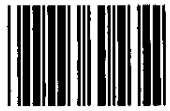

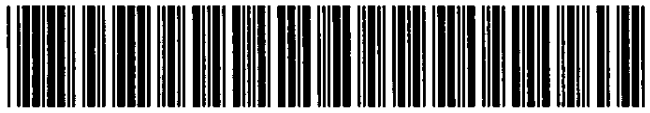

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3:01-CV-02089 CP MANUFACTURING INC V. MACHINEFABRIEK
1
CMP.

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Attorneys for Plaintiff
CP MANUFACTURING, INC.

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CLERK U.S. DISTRICT COURT
SOUTHERN DISTRICT OF CALIFORNIA
BY DEPUTY

UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF CALIFORNIA

CP MANUFACTURING, INC., a California corporation, Plaintiff, vs. MACHINEFABRIEK COLLEGRAAF APPINGEDAM B.V., a Netherlands corporation, Defendant.	'01 CV 2089 K (CGA) Civil Action No. **COMPLAINT FOR DECLARATORY RELIEF RE: (1) NO PATENT INFRINGEMENT; (2) INVALIDITY OF PATENT; (3) UNFAIR COMPETITION UNDER STATE LAW.** [JURY TRIAL DEMANDED] (35 U.S.C. § § 1, 101, 102, 103, 112, 119; 28 U.S.C. § § 1331, 1332, 1338, 1367, 2201, 2202; California Business and Professions Code § § 17200 *et seq.*)

Comes now the Plaintiff CP MANUFACTURING, INC. (hereinafter referred to as "CP") and for its Complaint herein alleges as follows:

1. Plaintiff CP is a corporation duly organized and at all times relevant hereto in good standing under the laws of the State of California, with its principal place of business at 1300 Wilson Avenue, National City, California 91950.

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2. Defendant Machinefabriek Bollegraaf Appingedam B.V. (hereinafter referred to as "BOLLEGRAAF") is, on information and belief, a corporation organized under the laws of the Kingdom of the Netherlands with its principal place of business at Appingedam, Netherlands, and doing business in the Southern District of California. BOLLEGRAAF has sufficient contacts with the State of California to support the existence of personal jurisdiction in California over BOLLEGRAAF. Specifically without limitation, on information and belief, BOLLEGRAAF has at least one waste sorting conveyor installed and operating in San Diego County.

3. This Complaint arises under the patent laws of the United States of America, 35 U.S.C. § 1 *et seq.*, and under the laws of the State of California.

4. This Court has jurisdiction pursuant to 35 U.S.C. § 1 *et seq.* and 28 U.S.C. §§ 1331, 1332, 1338(a), 1338(b), 2201 and 2202, and supplemental jurisdiction pursuant to 28 U.S.C. § 1367. The Court has pendent jurisdiction of the California state law claim under 28 U.S.C. § 1338(b).

5. Venue is proper in this judicial district pursuant to 28 U.S.C. § 1391.

6. The Plaintiff, CP, manufactures and sells recycling equipment including screens or conveyors for sorting waste (hereinafter sometimes referred to as "waste

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classifiers") under the trademarks CPScreen™ and NEWScreen™. A true copy of a sample marketing brochure is attached hereto as Exhibit A.

7. The Defendant, BOLLEGRAAF, on information and belief, is the owner of United States Patent No. 6,076,684 ("the '684 Patent), issued June 20, 2000 for "Waste Paper Sorting Conveyor For Sorting Waste Paper Form [sic] Waste Cardboard". On information and belief, a true copy of the '684 Patent is attached hereto as Exhibit B. Independent Claim 1 of the '684 Patent is limited to continuously variable adjustment or re-positioning of the impellers or discs on the shafts of the wastepaper sorting conveyor described in the '684 Patent. Independent Claims 14 and 16 are limited to a conveyor with shafts that are adjustable along the conveying direction.

8. Counsel for BOLLEGRAAF has sent a series of letters to CP dated June 19, October 18, October 23, October 26, October 30, and November 7, 2001, effectively alleging that the CPScreen™ and NEWScreen™ waste classifiers infringe BOLLEGRAAF's '684 Patent. True copies of said letters are attached collectively hereto as Exhibit C. For example, the letter of October 17, 2001 states, "Our investigation indicates that there are many similarities between your conveyors and our client's sorters." The letter of October 23, 2001 states, "It is readily apparent that [CP] is offering for sale sorting screens that are promoted as having the discs adjustable along the length of the shaft," clearly implying the

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writer believes there is something objectionable about that, and equally clearly relating back to the "releasable impellers," or discs, which are described in independent Claim 1 of the '684 Patent. Counsel for BOLLEGRAAF's last letter, of November 7, 2001, stated, *inter alia,* that BOLLEGRAAF disagreed with CP's reading of the '684 Patent file history, stated that CP's counsel had admitted that CP "practices [*i.e.*, infringes] ... 15 claims of the ['684] patent," and demanded that counsel for CP "explain what it is you perceive to be the differences between the ['684] patent, and [CP's] sorter."

9. CP has responded each time with its own counsel's letters denying BOLLEGRAAF's allegations. True copies of these responses dated July 19, October 18, October 22 (two letters), October 26, October 29, November 1 and November 7, 2001 are attached collectively hereto as Exhibit D. For example, the letter of July 19, 2001 notes, "With regard to independent Claim 1 [of the '684 Patent], CP does not currently manufacture any conveyor in which the impellers are releasably fixed to the shafts and can be repositioned along the shafts. With regard to independent Claims 14 and 16, CP does not currently manufacture any conveyor with shafts that are adjustable along the conveying direction." The first, longer letter of October 22 reiterated that the discs in CP's screens were not movable or adjustable; this point was repeated in the letters of October 26 and 29 and November 1 noting that CP's CPScreen™ waste classifier has plates welded

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to the shaft of the conveyer, making repositioning of the discs not possible. The letter of November 7 finally states expressly that "[s]ince CP's current machines do not have discs with a continuously variable re-adjustment capability, *they do not infringe* Claim 1, nor Claims 2 – 13 which depend directly or indirectly therefrom [and] CP does not currently manufacture any disc screen conveyors with shafts that are adjustable along the conveying direction. Therefore, CP's current machines *do not infringe* Claims 14-17 of your client's patent." (emphasis added)

10. BOLLEGRAAF's letters clearly imply and effectively charge infringement. The later letters challenge CP's denial of infringement, and also challenge CP's argument that there would be no damages in any event for allegedly infringing machines sold by CP prior to June 2001 since BOLLEGRAAF's machines were not marked with a patent number, as required by 35 U.S.C. § 287, and there was no prior notification of infringement communicated to CP. In addition, CP and BOLLEGRAAF are competitors, and BOLLEGRAAF has recently lost several sales for this type of machine to CP. BOLLEGRAAF's counsel has called CP's counsel twice and has demanded that BOLLEGRAAF or its representatives be allowed to inspect CP's conveyors, either at CP's plant or at facilities of a CP customer, analogous to a demand for entry unto land under Fed.R.Civ.Pro. 34.

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11. Following this correspondence, CP and its counsel undertook a telephone conference with counsel for BOLLEGRAAF on November 9, 2001. In this telephone conference, counsel for BOLLEGRAAF rejected CP's responses and referred to the dispute as "litigation."

12. Based upon the threats and allegations by BOLLEGRAAF, and upon the prior exchange of correspondence, and there is an actual controversy within the meaning of 28 U.S.C. § 2201 for purposes of this declaratory judgment action. CP has an objectively reasonable apprehension that it will face an infringement suit by BOLLEGRAAF regarding the '684 Patent if CP continues to sell CPScreen™ and NEWScreen™ waste classifiers or disc screen apparatus with clampable discs each having keyways that register with keys welded to the opposite side of its square shafts.

13. CP will be harmed if it is forced to proceed with its business without a clear declaration of its non-infringement. Potential damages will continue to accrue, and CP will thereby be subjected to uncertainty and insecurity. As CP is anxious to resolve this dispute, it is filing this current action.

FIRST CLAIM
(Declaratory Judgment re Non-Infringement of the '684 Patent)

14. CP hereby incorporates the allegations of Paragraphs 1 through 13 above as if set forth and re-alleged in full herein.

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15. CP's CPScreen™ and NEWScreen™ waste classifiers do not infringe BOLLEGRAAF's '684 Patent as hereinabove alleged, under U.S.C. § 271.

16. CP's sale and offer for sale of its CPScreen™ and NEWScreen™ waste classifiers does not constitute unfair competition under California state law.

17. CP is entitled to a judgment declaring that its CPScreen™ and NEWScreen™ waste classifiers do not infringe BOLLEGRAAF's '684 Patent or otherwise infringe BOLLEGRAAF's rights.

SECOND CLAIM
(Declaratory Judgment re Invalidity of the Claims of the '684 Patent)

18. CP hereby incorporates the allegations of Paragraphs 1 through 17 above as if set forth and re-alleged in full herein.

19. Claims 1 – 17 of the '684 Patent are invalid for failure to satisfy the statutory criteria for patentability under 35 U.S.C. §§ 101, 102, 103, 112, and 119. In addition, on information and belief, the aforementioned Claims of the '684 Patent are invalid based on prior art as asserted in ongoing opposition proceedings before the European Patent Office in regard to BOLLEGRAAF's European Patent Application No. 96202605 to which the '684 Patent corresponds and claims a priority filing date.

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THIRD CLAIM
(Unfair Competition and Unfair Trade Practices)

20. CP hereby incorporates the allegations of Paragraphs 1 through 19 above as if set forth and re-alleged in full herein.

21. BOLLEGRAAF's conduct in effectively alleging and implying that CP infringes BOLLEGRAAF's '684 Patent, as set forth in its letter of November 7, 2001 and prior correspondence (Exhibit C), constitutes unfair competition and unfair trade practices in violation of California Business and Professions Code Section 17200 *et seq.*

22. There is a strong public interest in protecting CP from BOLLEGRAAF's unfair competition and unfair trade practices.

23. CP is entitled to recover any and all damages permitted under California Business and Professions Code Section 17200 *et seq.*, including attorney's fees, punitive damages, and costs from BOLLEGRAAF for BOLLEGRAAF's willful, knowing misconduct as well as injunctive relief against BOLLEGRAAF's continued unfair competition and unfair trade practices.

PRAYER FOR RELIEF

WHEREFORE, Plaintiff CP prays that this Court enter judgment as follows:

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1. Declaring that CP's CPScreen™ and NEWScreen™ waste classifiers do not infringe BOLLEGRAAF's '684 Patent under 35 U.S.C. § 271.

2. Declaring that BOLLEGRAAF's Claims 1 – 17 of the '684 Patent are invalid.

3. Declaring that the sale and offer for sale of CP's CPScreen™ and NEWScreen™ waste classifiers do not constitute unfair competition under California law.

4. Declaring that BOLLEGRAAF's conduct constitutes unfair competition and unfair trade practices in violation of California Business and Professions Code Section 17200 *et seq.*

5. Granting preliminary and permanent injunctions to stop BOLLEGRAAF's threats and unfair competition and trade practices.

6. Awarding CP its actual damages to be proven at trial.

7. Declaring this to be an exceptional case and awarding CP its reasonable attorney's fees under 35 U.S.C. § 285.

8. Awarding CP its reasonable attorney's fees under California Business and Professions Code Section 17200 *et seq.*

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9. Granting CP such other further equitable and legal relief as the Court may deem proper.

Dated: November 13, 2001

Respectfully submitted,
GORDON & REES LLP

by _____
Richard P. Sybert
Attorneys for Plaintiff
CP MANUFACTURING, INC.

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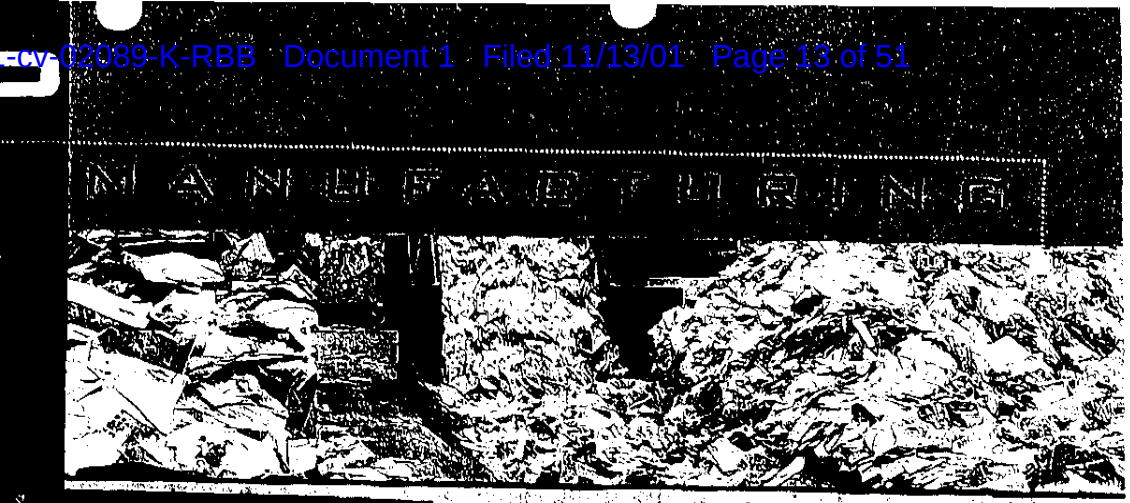
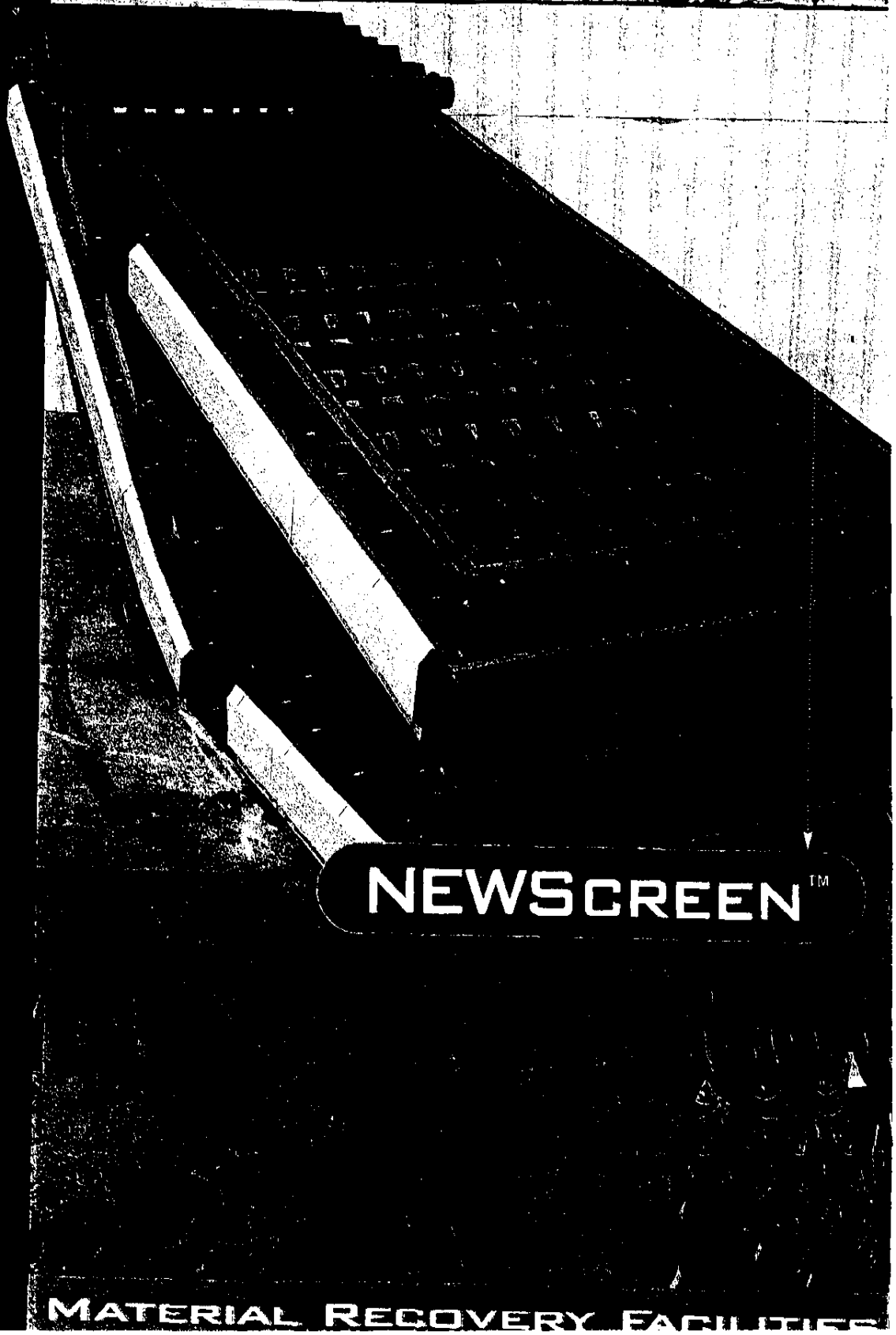
CP

MANUFACTURING



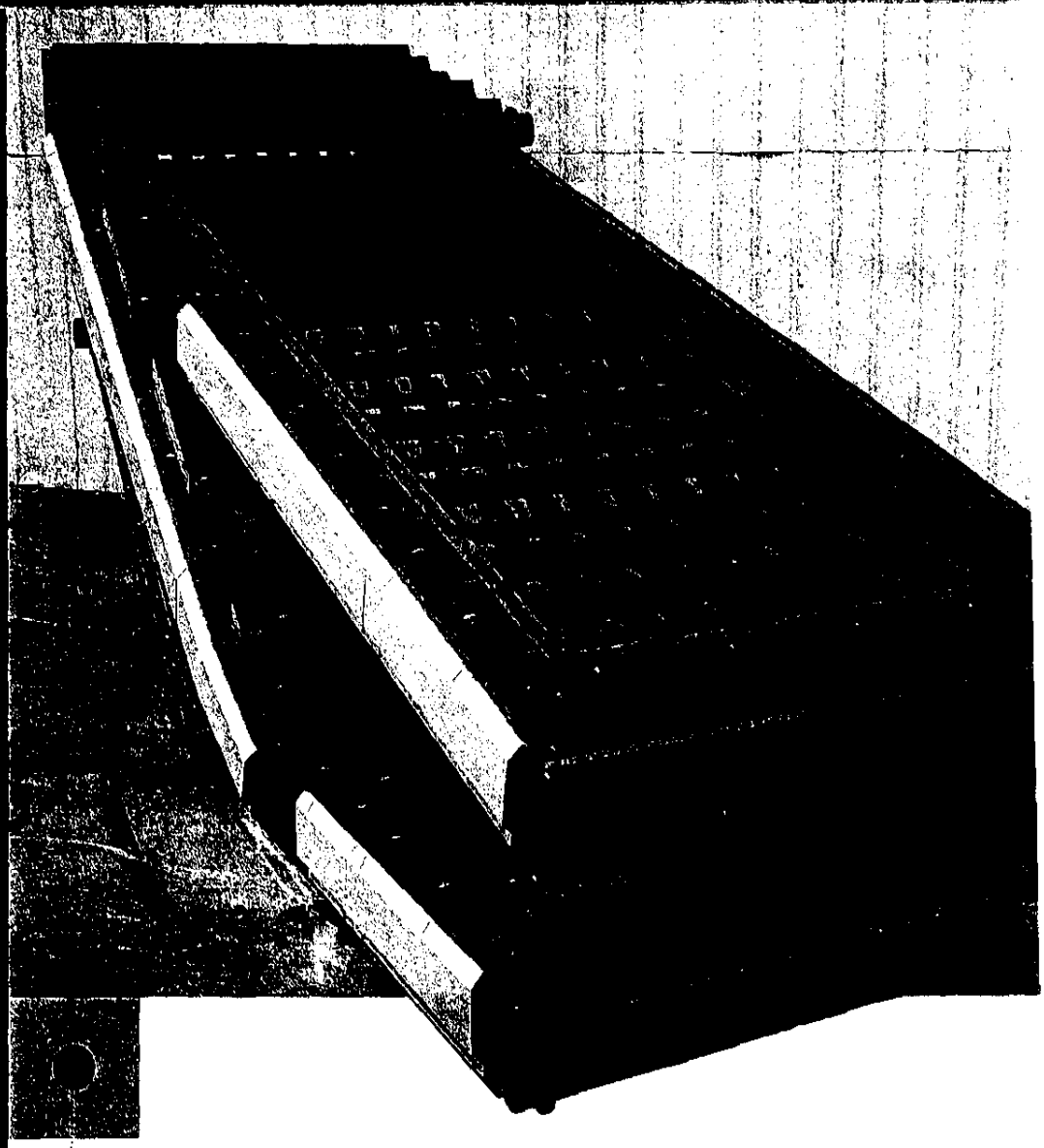


NEWSCREEN™

CP mfg.®

MATERIAL RECOVERY FACILITIES

NEWSPAPER SEPARATION



CP MANUFACTURING HAS PUT ITS OPERATIONAL EXPERIENCE AND ENGINEERING EXPERTISE TO WORK FOR YOU, TO DEVELOP THE QUICKEST, EASIEST WAY TO SEPARATE NEWSPAPER FROM MIXED PAPER, CO-MINGLED PAPER, CONTAINERS AND DEBRIS. THE INNOVATIVE DISC SCREEN TECHNOLOGY USED IN CP'S NEWSCREEN™ ASSURES YOU OF THE MOST EFFICIENT SEPARATION, REDUCING LABOR COSTS AND INCREASING THROUGHPUT—ALL AUTOMATICALLY.

CP mfg. ®

CP MAKES IT AUTOMATIC.

INNOVATIVE DESIGN.

CP's NEWScreen™ is the most-efficient, automatic way to separate ONP from other fiber and rigid containers. CP's exclusive disc screen technology features patented interlocking discs in a variable-pitch three-deck design to maximize throughput, optimize separation and minimize wear. Variable-speed drives on each deck increase separation quality.

LOWER OPERATING COSTS.

CP's NEWScreen™ can be retrofitted into an existing facility, immediately lowering your operating costs by automating this labor-intensive process. Then, it keeps costs low by requiring very little on-site maintenance. For example, its square tube steel shafts minimize material wrapping, reducing downtime and labor costs. Overlapping disc hubs maintain the correct screen size throughout the life of the discs. Our patented two-piece discs permit easy disc replacement, while our multiple-deck design minimizes disc wear. Access doors and rugged, bolt-together construction put the vital systems right at hand.

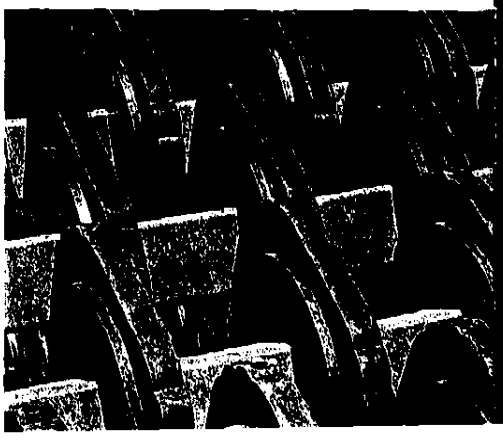
FIELD-TESTED IN OUR OWN MRF.

Every piece of CP Single-Stream Processing Equipment is thoroughly field-tested at our own Single-Stream MRF, where our profit—like yours—depends on the ability of CP equipment to perform. This is a critical step no one else offers.

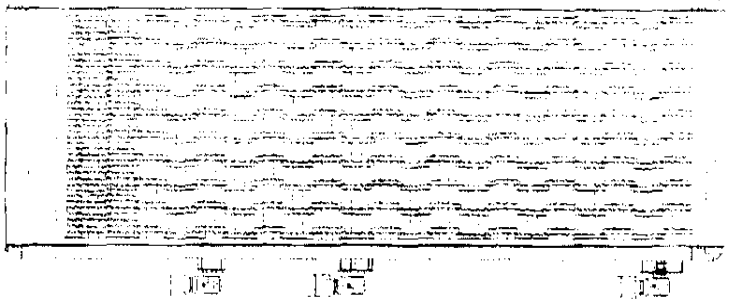
LET CP GIVE YOU THE EDGE WITH AUTOMATED NEWSPAPER SEPARATION.

CP's exclusive engineering and technology assure you of maximum efficiency and the highest-quality, easily marketable end products. Whether you're a paper processor, container processor, MRF operator, waste hauler or municipality, CP can help you enhance revenue by automating your fiber sorting line. Whether you process 20 tons per day, or 600 tons, CP can design, engineer and build the right system for your needs. Wherever you are in the world, CP can bring the most-advanced technology right to your facility. Contact us today.

CP MANUFACTURING



NEWSCREEN™

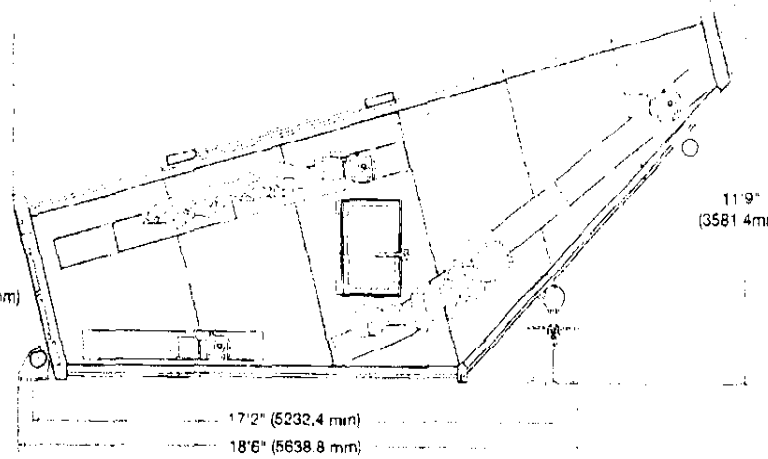


TOP VIEW

7'0" (2133.6 mm) or 8'6" (2590.8 mm)

9'1" (2768.6 mm) or 10'11" (3327.4 mm)

23'11" (7289.8 mm)



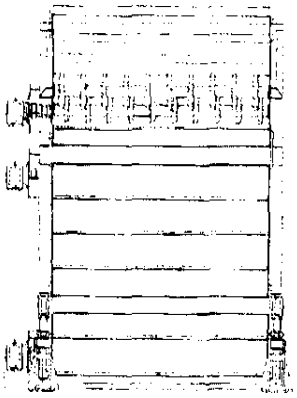
SIDE VIEW

11'9" (3581.4mm)

5'8" (1727.2 mm)

17'2" (5232.4 mm)

18'6" (5638.8 mm)



END VIEW

7'9" or 9'2" (2362.2 mm) (2794.0 mm)

9'6" or 10'11" (2895.6 mm) (3327.4 mm)

CP Manufacturing
1300 Wilson Avenue
National City, California 91950-6625
tel: (619) 477-3175
Fax: (619) 477-2511
E-mail: sales@cpmfg.com
Or visit us on line: www.cpmfg.com

DESCRIPTION:

- CP's NEWScreen™ removes ONP (old newspaper) from containers, contaminants, small debris, mixed paper and office paper by means of patented disc screen technology

BENEFITS:

- Automatically separates newspaper from mixed paper or mixed paper and containers.
- Reduces labor costs and increases throughput.
- Reduces residue by capturing more recyclables.
- Compact and self-contained.
- Designed for low-cost maintenance by utilizing two-piece discs, easily removable shafts and access doors.
- Multiple-deck design utilized to minimize disc wear.

FEATURES:

- Proprietary two-piece, square shaped, bolt-together molded rubber or urethane discs with metal inserts allow for easy maintenance or removal.
- Square tube steel shafts minimize wrapping and require little or no cleaning.
- Overlapping disc hubs maintain proper screen size throughout disc life.
- Triple-deck design provides higher throughput with less wear and removes small broken glass, dirt and debris from the paper stream.
- Variable deck-angle for optimum separation.
- Variable-speed drive deck motors easily adjust disc speeds to your waste stream.
- Three 5-HP drives with premium efficiency motors.
- Access doors for visual inspection and easy maintenance.
- Easy access to each rotor.
- Heavy-duty frame.
- Top cover for safe and clean operation.

CAPACITY:

- Two choices available:
  - Up to 15 tons per hour.
  - Up to 20 tons per hour.

DIMENSIONS:

- Inside working width—7'0"/2133.6 mm or 8'6"/2590.8 mm
- Overall width—9'6"/2895.6 mm or 10'11"/3327.4 mm
- Base length—17'2"/5232.4 mm
- Overall length—23'11"/7289.8 mm
- Overall height—11'9"/3581.4 mm, without support frame
- Weight - 18,000 lbs/8154 kg (approximate)

OPTIONS:

- Different disc spacing to accommodate multiple material characteristics.
- New air system further improves screen efficiency.
- Misting systems for dust suppression and improved co-efficient of friction.
- 208, 230, 380, 415, 575 volt three phase power.
- Infeed/outfeed conveyors.
- Various widths and capacities.

Specifications subject to change without notice

MATERIAL RECOVERY FACILITIES

[54] **WASTE PAPER SORTING CONVEYOR FOR SORTING WASTE PAPER FORM WASTE CARDBOARD**

[75] Inventor: **Heiman Salle Bollegraaf**, Groningen, Netherlands

[73] Assignee: **Machine Fabriek Bollegraaf Appingedam B.V.**, Appingedam, Netherlands

[21] Appl. No.: **08/728,288**

[22] Filed: **Oct. 8, 1996**

[30] **Foreign Application Priority Data**

Sep. 18, 1996 [EP] European Pat. Off. 96202605

[51] **Int. Cl.**[7] **B07B 13/04**

[52] **U.S. Cl.** **209/668**; 209/672

[58] **Field of Search** 209/659, 660, 209/667, 668, 671, 672, 930

[56] **References Cited**

U.S. PATENT DOCUMENTS

1,679,593	8/1928	Williamson et al.	209/672
3,519,129	7/1970	Peterson	209/671
4,600,106	7/1986	Minardi	209/668 X
4,795,036	1/1989	Williams	209/672 X
5,060,806	10/1991	Savage	209/672 X
5,450,966	9/1995	Clark et al.	209/668 X
5,484,247	1/1996	Clark et al.	414/412

FOREIGN PATENT DOCUMENTS

89 06 721	8/1989	Germany .	
2015911	4/1990	Germany .	
9001005	11/1991	Netherlands .	
2222787	3/1990	United Kingdom	209/668
WO 95/35168	12/1995	WIPO .	

OTHER PUBLICATIONS

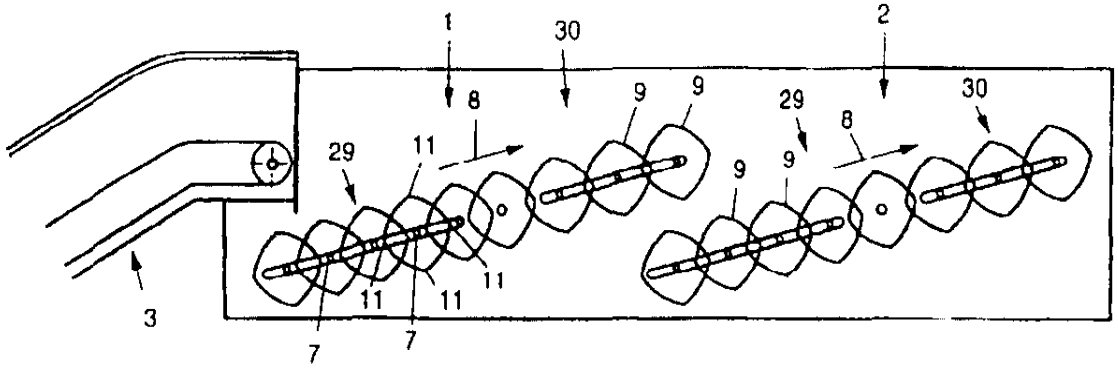
Exhibit 1: Machinefabriek Bollegraaf Appingedam B.V. Order confirmation outlining the specification for a separator from D&D Recycling in Dallas, Texas, Nov. 10, 1993.
Exhibit 2: Brochure from B.H.S. Handling systems, Inc. depicting paper separator.
Exhibit 3. Lubo B.V. order outlining the specification for a cardboard paper sorter (with translation), Jan. 3, 1993

Primary Examiner—Tuan N. Nguyen
Attorney, Agent, or Firm—Merchant & Gould P.C.

[57] **ABSTRACT**

A waste paper sorting conveyor for sorting waste paper from waste cardboard has a sorting bed formed by a row of rotatable, driven shafts mutually spaced in a conveying direction and each extending transversely to the conveying direction. The shafts each carry a row of impellers for intermittently urging material on the sorting conveyor upward and in the conveying direction. The impellers of each of the rows are mutually spaced in longitudinal direction of the respective shaft. Rotary contours of impellers carried by each of the shafts project between rotary contours of the impellers carried by a neighboring one of the shafts. Since the mutual spacing of the impellers of at least one of the rows in longitudinal direction of the respective shaft is adjustable, waste paper and waste cardboard mixtures of varying compositions can be sorted to an improved purity.

17 Claims, 5 Drawing Sheets



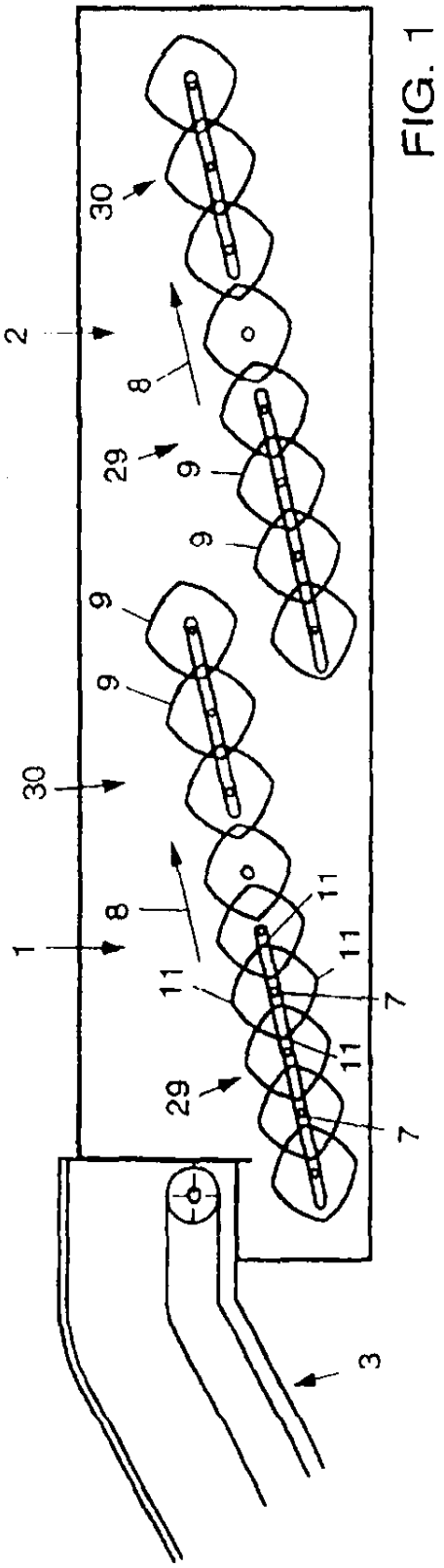


FIG. 1

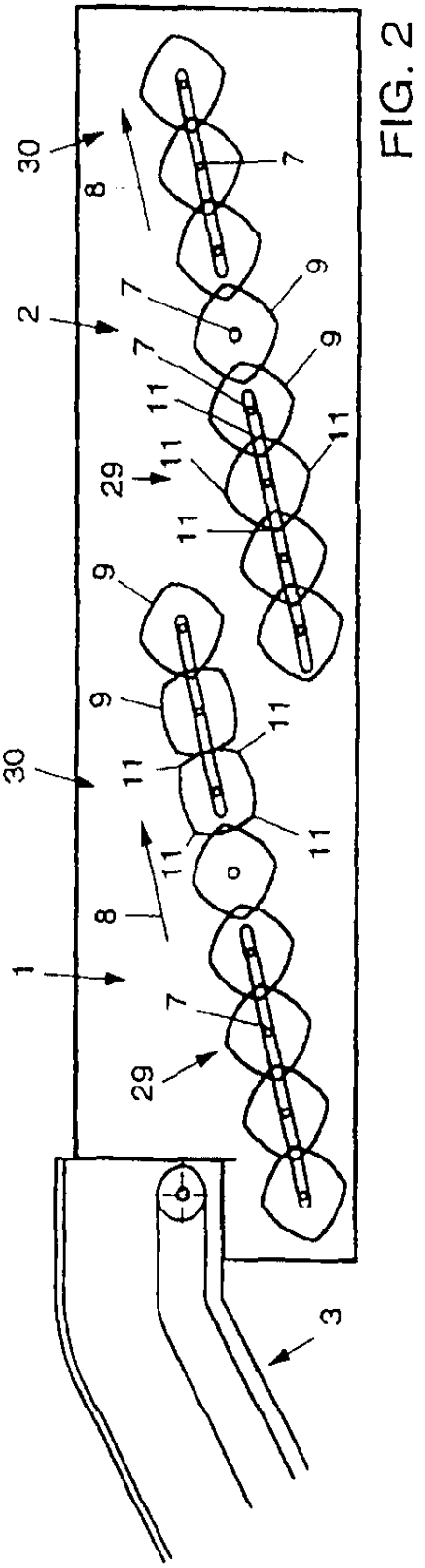


FIG. 2

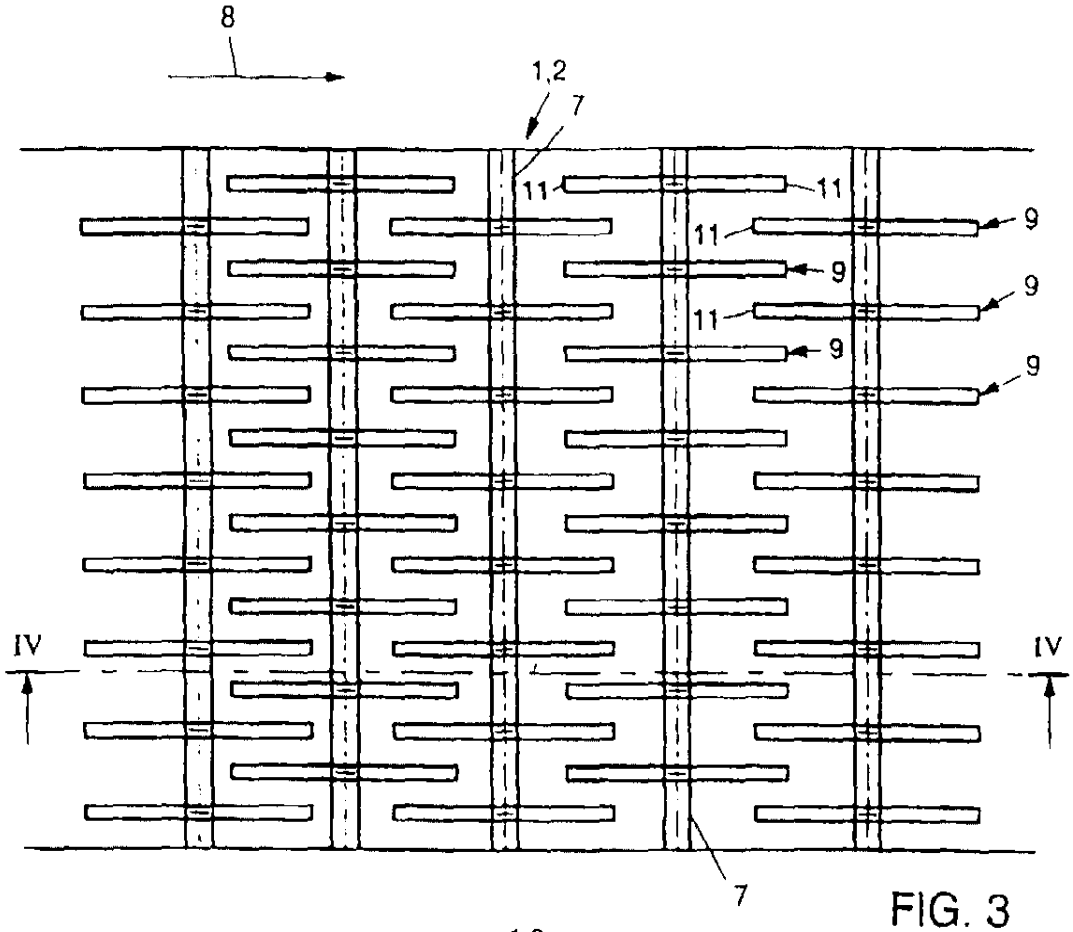


FIG. 3

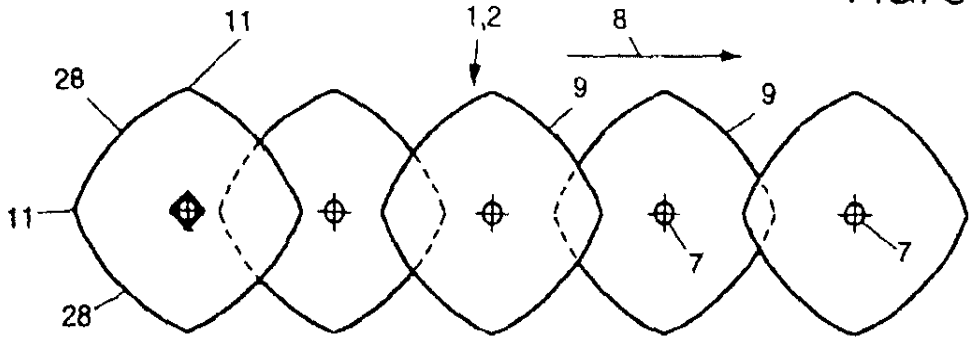


FIG. 4

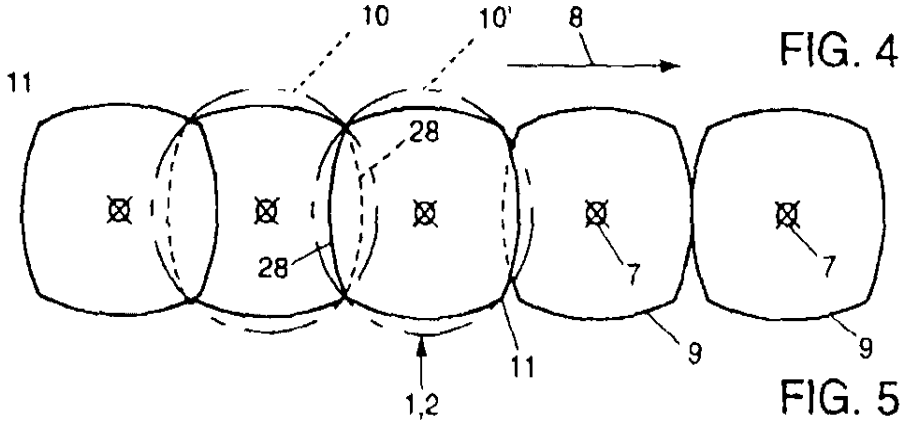


FIG. 5

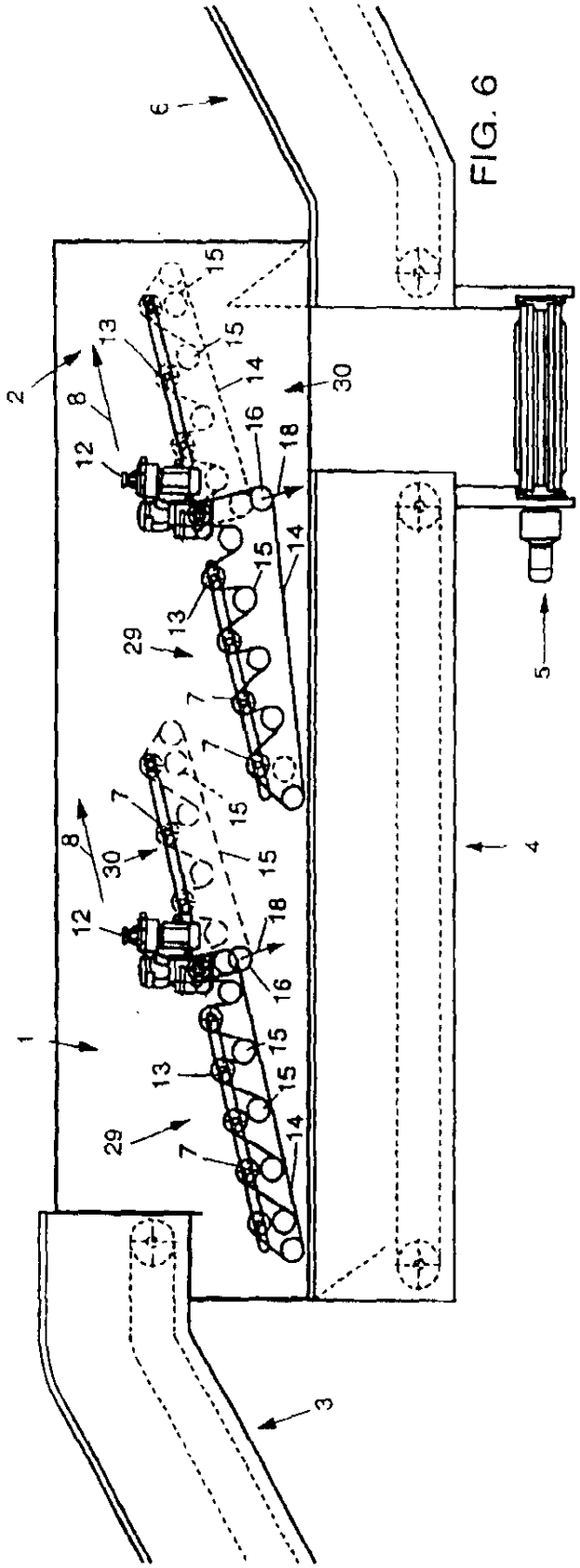


FIG. 6

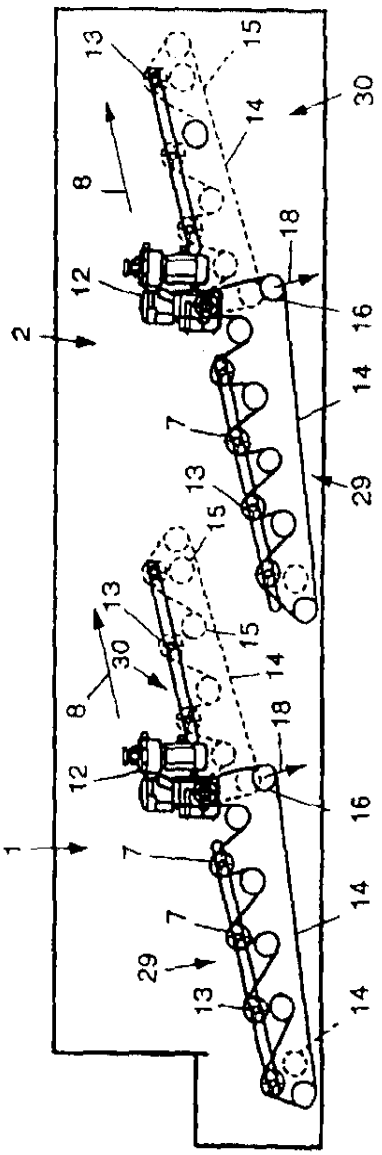


FIG. 7

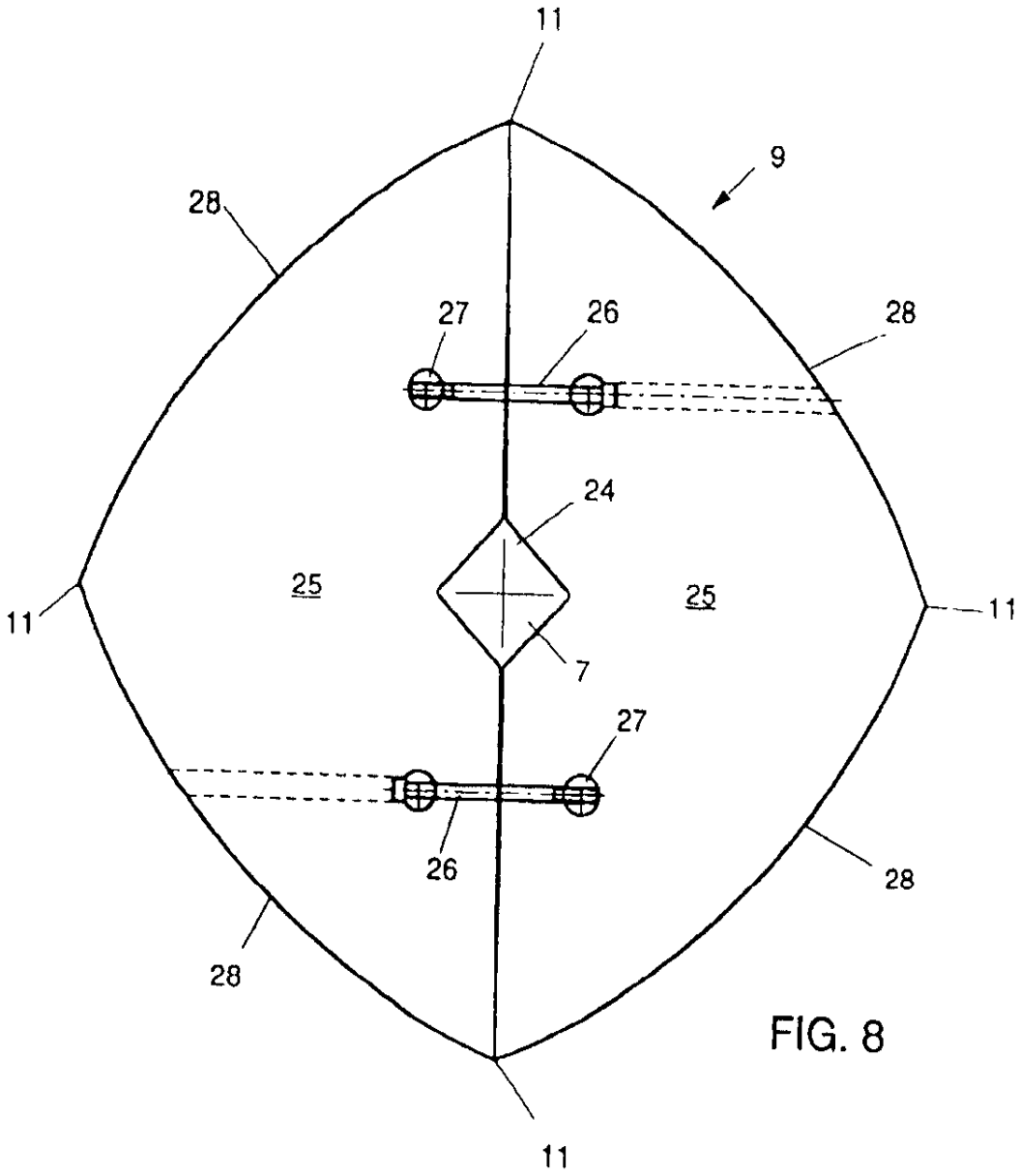


FIG. 8

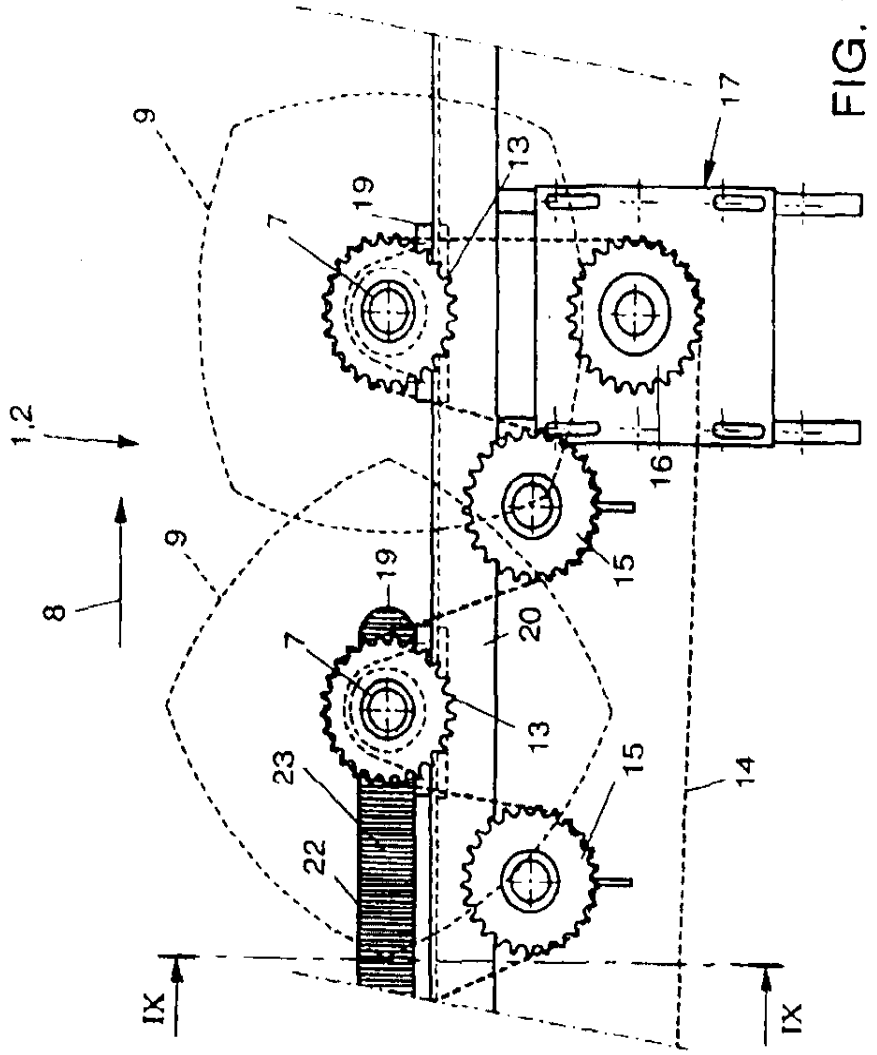


FIG. 10

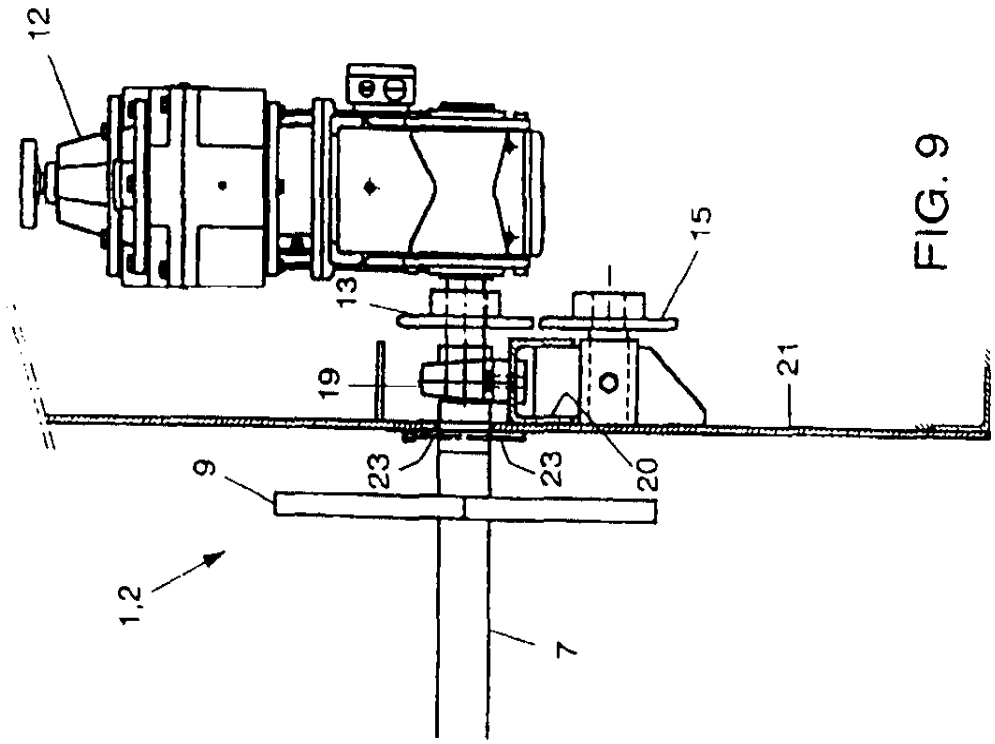


FIG. 9

WASTE PAPER SORTING CONVEYOR FOR SORTING WASTE PAPER FORM WASTE CARDBOARD

TECHNICAL FIELD

Waste paper and waste cardboard are generally collected in mixed form. For the sake of recycling, however, it is preferred to separate typically brown cardboard from waste paper, because inclusion of substantial amounts of waste cardboard in raw material from which paper is to be made results in relatively gray or brown paper. The invention relates to an apparatus for sorting waste paper from waste cardboard.

BACKGROUND ART

From practice, a waste paper sorting conveyor for sorting waste paper from waste cardboard is known, which comprises a row of rotatable, driven shafts mutually spaced in a conveying direction and each extending transversely to the conveying direction. The shafts each carry a row of radially extending impelling members for intermittently urging material on the sorting conveyor upward and in the conveying direction. The impellers of each of the rows are mutually spaced in longitudinal direction of the respective shaft. Rotary contours of impellers carried by each of the shafts project between rotary contours of the impellers carried by a neighboring one of the shafts.

In operation, a mixture of waste paper and waste cardboard is fed to the upstream end of the sorting conveyor. Rotary motion of the impellers intermittently urges the material on the conveyor upward and forward in conveying direction. Thus, the material on the conveyor is simultaneously shaken and transported along the conveyor. Since paper in the mixture is typically of a smaller size and more flexible than cardboard, paper on the conveyor tends to fall through interspaces between the shafts and the impellers, while cardboard tends to remain on top of the conveyor. Thus, material predominantly consisting of cardboard can be collected at the downstream end of the conveyor or succession of conveyors, and material predominantly consisting of paper can be collected from under the conveyor.

A problem of this known sorting conveyor is that in most cases it does not yield a satisfactory degree of sorting. Either too much paper is included in the sorted cardboard and/or too much cardboard is included in the sorted paper.

SUMMARY OF THE INVENTION

It is an object of the present invention to provide a sorting conveyor with which a more generally satisfactory degree of sorting can be achieved.

According to the invention, this object is achieved by providing a sorting conveyor of the above-described type in which the mutual spacing between the impellers of at least one of the rows in longitudinal direction of the respective shaft is adjustable.

By increasing the size of the spacings, material of a generally larger maximum size and stiffness is allowed to fall through the interspace. By decreasing the size of the spacings, material of a generally smaller minimum size and stiffness is precluded from falling through the interspace. Thus, the sorting properties can be accurately adjusted to the composition of the mixture of waste material fed to the sorting conveyor, the demand for waste paper and waste cardboard, and any requirements regarding the maximum and minimum proportion of paper in the sorted cardboard and, conversely, regarding the maximum and minimum proportion of cardboard in the sorted paper.

It has been found, for example, that the composition of paper and cardboard waste in urban areas is substantially different from the composition of the same type of waste in rural areas. It has also been found that the composition varies from country to country, major factors determining the structure of the paper and cardboard waste being the thickness and size distribution of newspapers and magazines and the type of cardboard typically used. Furthermore, in some instances, waste cardboard including about 10% waste paper is required. Instead of simply adding paper to the waste cardboard after sorting, such a composition can be obtained more efficiently using the sorting apparatus according to the invention by narrowing the spacings so that the desired composition is obtained directly. As an advantageous side effect, the degree to which the sorted paper includes cardboard impurities is then reduced.

A further improved adjustability of the sorting conveyor to variations in the composition of paper and cardboard material to be sorted can be obtained by providing that the position of at least one of the shafts in conveying direction is adjustable as well.

A still further improved adjustability of the sorting conveyor to variations in the composition of paper and cardboard material to be sorted can be obtained by providing that the rotational velocity of the impellers is adjustable as well. In particular, if the combination of spacing in conveying direction and rotational velocity of the impellers is independently adjustable in at least two sections of the conveyor, a substantially improved degree of purity of the sorted materials can be achieved over a wide range of compositions of paper and cardboard mixtures to be sorted.

Further objects, features and advantages of the present invention appear from the description set forth below, in which a preferred embodiment of the present invention is described with reference to the drawings. Particularly advantageous embodiments of the present invention are also described in the dependent claims.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a schematic side view of a sorting conveyor system according to the present invention;

FIG. 2 is a side view of the sorting conveyor system shown in FIG. 1 in another setting;

FIG. 3 is a schematic top plan view of a section of the sorting conveyor system according to FIG. 1;

FIG. 4 is a side view in cross-section along the line IV—IV in FIG. 3;

FIG. 5 is a side view according to FIG. 4 with impellers in different rotary positions;

FIG. 6 is a view according to FIG. 1 showing the drive system and discharge means of the sorting conveyor system shown in FIGS. 1–5;

FIG. 7 is a view according to FIG. 6 in a setting corresponding to the setting shown in FIG. 2;

FIG. 8 is a detailed side view of an impeller member of the sorting conveyor system shown in FIGS. 1–7,

FIG. 9 is a detailed view in cross-section along the line IX—IX in FIG. 10; and

FIG. 10 is a detailed side view of a section of the sorting conveyor system shown in FIGS. 1–9.

MODES FOR CARRYING OUT THE INVENTION

The waste paper sorting conveyor system shown in the drawing comprises two sorting conveyors 1, 2. The

upstream conveyor 1 of the conveyors shown has a downstream end positioned above the upstream end of the downstream conveyor 2, so that material which has been passed over the upstream conveyor 1 is dropped onto the downstream conveyor 2. The system further includes a feeding conveyor 3 which is shown in FIGS. 1, 2 and 6 only, and discharge conveyors 4, 5, 6 shown in FIG. 6 only.

The sorting conveyors 1, 2 are each provided with a row of rotatable, driven shafts 7 (not all shafts are designated by reference numerals). The shafts 7 are arranged in positions mutually spaced in a conveying direction (arrow 8) and each extend perpendicularly to the conveying direction. The shafts 7 each carry a row of radially extending impellers 9 (not all impelling members are designated by reference numerals) for intermittently urging material on the sorting conveyors 1, 2 upwards and in the conveying direction 8. The impellers 9 of each of the shafts 7 are mutually spaced in the longitudinal direction of the respective shaft 7 and rotary contours 10 (see FIGS. 4 and 5) of impellers 9 carried by each of the shafts 7 project between rotary contours 10' of the impellers 9 carried by a neighboring one of the shafts 7.

The conveyors 1, 2 are further each provided with a motor-transmission unit 12 (FIGS. 6, 7 and 9) and transmission systems for driving the shafts 7. The transmission systems each include sprocket wheels 13 (not all sprocket wheels 13 are designated by reference numerals) mounted on the shafts 7, for transmitting driving forces exerted by the respective motor 12. The sprocket wheels 13 are engaged by a chain 14 (omitted in FIG. 9) which passes over the sprocket wheels 13, over divert wheels 15 (not all divert wheels 15 are designated by reference numerals) and over tensioning wheels 16. The tensioning wheels 16 are rotatably suspended from a tensioning structure 17 (FIG. 10) which is adapted for resiliently exerting a tensioning force in a direction indicated by arrows 18 in FIGS. 6 and 7. Chain tensioners are well known in the art and therefore not described in further detail.

In operation, material to be sorted is fed along the feeding conveyor 3. From there, the material is deposited onto the upstream sorting conveyor 1. The upstream sorting conveyor 1 transports the material in conveying direction 8 through rotation of the impellers 9 in conveying direction 8. Since the impellers include radially projecting parts, in this embodiment in the form of corners 11, the material on the conveyor 1 is simultaneously intermittently urged upwards and thereby agitated, which increases the likelihood that items sufficiently small and/or flexible to pass through open spaces in the conveyor 1 will eventually drop through the conveyor 1. Material that has not dropped through the conveyor 1 and has reached the downstream end thereof is dropped onto the downstream sorting conveyor 2, where the same sorting treatment is repeated. Dropping the material which is being sorted as it passes over the two conveyors 1, 2 provides the advantage that a very intensive additional agitation and mixing of the material is obtained, so that any paper items still lying on top of cardboard items are more likely to reach a position under cardboard material, allowing that paper item to fall through the second conveyor 2.

Material that has dropped through the conveyors 1, 2 (predominantly waste paper) is carried off along discharge conveyors 4, 5. Material that has also passed the downstream conveyor 2 without dropping through is dropped onto a third discharge conveyor 6 and carried off to another location. The mutual spacing of the impellers 9 of each shaft 7 in the longitudinal direction of that shaft 7 is adjustable. If, for example, the cardboard in a mixture includes relatively few small and flexible items, a wide spacing can be selected to achieve maximum paper yield without undue sacrifice of purity of the sorted paper waste. Conversely, if the waste paper includes relatively few large and stiff items such as books or other bound stacks of paper, a small spacing can be selected to achieve maximum paper purity without undue sacrifice of paper yield.

Other factors determining an optimum setting of the spacing between the impellers are the ratio between the demand for and the price of waste paper and waste cardboard, and the requirements regarding the maximum and minimum proportion of paper in the sorted cardboard and, conversely, regarding the maximum and minimum proportion of cardboard in the sorted paper.

The positions of all but one of the shafts 7 of each conveyor 1, 2 are adjustable relative to the other shafts 7 in the conveying direction 8.

By adjusting the position of the shafts 7 relative to each other in the conveying direction, the size in the conveying direction of the spacing between the respective shaft 7 and next successive and/or preceding shafts 7 can be changed as well. By increasing the size of a spacing, material of a generally larger maximum size and stiffness is allowed to fall through the interspace, i.e. less paper will reach the third discharge conveyor 6 and more cardboard will reach the first and second discharge conveyors 4 and 5. By decreasing the size of a spacing, material of a generally smaller minimum size and stiffness is precluded from falling through the interspace, i.e. more paper will reach the third discharge conveyor 6 and less cardboard will reach the first and second discharge conveyors 4 and 5.

Thus, also the spacings in the conveying direction can be accurately adjusted to the characteristics of the mixture of paper and cardboard material fed to the sorting conveyors 1, 2. It is noted that the adjustability of the positions of the shafts 7 in the conveying direction is also advantageous if the impellers are arranged on the shafts in fixed positions, but that in combination with the lateral adjustability of the spacings between the impellers 9, particularly good sorting results can be achieved, probably because the dimensions of the spacings between the impellers in both longitudinal and transverse direction are adjustable to the size and flexibility distributions of paper and cardboard in the material to be sorted.

Because the positions of each of the adjustable shafts 7 of each of the conveyors 1, 2 relative to the respective other shafts 7 are independently adjustable in the conveying direction 8, it is possible not only to adjust the spacing between successive shafts 7, but also to vary the spacings as a function of the distance in the conveying direction along the conveyors, depending on the structure of the materials to be sorted.

In most cases, it is preferred that the size of the spacings in longitudinal and transverse direction between impellers and shafts generally increases in the conveying direction. Thus, the spacings encountered by material fed to the upstream conveyor track 1 are initially relatively small, so that, at first, the very small items are sorted out while keeping the amount of cardboard dropping through to a minimum. After the material has travelled some distance along the conveyor track, the larger and stiffer items generally have assumed positions where they lie essentially flat on the conveyor track 1. In such positions, the cardboard items can pass larger spacings with little or no likelihood of falling through, so that by increasing the size of the spacings as a function of the distance travelled by the passing material

at the respective spacing, an increased paper yield can be obtained without sacrificing the degree of purity of the sorted paper. The same principle applies to the downstream conveyor 2.

Each of the sorting conveyors 1, 2 is constituted by an upstream section 29 and a downstream section 30. The mutual spacings between the shafts 7 in the upstream sections 29 and between the shafts 7 in the downstream sections 30 are independently adjustable. Since the upstream and downstream sections 29, 30 of each of the sorting conveyors 1, 2 are driven by separate chains 14, the circumferential velocities of the shafts 7 in each of the upstream and downstream sections are controllable independently of each other. Thus, the circumferential velocity of the impellers 9 in each section can be controlled in accordance with the size in the conveying direction of the spacings between the shafts 7 and the impeller plates 9. Preferably, a higher circumferential velocity is selected if larger spacings in the conveying direction are set. Increasing the circumferential velocity in the downstream direction further provides the advantage that items on the sorting conveyor are urged apart when reaching downstream sections, increasing the likelihood that smaller items pass through widened gaps between the larger items.

The transmission wheels 13 are positioned in a row. The divert wheels 15, which are rotatable as well, are arranged along the row of transmission wheels 13 in staggered relation to the row of transmission wheels 13. The drive chain 14 is woven alternately over the transmission wheels 13 and the divert wheels 15. This transmission structure allows the shafts 7 carrying the impellers 9 to be displaced in the conveying direction over substantial distances without requiring structural changes to the transmission structure or even repositioning of the divert wheels 15. A particularly efficient construction is obtained because the divert wheels 15 are mounted on a support structure in fixed positions.

It is noted that the upstream sections of the upstream conveyor 1 in FIGS. 1 and 6 have five shafts 7, whereas the corresponding sections in FIGS. 2 and 7 have only four shafts 7. By allowing the removal of shafts 7, the spacing between successive shafts along a given track can be widened further than if adjustments are restricted to adjustments of a fixed number of shafts along that track. The chain 14 in the upstream parts of the upstream conveyors 1 in FIGS. 2 and 7 is woven to by-pass the most upstream divert wheel 15 which is shown in dotted lines. Depending on the selected setting and the length of the chain 14, various manners of leading the chain 14 over the divert wheels 15 and the transmission wheels 13 are available.

In the drawings, the upstream sections of both conveyors 1, 2 are shown in a setting in which the chain skips a divert wheel 15 as well. The spare divert wheels 15 allow mounting an additional shaft. In other settings, skipping a divert wheel 15 other than the most downstream divert wheel 15 can be advantageous.

To allow adjustment of the positions of the shafts 7 in the conveying direction, bearing members 19 of the shafts 7 are releasably mounted onto rails 20 extending along the conveyors 1, 2 in the conveying direction 8. The rails 20 are provided with a row of holes along the length of the rails 20. By inserting bolts through the bearing member 19 and through selected holes, the bearing members 19, and hence the shafts 7, can be inserted fixedly in the desired positions. It will be evident that many other constructions for adjustably positioning the shafts are feasible, such as clamping the bearing members onto the rails.

To prevent waste material from leaving the conveyors in lateral direction, the conveyors 1, 2 are provided with guide plates 21. To allow adjustment of the shafts 7 without disassembling the guide plates 21, slots 22 are provided in the guide plates 21. The slots 22 in turn are resiliently closed off by brushes 23 which prevent waste material from falling through the slots 22, but do not interfere with adjustment, removal or addition of any of the shafts 7. To facilitate driving the conveyor from the motor-transmission units 12, which are in fixed positions, one of the shafts 7 of each of the conveyors 1, 2 is mounted in a fixed position.

Since the shafts 7 in fixed positions are central shafts 7 located between upstream and downstream shafts 7 in adjustable positions, a given readjustment of the spacings between the shafts 7 entails relatively small maximum displacements of the shafts 7. If, for example, the fixed shaft were positioned at an extreme end of the conveyor, a given proportional readjustment would for example require a displacement of the shaft at the opposite end of the conveyor about twice as large as the displacement of the shafts 7 at the extreme ends of conveyors 1, 2 with central fixed shafts 7.

An efficient and compact construction of the conveyor is further promoted by arranging the motor-transmission units 12 close to the fixed shafts 7 and particularly by providing a direct drive from the reduction transmission of the unit 12 to the respective fixed shaft 7.

As is best seen in FIG. 8, the impellers 9 are releasably clamped onto the shafts 7, which are preferably of polygonal cross section. This allows easy readjustment of the lateral spacing between successive impellers 9 of a row. Thus, not only the spacing in the conveying direction, but also the lateral spacing between successive impellers 9 can be easily adjusted to the properties of the material to be sorted and to requirements regarding the sorted materials. The latter advantage can also be obtained if clamped impellers of the above-described type are applied in a sorting conveyor of which the shafts carrying the impellers are not adjustable.

Furthermore, the impellers 9 are each provided with an opening 24 through which extends the shaft 7 carrying that impeller. A releasable part 25 is displaceable when in released condition. When the releasable part 25 is in displaced condition, a radial passage for passing the shaft 7 radially into and out of the opening 24 is obtained. This construction of the impellers allows the impellers 9 to be mounted on and dismounted from the shafts 7 without dismounting the shafts 7. Thus, if damage to an impeller 9 or readjustment of the lateral spacing between the impellers 9 necessitates mounting or dismounting impellers 9, impellers 9 can be dismounted from the shaft 7 and mounted on the shaft 7 without dismounting the shaft 7 or requiring a shaft having a free end over which the impeller can be mounted. In particular, given the fixed width of the sorting conveyors 1, 2, lateral adjustment of the mutual, lateral spacing between the impellers 9 of a shaft 7 will generally require the removal or addition of at least one impeller plate assembly 9.

The impellers 9 of the sorting conveyors shown can be manufactured particularly efficiently, because the impeller body is formed by two mutually identical parts 25. The parts 25 are releasably clamped around the one of the shafts 7 carrying that impeller 9 through bolts 26 engaging plug-shaped nuts 27 in the opposite parts. The impeller body can also be advantageously formed by more than two identical parts clamped around the shaft.

The contour of the impellers 9 with radially outwardly projecting corners 11 and outwardly curved sections 28,

with the corners 11 projecting further outward than at least adjacent portions of the curved sections 28, is advantageous in that, on the one hand, it generates a substantial intermittent vertical motion of the material lying on the bed formed by the impellers 9 when the impellers 9 are rotated but, on the other, it provides a relatively large minimum overlap between impellers 9 carried by successive shafts 7. Furthermore, when impellers 9 carried by successive shafts 7 are in orientations in which the curved sections 28 face each other, as shown in FIG. 5, relatively steep wedge-like sloping edges of the interspaces between successive shaft-impeller assemblies are obtained, which cause any material tending to fall through that interspace to be gradually urged in a flexed condition allowing passage through that interspace. To prevent even small, but stiff cardboard items from falling through interspaces between successive rows of impellers 9, the spacings between successive shafts 7 are preferably set such that impellers 9 of neighboring shafts 7 mutually overlap in each rotary position of the respective impellers 9.

What is claimed:

1. A waste paper sorting conveyor for sorting waste paper from waste cardboard, comprising a row of rotatable, driven shafts mutually spaced in a conveying direction and each extending transversely to said conveying direction, said shafts each carrying a row of radially extending impellers for intermittently urging material on the sorting conveyor upward and in the conveying direction, the impellers of each of said rows being mutually spaced in longitudinal direction of the respective shaft, where the impellers of at least one of said rows are releasably fixed to the respective one of said shafts for allowing repositioning of the impellers of said at least one of said rows in longitudinal direction along the respective shaft while said impellers are mounted in released condition.

2. A sorting conveyor according to claim 1, wherein said impellers are releasably clamped onto the shafts.

3. A sorting conveyor according to claim 1, wherein at least one of said impellers is provided with an opening through which extends the shaft carrying that impeller, with a releasable part displaceable when in released condition, and with a radial passage for passing said shaft radially into and out of said opening when said releasable part is in displaced condition said at least one of said impellers comprising at least two releasably connected parts, said parts bounding opposite sides of said opening and clamping said at least one of said impellers to said shaft.

4. A sorting conveyor according to claim 1, wherein at least one of said impellers includes at least two mutually identical parts, said parts bounding opposite sides of an opening in said at least one impeller through which extends one of said shafts carrying said at least one impeller and being clamped around said one of said shafts carrying said impeller.

5. A sorting conveyor according to claim 1, wherein the position of at least one of said shafts relative to the other shafts is adjustable in conveying direction.

6. A sorting conveyor according to claim 5, wherein the positions of each of at least two of said shafts relative to the respective other shafts are independently adjustable in conveying direction.

7. A sorting conveyor according to claim 5, wherein mutual spacings between said shafts in an upstream section and a downstream section are independently adjustable and wherein circumferential velocities of the impellers of each of said sections are adjustable independently of the circumferential velocities of the impellers of the other one of said sections.

8. A sorting conveyor according to claim 5, wherein each of said spacings between a neighboring pair of said shafts is equal to or smaller than any next successive one in conveying direction of said spacings between a neighboring pair of said shafts.

9. A sorting conveyor according to claim 1, wherein at least one of said shafts is rotatably mounted in a fixed position.

10. A sorting conveyor according to claim 9, wherein said shaft in a fixed position is a central shaft located between upstream and downstream shafts in adjustable positions.

11. A sorting conveyor according to claim 9, further comprising a drive unit arranged closely adjacent said fixed shaft.

12. A sorting conveyor according to claim 1, wherein said impellers each have a contour which has at least one radially outwardly projecting corner and at least one outwardly curved section, said corner projecting further outward than at least adjacent portions of said curved section.

13. A sorting conveyor according to claim 12, wherein impellers of neighboring shafts mutually overlap in each rotary position of the respective impellers.

14. A waste paper sorting conveyor for sorting waste paper from waste cardboard, comprising a row of rotatable, driven shafts mutually spaced in a conveying direction and each extending transversely to said conveying direction, said shafts each carrying a row of radially extending impellers for intermittently urging material on the sorting conveyor upward and in the conveying direction, the impellers of each of said rows being mutually spaced in longitudinal direction of the respective shaft, where the impellers of at least one of said rows are releasably fixed to the respective one of said shafts for allowing readjustment of the mutual spacing of the impellers of said at least one of said rows in longitudinal direction along the respective shaft while said impellers are mounted in released condition,

wherein the position of at least one of said shafts relative to the other shafts is adjustable in said conveying direction, and

wherein at least a plurality of said shafts each carry a transmission wheel, said transmission wheels being positioned in a row, a row of rotatable divert wheels are arranged along said row of transmission wheels in staggered relation to said row of transmission wheels, and a drive belt or chain is woven alternately over said transmission wheels and said divert wheels, and at least a plurality of said shafts is supported by at least one common guide and adjustable in said conveying direction relative to the other shafts along said at least one common guide.

15. A sorting conveyor according to claim 14, wherein said divert wheels are rotatably mounted in fixed positions.

16. A waste paper sorting conveyor for sorting waste paper from waste cardboard, comprising:

a row of rotatable, driven shafts mutually spaced in a conveying direction and each extending transversely to said conveying direction, said shafts each carrying a row of radially extending impellers for intermittently urging material to be sorted upward and in said conveying direction, the impellers being mutually spaced in a longitudinal direction along each shaft, wherein at least a plurality of said shafts each carry a transmission wheel, said transmission wheels being positioned in a row, a row of rotatable divert wheels are arranged along said row of transmission wheels in staggered relation to said row of transmission wheels, and a drive belt or chain is woven alternately over said transmission wheels and said divert wheels, and wherein at least a

plurality of said shafts is supported by at least one common guide and the position of at least a plurality of said shafts relative to the other shafts is adjustable in said conveying direction along said at least one common guide.

17. The waste paper sorting conveyor of claim 16, wherein the impellers are spacially adjustable in the longitudinal direction relative to one another.

* * * * *

EXHIBIT C

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June 19, 2001

VIA FEDERAL EXPRESS

Robert M. Davis
President
CP Manufacturing Inc.
1438 McKinley Avenue
National City, CA 91950-4217

Re: M&G File No. 9424.59USAC

Dear Mr. Davis:

We represent Machinefabriek Bollegraaf Appingedam B.V., with respect to its intellectual property matters in the United States. I understand that your company manufactures and sells waste paper sorted conveyors, among other things. I wanted to make you aware of our client's United States Patent No. 6,076,684. A copy of the patent is enclosed.

Very truly yours,

Paul E. Lacy

PEL/jmj/encls.

cc: A.H.K. Tan (via fax)
Heiman Bollegraaf (via fax)
John Gresens

OCT 18 2001

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October 17, 2001

VIA FEDERAL EXPRESS

Robert M. Davis
President
CP Manufacturing Inc.
1438 McKinley Avenue
National City, CA 91950-4217

Re: M&G File No. 9424.59USAC

Dear Mr. Davis:

I previously contacted you several months ago, with regard to our client, Machinefabriek Bollegraaf Appingedam B.V., with respect to its United States Patent No. 6,076,684. To date, I have heard nothing from you.

We are continuing our investigation, as our client has concerns with respect to your fiber-sorting conveyors. Our investigation indicates that there are many similarities between your conveyors and our client's patent. Please advise us, as soon as possible, whether your sorters use impellers that are mounted in a manner such that they can be released from the shaft, and if so, how that is accomplished on your conveyors. In addition if you believe there are other distinguishing factors between your conveyors and the claims of the patent, please also advise us as to those differences.

In the alternative, we would be happy to travel to your facilities in California for an in person inspection of your apparatus.

June 19, 2001 incorrect date
Page 2

Thank you for your prompt attention to this matter.

Very truly yours,

Paul E. Lacy

PEL/jmj/

cc: A.H.K. Tan (via fax)
Heiman Bollegraaf (via fax)
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October 23, 2001

VIA FACSIMILE AND U.S. MAIL

Michael H. Jester
Law Offices of Michael H. Jester
PATENTS & TRADEMARKS
Symphony Towers, 750 B. Street, Suite 2560
San Diego, CA 92101-8106

Re: M&G File No. 9424.59USAC

Dear Mr. Jester:

This letter is in response to your letters of October 22, 2001.

While I appreciate your presentation of your understanding of the construction of your client's sorting screens, the information that I have available does not permit me to reach the same conclusion. It is readily apparent that your client is offering for sale sorting screens that are promoted as having the discs adjustable along the length of the shaft. This feature is still called out today, on your client's website. Although you discussed an alternative method by which you thought your client might be providing this feature, it would of course be inappropriate for me to rely on such conjecture. Please advise me as to whether you will allow me to inspect one of your client's machines.

In addition, it was uncertain to me from our conversation yesterday, as to whether you are saying that all of your client's past sales of its sorting screens have been retrofitted with axles with welded sleeves.

With regard to your request for additional documents from the EPO, I will take that under advisement. However, it would be completely inappropriate for you to conclude that the lack of provision of those documents indicates a belief that any claim of United States Patent No. 6,076,684 is invalid.

In addition, your conjecture and unsworn statements about the operation of your client's apparatus does not give rise to any possible entitlement to an award of attorneys' fees.

Finally, while I provided my understanding as to when the marked machines of my client were first sold, I have not verified that at this time. In addition, while I appreciate your explanation of your understanding of the effect of the marking statute, please do not believe that I acquiesce to that interpretation.

Very truly yours,

Paul E. Lacy

PEL/jmj

cc: A.H.K. Tan (via fax)
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October 26, 2001

VIA FEDERAL EXPRESS

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Symphony Towers, 750 B. Street, Suite 2560
San Diego, CA 92101-8106

Re: M&G File No. 9424.59USAC

Dear Mr. Jester:

I am in receipt of your letter of today's date. With regard to the issue of infringement, I have not taken a position on that matter. My client has never charged your client with infringement. Instead, we are attempting to understand how your machine works. In reviewing the material you sent, I am even more at a loss to understand the modifications. When we spoke, you said there was a sleeve that was placed over the shaft that is welded in place and acts as a spacer between the two adjacent disks or impellers. That is not the way it appears in my understanding of the drawings.

I have not been ignoring your request, but rather, I have gathered the European opposition filings, and I am enclosing a copy for your review. In addition, I've also enclosed the Amendment that was made to the claims, after the hearing.

I am convinced that the most expedient way to resolve issues with regard to CP Manufacturing's machines is to view the machines themselves. I understand that Aardvark Recycling has one of your client's screens at its site. As they are located near

Long Beach, I would like to suggest that you arrange some potential times when you and I could both meet at this facility and examine the screens.

Very truly yours,

Paul E. Lacy

PEL/jay
Enclosures

cc: A.H.K. Tan (via fax, w/o enclosures)
Heiman Bollegraaf (via fax, w/o enclosures)
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October 30, 2001

VIA FACSIMILE AND U.S. MAIL

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Re: M&G File No. 9424.59USAC

Dear Mr. Jester:

I am in receipt of your letter of October 29, 2001. I also now have the confirmation copy of your letter of October 26, 2001, which, unlike the faxed copy, is actually legible. It is still unclear to me what modifications have been made to the CP Manufacturing screens that prevent placing a split disc at locations along the shaft where there are not locating keys welded to the shaft.

With regard to the EPO opposition proceeding, I provided you with the materials that we have. We have not handled that proceeding, thus, our files are not complete. I will attempt to obtain the additional documents you have requested.

It is my understanding that a written Order issued on October 24, 2001, as a result of the oral hearing. However, to date, I have not seen that decision.

Finally, your repeated assertion of your understanding of various aspects of the patent law does not make that understanding necessarily correct. However, rather than repeatedly give our position, I will simply state that my client is not waiving any rights it may have.

Very truly yours,

Paul E. Lacy

PEL/jmj

cc: A.H.K. Tan (via fax)
Heiman Bollegraaf (via fax)
John Gresens

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80 South Eighth Street
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55402-2215 USA
TEL 612.332.5300
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www.merchant-gould.com

Direct Contact | 612.336.4601
placy@merchant-gould.com

A Professional Corporation

November 7, 2001

VIA FACSIMILE AND U.S. MAIL

Michael H. Jester
Law Offices of Michael H. Jester
PATENTS & TRADEMARKS
Symphony Towers, 750 B. Street, Suite 2560
San Diego, CA 92101-8106

Re: M&G File No. 9424.59USAC

Dear Mr. Jester:

This is in response to your letter of November 1, 2001. In light of your comments regarding the file history, I have reviewed that file history in detail. Even assuming that I agree with your interpretation, which I do not, the statement that your quoted referred only to claims 3 and 4 of the Bollegraaf patent. Thus, I must assume that your admitting that your client practices the other 15 claims of the patent. If this is not true, please explain what it is that you perceive to be the differences between the patent, and your client's sorter.

Very truly yours,

Paul E. Lacy

PEL/jmj

cc: A.H.K. Tan (via fax)
Heiman Bollegraaf (via fax)
John Gresens

Law Offices of Michael H. Jester
PATENTS & TRADEMARKS

SYMPHONY TOWERS, 750 B STREET, SUITE 2560
SAN DIEGO, CALIFORNIA 92101-8106
Phone: (619) 231-9090 Fax: (619) 231-9093
e-mail: mjester@cts.com
http://www.lawyers.com/jesterlaw

Member
California and Wash. D.C. Bars

USPTO Reg. No.
28,022

July 19, 2001

Paul E. Lacy
MERCHANT & GOULD
3200 IDS Center
80 South Eighth Street
Minneapolis, Minnesota 55402 - 2215

Re: CP Manufacturing
My File No. 2760 - 33

Dear Mr. Lacy:

I represent CP Manufacturing in patent matters and have been asked to reply to your letter of June 19, 2001 to Robert M. Davis regarding U.S. Pat. No. 6,076,684 assigned to Machinefabriek Bollegraaf Appingedam B.V.

With regard to independent Claim 1, CP does not currently manufacture any conveyor in which the impellers are releasably fixed to the shafts and can be repositioned along the shafts.

With regard to independent Claims 14 and 16, CP does not currently manufacture any conveyor with shafts that are adjustable along the conveying direction.

If your client has any further concerns regarding this matter, please write to me directly.

Very truly yours,

Michael H. Jester

MHJ:st
cc: Robert Davis
President
CP Manufacturing, Inc.

FAXED 10-18-01

Law Offices of Michael H. Jester
PATENTS & TRADEMARKS

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USPTO Reg. No.
28,022

October 18, 2001

Via Facsimile

Paul E. Lacy
MERCHANT & GOULD
3200 IDS Center
80 South Eighth Street
Minneapolis, Minnesota 55402 - 2215

Re: CP Manufacturing
My File No. 2760 - 33

Dear Mr. Lacy:

I represent CP Manufacturing in patent matters and have been asked to reply to your letter of October 17, 2001 to Robert M. Davis regarding U.S. Pat. No. 6,076,684 assigned to Machinefabriek Bollegraaf Appingedam B.V.

I previously responded on the merits to your prior letter of June 19, 2001. Transmitted herewith is a copy of my letter to you of July 19, 2001. I note that it was mailed to the correct address and was never returned to my office as undeliverable.

If your client has any further concerns regarding this matter, please write to me directly.

Very truly yours,

Michael H. Jester

MHJ:st
cc: Robert Davis
President
CP Manufacturing, Inc.

FAXED 10-22-01

Law Offices of Michael H. Jester
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Member
California and Wash. D.C. Bars

USPTO Reg. No.
28,022

October 22, 2001

Paul E. Lacy
MERCHANT & GOULD
3200 IDS Center
80 South Eighth Street
Minneapolis, Minnesota 55402 - 2215

Via Facsimile (612) 332 - 9081

Re: Bollegraaf v. CP Manufacturing
My File No. 2760 - 33

Dear Mr. Lacy:

This will confirm the matters we discussed during our telephone conversation this morning.

In response to your request to inspect CP's screens I indicated that your request is premature in view of the ongoing opposition proceedings in Europe regarding the EPO counterpart of your client's U.S. Patent No. 6,076,684. I stated that my client may want to initiate a re-examination in the USPTO of U.S. Patent No. 6,076,684 based on the prior art cited in Europe. You indicated that you thought that the EPO opposition proceedings had terminated on the basis of an amendment being made to the European claims.

Furthermore, I told you that in CP's current screens, the discs cannot be moved along the lengths of the shafts. You asked if CP is using spacers, and I indicated that CP welds metal plates to the shafts to prevent the discs, which can be clamped around the shafts, from being re-positioned along the lengths of the shafts.

You said that you would discuss these matters with your partner.

Please provide me with documents showing: 1) any final decision in the EPO with regard to the BRT opposition; 2) copies of Bollegraaf's surviving claims in the BRT opposition; and 3) copies of the prior art relied upon by BRT in its opposition. Failing receipt of this information from you, I can only conclude that Bollegraaf no long believes that that independent Claim 1 of its U.S. Patent No. 6,076,684 is valid.

Let me also reiterate that with regard to independent Claims 14 and 16 of Bollegraaf's U.S. Patent No. 6,076,684, in CP's screens the shafts are not adjustable along the conveying direction.

In view of the facts that have been provided to Bollegraaf, CP would have a strong case for an award of attorneys fees under 35 USC Sec. 285 should Bollegraaf sue CP for infringement of its U.S. Patent No. 6,076,684.

Very truly yours,

Michael H. Jester

MHJ:st
cc: Robert Davis
President
CP Manufacturing, Inc.

FAXED 10-22-01

Law Offices of Michael H. Jester
PATENTS & TRADEMARKS

SYMPHONY TOWERS, 750 B STREET, SUITE 2560
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Member
California and Wash. D.C. Bars

USPTO Reg. No.
28,022

October 22, 2001

Paul E. Lacy
MERCHANT & GOULD
3200 IDS Center
80 South Eighth Street
Minneapolis, Minnesota 55402 - 2215

Via Facsimile (612) 332 - 9081

Re: Bollegraaf v. CP Manufacturing
My File No. 2760 - 33

Dear Mr. Lacy:

This will confirm the matters we discussed during our second telephone conversation this morning. I confirmed that the photographs, the NEWScreen literature and the web page that you have been reviewing deal with a prior CP screen. You indicated that Bollegraaf first sold a waste sorting conveyor in the U.S. with its patent number marked thereon this Summer. Therefore, since there was no prior notification of infringement communicated to CP, any machines sold by CP before Bollegraaf commenced marking cannot subject CP to any liability for patent infringement damages relative to your client's U.S. Patent No. 6,076,684. CP changed its design prior to your client's institution of patent marking. Whether CP had any actual knowledge of the patent before Bollegraaf commenced marking its products with the patent number is completely irrelevant. See 35 USC Sec. 287

Very truly yours,

Michael H. Jester

MHJ:st
cc: Robert Davis
President
CP Manufacturing, Inc.

C:\MyFiles\CP33MERCHANT4.frm

Law Offices of Michael H. Jester
PATENTS & TRADEMARKS

SYMPHONY TOWERS, 750 B STREET, SUITE 2560
SAN DIEGO, CALIFORNIA 92101-8106
Phone: (619) 231-9090 Fax: (619) 231-9093
e-mail: mjester@cts.com
http://www.lawyers.com/jesterlaw

Member
California and Wash. D.C. Bars

USPTO Reg. No.
28,022

October 26, 2001

Paul E. Lacy
MERCHANT & GOULD
3200 IDS Center
80 South Eighth Street
Minneapolis, Minnesota 55402 - 2215

Via Facsimile (612) 332 - 9081

Re: Bollegraaf v. CP Manufacturing
M & G File No. 9424.59USAC
My File No. 2760 - 33

Dear Mr. Lacy:

In reply to your letter of October 23, 2001, transmitted herewith is a CP engineering drawing illustrating the manner in which each disc in CP's current model of its CPScreen™ waste classifier is indexed to its square shaft via keys welded to opposite sides of the square shaft and mating keyways formed in the interior surfaces of the split discs. In view of this information, it doesn't seem necessary for you to inspect one of my client's machines.

CP shipped its first waste classifier incorporating its new disc mounting design in July, 2001. No waste classifiers incorporating the older disc mounting design have been shipped by CP to any customers since April, 2001. None of CP's waste classifiers incorporating its old disc mounting design have been retrofitted to the new design by CP.

CP's CPScreen product brochure has already been revised to remove any indication that the discs can be repositioned along the shafts (see enclosed sample). CP is currently updating its web page in a similar manner. Please note that CP's customers can still specify disc spacings as an option, in which case the keys are welded to the shafts as needed.

Please let me know whether Bollegraaf contends that CP's new design illustrated in the enclosed drawing infringes your client's U.S. Patent No. 6,076,684. My client will take your silence on this issue as an indication that it does NOT infringe.

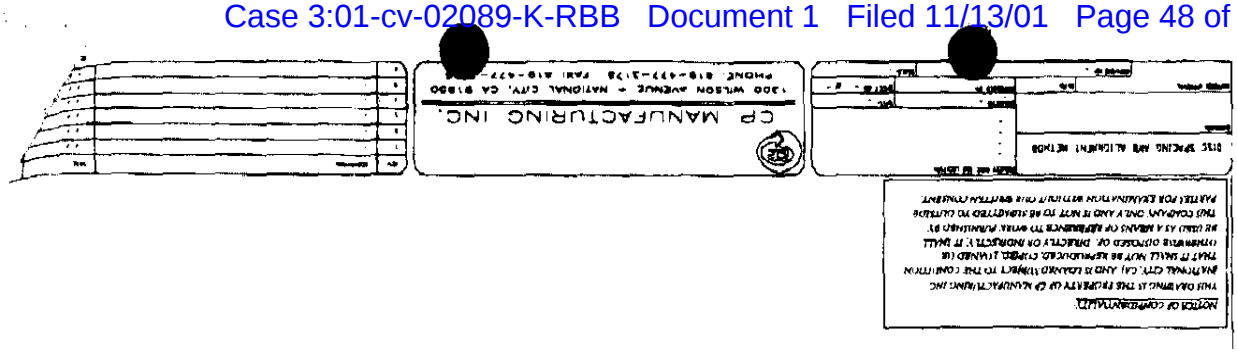
I can only view your failure to provide information regarding the status of the BRT/Bollegraaf opposition in the EPO as an indication that your client prefers that CP not have that information because of its potential negative impact on the scope and/or validity of Claim 1 of its U.S. Patent No. 6,076,684. If necessary, I will have to obtain the salient documents from that proceeding through my German associate.

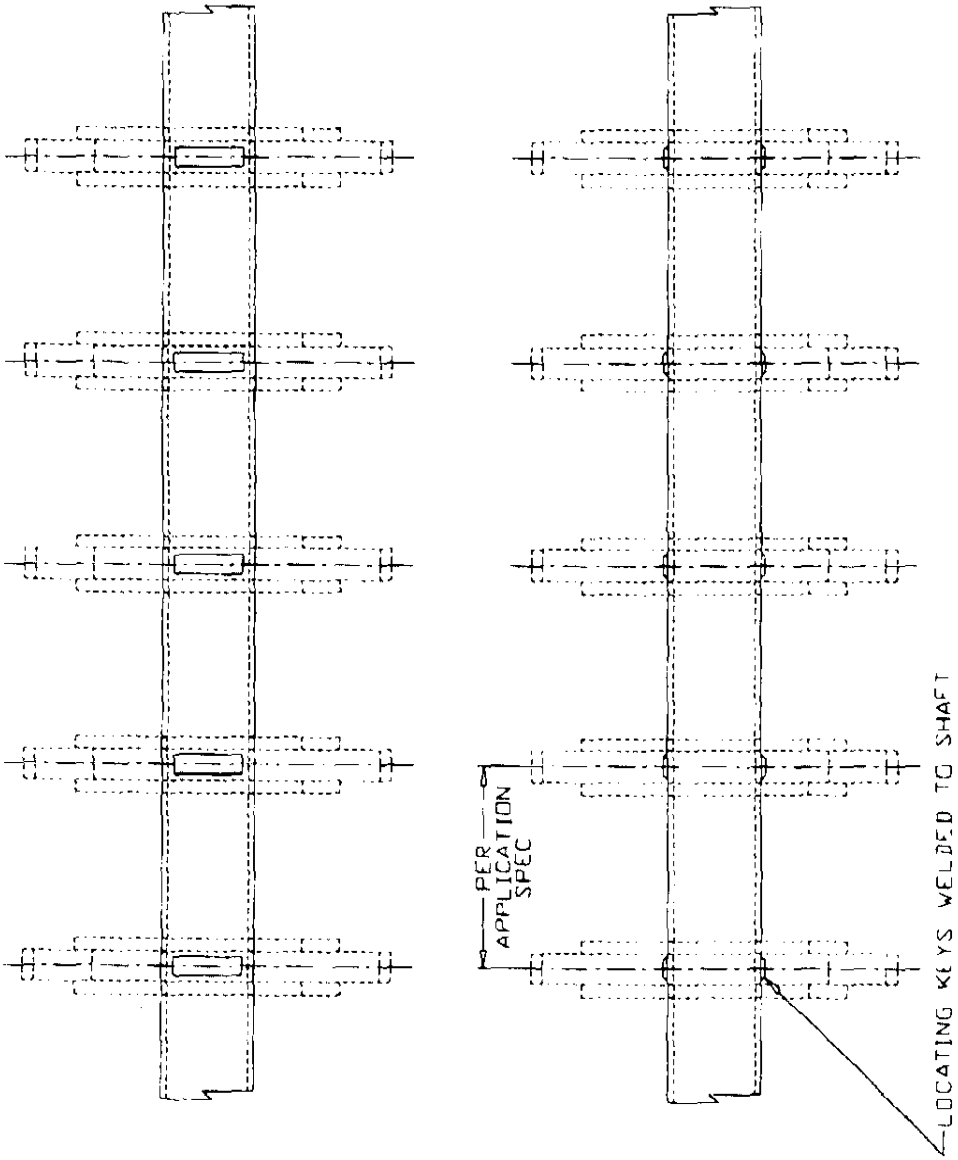
Very truly yours,

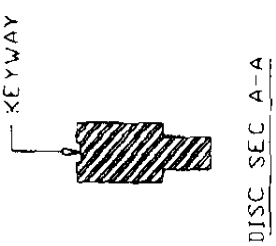
Michael H. Jester

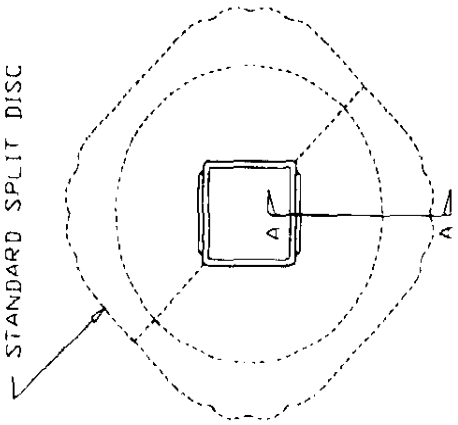
MHJ:st
enclosures

cc: Robert Davis
President
CP Manufacturing, Inc.
(w/o encls.)









80 South Eighth Street
Minneapolis, Minnesota 55402 - 2215

As stated in my letter to you of July 19, 2001, CP does not currently manufacture any disc screen conveyors with shafts that are adjustable along the conveying direction. Therefore, CP's current machines do not infringe Claims 14 - 17 of your client's patent.

Very truly yours,

Michael H. Jester

MHJ:st
cc: Robert M. Davis
President
CP Manufacturing, Inc.

AO 120 (Rev. 2/97)

TO:

Commissioner of Patents and Trademarks
Arlington, VA 22202

REPORT ON THE FILING OR DETERMINATION OF AN ACTION REGARDING A PATENT OR TRADEMARK

In Compliance with 35 § 290 and/or 15 U.S.C. § 1116 you are hereby advised that a court action has been filed in the U.S. District Court Southern District of California on the following ☒ Patents or ☐ Trademarks:

DOCKET NO.	DATE FILED	U.S. DISTRICT COURT
01cv2089K (A)	November 13, 2001	Southern District of California

PLAINTIFF	DEFENDANT
C.P. Manufacturing, Inc.	Machinefabriek Bollegraaf Appingedam B.V.

PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
16,076,684	June 20, 2000	Machinefabriek Bollegraaf Appingedam B.V.
2		
3		
4		
5		

In the above-entitled case, the following patent(s) have been included:

DATE INCLUDED	INCLUDED BY ☐ Amendment ☐ Answer ☐ Cross Bill ☐ Other Pleading	
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1		
2		
3		
4		
5		

In the above-entitled case, the following decision has been rendered or judgement issued:

DECISION/JUDGEMENT

CLERK	(BY) DEPUTY CLERK	DATE

Copy 1—Upon initiation of action, mail this copy to Commissioner **Cpy 3—Upon termination of action, mail this copy to Commissioner**
Copy 2—Upon filing document adding patent(s), mail this copy to Commissioner ***Copy 4—Case file copy***

CIVIL COVER SHEET

The JS-44 civil cover sheet and the information contained herein neither replace nor supplement the filing and service of pleadings or other papers as required by law, except as provided by local rules of court. This form, approved by the Judicial Conference of the United States in September 1974, is required for the use of the Clerk of Court for the purpose of initiating the civil docket sheet. (SEE INSTRUCTIONS ON THE SECOND PAGE OF THIS FORM.)

I. (a) PLAINTIFFS

CP MANUFACTURING, INC., a California corporation,

DEFENDANTS

MACHINEFABRIEK BOLLEGRAAF APPINGEDAM B.V., a Netherlands corporation,

01 CV 2089 K (CGA)

(b) COUNTY OF RESIDENCE OF FIRST LISTED PLAINTIFF San Diego
(EXCEPT IN U.S. PLAINTIFF CASES)

COUNTY OF RESIDENCE OF FIRST LISTED DEFENDANT
(IN U.S. PLAINTIFF CASES ONLY)
NOTE: IN LAND CONDEMNATION CASES, USE THE LOCATION OF THE TRACT OF LAND INVOLVED.

(c) ATTORNEYS (FIRM NAME, ADDRESS, AND TELEPHONE NUMBER)
GORDON & REES LLP

101 West Broadway, Suite 1600
San Diego, CA 92101
619-696-6700

ATTORNEYS (IF KNOWN)
Merchant & Gould, P.C.
3200 IDS Center
80 South Eighth Street
Minneapolis, MN 55402
(612) 332-5300

II. BASIS OF JURISDICTION (PLACE AN 'X' IN ONE BOX ONLY)

- [ ] 1 U.S. Government Plaintiff
- [X] 3 Federal Question (U.S. Government Not a Party)
- [ ] 2 U.S. Government Defendant
- [ ] 4 Diversity (Indicate Citizenship of Parties in Item III)

III. CITIZENSHIP OF PRINCIPAL PARTIES (PLACE AN 'X' IN ONE BOX FOR PLAINTIFF AND ONE BOX FOR DEFENDANT)
(For Diversity Cases Only)

	PT	DEF		PT	DEF
Citizen of This State	[ ] 1	[ ] 1	Incorporated or Principal Place of Business in This State	[X] 4	[ ] 4
Citizen of Another State	[ ] 2	[ ] 2	Incorporated and Principal Place of Business in Another State	[ ] 5	[ ] 5
Citizen or Subject of a Foreign Country	[ ] 3	[X] 3	Foreign Nation	[ ] 6	[ ] 6

IV. CAUSE OF ACTION (CITE THE U.S. CIVIL STATUTE UNDER WHICH YOU ARE FILING AND WRITE A BRIEF STATEMENT OF CAUSE. DO NOT CITE JURISDICTIONAL STATUTES UNLESS DIVERSITY.)

35 U.S.C. Section 101 et seq.; 28 U.S.C. Sections 2201 and 2202. This is a declaratory relief for non-infringement and invalidity of a United States patent.

28:1338 pt-ro

V. NATURE OF SUIT (PLACE AN "X" IN ONE BOX ONLY)

CONTRACT
- [ ] 110 Insurance
- [ ] 120 Marine
- [ ] 130 Miller Act
- [ ] 140 Negotiable Instrument
- [ ] 150 Recovery of Overpayment & Enforcement of Judgment
- [ ] 151 Medicare Act
- [ ] 152 Recovery of Defaulted Student Loans (Excl. Veterans)
- [ ] 153 Recovery of Overpayment of Veteran's Benefits
- [ ] 160 Stockholders' Suits
- [ ] 190 Other Contract
- [ ] 195 Contract Product Liability

REAL PROPERTY
- [ ] 210 Land Condemnation
- [ ] 220 Foreclosure
- [ ] 230 Rent Lease & Ejectment
- [ ] 240 Torts to Land
- [ ] 245 Tort Product Liability
- [ ] 290 All Other Real Property

TORTS

PERSONAL INJURY
- [ ] 310 Airplane
- [ ] 315 Airplane Product Liability
- [ ] 320 Assault, Libel & Slander
- [ ] 330 Federal Employers' Liability
- [ ] 340 Marine
- [ ] 345 Marine Product Liability
- [ ] 350 Motor Vehicle
- [ ] 355 Motor Vehicle Product Liability
- [ ] 360 Other Personal Injury

PERSONAL INJURY
- [ ] 362 Personal Injury - Medical Malpractice
- [ ] 365 Personal Injury - Product Liability
- [ ] 368 Asbestos Personal Injury Product Liability

PERSONAL PROPERTY
- [ ] 370 Other Fraud
- [ ] 371 Truth in Lending
- [ ] 380 Other Personal Property Damage
- [ ] 385 Property Damage Product Liability

CIVIL RIGHTS
- [ ] 441 Voting
- [ ] 442 Employment
- [ ] 443 Housing/ Accommodations
- [ ] 444 Welfare
- [ ] 440 Other Civil Rights

PRISONER PETITIONS
- [ ] 510 Motion to Vacate Sentence

HABEAS CORPUS:
- [ ] 530 General
- [ ] 535 Death Penalty
- [ ] 540 Mandamus & Other
- [ ] 550 Civil Rights
- [ ] 555 Prison Conditions

FORFEITURE/PENALTY
- [ ] 610 Agriculture
- [ ] 620 Other Food & Drug
- [ ] 625 Drug Related Seizure of Property 21 USC 881
- [ ] 630 Liquor Laws
- [ ] 640 R.R. & Truck
- [ ] 650 Airline Regs.
- [ ] 660 Occupational Safety/Health
- [ ] 690 Other

LABOR
- [ ] 710 Fair Labor Standards Act
- [ ] 720 Labor/Mgmt. Relations
- [ ] 730 Labor/Mgmt. Reporting & Disclosure Act
- [ ] 740 Railway Labor Act
- [ ] 790 Other Labor Litigation
- [ ] 791 Empl. Ret. Inc. Security Act

BANKRUPTCY
- [ ] 422 Appeal 28 USC 158
- [ ] 423 Withdrawal 28 USC 157

PROPERTY RIGHTS
- [ ] 820 Copyrights
- [X] 830 Patent
- [ ] 840 Trademark

SOCIAL SECURITY
- [ ] 861 HIA (13958)
- [ ] 862 Black Lung (923)
- [ ] 863 DIWC/DIWW (405(g))
- [ ] 864 SSID Title XVI
- [ ] 865 RSI (405(g))

FEDERAL TAX SUITS
- [ ] 870 Taxes (U.S. Plaintiff or Defendant)
- [ ] 871 IRS - Third Party 26 USC 7609

OTHER STATUTES
- [ ] 400 State Reappointment
- [ ] 410 Antitrust
- [ ] 430 Banks and Banking
- [ ] 450 Commerce/ICC Rates/etc.
- [ ] 460 Deportation
- [ ] 470 Racketeer Influenced and Corrupt Organizations
- [ ] 810 Selective Service
- [ ] 850 Securities/Commodities/ Exchange
- [ ] 875 Customer Challenge 12 USC 3410
- [ ] 891 Agricultural Acts
- [ ] 892 Economic Stabilization Act
- [ ] 893 Environmental Matters
- [ ] 894 Energy Allocation Act
- [ ] 895 Freedom of Information Act
- [ ] 900 Appeal of Fee Determination Under Equal Access to Justice
- [ ] 950 Constitutionality of State Statutes
- [ ] 890 Other Statutory Actions

VI. ORIGIN (PLACE AN "X" IN ONE BOX ONLY)

- [X] 1 Original Proceeding
- [ ] 2 Removal from State Court
- [ ] 3 Remanded from Appellate Court
- [ ] 4 Reinstated or Reopened
- [ ] 5 Transferred from another district (specify)
- [ ] 6 Multidistrict Litigation
- [ ] 7 Appeal to District Judge from Magistrate Judgment

VII. REQUESTED IN COMPLAINT: [ ] CHECK IF THIS IS A **CLASS ACTION** UNDER F.R.C.P. 23 **DEMAND $**

CHECK YES only if demanded in complaint
JURY DEMAND: [X] YES [ ] NO

VIII. RELATED CASE(S) IF ANY (See instructions): JUDGE _____ Docket Number _____

DATE
November 13, 2001

SIGNATURE OF ATTORNEY OF RECORD

K:\DMA\PCDOCS\WORDPERFECT\22816\1 January 24, 2000 (3:10pm)

76784 - Pd $150