 serves to bite onto the bar 21 so that the upward movement of the push rod 32 is transmitted to the bar 21 and through said bar to the plate 14. The means for preventing downward movement of the bar 21 and plate 14 carried thereby when it has been raised one step by means of the clutch member 33, preferably consists of a clutch mem-

ber 35 which is pivotally connected at 36 with the frame member 7 and surrounds the rod 21 at its free end. A spring 37 is employed to hold the bar 35 normally in position to bite onto the rod 21 so as to prevent downward movement thereof. The clutch member 35 thus acts to hold the rod 21 and plate 14 in the position to which it has been raised by the push bar 32. The means for operating the bar 32 includes a transmission lever 39 which is fulcrumed at 40 upon a bracket arm 41 and at its outer end is formed with a pair of notches 42 and 43, the notch 42 being deep and the notch 43 being shallow.

The transmission lever 39 is operated by means of an operating lever 44 which is fulcrumed at its rear end at 45 upon a bracket arm 46 connected with the side bar 1. The operating lever 44 normally is fitted into the notch 42 of the transmission lever 39. When the lever 44 is in the notch 42, its downward movement is limited by means of a stop member 47 in the form of a screw rod adjustably fitted into a socket member 48 which is mounted upon the side bar 1. So long as the operating lever 44 is in the notch 42 so as to be limited in its downward movement by the stop member 47, the plate 14 is raised in a step by step manner by means of said lever 44. When however it is desired to lower the plate 14, the lever 44 is lifted out of the notch 42 and shifted into the notch 43. This causes the lever to move out of alinement with the stop member 47 so that downward pressure thereon is no longer limited by the stop 47. The consequence is that the lower clutch member 33 is raised sufficiently to escape the upper clutch member 35 with the result that both of said clutch members are thrown into approximately horizontal position and the rod 21 is permitted to slide downward there-through, thus permitting the lowering movement of the plate 14.

When the two clutch members 33 and 35 are caused to release the bar 21 so as to permit downward movement of the plate 14, it is desirable that means should be brought into operation for regulating or controlling the downward movement of said plate so as to prevent it from dropping with a crash. It is one of the objects of the present invention to provide means for accomplishing this result. The preferred means preferably includes a pair of semi-cylindrical brake shoes 50 such as are shown in Figs. 5 and 6. The brake shoes 50 fit against opposite sides of the rod 21 and are pivotally connected with downwardly converging rod or lever arms 51, the arms 51 being connected at 52 with the brake shoes 50 and at their upper ends at 53 with the frame members 7 and 8. By reason of the fact that the lever arms 51 are pivotally connected with the frame

members 7 and 8, upward movement upon the brake shoes 50 causes said levers 51 to throw said brake shoes firmly against the bar 21. The means for throwing the brake shoes into position preferably consists of a sleeve member 55 which slidably surrounds the rod 21 above the upper clutch member 35. The sleeve 55 is interiorly recessed as indicated at 56 to receive the brake shoes 50. Said sleeve member is also slotted downward from its upper end as indicated at 56 so as to permit the passage of the lever arms 51. The operation of this part of the mechanism is as follows: When the two clutch members 33 and 35 are thrown in horizontal position so as to release the rod 21 and plate 14, the upper clutch member 35 bears against the lower end of the sleeve member 55 and raises the same. The action of the sleeve member 55 is to cause the brake shoes 50 to be thrown tightly against the rod 21. The greater the downward pressure upon the operating lever 44, the greater the braking action upon the rod 21 will be. It will be apparent therefore that the operating lever 44 not only serves to raise the plate 14 in a step by step manner but also to release the same and simultaneously throw into action a braking mechanism by means of which the downward movement of the plate can be nicely regulated and any jar or crash can be avoided. The wear, tear and strain upon the mechanism is consequently obviated and the life and efficiency thereof are materially prolonged.

For the purpose of concealing the working parts of the mechanism and of presenting a neat appearance at the back of the copy holder, a casing 60 is employed. This casing fits entirely over the back of the frame of the device and conceals all the working mechanism.

A modified form of the improved brake mechanism is illustrated in Fig. 8 of the drawing, wherein the lower ends of the brake shoes 50' instead of being straight as indicated in Fig. 5 are beveled or conical in form, and the recess 56' in the sleeve

member 55' is similarly tapered so as to engage the tapered or beveled lower ends of the brake shoes 50' and thus throw them very tightly into engagement with the rod 21. This form of brake mechanism is very effective in its operation.

The copy holder of the present invention is strong, simple, durable and inexpensive in construction as well as neat and compact in appearance and thoroughly efficient and practical in operation.

What is claimed is:—

1. A copy holder having a vertically movable copy support, a rod connected therewith, clutch mechanism engaging said rod, a pair of brake shoes adapted to be thrown into engagement with said rod, and common means for operating said clutch mechanism and brake shoes to control the upward and downward movement of said support.

2. A copy holder comprising a pair of upwardly converging frame members, a cross piece connected with the upper ends of said frame members, a pair of vertically extending rods connected with said cross piece at their upper ends, a vertically movable plate slidable on said rods, a vertical rod connected with said plate and extending through said cross piece, a pair of clutch members operating on said rod, an operating lever for operating said clutch members, a pair of brake shoes bearing against opposite sides of said rod, a pair of levers connected with said brake shoes, a sleeve engaging said brake shoes and one of said clutch members, and a transmission lever located between said operating lever and said clutch members and having a plurality of notches adapted to be engaged by said operating lever for controlling said clutch mechanism and said brake mechanism.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

BENJAMIN F. COLE.

Witnesses:

FRANK B. OCHSENREITER,
W. H. C. CLARKE.