No. 674,308. Patented May 14, 1901.

# M. J. STEFFENS.

## PROCESS OF PACKING SENSITIZED PHOTOGRAPHIC MATERIAL.

(Application filed Mar. 16, 1899.)

(No Model.)

Fig. 1.

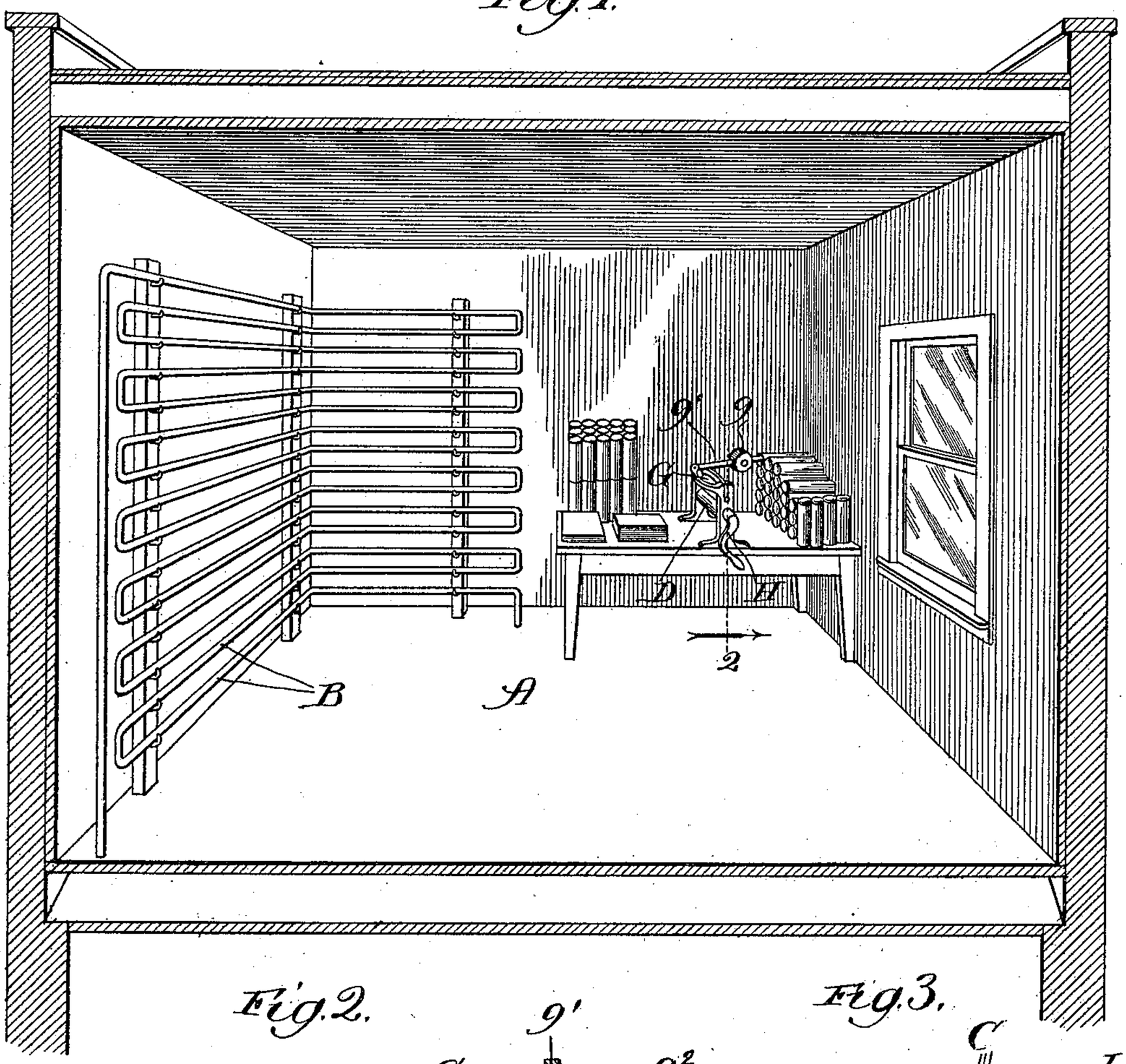



Fig. 2.

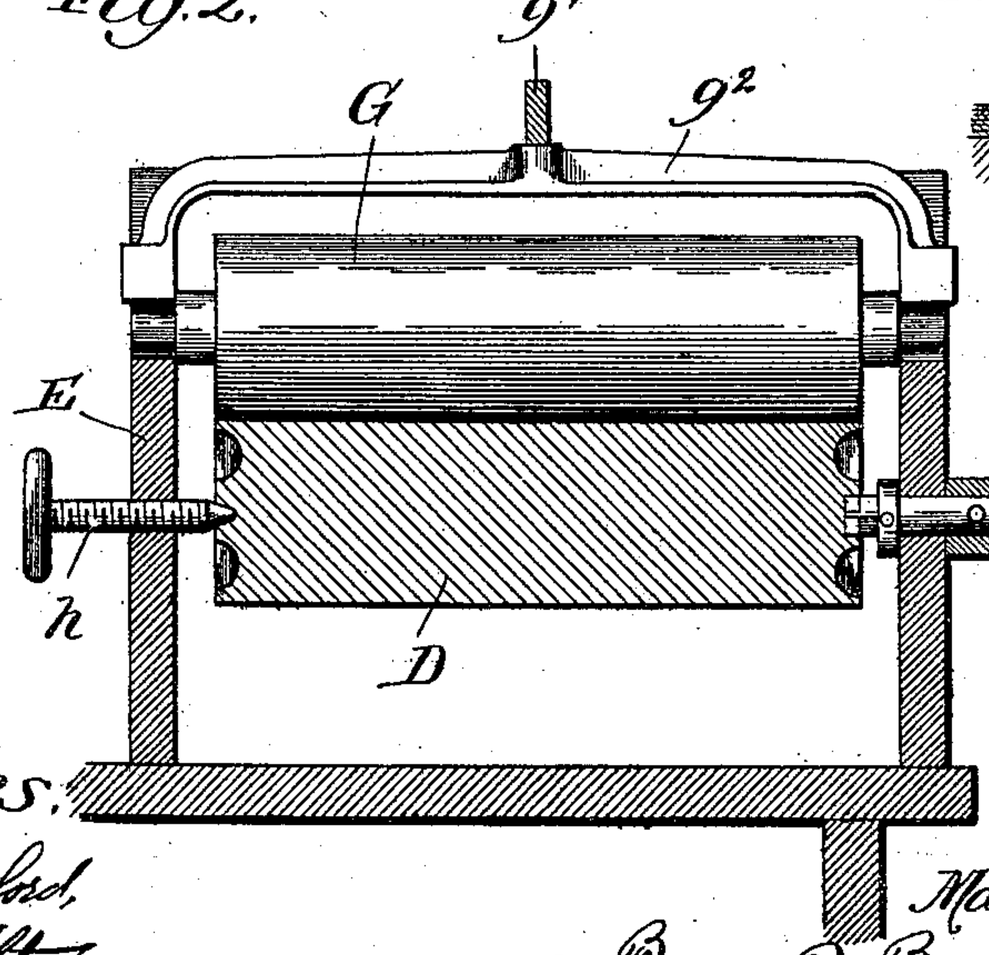
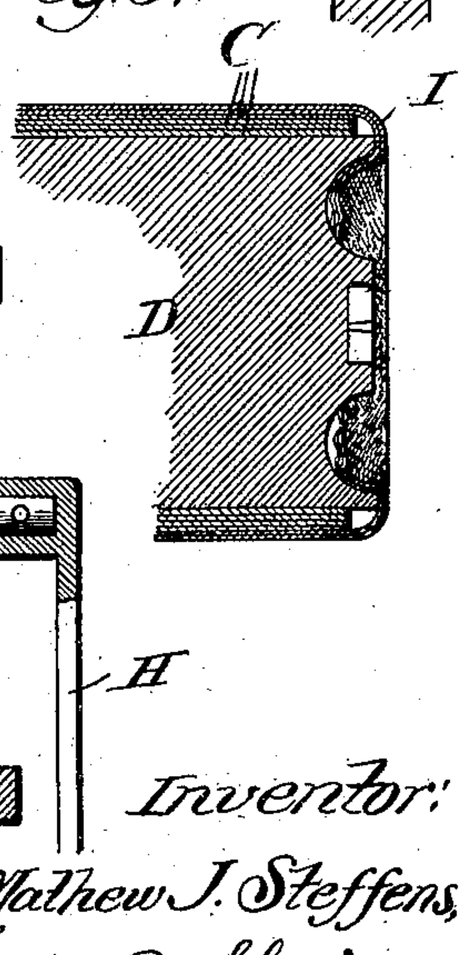



Fig. 3.




Witnesses:
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# UNITED STATES PATENT OFFICE.

MATHEW J. STEFFENS, OF CHICAGO, ILLINOIS.

## PROCESS OF PACKING SENSITIZED PHOTOGRAPHIC MATERIAL.

SPECIFICATION forming part of Letters Patent No. 674,308, dated May 14, 1901.

Application filed March 16, 1899. Serial No. 709,319. (No specimens.)

*To all whom it may concern:*

Be it known that I, MATHEW J. STEFFENS, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Processes of Packing Sensitized Photographic Material, of which the following is a specification.

The object of my invention is to provide a simple, economical, and efficient process for packing sensitized photographic material; and the invention consists in the features hereinafter described and claimed.

In the accompanying drawings, Figure 1 is a perspective view of a room and apparatus arranged to carry out my process; Fig. 2, a sectional detail of an apparatus for packing the material, and Fig. 3 a sectional detail of a portion of a completed package.

In the art to which this invention relates it is well known that the ordinary commercial silver sensitized photographic-printing paper has to be treated chemically in order to preserve it for any great length of time and that its efficiency is greatly impaired by the treatment it receives, so much so that photographers generally prefer to use other and higher-priced papers. My improvement is designed to dispense with these objectionable chemical and other deleterious treatments and processes and to provide an economical process that will permit of packing the sensitized photographic paper so that it can be kept indefinitely and its efficiency enhanced to such an extent as to equal the higher-priced papers, which are made of other and expensive materials, all of which will more fully hereinafter appear.

In carrying out my improved process I find it desirable to first exclude all moisture from the paper, and in order to accomplish this result I cool the workroom to a point about twelve degrees (12°) above zero. To do this effectually, I employ a room A, in which coils B are arranged that contain a circulating cooling mixture, such as lime, which condenses and gathers all or substantially all of the moisture on the pipes. I next take the sheets or strips of paper C and pack them under pressure, preferably by winding them around rolls D, which are rotatably and removably inserted in a frame portion E, while a compressing-roll G bears thereon. The pressure is furnished by a weight *g*, mounted on a pivoted lever *g'*, which contracts the movable bracket $g^2$, and the winding-roll is turned by a crank H. A removable center *h* is provided and has threaded engagement with the frame, so that the auxiliary rolls may be removed or inserted whenever it may be necessary. When a sufficient amount of material has been wound on the winding-roll, an opaque moisture-impervious wrapper I is next wound around the same and has its ends secured hermetically to the ends of the roll, this being done while the pressure is yet applied, as shown in Fig. 3, when the completed package may be removed from the machine and stored away for future use.

I claim—

1. The process of packing sensitized photographic material, which consists in employing a temperature below the freezing-point, forming the material under a positive and equal pressure into its package shape subject to the action of and under the effects of the low temperature and the applied pressure, and maintaining the low temperature and the applied pressure during the entire period of formation of the package, for excluding the moisture from the package when completed, substantially as described.

2. The process of packing sensitized photographic material, which consists in employing a temperature below the freezing-point, winding the material under a positive and equal pressure into a rolled package subject to the action of and under the effects of the low temperature and the applied pressure, and maintaining the low temperature and the applied pressure during the entire winding period of forming the package, for excluding moisture from the package when completed, substantially as described.

3. The process of packing sensitized photographic material which consists in employing a temperature below the freezing-point, winding the material under a positive and equal pressure into a rolled package subject to the action of and under the effects of the low temperature and the applied pressure, maintaining the low temperature and the applied pressure during the winding period of the package for excluding moisture from the

package when completed in its rolled shape, and finally inclosing the rolled package in an opaque wrapper under a positive and equal pressure while inclosing and hermetically sealing the ends of the formed package and wrapper for rendering the package impervious to moisture, substantially as described.

4. The process of packing sensitized photographic material which consists in employing a temperature below the freezing-point in which to pack the material, winding the material into a roll shape under the low temperature and pressure, excluding moisture during the winding and pressing into a roll, and wrapping the formed roll while still under pressure in an opaque covering and closing the ends of the covering, thereby hermetically sealing the package against moisture, substantially as described.

5. As a new article of manufacture, a sensitized photographic-material package comprising a cylindrical roll, a sheet or strip of sensitized photographic material wound onto the roll and positively and equally pressed on itself while being wound, and an opaque covering of greater width than the width of the material wrapped around the completed roll and positively and equally pressed while being so wrapped, leaving the sensitized material between it and the roll and having the sensitized material hermetically sealed by closing the projecting wrapper ends over onto the ends of the roll, substantially as described.

6. As a new article of manufacture, a sensitized photographic-material package comprising a sheet or strip of sensitized photographic material closely wound on a central support and positively and equally pressed on itself in so winding, and an opaque covering of greater width than the width of the material and closely wrapped around the completed roll and positively and equally pressed while being so wrapped, leaving the sensitized photographic material between it and the central support and having the sensitized photographic material hermetically sealed without moisture in the package by turning the wrapper ends over and closing them down onto the ends of the central support, substantially as described.

MATHEW J. STEFFENS.

Witnesses:
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