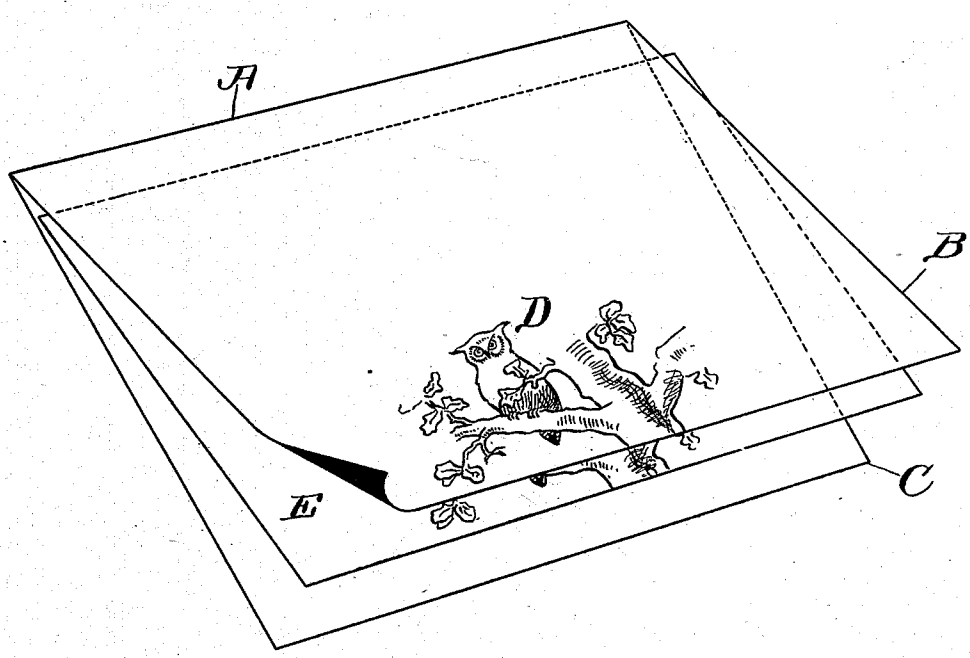
No. 714,806. Patented Dec. 2, 1902.

J. A. LEE.

DUPLICATING DEVICE.

(Application filed June 28, 1902.)

(No Model.)



Witnesses:
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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

JOHN ALDEN LEE, OF MILTON, MASSACHUSETTS.

DUPLICATING DEVICE.

SPECIFICATION forming part of Letters Patent No. 714,806, dated December 2, 1902.

Application filed June 28, 1902. Serial No. 113,658. (No model.)

To all whom it may concern:

Be it known that I, JOHN ALDEN LEE, a citizen of the United States, and a resident of Milton, in the county of Norfolk and State of Massachusetts, have invented new and useful Improvements in Duplicating Devices, of which the following is a specification.

My invention relates to duplicating devices of the class employing a sheet of paper or other suitable material coated with carbon or a similar transferring composition by means of which a pattern, inscription, or the like traced or delineated upon the uncoated surface by means of a pencil or other pointed instrument may be imprinted upon a sheet of paper, fabric, or other material placed underneath the duplicating-sheet.

The chief objects of my invention are to provide a duplicating device for artistic, educational, or like purposes which shall have upon its uncoated face a pattern, figure, design, or other impression adapted to be reproduced upon another sheet of suitable material by tracing and to provide a duplicating device of the above-mentioned class whose carbonized or printing surface shall be protected from handling and from contact with other objects which would be to the mutual disadvantage of such objects and of the carbonized surface. Unless the coated surface of the duplicating device be protected in some way it is the experience of all who have used duplicating devices that the hands of the user and whatever objects come in contact with the coated surface are apt to become "smutted." This is a serious disadvantage, especially where a duplicating device is designed to be used for educational or artistic purposes. My device is intended to be used for such purposes and is especially adapted for use in kindergartens where it is desired to transfer a pattern, figure, or the like to a sheet of paper or other material to be subsequently cut out, pricked in outline, or worked with a needle in worsted, thread, or yarn by the pupil. It is obvious that in the hands of a child a duplicating device whose coated surface was exposed would besmear the hands and clothes of the pupil and other objects with which it came in contact, rendering it impracticable for kindergarten use.

My invention is also adapted for use in transferring patterns for embroidery and other needle-work, and its use greatly reduces the danger of soiling the hands of the user and the fabric to be operated upon and other objects in the vicinity.

The accompanying drawing illustrates in perspective view an embodiment of my invention.

My device consists of a sheet of paper or other suitable material folded upon itself, preferably across its middle at the crease A, forming two leaves B and C. The inner surface of one of the leaves, as B, is coated with carbon or any desired transferring composition adapted to reproduce or transfer upon a sheet placed thereunder the impression of a pencil or other pointed instrument made upon the outer surface.

Upon the outer surface of the duplicating device is depicted a figure, pattern, design, or the like to be traced and reproduced and conventionally shown in the drawing as the figure D. The leaf C may, if desired, also bear a figure on its outer side, each sheet thereby bearing two patterns. The inner surface of C may also, if desired, be coated with a transferring composition, the advantage of providing both leaves with the transferring composition being that the material to be operated upon will receive an impression of the pattern on both sides, which will facilitate the cutting of the pattern or the working thereof by the needle-worker, as the case may be. If, however, only one side of the pattern-receiving sheet is to be marked, whether the obverse or the reverse side, I prefer to provide only one leaf of my duplicating device with the transferring composition.

The operation of my device will be obvious. I place the sheet E to be operated upon between the leaves B and C, where it will lie and be held without danger of slipping or rubbing, and trace the figure D with a suitable pointed instrument, whereby the design or pattern D will be transferred and reproduced through the transferring composition upon the sheet E inserted between the leaves.

I claim as my invention—

1. A duplicating device comprising a sheet folded upon itself to form a pair of leaves, whose interior is thereby protected from con-

tact from without and is adapted to receive the material to be operated upon, a transferring composition upon the inner surface of one of the leaves, and a pattern, figure, or design portrayed upon the outer surface of one of the leaves, adapted to be traced, whereby such pattern, figure or design may be transferred to a material inserted between said leaves, substantially as described.

2. A duplicating device comprising a sheet folded upon itself to form a pair of leaves, whose interior is thereby protected from contact from without and is adapted to receive the material to be operated upon, a transferring composition upon the inner surface of one of the leaves, and a pattern, figure, or design portrayed upon the outer surface of the leaf, having the transferring composition adapted to be traced, whereby such pattern, figure or design may be transferred to a material inserted between said leaves, substantially as described.

3. A duplicating device comprising a sheet folded upon itself to form a pair of leaves, whose interior is thereby protected from contact from without and is adapted to receive the material to be operated upon, a transferring composition upon the inner surface of both of said leaves, and a pattern, figure or design portrayed upon the outer surface of said sheet adapted to be traced whereby such pattern, figure or design may be transferred to the material to be operated upon, substantially as described.

Signed by me at Boston, Massachusetts, this 26th day of June, 1902.

JOHN ALDEN LEE.

Witnesses:
ROBERT CUSHMAN,
JOSEPH T. BRENNAN.