

Aug. 9, 1927.

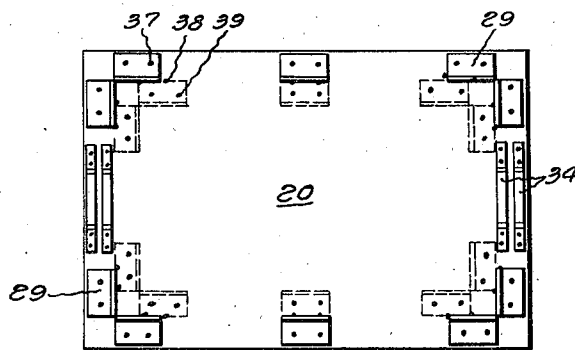
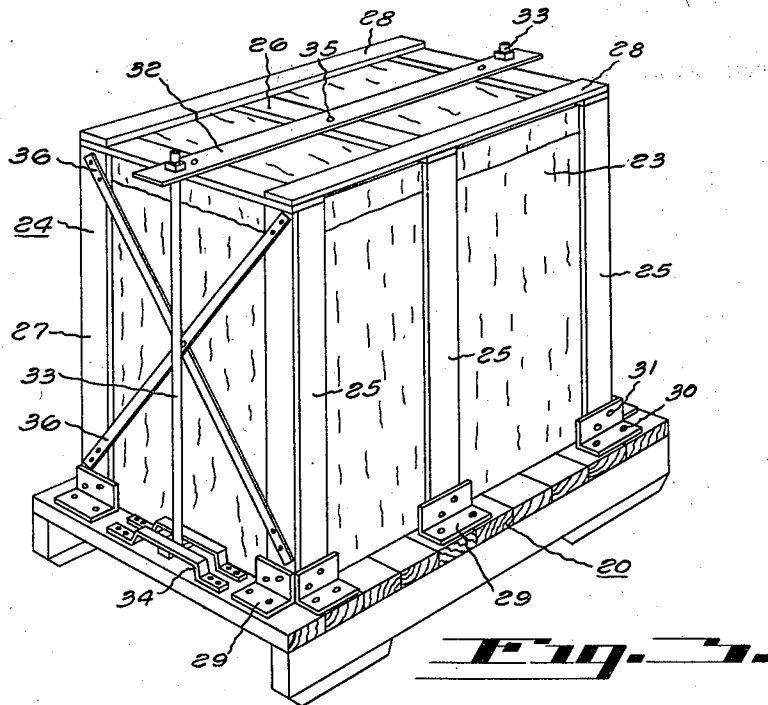
1,638,563

H. P. CARRUTH ET AL

APPARATUS AND METHOD FOR PACKAGING PAPER

Filed April 11, 1924

2 Sheets-Sheet 2



Inventor

Henry P. Carruth
William C. Lindsey

By

Marshall & Fisher
Attorneys

UNITED STATES PATENT OFFICE.

HENRY P. CARRUTH AND WILLIAM C. LUDWIG, OF CHILLICOTHE, OHIO, ASSIGNORS
TO THE MEAD PULP & PAPER COMPANY, OF DAYTON, OHIO, A CORPORATION OF
OHIO.

APPARATUS AND METHOD FOR PACKAGING PAPER.

Application filed April 11, 1924. Serial No. 705,821.

The present invention relates to the pack-
aging and transporting of paper and par-
ticularly to the packaging and transport-
ing of sheet paper adapted to be piled or
5 formed into stacks.

One of the principal objects of the present
invention is the provision of an improved
method of packaging and transporting sheet
paper and of an apparatus for packaging,
10 which apparatus has as one of its principal
elements a skid platform upon which the
sheet paper is adapted to be piled.

Further objects and advantages of the
present invention will be apparent from the
15 following description when taken in con-
nection with the accompanying drawings,
wherein;

Fig. 1 is a perspective view of the plat-
form upon which the paper is adapted to
20 be piled;

Fig. 2 is a perspective view showing the
paper packaged and ready for shipment,
parts being broken away; and

Figs. 3 and 4 show a modified form of the
25 invention.

Referring to the drawings, 20 designates
a platform, preferably of rigid and sub-
stantial construction, which platform has
a pair of skids or runners 21 by which the
30 platform is supported at any desired dis-
tance above the ground, preferably at such a dis-
tance as to permit pushing of an elevating
truck thereunder, whereby the platform may
be readily elevated and transported.

The sheet paper is then piled upon the
platform to form a stack 22 as shown in
dotted lines in Fig. 1 and when the stack or
pile of paper has reached the desired height
it is preferably enwrapped with a suitable
40 protective covering, as for example thin
flexible water-proof paper 23, although it
will be understood that the use of such a
protective covering may be dispensed with
if desired. A closely-enclosing confining
45 structure or frame-work 24 for the pile of
paper is then built up upon the platform in
order to bind the pile of paper to the plat-
form, and to protect the corners and sides
thereof from damage in shipment.

The confining structure consists generally
50 of a series of upright supporting and pro-
tecting frame members 25 secured to one
side edge of the platform and a second series
of correspondingly spaced upright support-
ing frame members fastened to the op-

posite side edge of the platform, the cor-
responding upright supporting members of
the two series being connected together
across the top of the stack of paper by
means of the connecting members 26. An
60 important feature of the present inven-
tion is the fact that the platform is the same
size as the sheets of paper to be packaged,
and as a consequence when the upright sup-
porting and protecting members are fast-
65 ened to the edge of the platform they lie
against and closely confine the stack of
paper. The connecting members 26 together
with the upright members 25 and the plat-
form 20 constitute a series of encircling
70 frames which serve to closely confine or
bind the stack of paper on the platform as
well as to protect the top and sides of the
stack.

In the preferred form of the invention as
75 shown in Fig. 2 there is an upright support-
ing and protecting member 25 adjacent each
corner of the stack of paper and an inter-
mediate upright member 25 between the cor-
ner members. It will be understood of
80 course that the intermediate members may
be increased in number as desired or even
omitted entirely. Upright supporting mem-
bers 27 are secured to the end edges of the
platform 20 adjacent the corners, these up-
85 right supporting members being preferably
nailed or otherwise secured to the corner up-
right members 25 to brace the encircling
frames and to protect the corners of the
stack of paper. The confining structure 24
90 is completed by the connecting members 28
which connect the several individual en-
circling frames and which, when taken in
connection with the members 26 form a
95 framework over the top of the stack which
serves to join together the upper ends of the
upright supporting members, and which, to-
gether with said upright members and the
platform forms an enlarged encircling and
100 binding frame for binding the stack of paper
to the platform, consisting generally of top
and bottom members bearing against the
ends of the stack of paper and a plurality
of connecting members for holding together
105 the top and bottom members and for pro-
tecting the side of the stack of paper from
injury. As shown in Fig. 2 the protective
covering 23 completely covers the stack of
paper and extends downwardly preferably
110 at least as far as the bottom edge of the

platform and is securely clamped or fastened in position between the edges of the platform and the upright members 25 and 27.

In the form of invention shown in Figs. 3 and 4 the skid platform 20 is made larger than the sheet of paper to be packaged, and the confining structure 24 is secured to the upper surface of the platform. The lower ends of the upright supporting and protecting members 25 and 27 abut against the surface of the platform and the upright members are held against the sides of the stack of paper by means of fastening devices or angle irons 29. Angle irons 29 are fastened to the platform and to the upright supporting members by means of screws, pins or other suitable forms of fastening devices 30 and 31 respectively, although the fastening devices 31 may obviously be omitted if desired. The confining structure 24 and the paper therein may be additionally secured or braced in position upon the platform 20 by means of the bracing or binding frame consisting of a bar 32 which lies over the connecting members 26 and which is bolted at its ends to the platform by means of the bolts 33. The platform is provided at each end with a pair of clamping members 34 which are spaced apart to receive the T-shaped head of the clamping bolt 33. The bar 32 may be pinned or otherwise secured as at 35 to the connecting members 26, and when this is done other means for connecting the bars 26 may be dispensed with. In the form of the invention shown in Fig. 3 the end encircling frame formed by the connecting members 26, the upright members 25 and 27 and the platform 20 are additionally braced by means of the diagonal bracing members 36. While both the bracing or securing bar 32 and the diagonal bracing members 36 are employed in the form of the invention shown in Fig. 3 it should be understood that either or both of these may be omitted if desired, and likewise either or both of these are equally adapted to be used with the form of the invention shown in Fig. 2.

One advantage of using a platform larger than the sheet of paper as shown in Figs. 3 and 4 is that it is possible to standardize on a number of platforms each adapted to receive paper of several different sizes, thus doing away with a large variety of platforms. One means by which a platform may be employed for several different sizes of paper is shown in Fig. 4 wherein the platform is provided with several series of holes or slots to receive the particular form of fastening device which may be employed to secure the angle irons 29 upon the platform. In Fig. 4 the platform is illustrated as having three series of holes 37, 38 and 39 respectively by which the angle irons may be secured in position to receive various sizes of

paper, as shown, for example, by the full line position of the angle irons and the dotted line position of the angle irons. It will be obvious that the platform may be provided with any number of series of openings and that by taking advantage of the various possible locations of the angle irons, the platform may be used to accommodate a wide range of shapes and sizes of paper. While the skid platform and confining structure 24 is herein shown as made of wood it will be understood that these parts may be made of metal or any other desired material which may contribute to the lightness, durability or ease of assembly or disassembly of the parts.

After the confining structure 24 is built up around the stack of paper as above described, the paper is ready for storage or shipment as desired. In handling the paper for shipment it is only necessary to push an elevating truck underneath the platform either for loading into a freight car or for unloading therefrom. There being no strain upon the confining structure such as ordinary packing boxes are subjected to when they are raised upon one edge in order to receive a truck thereunder, the confining structure of the present invention may obviously be made comparatively very light, being only heavy enough to hold or bind the stack of paper securely to the platform and to protect the edges and corners thereof.

From the foregoing description it may be seen that the following advantages are obtained by use of an apparatus constructed in accordance with the present invention.

One advantage resides in the saving in the cost of the package for the paper. The quantity of lumber required being necessarily small, the package is much lighter in weight for any given weight of paper than the usual form of packing case. This results not only in a considerable saving in freight charges but makes it possible with this form of package to load into a freight car a greater weight of paper.

Another advantage which is present particularly in the form of the invention shown in Fig. 2 is that when the packages are packed in solid in a freight car, the packages contact with one another and with the walls of the freight car over the entire height of the package thus preventing any shifting of the paper which would be ruinous to its quality.

Another advantage is the saving in the handling of the paper both by the manufacturer who packs the paper and by the customer who unpacks the paper. Heretofore it has been customary to construct a solid packing box of the required size and to place the sheet paper therein a little at a time and finally to nail the cover thereon. This has resulted in considerable waste of

the paper due to handling in this manner. According to the present invention the paper is piled upon the platform and since the platform is out in the open this may be done quickly and without damaging the edges of the sheets of paper. The stack being formed to the proper size and then covered by the protective covering, the confining structure may be quickly and easily built up about the stack of paper as already described. When the paper reaches its destination it may be unpacked by simply removing the confining structure 24 which leaves the stack of paper upon the platform completely exposed and ready for use. It is not necessary at this stage to unpack the paper a little at a time as in the case of the ordinary packing box. Where it is desirable to season the paper prior to its use on the press, as in the case of high grade paper, the paper need not be transferred from the platform to a truck, as heretofore, but may be left on the platform and placed in storage for the length of time required for proper seasoning of the paper, and then withdrawn from storage as required.

From the foregoing it will be evident that the present apparatus and method of packaging and shipping paper effects a great saving in wastage due to the fact there is less handling of the paper than heretofore, and this is an item of considerable importance in the case of high grade expensive sheet paper.

A still further advantage resides in the fact that much material is saved by the reuse of the platforms which may be returned to their source when empty and again used for shipping paper. The upright supporting members and other parts of the confining structure 24 may also be dis-assembled and returned in compact form to their source and used over again.

While the forms of apparatus herein described constitute preferred embodiments of the invention, it is to be understood that the invention is not limited to these precise forms of apparatus, and that changes may be made in either without departing from the scope of the invention which is defined in the appended claims.

What is claimed is:

1. Apparatus of the character described adapted for packaging sheet paper, comprising a platform adapted to receive sheet paper in a stack thereon and having skids for supporting the platform at such a distance above the ground as to receive an elevating truck thereunder, and a confining structure secured to the platform for binding the stack of paper immovably thereon, said confining structure includes upright members securely fastened to the platform

and lying along the side of the stack to closely confine the latter, and a top member lying over the top of the stack and connected with said upright members. 65

2. Apparatus of the character described adapted for packaging sheet paper, comprising a platform including skids thereon, the platform being proportioned to received a predetermined size of paper to be packaged and adapted to receive the sheets of paper in a stack thereon, and a confining structure secured to the platform for binding the stack of paper immovably thereon, said confining structure including a top member bearing on the top of the stack and upright means to securely connect the top member to the platform and to closely confine and protect the corners of the stack of paper. 70 75 80

3. Apparatus of the character described adapted for packaging sheet paper, comprising a platform including skids thereon, the platform being of the same size as the sheet of paper to be packaged and adapted to receive the sheets of paper in a stack thereon, upright supporting members fastened to the platform for closely confining and protecting the corners of the stack, said supporting members having portions disposed at an angle to one another lying against adjacent edges of the platform, and means lying against the upper surface of the stack for closely confining and protecting the same and for binding together the said supporting members. 85 90 95

4. Apparatus of the character described adapted for packaging sheet paper, comprising a platform including skids thereon, the platform being of the same size as the sheet of paper to be packaged and adapted to receive the sheets of paper in a stack thereon, upright supporting members fastened to the platform at one side edge thereof, there being corner members adjacent the corners of the platform and a side member intermediate the corner members, correspondingly located upright supporting members fastened to the platform at the opposite side edge thereof, connecting members lying along the upper surface of the stack for connecting opposite pairs of upright members, said upright members and connecting members forming with the platform a series of encircling frames, other supporting members secured to the end frames to reinforce the latter, said supporting and connecting members closely confining and protecting the stack, and means for connecting the top portions of adjacent frames. 100 105 110 115 120

In testimony whereof they hereto affix their signatures.

HENRY P. CARRUTH.
WILLIAM C. LUDWIG.