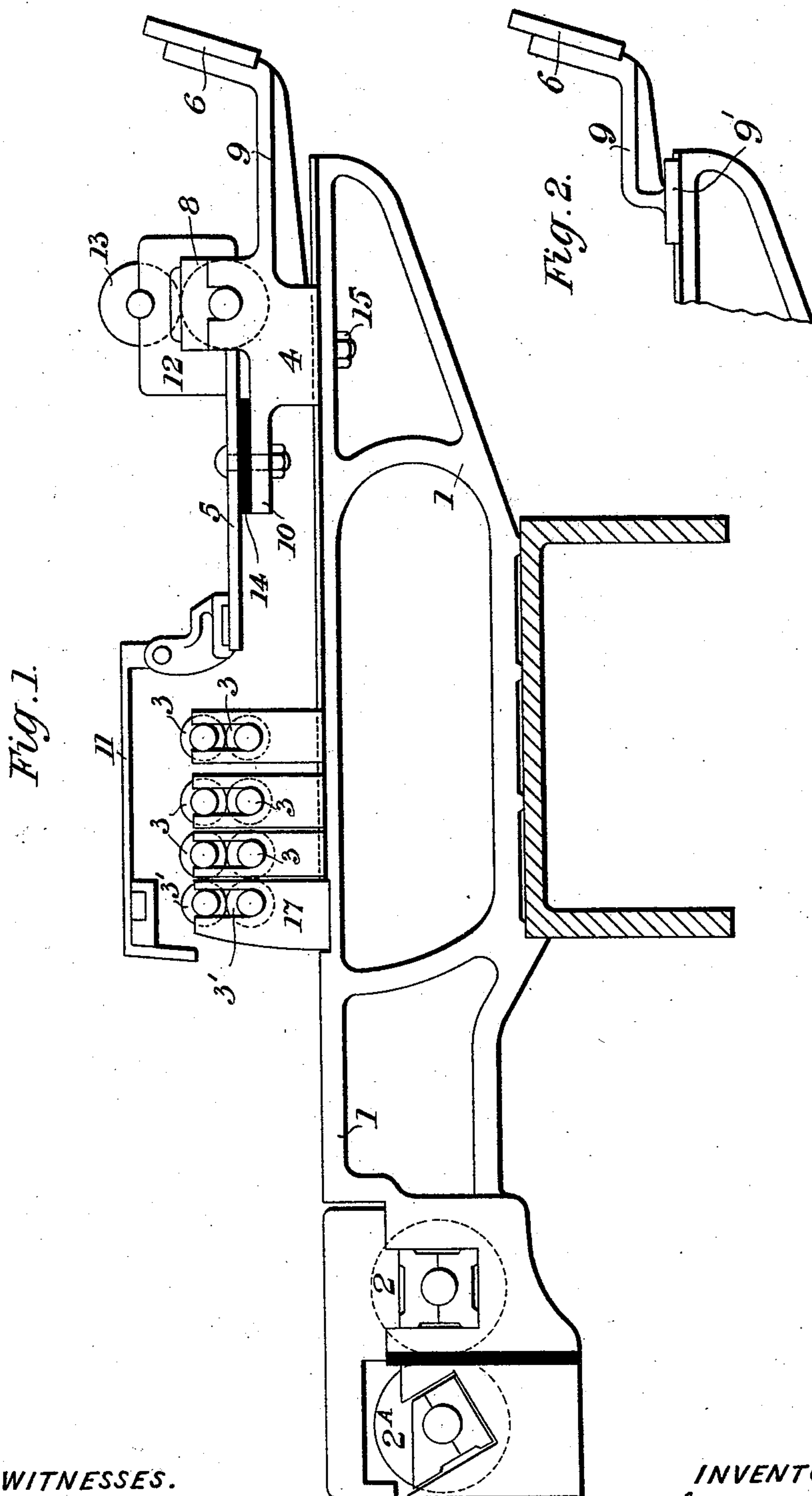


(No Model.)

E. & S. TWEEDALE & J. SMALLEY.
ELECTRIC STOP MOTION DRAWING FRAME.

No. 517,778.

Patented Apr. 3, 1894.



WITNESSES.

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UNITED STATES PATENT OFFICE.

EDMUND TWEEDALE, SAMUEL TWEEDALE, AND JOSEPH SMALLEY, OF
CASTLETON, ENGLAND.

ELECTRIC STOP-MOTION DRAWING-FRAME.

SPECIFICATION forming part of Letters Patent No. 517,778, dated April 3, 1894.

Application filed November 14, 1893. Serial No. 490,884. (No model.)

To all whom it may concern:

Be it known that we, EDMUND TWEEDALE, SAMUEL TWEEDALE, and JOSEPH SMALLEY, all subjects of Her Majesty the Queen of Great Britain, residing at Castleton, in the county of Lancaster, England, have invented a certain new and useful Improvement in Electric Stop-Motion Drawing-Frames, of which the following is a specification.

10 This invention comprises a new and improved construction and arrangement of parts for supporting the calender rollers, the fluted rollers, the back plate, (which carries the top clearer and cap bar,) the electric roller and
15 guide rail the object being to insure steadiness in the working and provide for the simultaneous adjustment of the various related parts.

20 In the accompanying drawings Figure 1 is a sectional end elevation illustrating the improvements in electric stop motion drawing frames. Fig. 2 is a portion of the frame illustrating a modification.

25 According to our invention we construct the frame or support 1 for the various parts which is T headed in section so as to provide for carrying the fluted rollers 3, 3, 3', 3', and sliding bracket 4, (on which are fixed the back plates 5 and the guide rail 6,) the calender roller 2 and the insulated calender roller 2^A.
30 The calender rollers are carried on an extension of the frame 1 as shown. The sliding bracket 4 supports the bottom electric rollers 8 and has two arms or projections 9, 10 one of which arms 9 supports the guide rail 6 the
35 other arm 10 supporting the back plate 5 which carries the top clearer 11 and cap bars 12 for the electric top roller 13. The said block plate 5 is insulated at 14 from the projection 10 of the sliding bracket 4 and on
40 moving the sliding bracket 4 the latter carries the top clearers 11, cap bars 12, electric rollers 8—13 and guide rail 6, and all the parts are moved simultaneously and without
45 disturbance of their relative positions, it only being necessary to loosen the nut 15 and move

the sliding bracket 4 along the top of the frame 1 to the required position and then to fix it there by tightening the nut 15. Or the arm 9 may be carried by the support 1 by the block 9' as shown in Fig. 2 so that the guide rail 6 may be independently adjusted.

The bearings 17 for the drawing rollers 3', 3' are mounted on the supports 1 so as to be readily replaced in place of being cast to and forming part of the support as formerly. With this arrangement it will be seen that a simultaneous adjustment of the back plate, electric rollers and guide rail may be more readily and efficiently obtained, as the arms of the T shaped support 1 serve to carry the required parts while the construction of the sliding bracket 4 enables the parts which it carries to be adjusted by one movement and to preserve their relative positions. Heretofore these parts have been separately carried by the support and necessarily have had to be separately adjusted.

What we claim is—

1. In electric stop motion drawing frames and in combination the support 1, adjustable sliding bracket 4 carried thereby, guide rail 6, insulated back plate 5, top clearer 11, cap bar 12 and rollers 8, 13, all carried by the bracket 4, substantially as and for the purpose described.

2. In electric stop motion drawing frames and in combination the support 1, adjustable sliding bracket 4 carried thereby, insulated back plate 5, top clearer 11, cap bar 12, and rollers 8, 13, all carried by the bracket 4 substantially as and for the purpose described.

In testimony whereof we have hereunto set our hands in the presence of two subscribing witnesses.

EDMUND TWEEDALE.
SAMUEL TWEEDALE.
JOSEPH SMALLEY.

Witnesses:

FREDK. A. VERITY,
JOHN LORD.