

H. R. David.
Paper Bag Cutter.

N^o 21657.

Patented Oct. 5. 1858.

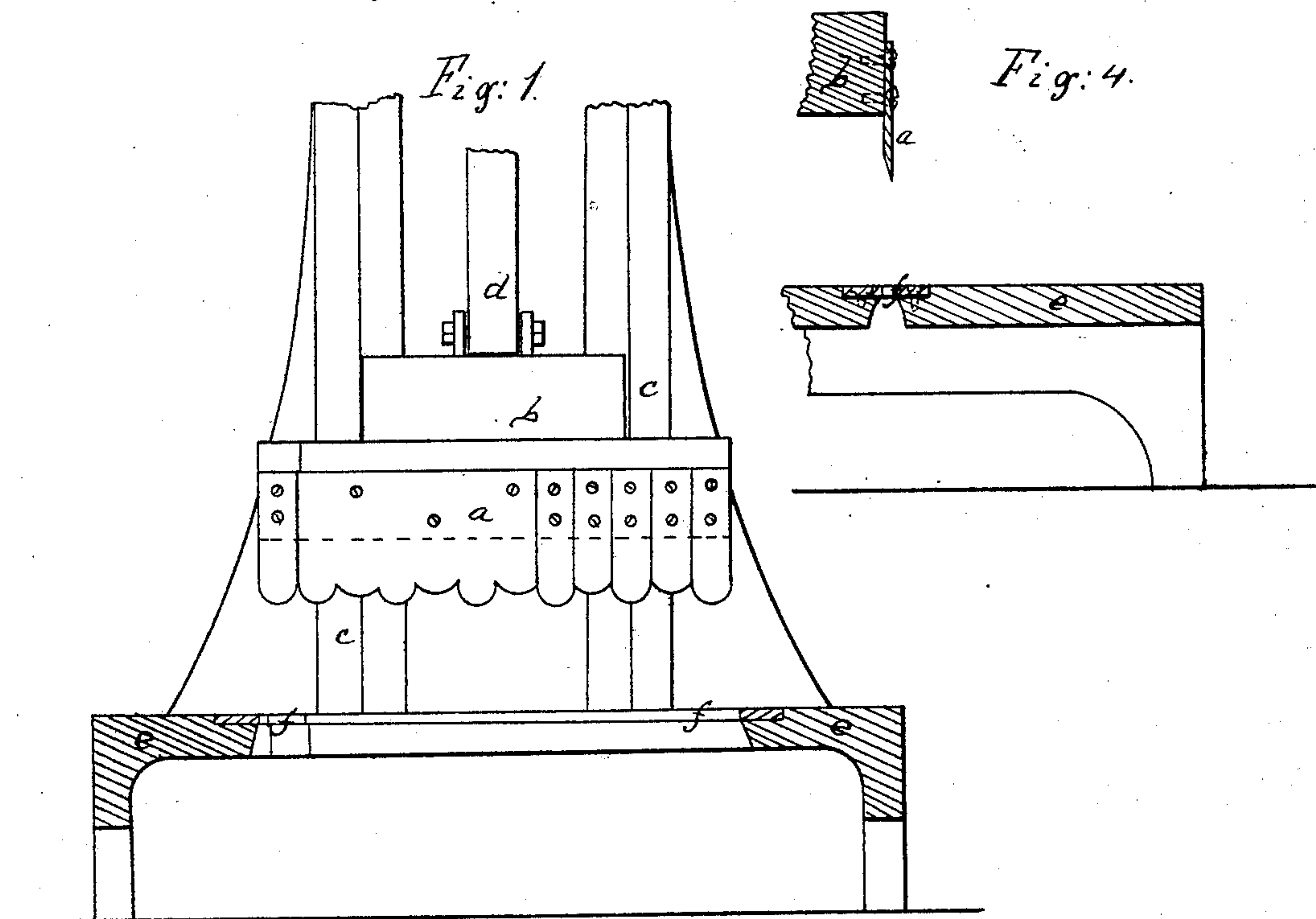


Fig. 2.

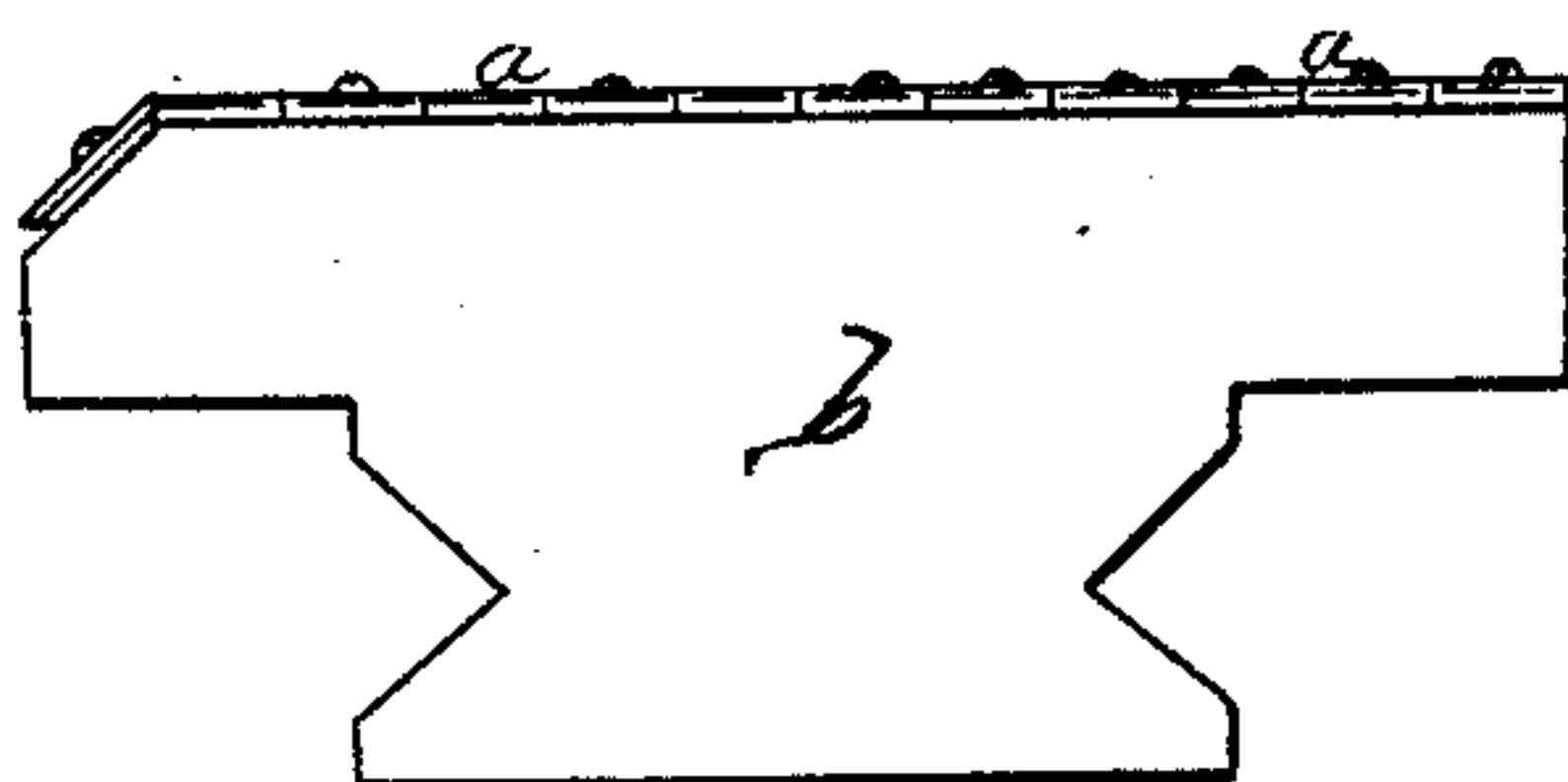


Fig. 5.

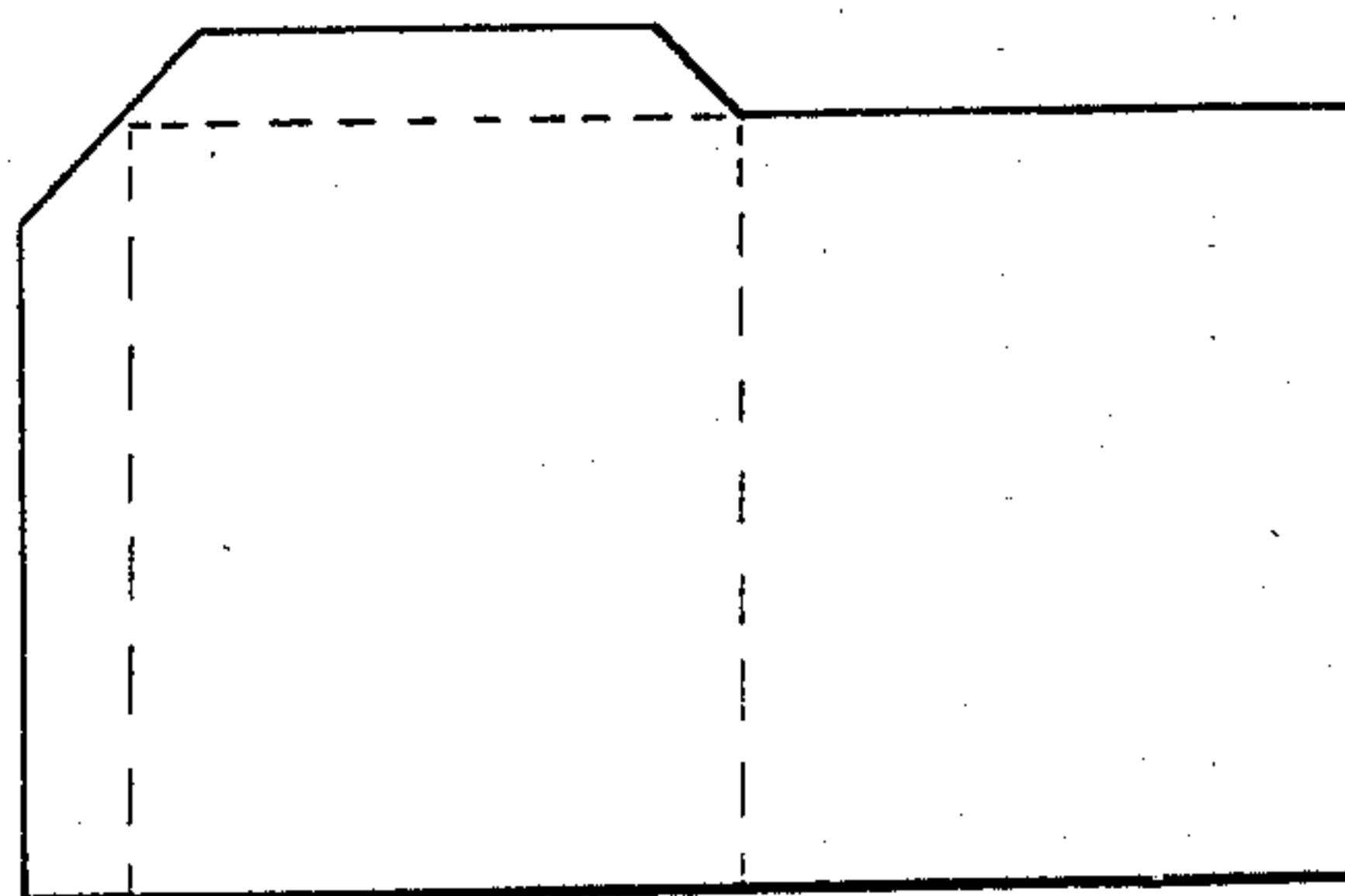
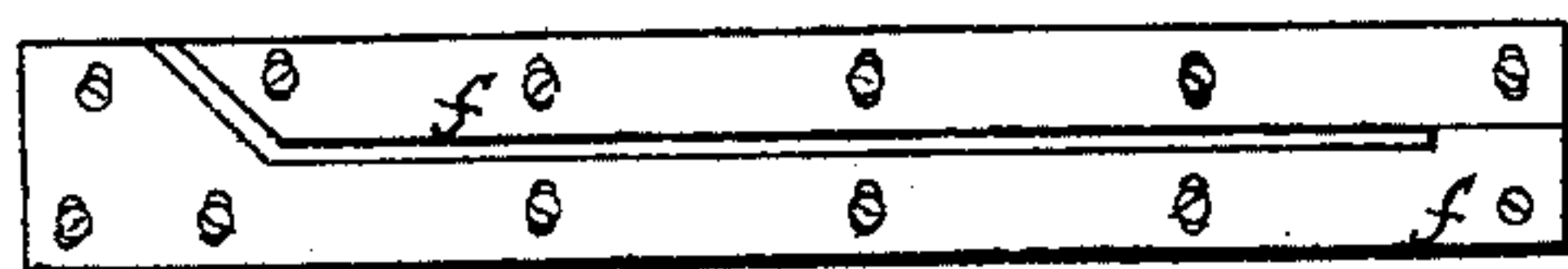


Fig. 3.



Witnesses

Lemuel W. Sevel
James S. Diack.

Inventor

Henry R. David

UNITED STATES PATENT OFFICE.

HENRY R. DAVID, OF NEW YORK, N. Y.

IMPROVEMENT IN KNIVES TO CUT PAPER BAGS, &c.

Specification forming part of Letters Patent No. 21,657, dated October 5, 1858.

To all whom it may concern:

Be it known that I, HENRY R. DAVID, of the city and State of New York, have invented, made, and applied to use a certain new and useful Improvement in Knives for Cutting Paper; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the accompanying drawings, making part of this specification, wherein—

Figure 1 is a front elevation of my improved knife and part of the press used for actuating the same. Fig. 2 is an inverted plan of said knife. Fig. 3 is a plan of the slot into which the knife passes, and Fig. 4 is a vertical section of the knife and its bed.

Similar marks of reference denote the same parts.

My said invention is intended for the purpose of cutting out paper bags, although applicable to other characters of work, especially where the cut is not a perfect straight line or where the same has to be done with great dispatch and a small expenditure of power. The shape of the paper as required to be cut out for making paper bags is shown in Fig. 5, in which an offset at an angle of about forty-five degrees is made, to provide for turning one edge over onto the other and pasting. This shape is cut out of sheets, each adapted to making one bag; or the knife can be adapted to form a double cut near the center of the sheet united by a short diagonal cut, so as to form two bags out of one sheet. The knife *a* is attached to a suitable head-block or follower, *b*, that is fitted to slide up and down in a competent press, *c*, and is actuated by a lever acting on the toggle-joint *d*, or equivalent means. *e* is the bed of the press, in which is an opening, and on the surface of said bed there is a slotted plate, *f*, adjustable by countersunk screws or otherwise, to correspond with the knife *a*, so that said knife, when the platen *b* is brought down, shall pass into said slot. The knife itself is formed of thin steel, of the shape required for the cut, and composed

of a single piece or separate chisel-shaped knives attached to the follower *b* by screws, and the edges of said knives are formed with nearly semicircular serrations, as seen in Fig. 1, and properly sharpened; and each alternate serration is longer than the intermediate one, so that as the knife is brought down the long serrations pierce and cut first into the paper, and then the shorter serrations operate, cutting the remaining parts thereof. I am thus enabled to obtain a piercing and shearing cut by a vertically-moving knife, that makes a clean cut at one operation and with little power, through a quire or more of paper, and that without said paper being previously compressed, whereas if a continuous straight-edged knife were used it would not cut the paper, but tear the same and wedge it down into the slot, and require far more power and a sharper instrument than when said knife is formed in the manner set forth.

I do not claim a serrated-edged knife in itself, as the same has been used with a reciprocating motion for cutting the edges of books, &c. Neither do I claim a serrated shear or blade for cutting paper, as this has before been used; but

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The serrated knife *a*, having a vertical movement, in combination with the narrow slot in the bed-plate *f*, for sustaining the paper while several thicknesses are being cut for bags or other irregular forms, as set forth.

2. Forming said serrated knife with alternate long and short serrations for piercing and cutting several thicknesses of paper, in substantially the manner and for the purposes specified.

In witness whereof I have hereunto set my signature this 22d day of July, 1858.

HENRY R. DAVID.

Witnesses:

LEMUEL W. SERRELL,
JAMES S. DIACK.