April 9, 1946. L. LENZ 2,397,967

SPREAD SHEET

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Fig. 1.

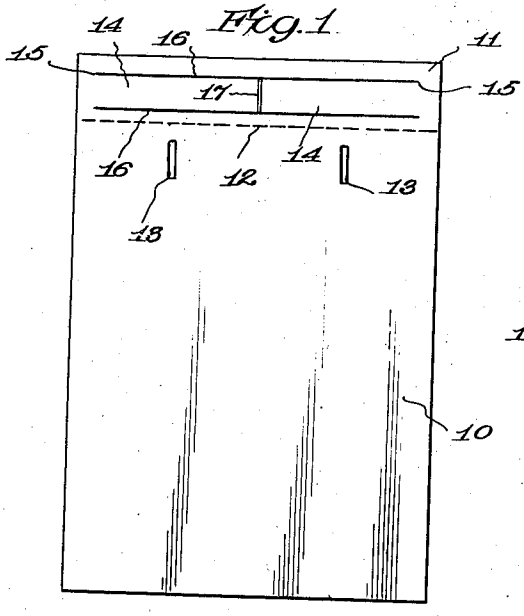


Fig. 2.

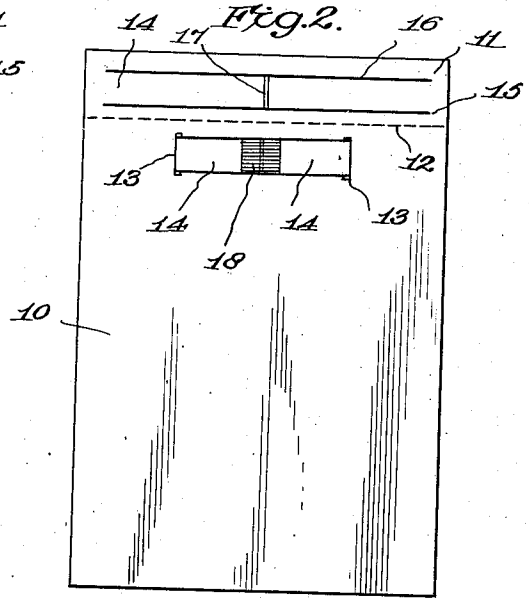


Fig. 3.

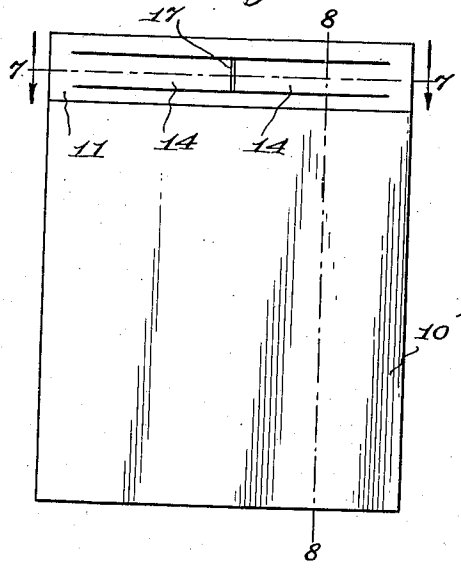
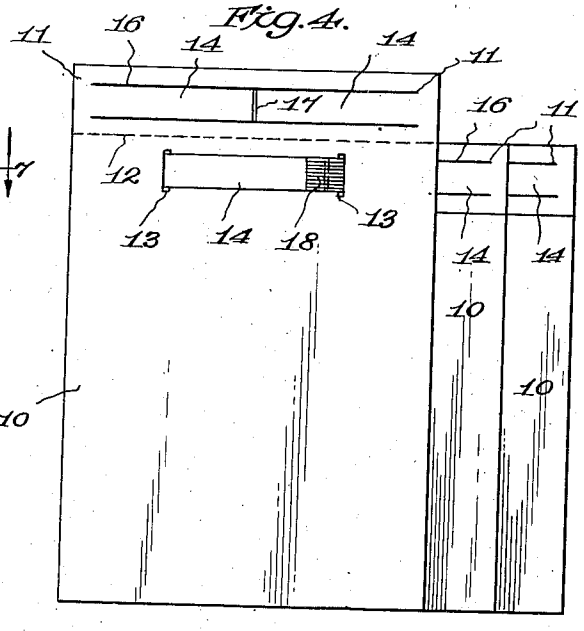


Fig. 4.



INVENTOR.
LEO LENZ
BY
A. W. Deller
ATTORNEY

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Fig. 5.

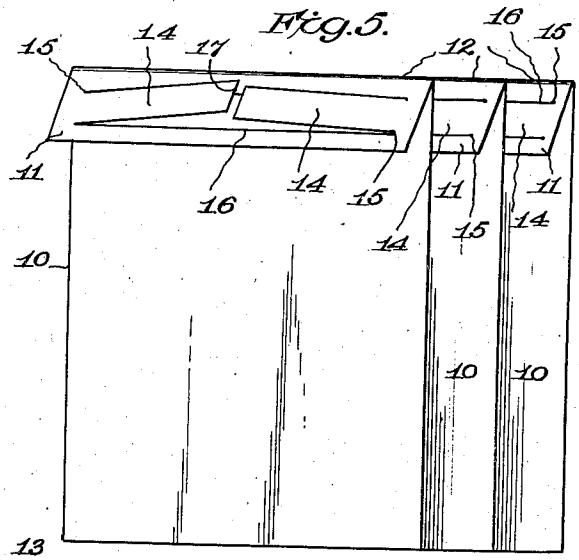


Fig. 6.

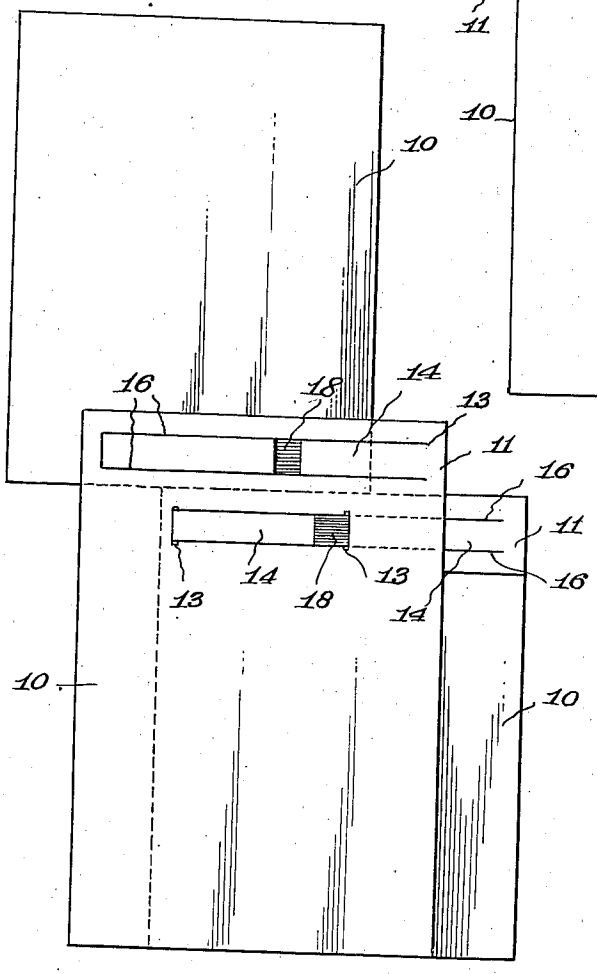


Fig. 8.

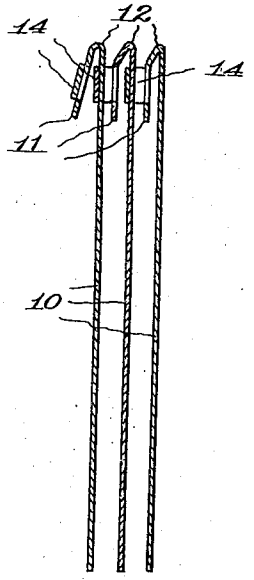
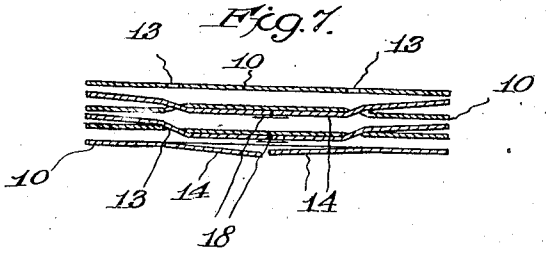


Fig. 7.



INVENTOR.
LEO LENZ
BY
A. W. Deller
ATTORNEY

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SPREAD SHEET

Leo Lenz, New York, N. Y.

Application June 15, 1944, Serial No. 540,451

3 Claims. (Cl. 281—21)

The invention relates to spread sheets of the type in which the member sheets are in movable connection with each other so as to be capable of being relatively shifted to spread positions in which the information, data or the like contained on said sheets is readily visible.

In existing types of such spread sheets the member sheets are slidably interlocked with each other by means of independent metal or other devices. The latter are bulky and because of this restrict the number of member sheets which may be combined with each other within reasonable dimensionable limits. The independent devices furthermore are difficult to combine with the member sheets and are easily lost or misplaced.

The object of the invention is to provide a novel spread sheet of maximum efficiency and in which the disadvantages referred to above and other existing objections are entirely overcome and avoided.

The invention contemplates further the provision of a novel spread sheet in which the member sheets are slidably connected with each other by devices constituting integral parts of the sheets themselves.

A further object of the invention is to provide a novel spread sheet as set forth in which the member sheets in addition to being slidably adjustable relatively to each other are capable of relative hinged movement so as to be adjustable to unfolded positions at will.

Other objects will appear from the description hereinafter and the features of novelty will be pointed out in the claims.

In the accompanying drawings, which illustrate an example of the invention without defining its limits:

Fig. 1 is a face view of one of the member sheets of the novel device;

Fig. 2 is a rear face view of the spread sheets illustrating the member sheets in connection with each other and with the terminal member sheet partly unfolded;

Fig. 3 is a rear face view of the novel spread sheet as it appears in its normal condition;

Fig. 4 is a rear face view of the novel spread sheet showing the member sheets thereof adjusted to spread or separated positions;

Fig. 5 is a perspective view of the novel spread sheet with the member sheets thereof in spread relation;

Fig. 6 is a rear face view illustrating the member sheets in a spread position and with one of said member sheets in an unfolded relation;

Fig. 7 is a cross-section on the line 7—7 of Fig. 3, and

Fig. 8 is a longitudinal section on the line 8—8 with the parts in a somewhat distorted relation for the sake of clearness.

As shown in the illustrated example the novel spread sheet comprises a plurality of member sheets 10 of predetermined dimensions and preferably of rectangular form as shown. The member sheets 10 may be made of paper, metal, textiles, wood, composite materials or any materials suitable for the intended purpose. At one end each member sheet 10 is provided with a flap 11 in hinged connection with the member sheet 10 in any convenient manner as by means of a score line 12 extending transversely across said sheet as illustrated.

The member sheets 10 are provided with means constituting integral parts of said sheet and adapted for cooperation with a corresponding means on associated member sheets 10 to slidably unite said sheets with each other in a manner to slidably connect said sheets together in surface engagement with each other as will be more fully pointed out hereinafter.

In the illustrated example, each member sheet 10 accordingly is provided at predetermined points with slots 13 located in spaced alinement with each other for instance, as illustrated. In addition, each member sheet 10 is provided with guide members 14 projecting toward each other in co-operating pairs and having their opposite ends in hinged connection with the associated member sheet as illustrated at 15 in Fig. 1. In the illustrated example the guide members 14 are formed in the flap 11 by cutting the same along parallel lines 16 and transversely at 17. With this arrangement the opposed ends of the guide members 14 are normally disconnected from each other to enable the guide members 14 of one member sheet 10 to be inserted from opposite directions through the slots 13 of an adjacent member sheet 10, as shown in Figs. 2 and 6. After the guide members 14 of the folded back flap 11 have been inserted through the slots 13, as stated, the contiguous ends thereof are connected with each other in any convenient manner as for instance by means of a section of Scotch tape 18, or the like. When thus connected the guide members 14 form continuous guide strips whereby the member sheets 10 are slidably connected with each other.

In practice, the guide members 14 of one member sheet 10 extend through the slots 13 of the next adjacent member sheet 10 with the flap 11

lying in overlapping relation with its associated member sheet 10 in surface engagement therewith, as illustrated in the drawings. With this arrangement each member sheet 10 not only is transversely slidable relatively to the associated member sheets 10 in surface relation therewith but also is foldable on the score line 12 to the position illustrated in Fig. 6.

In the normal condition of the spread sheet the member sheets 10 comprised therein are located in registering superimposed relation in the form of a pad as shown in Figs. 3 and 7. The respective member sheets 10 may be transversely shifted relatively to each other in surface engagement so as to project transversely beyond each other as shown in Fig. 4. It will be understood that the member sheets 10 may be correspondingly adjusted so as to project transversely beyond each other in the opposite direction from that shown in Fig. 4. If for any reason it should become necessary or desirable one or more of the member sheets 10 of a given group may be unfolded on the score line or lines 12 out of surface parallelism with the succeeding member sheets 10 of said group, for instance, to the position shown in Fig. 6. In this way the respective member sheets 10 are capable of being slidably adjusted relatively to each other in transverse directions to expose data or other information appearing along the margins of said sheets, but in addition said sheets may be folded relatively to each other on the score lines 12 to expose the opposite surfaces of one or more of said sheets. With the adjustment of the member sheets 10 illustrated in Figs. 4 and 5, or in opposite transverse relation, the information or data appearing along the margins of the respective member sheets 10 may be compared with each other if for any reason this should be desired. At the same time, by enabling the member sheets 10 to be foldably adjusted for instance to the position illustrated in Fig. 6 any information or data appearing upon the opposite faces of said member sheets 10 may be exposed to view.

By slidably connecting the member sheets 10 of a given group with each other in the manner set forth any number of member sheets 10 may be combined without making the entire device unduly bulky. The connecting means shown and described also makes it unnecessary to employ independent connecting devices which add to the thickness and bulk of the spread sheet and thereby restrict the number of member sheets which may be efficiently combined in the form of a unit. The novel arrangement also avoids the necessity for the use of metal or any other material which under existing conditions is difficult to procure, and provides an arrangement of maximum simplicity and of very high efficiency.

The member sheets 10 may be used for containing any kind of data, for keeping records, or may contain comparative statements, advertising matter, prospectus of any kind, or any other written or printed matter. The device may further be used efficiently for color comparisons by providing the various member sheets 10 with different colors produced thereon in any convenient manner.

The device further may be used for containing cost data, sales reports, sales analyses, branch reports, expense analyses, salesmen's statistics, production reports, profit and loss statements, balance sheets or detailed schedules of all types. The novel device may be arranged to be used for daily, weekly, monthly or any other time-period reports.

The location of the slots 13 on each member sheet 10 and the distance said slots are placed apart in co-operating pairs on each sheet 10 will determine the extent to which said sheets may be spread relatively to each other in transverse directions.

Although the present invention has been described in conjunction with a preferred embodiment, it is to be understood that modifications and variations may be resorted to without departing from the spirit and scope of the invention, as those skilled in the art will readily understand. Such variations and modifications are considered to be within the purview and scope of the claims.

I claim:

1. In a spread sheet of the kind described, a member sheet provided with slots located in spaced alinement with each other, a flap at one end of said member sheet in hinged connection therewith, and guide members constituting integral parts of said flap and each in hinged connection therewith at one end, said guide members projecting toward each other for insertion from opposite directions through the slots of an adjacent member sheet whereby said member sheets are slidably connected with each other.

2. A spread sheet comprising a plurality of member sheets each provided with slots located in spaced alinement with each other, guide members constituting integral parts of said member sheets and projecting toward each other in co-operating pairs with their opposite ends in hinged connection with the associated member sheet, the guide members of each member sheet extending slidably through the slots of an adjacent member sheet whereby contiguous member sheets are slidably connected with each other for relative adjustment in surface relation to each other, and means whereby the ends of associated guide members are connected with each other to form a continuous guide strip.

3. A spread sheet comprising a plurality of member sheets each provided with slots located in spaced alinement with each other, a flap at one end of each member sheet in hinged connection therewith, guide members constituting integral parts of said flaps and projecting toward each other in co-operating pairs with their opposite ends in hinged connection with the associated flap, the guide members of each flap extending slidably through the slots of an adjacent member sheet whereby contiguous member sheets are slidably connected with each other for relative adjustment in surface relation to each other, and means whereby the ends of associated guide members are connected with each other to form a continuous guide strip.

LEO LENZ.