Feb. 11, 1936. G. H. COLE 2,030,353

PAPER STACKING CLAMP

Original Filed Aug. 22, 1934

Fig. 1.

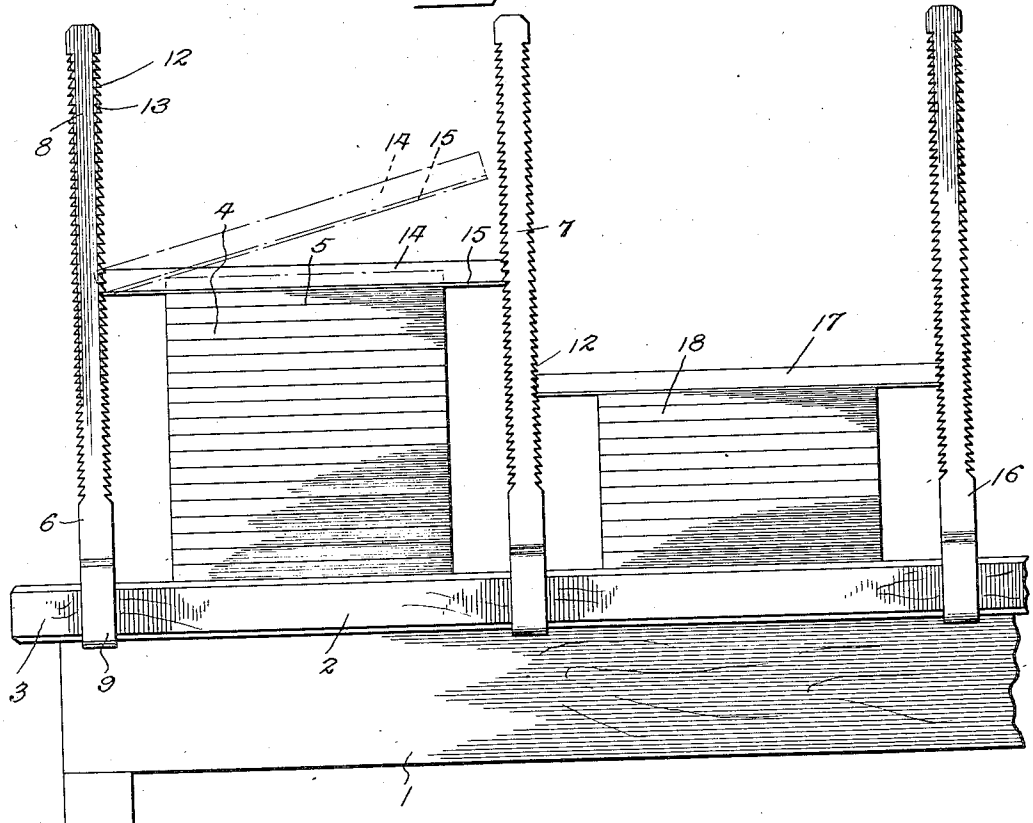


Fig. 2.

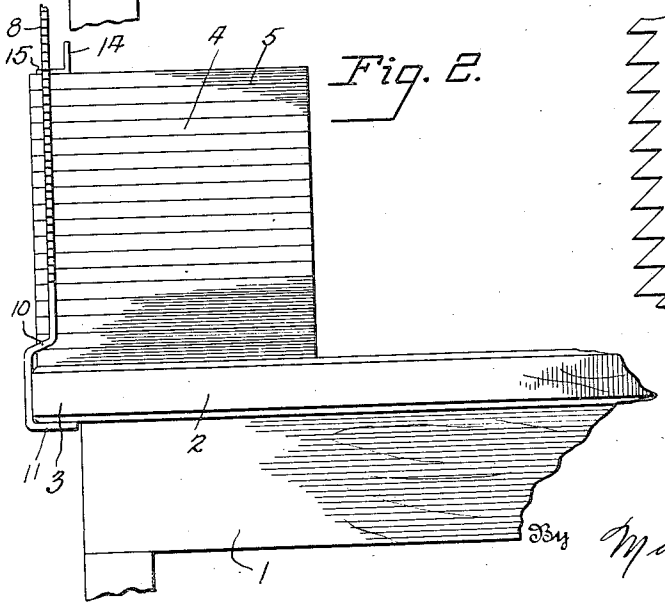
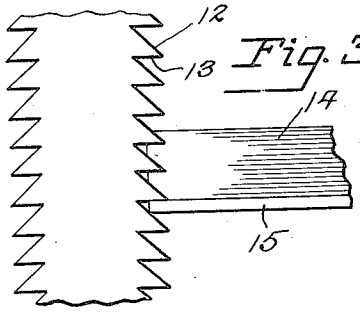


Fig. 3.



Inventor
George H. Cole

By Mason Fenwick & Lawrence
Attorneys

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PAPER STACKING CLAMP

George H. Cole, Lakeland, Fla.

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5 Claims. (Cl. 11—1)

This invention relates to stacking clamps useful in the printing and paper cutting industries for compressing stacks or lifts of paper, holding them compactly in place while glue is being applied to the edges of the lifts in making pads or tablets, and while the glue is drying.

One of the objects of the invention is the provision of a stacking clamp characterized by simplicity of construction and ease in manipulation.

Another object of the invention is the provision of a stacking clamp comprising upright members cooperating with a cross member for compressing a stack of sheets placed between said uprights and beneath said cross member, the uprights being constructed to be used in multiple upon the same table, one upright serving two adjacent stacks or lifts.

Other objects of the invention will appear as the following description of a preferred and practical embodiment thereof proceeds.

In the drawing which accompanies and forms a part of the following specification and throughout the several figures of which the same characters of reference have been employed to designate identical parts:

Figure 1 is a front elevation illustrating the multiple use of the stacking clamp;

Figure 2 is an end view; and

Figure 3 is a fragmentary elevation.

Before adverting to a detailed description of the invention, it may be stated that in printing shops and paper cutting establishments, there are quantities of paper which would otherwise be waste that are made up in the form of pads or tablets to be sold for scratch or other writing purposes. These waste papers are stacked, cut to the best advantage as to size, and united by having glue applied to one end of the stack. The present invention is designed to hold the stacks in place while the glue is being applied and drying and since there are customarily various sized stacks, the present invention provides that a plurality of them may be tableted at the same time.

Now, referring to the several figures, the numeral 1 represents a printer's table, the top 2 of which has the overhanging edge 3. Upon the top of the table is shown a lift or stack 4 of paper cut uniformly to size and ordinarily separated by cardboard spacers 5 into a plurality of tablets.

The stacking clamp comprises at least 2 similar upright members 6 and 7 each of which comprises a rack bar 8 and an L-shaped lower end 9, said rack bar being joined to said L-shaped lower end by an angular off-set 10. The free end of the L-shaped portion is designed to underlie the overhanging edge 3 of the table. The purpose of the off-set 10 is to dispose the rack bar above an intermediate point of the free end 11 of the L-shaped portion to nullify any tilting tendency on the part of the upright. The rack bar is provided with teeth 12 having abrupt shoulders 13 facing downwardly and it is preferred that the rack bar have teeth on both sides as shown.

Cooperating with an adjacent pair of rack bars is the press bar 14 which may be of any desired shape, but is here shown as being constituted by an angle iron with one of the flat flanges 15 adapted to rest against the stack of sheets in the manner shown in full lines in Figure 1. The ends of the flange 15 are adapted to engage beneath the teeth of a pair of rack bars.

In employing the device, a pair of uprights are needed for a single stack or lift, and one press bar. The lift of sheets is placed in the desired position with one of its faces at the edge of the table as shown in Figure 2, care being taken to aline the sheets so that their front edges are in vertical plane. The clamping bar 6 is then held adjacent the side of the stack with the free end 11 of its L-shaped portion against the underside of the overhanging edge of the table top. The cross piece is then engaged beneath one of the teeth of the rack bar in such manner as to fulcrum against the side of the stack of sheets and to lift the rack bar until the lower free end 11 presses against the underside of the table.

The end which has hitherto held the rack bar 6 in place, may now be released since the press bar 14 acting as a lever will hold it up in position. The rack bar 7 is now placed adjacent the opposite side of the lift of sheets with its lower free end beneath the edge of the table and the press bar 14 pushed down compressively against the stack of sheets until it can be pressed no further whereupon the free end of the press bar is engaged beneath a tooth of the upright 7. It is not necessary any longer to hold any part of the clamp in place by hand, for the expansive tendency of the paper stack reacting against the press bar holds it firmly in engagement with the teeth of the opposite uprights and in turn, maintains them firmly in engagement with the lower surface of the overhanging edge of the table.

Another stack or lift 18 may now be placed upon the table adjacent the rack bar 7. It is now necessary merely to employ one additional upright 16 and an additional press bar 17, for

the up-right 7 being provided with teeth on both sides cooperates with the up-right 16 in forming a clamp for the second stack.

In clamping the second stack 18, the press bar 17 is tilted in the same manner as was the press bar 14 and engaged with a suitable tooth 12 on the right hand side of the up-right 7. It is then pushed down to horizontal position, and the additional up-right 16 is placed adjacent the stack 18 beneath a tooth of which the press bar 17 is engaged. The expansive tendency of the stack 18 pushes the press bar 17 upward, elevating the up-right 16 until its free lower end 11 is in firm contact with the overhanging edge of the table. Thus, any number of stacks depending upon the capacity of the table can be alined and put under pressure merely by the use of one additional up-right for each stack, after the first additional press bar for each stack. When the stacks are all in place, glue may be applied with a brush to that face of each stack which lies adjacent the edge or edges of the table and the glue is let rest until dry. The clamps may be readily knocked down by forcibly tilting the up-rights, laterally causing the press bars to spring out of engagement with the up-rights permitting collapse of the clamps.

While I have in the above description disclosed what I believe to be a preferred and practical embodiment of the invention, it will be understood that the specific details of construction and arrangement of parts as above outlined, are merely by way of example and not to be construed as limiting the scope of the invention as claimed.

What I claim is:

1. In a stacking clamp, a rack bar having an L-shaped lower portion, the free end of which is substantially perpendicular to said rack bar, and an integral angular off-set between said rack bar and L-shaped portion extending over and shorter than said free end, so that a plane embracing said rack bar intersects said free end at an intermediate point.

2. Stacking clamp comprising a rack bar having teeth on at least one lateral edge thereof, said teeth having abrupt shoulders facing downwardly, said rack bar having an L-shaped lower portion, the free end of which is substantially perpendicular to said rack bar, and an integral angular off-set between said rack bar and L-shaped portion, extending over, and shorter than said free end, so that a plane embracing said rack bar intersects said free end at an intermediate point.

3. Stacking clamp comprising a pair of rack bars having teeth on at least their confronting lateral edges, said teeth having abrupt shoulders facing downwardly, said rack bars having each an L-shaped lower portion, the free end of which is substantially perpendicular to said rack bar and adapted, in the operative position of the clamp to engage the under surface of the edge of a table, and an integral angular off-set between said rack bar and L-shaped portion extending over, and shorter than said free end, so that a plane embracing said rack bar intersects said free end at an intermediate point, and a press bar having its ends engageable with suitable teeth on the confronting edges of said rack bars, adapting it to hold in compressing relation a stack of sheets placed between said rack bars, said press bar being adapted to react against said teeth under the tendency of the stack of sheets to expand thereby drawing said L-shaped portions into sustaining relation to the under edge of the table on which said rack bars may be mounted.

4. Stacking clamp as claimed in claim 3, the rack bars having similar teeth on both lateral edges whereby their employment in multiple relation is made possible.

5. Stacking clamp as claimed in claim 3, the press bars comprising members of angular cross section with a flat face arranged in engaging relation to the stack.

GEORGE H. COLE.