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71 Applicant: **Moore Business Forms, Inc.**  
300 Lang Boulevard  
Grand Island, New York 14072(US)

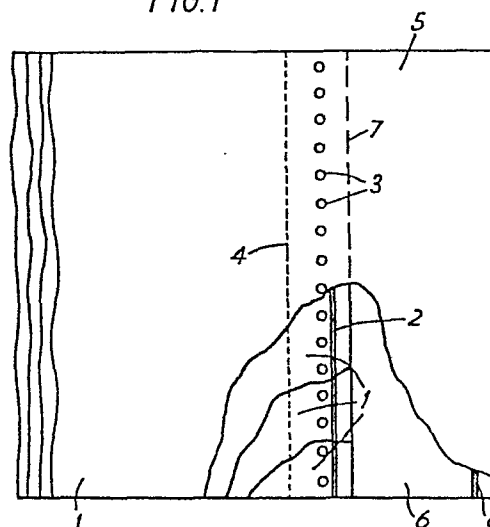
72 Inventor: **Hektoen, Per**  
Otto Ruses Vei 94A  
N-1345 Osteraas(NO)

74 Representative: **Townsend, Derek Thomas et al,**  
Barlin Professional Services Barlin House 20 High Street  
Carshalton Surrey SM5 3AG(GB)

54 Improvements in business forms sheet assemblies.

57 This invention is concerned with a business forms assembly of the kind sometimes referred to as a 'snap out set' and has particular reference to that kind of assembly to be fed through a print unit. The assembly comprises a plurality of interleaved sheets secured together at or adjacent one edge by adhesive to form stub and each of the outer sheets of the assembly extend beyond the intermediate sheet or sheets and are secured together between the stub edge and the leading edges of the extended sheets to provide a means for feeding the interleaved sheets into and through a print unit.

*FIG.1*



IMPROVEMENTS IN BUSINESS FORMS SHEET ASSEMBLIES

This invention has reference to business forms sheet assemblies and has particular reference to forms usually of self manifolding paper but may be of record  
5 sheets interleaved with sheets of carbon paper and which sheets are secured together at one edge by adhesive between the individual sheets to form a stub. This stub includes a line of perforations adjacent the stub so that the parts or individual parts may be snapped out from  
10 the stub. The stub is usually at the top end of the sheets and the form constitutes what is known as a "Snap-out" set.

It is required to feed such sheet assemblies into and through a print unit. Such print unit may form part for  
15 example of a word processing unit and this leads to difficulty because of the distance through which the form has to be fed between the input to the print unit and the feed mechanism within the print unit. Such print units readily accommodate a single part sheet being fed through them  
20 but when feeding traditional multi part sets problems arise with the feeding of such sets.

In the specification of European Patent No. 0066420 there is described a business forms sheet assembly comprising a plurality of interleaved record sheets  
25 secured together at or adjacent one edge by a line of

adhesive to form a stub and with transfer material  
between the sheets to enable information entered on  
the front sheet to be reproduced on succeeding sheets and  
wherein one of the outer sheets of the assembly extends  
5 freely beyond the stub edge characterised in that a separate  
extension sheet is secured to the other outer sheet of the  
assembly and extends beyond the stub edge and the outer  
sheet and the separate extension sheet (but not the  
intermediate sheets) are secured together by an additional  
10 area of adhesive to enable the secured together sheets  
to provide the means for feeding the interleaved sheets  
through a print unit.

It is an object of the present invention to provide an  
improved business forms sheet assembly.

15 It is a further object of the invention to provide an  
improved business forms sheet assembly which is capable  
of being fed through a print unit, having a long feed  
and feed mechanism within the print unit.

According to the present invention a business form  
20 sheet assembly comprises a plurality of interleaved  
sheets secured together at or adjacent one edge by  
adhesive to form a stub wherein each one of the outer  
sheets of the assembly extend beyond the intermediate  
sheet or sheets and are secured together between the  
25 stub edge and the leading edges of the extended sheets  
to provide a means for feeding the interleaved sheets  
into and through a print unit.

A business forms sheet assembly in accordance with the present invention will now be described by way of example with reference to the accompanying drawings wherein:

5 Fig. 1 is a plan view of a business forms assembly in accordance with the present invention.

Fig. 2 is a side view of the assembly.

Fig. 3 is a side view of a modified assembly

Fig. 4 is a side view of a further assembly and

10 Fig. 5 is a diagrammatic view of a printing unit.

Referring to Figs. 1 and 2 of the drawings, there is shown a business forms sheet assembly comprising a plurality of interleaved record sheets 1 each consisting of a sheet of self manifolding paper. These sheets may  
15 be the kind sold under the Trade Mark MCP (Moore Clean Print) but may be of other kinds of self manifolding paper. As shown the assembly consists of four sheets of paper secured together adjacent their leading edges by a respective line of adhesive 2 extending across the  
20 form adjacent to the leading edge of the form. On the side of the line of adhesive away from the leading edge of the form a plurality of aligning holes 3 are provided in each sheet. These are for the purpose of registering the sheets together.

25 A line 4 of tear off perforations is also provided in each sheet on the side of the registrations holes remote

from the leading edge and thus defines one side of a stub. The upper most sheet of the assembly extends beyond the leading ends of the intermediate sheets 1 of the assembly to form an intergral extension sheet part or tongue 5 which extends beyond the stub edge of the two intermediate sheets. Similarly the lowermost and outer sheet of the assembly also extends beyond the leading ends of the intermediate sheets of the assembly to form a second integral extension sheet part or tongue 6 which also extends beyond the stub edge of the two intermediate sheets. These two extended parts or tongues 5, 6 provide a means for feeding and leading the interleaved sheets into a print unit. A perforation line 7 is provided on each of the extended sheet parts or tongues 5, 6 adjacent the body part of the assembly in order that the sheet parts or tongues 5, 6 may be readily detached when required. As shown in Fig 2 of the drawings the outer end of the extended part or tongue 5 of the uppermost sheet is in register with the outer end of the extended part or tongue 6 of the lowermost sheet and the line of perforations 7 of the sheet part 5 lies immediately above the leading edges of the intermediate sheets 1. Similarly the line of perforations 7 of the sheet part 6 is also in line with the leading edges of the intermediate sheets 1. A further line of adhesive 8 which extends between the tongue 5 closely adjacent to the outer ends of the respective tongues secures the tongues 5, 6 together and adds some

rigidity to the secured together sheets. Similarly  
as shown in Fig. 3 of the drawings the uppermost sheet  
and the lowermost sheet are extended beyond the leading  
ends of the intermediate sheets to form extended parts  
5 or tongues but the extended part or tongue 5 of the upper-  
most sheet extends beyond the extended part or tongue 6 of  
the lowermost sheet. A line of adhesive extends closely  
adjacent to the leading end of the lowermost sheet 6  
to join the two extended parts or tongues 5, 6 together.  
10 If desired one of the lines of adhesive 2 securing the  
intermediate sheets 1 together may be omitted because  
the sheets are joined by the line of adhesive 8. Thus  
as shown in Fig. 4 the two uppermost intermediate sheets 1  
are secured together and to the uppermost sheet 5, and  
15 the two lowermost intermediate sheets 1 are secured  
together and to the lowermost sheet 6.

In a preferred form of the invention each of the  
two intermediate sheets 1 has a width of 21 centimeters  
(8 $\frac{3}{8}$  inches) and a depth of 29.5 cms. (11 $\frac{3}{4}$  inches).  
20 The extension sheet part or tongue 5 of the top sheet 1  
extends beyond the two intermediate sheets for a distance  
of 5.25 centimeters (2 $\frac{1}{8}$  inches) and of course has a width  
of 21 centimeters. Likewise the extension sheet part  
or tongue 6 of the lowermost sheet extends beyond the  
25 two intermediate sheets for a similar distance of 5.25  
centimeters (2 $\frac{1}{8}$  inches). In a preferred form of the  
assembly shown in Figs. 1 and 2 the paper of the outer  
sheets of the assembly and which forms the extension

sheet parts of the assembly and of 90 gsm (grams per square meter) paper and of MCP (Trade Mark) (self-manifolding paper) and each intermediate part is of 53 gsm paper also of MCP self manifolding paper.

- 5 For bond paper with carbon transfer sheets the uppermost record sheet part of the assembly is of 60 gsm paper and the other sheets of the assembly are of 45 gsm paper.

The extension sheet part 5 may constitute a reply card  
10 and has provision to receive the name of a prospect printed on the card. Alternatively it can be used as a self adhesive label or an attachment for an envelope. In an alternative it can be produced from Davoc paper and serve as a basis for providing a label in which  
15 case the label would be printed in the print out unit. In a further arrangement the tongue would constitute an envelope.

Referring to Fig. 5 of the drawings there is shown a diagrammatic view of a typical print unit which includes  
20 a hopper tray 11 for receiving a stack of forms 1a assemblies of the kind shown in Figs. 1 to 4. The hopper tray 11 has adjacent its lower end a resilient guide member 12 which serves to guide the uppermost form assembly of the stack towards a form feed means shown  
25 diagrammatically as a feed tractor mechanism 13. The feed tractor mechanism directs a single form assembly from the hopper tray to a throat between the platen 14

and a guide 15 arranged circumferentially around the platen and thence to a print position 16 represented by an arrow. At this print position 16 a percussion mechanism for example a print hammer of  
5 a series of wire print heads apply printed data to the form assembly. Roller mechanism represented by a pair of rollers 17 are positioned at the outfeed side of the platen 14 and these other rollers serve to guide the forms assembly to the tray 18 to receive  
10 the printed forms assemblies. The print mechanism is retained in a casing at 19 to reduce the noise issuing from the print mechanism.

By virtue of having the extension sheet part of the leading end of each of the forms assemblies an  
15 assembly can be fed satisfactorily through a print unit and printed on the top sheet and the data typed on the uppermost sheet is also reproduced on the underlying sheets by virtue of the sheets being of self manifolding paper.



CLAIMS

1. A business forms sheet assembly comprising  
a plurality of interleaved sheets secured together at  
or adjacent one edge by adhesive to form a stub wherein  
5 each one of the outer sheets of the assembly extend  
beyond the intermediate sheet or sheets and are secured  
together between the stub edge and the leading edges  
of the extended sheets to provide a means for feeding  
the interleaved sheets into and through a print unit.
- 10 2. A business forms sheet assembly according to  
Claim 1 wherein the extended parts of the outer sheets  
are secured together by adhesive adjacent the leading  
edge of the extended parts.
3. A business forms sheet assembly according to  
15 Claims 1 or 2 wherein the outer sheets of the assemblies  
are of a heavier weight of paper than the intermediate  
sheets.

FIG. 1

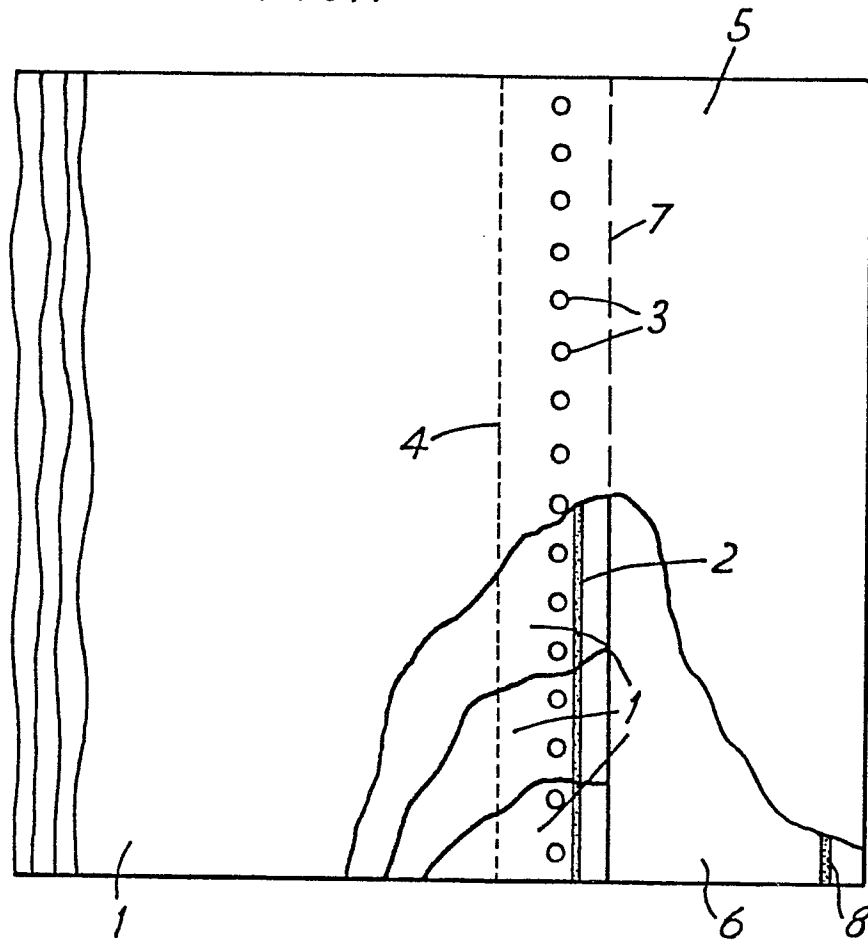


FIG. 2

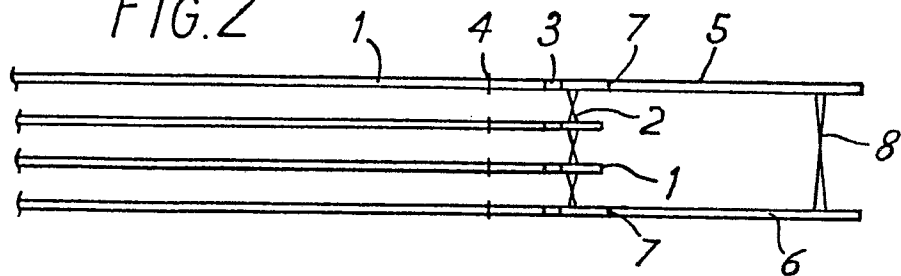
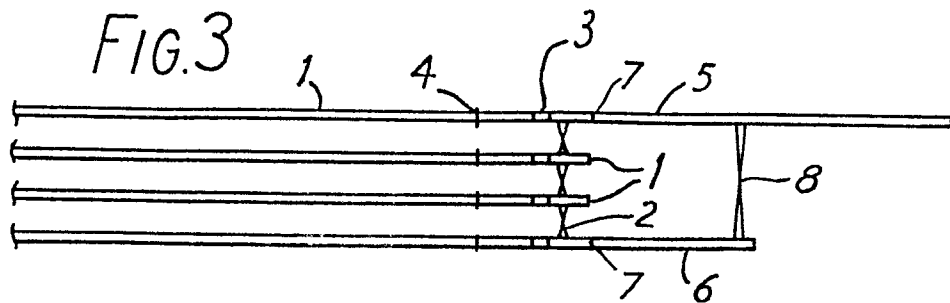


FIG. 3



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FIG. 4

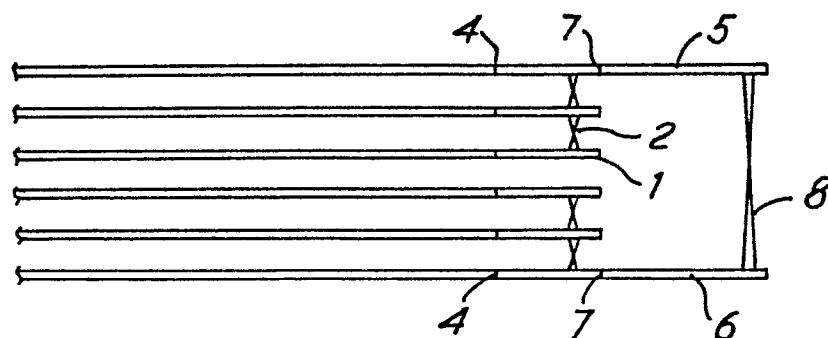


FIG. 5

