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THE PAPER AND PULP INDUSTRY

ESTABLISHED IN 1872

NEW YORK AND CHICAGO, FEBRUARY 23. 1922 Vol. LXXIV. No. 8

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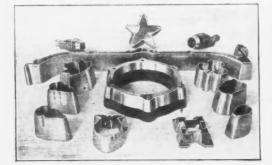
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2

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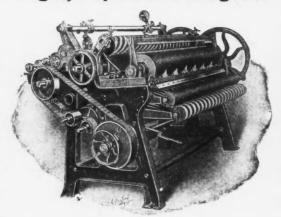
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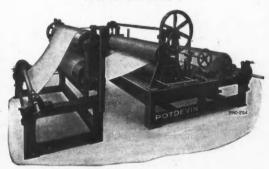
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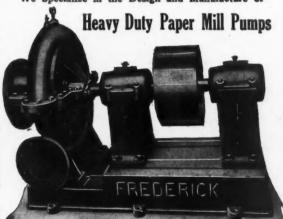
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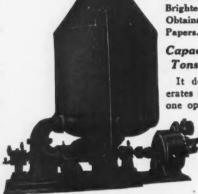
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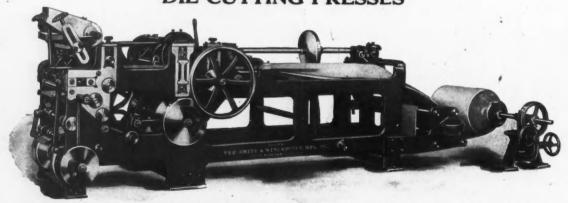
#### PAPER MAKING—PAPER CUTTING MACHINERY

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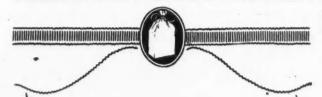
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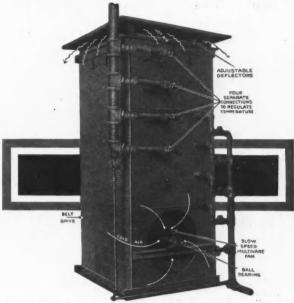
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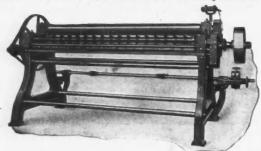
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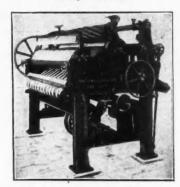
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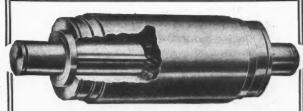
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THE INTERNATIONAL WEEKLY OF THE PAPER AND PULP INDUSTRY

#### FIFTIETH YEAR

PUBLISHED EVERY THURSDAY BY THE LOCKWOOD TRADE JOURNAL COMPANY, INC.

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J. W. VAN GORDON, Vice-President

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Vol. LXXIV. No. 8

NEW YORK AND CHICAGO

Thursday, February 23, 1922

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#### PRODUCTIONS, ETC., OF PAPER AND PULP FOR 1921

Report of Federal Trade Commission Gives Production, Shipments and Stocks of the Domestic Mills Classified into Groups by Months for the Years 1920 and 1921—Stocks on Hand at the Beginning and End of the Year Together with Total Quantity Produced and Shipped During Year by Grades Also Given for the Years 1917 to 1921 Inclusive

#### [FROM OUR REGULAR CORRESPONDENT.]

Washington, D. C., February 20, 1922.—The following is a summary of the production, shipments, and stocks of domestic paper and pulp mills, as reported to the Federal Trade Commission, for the year 1921. The mills have been classified for convenience into groups according to the kinds of paper and pulp manufactured. Standard news and box board, subdivisions of news print and paper board, respectively, are shown separately. The production, shipments, and stocks of the mills are given, by grades and by months, for the years 1920 and 1921. Stocks on hand at the beginning and end of year, together with total quantity produced and shipped during year, by grades, and also given for the years 1917 to 1921, inclusive.

Manufacturers report their production as nearly as possible in accordance with the following classification:

Total news print includes standard news and special grades of news print, but excludes hanging paper, which is shown separately. Book includes all periodical paper and miscellaneous grades of machine finished, supercalendered, coated, etc.

Total paper board includes all grades of board, such as box, straw, chip, tag, press, fiber, binder, leather, etc.

Wrapping includes kraft, manila, fiber, and miscellaneous grades such as glassine, grease proof, etc., but excludes bag, which is shown separately.

Bag includes paper made into flexible commercial containers, such as grocery bags, flour sacks, etc.

Fine includes writings, bonds, ledgers, etc.

Tissue includes toilet, crepe, fruit wrappers, etc.

Hanging includes paper ultimately intended to be used for purposes of interior decoration, such as No. 2 hanging, oatmeal, tile, etc.

Felt and Building includes roofing, felt, sheathing, and other grades of building paper.

Other Grades include a great variety of specialties that do not classify under any of the above captions.

Total News Print-Domestic Production, Shipments, and Stocks (Net Tons), by Months, 1920 and 1921; Stocks on Hand January 1 and December 31, and Total Quantity Produced and Shipped, by Years, 1917 to 1921, Inclusive

	Number of Mills		Number of Mills On Hand First of Mon		Production		Shipn	nents	On Hand End of Month	
Grade and Month	1921	1920	1921	1920	1921	1920	1921	1920	1921	1920
Total News Print-	0.5	00	24.502	17.200	*******		****	***	** ***	
January	85	89	24,763	15,369	123,830	129,663	116,176	128,098	32,417	16,934
March	88 85	. 84 90	32,417	16.934 27.955	103,040 107,532	114,235 127,847	96,281	103,214 128,238	39,176	27,955
	88	90	41.789	27,564	115,408	129,269	104,919 122,091	134.160	41,789	27,564
May	87	92	35,106	21.673	78,868	129,230	82,776	128,080	35,106 31,198	21,673
June	92	91	31,198	22,823	87,724	130.380	92,293	129,213	26,629	22,823 23,990
July	92	89	26,629	23,990	94,247	129.853	95.357	131,821	25,519	22,022
August	92	86	25,519	22,022	102,277	128,813	100,668	126,129	27,128	24,711
September	86	81	27,128	24,711	98,898	121,005	95,785	121,123	30.241	24,593
October	86	81 83 86	30,241	24,593	101,884	124.818	109,110	126,815	23,015	22,596
November	86	83	23.015	22,596	104,604	122,993	104,493	125,323	23,127	20,266
December	86	86	23,127	20,266	107,877	124,857	107,070	120,360	23,934	24,763
Year			On Hand	January 1	Total Pro	duction	Total Si	nipments	On Hand Dece	mber 31
1921 1920			15,3	369	1.51	5,189 1 968	1.50	7,018 2,574	23,934 24,763	
1919						4,517		3,556	15,369	
1918			20 6			0 285		2.590	19,408	
1917		*******	38,9	190	1,35	9,012	1,360	6,297	31,713	

Standard News-Domestic Production, Shipments, and Stocks (Net Tons), by Months, 1920 and 1921; Stocks on Hand January 1 and December 31, and Total Quantity Produced and Shipped, by Years, 1917 to 1921, Inclusive

	Number	of Mills	On Hand Fir	and First of Month Pro		uction	Shipments		On Hand End of Month	
Grade and Month Standard News-	1921	1920	1921	1920	1921	1920	1921	1920	1921	1920
January February March April May June July August September October November December	67 67 67 69 72 74 74 67 67	66 69 76 75 75 77 74 69 67 67 67	19,573 27,109 33,293 35,517 29,580 26,955 22,104 20,964 22,728 25,241 18,227 18,895	12,338 14,576 24,795 25,104 19,085 20,159 20,976 19,127 21,937 21,804 19,651 16,599	113,764 94,823 98,190 105,855 73,181 81,415 66,139 95,105 90,627 93,489 97,521 100,834	114,957 105,342 119,152 118,917 119,096 118,810 117,356 110,200 114,232 111,713 111,038	106,228 84,639 95,966 111,792 75,806 86,266 87,279 93,341 88,114 100,503 96,853 100,122	112,719 95,123 118,843 124,936 118,832 118,199 120,659 114,546 110,333 116,385 114,365 108,064	27,109 33,293 35,517 29,580 26,955 22,104 20,964 22,728 25,241 18,227 18,895 19,607	14,576 24,795 25,104 19,085 20,159 20,976 19,127 21,937 21,804 19,651 16,599 19,573
Year			On Hand	January 1	Total Pro	duction	Total Si	ipments	On Hand Dece	mber 31
1921 1920 1919 1918 1918			12,3 15,6 26,4	338 556 482	1,380 1,222 1,125	0.943 0.239 7,180 5,086 3,787	1.373 1,230 1.135	1.909 1.004 1.498 5.912 5,083	19,607 19,573 12,338 15,656 20,181	

Book Paper—Domestic Production, Shipments, and Stocks (Net Tons), by Month, 1920 and 1921; Stocks on Hand January 1 and December 31, and Total Quantity Produced and Shipped by Years, 1917 to 1921, Inclusive

	Number of Mills		On Hand First of Month		Produ	iction	Shipments		On Hand End of Month	
Grade and Month	1921	1920	1921	1920	1921	1920	1921	1920	1921	1920
Book Paper—				00.000	C4 200	06 410	CO 200	00.000	00.000	
January	93	98	25,005	23,279 .	64,382	96,419	60,507	96,152	28,880	23,546
February	94	96	28,880	23,546	56,687	85,532	51,980	80,644	33,587	28,43
March	95	94	33.587	28,434	59,832	95,851	55,698	99,789	37.721	24,49
8 15	92	95	37,721	24,496	51,380	95,251	50,846	92,746	38,255	27,00
3.6										27,00
May	93	94	38,255	27,001	52,642	92.856	51,258	97,555	39.639	22,30
lune	92	93	39,639	22,302	53,934	94,957	53,329	95,160	40,253	22,09
July	90	94	40,253	22,099	48,527	95.526	51,211	95,076	37.569	22;54
August	89	95	37,569	22,549	59,711	94,424	62,120	94.287	35,160	22.68
September	89	95	35,160	22,686	62,416	94,142	61,990	95,704	35,586	21,12
	89	93	35.586	21.124	72,139	93,849	75,382	94,147	32,343	
October										20.82
November	87	94	32,343	20,826	73,544	89,564	68,827	85,827	37,060	24,56
December	84	95	37,060	24,563	70,798	76,093	69,101	75,651	38,757	25,00
Year			On Hand		Total Pro		Total Shipments 712,240		On Hand December 31	
1921	* * * * * * * * *					.992			38,757	
1920					1,104		1,102		25,005	
1919			28,4	131	914	,823	919	.975	23,279	
1918			20			.157	857	.571	28,431	
1917			20.1			.283		494	36,845	

Total Paperboard—Domestic Production, Shipments, and Stocks (Net Tons), by Months, 1920 and 1921; Stocks on Hand January 1 and December 31, and Total Quantity Produced and Shipped, by Years, 1917 to 1921, Inclusive

January 2 and 20		of Mills		rst of Month		uction	Ship	ments	On Hand End	On Hand End of Month	
Grade and Month	1921	1920	1921	♦920	1921	1920	1921	1920	1921	1920	
Total Paperboard—	244	249	53,104	40,329	105,806	211,934	100,431	209.035	58,479	43,228	
	242	242	58,479	43,228	123,832	176.855	121,588	175,416	60,723	44,667	
February											
March	241	250	60,723	44,667	139,723	207,863	133,052	213.089	67,394	39.44	
April	236	242	67.394	39,441	128,186	199,395	124,800	191.898	70,780	46,93	
May	238	248	70,780	46,938	122,801	213,475	125,602	217.595	67,979	42.81	
	238	254	67,979	42.818	130,177	215.131	130,059	220,089	68.097	37,86	
June											
July	240	249	68,097	37,860	112,265	218,771	115,642	217,534	64.720	39.09	
August	233	251	64,720	39,097	138,530	215,633	139,974	216,425	63,276	38,30	
September	236	253	63,276	38,305	160,207	218,743	164,521	218,799	58,962	38,24	
October	226	256	58,962	38,249	181,775	196,604	183,568	192,631	57,169	42,22	
**	223	252	57,169	42,222	172,582	133,818	169,971	127,072	59,780	48.96	
December	220	247	59,780	48,968	149,047	105.227	145,809	101,091	63,018	53,10	
Year		On Hand Tanuary 1		Total Production		Total Shipments		On Hand Dece	mber 31		
1921			53.1	04	1.664	1.931	1.655	5.017	63.018		
1000			40 1	120	2 313	3,449	2 300	0.674	53,104		
			400			0.037		5.904	40,329		
1918	********					5,986		3,201	46,196		
1917			22,963		1.804.539		1,78	5,141	42,411		

Boxboard—Domestic Production, Shipments, and Stocks (Net Tons), by Months (a) 1920 and 1921; Stocks on Hand January
1 and December 31, and Total Quantity Produced and Shipped, by Years, 1920 and 1921, Inclusive

	Number of Mills			st of Month	h Production		Shipn	nents	On Hand End of Month	
Grade and Month Box Board(a)—	1921	1920	1921	1920	1921	1920 -	1921	1920	1921	1920
January	144 139		25,451 28,696	*****	74,870 89,788		71,625 89,123	****	28.696 29.361	*****
February	139	130	29,361	19,829	98,7/1	147,098	95,827	149.075	32,305	17,852
April	135	141 143	32,305 35,233	17,352 21,555	90,637 85,546	148,063 149,867	87,709 88,141	144,360 154,114	35,233 32,638	21,555 17,308
June	137 136	149 149	32,638 33,189	17,308 16,361	95,964 83,450	158.192 161,453	95,413 83,736	159,129 160,595	33,189 30,903	16,361 17,219
August	138	150	30,903	17,219	108.661 120.898	158.524 160.044	107.404 121.271	158,375 159,952	32,160	17,368
September	136 136	152 152	32,160 31,787	17.368 17,460	133,755	133,829	135,737	132,536	31.787 29,805	17,460 18.753
November	126 123	148 149	29,805 31,965	18,753 23,707	127,249 112,747	91,092 70,014	125,089 112,748	86,138 68,270	31,965 31,964	23,707 25,451
Year			On Hand	January 1	Total Fro			ipments	On Hand Dece	mber 31
1921 1920			10.0	51 329(a)		2,336 3,166(a)		5,823 2,544(a)	31,964 25,451	

(a) Figures for Box Board prior to March, 1920, were included under Total Paperboard.

Fine Paper—Domestic Production, Shipments, and Stocks (Net Tons), by Months, 1920 and 1921; Stocks on Hand January 1 and December 31, and Total Quantity Produced and Shipped, by Years, 1917 to 1921, Inclusive

and December		and Total		Produced						
	Number	of Mills	On Hand Fi	rst of Month	Produ	tetten	Shipm	ichts	On Hand End	of Month
Grade and Month	1921	1920	1921	1920	1921	1920	1921	1920	1921	1920
Fine	105	110	30,312	31.516	22,756	32,886	18,320	35,611	34.748	28,791
January	105 106	110	34,748	28,791	19.242	29,203	16,593	25,733	37.397	32,260
March	108	116	37,397	32,260	19,058	33,671	17,100	35,720	39.355	30,211
April	107	112	39,355	30,211	15,631	33.453	14,903	31,486	40,083	32,218
May	107	115	40,083	32,218	:7,485	31.575	16.425	35,759	41.143	28,034
June	107	113	41,143	28,034	17,511	34,121	17.846	34,883	40,808	27,272
July	107	113	40,808	27,272	16,327	34 078	17,750	33,911	39.385	27,439
August	107	111	39,385	27,439	18.833	33 122	20,315	33,434	37,903	27,127
September	106	111	37,903	27,127	20,555	34,207 34,506	22,464 26,672	32,934 33,958	35.994	28.400
October	106 102	113 109	35,994 33,957	28,400 28,968	24,635	31,208	25,177	29,991	33,957 33,389	28,968 30,185
November	103	106	33,389	30,185	25,843	27,233	25,232	27,106	34,000	30,312
Year			On Hand	January 1	Total Pro		Total Sh		On Hand Dece	mber 31
	1921				242			,797	34,000	
1920					389			526	30,312	
1919						,762 .012		.822 .936	31,516 34,576	
1918					288			.935	32,500	

Wrapping Paper—Domestic Production, Shipments, and Stocks (Net Tons), by Months, 1920 and 1921; Stocks on Hand January 1 and December 31, and Total Quantity Produced and Shipped, by Years, 1917 to 1921, Inclusive

	Number of Mills (		On Hand Fi	On Hand First of Month		Production		nents	On Hand End of Month	
Grade and Month	1921	1920	1921	1920	1921	1920	1921	1920	1921	1920
Wrapping— January February March April May June July August September	142 145 145 144 145 151 153 146 139	151 147 152 150 148 150 147 149	35,800 45,241 51,276 57,536 58,622 59,503 61,139 61,710 68,811	26,791 25,653 31,453 30,291 31,036 25,655 21,710 22,365 23,341	44,620 46,352 49,879 51,713 53,084 50,332 45,090 56,167 59,095	70,109 61,574 68,403 75,347 70,511 72,987 73,487 75,226 70,917	35,179 40,317 43,619 50,627 52,203 48,696 44,519 55,066 65,593	71,247 55,774 69,565 74,602 75,892 76,932 72,832 74,250 74,688	45,241 51,276 57,536 58,622 59,503 61,139 61,710 62,811 56,313	25,653 31,453 30,291 31,036 25,655 21,710 22,365 23,341 19,570
November December	130 130	148 144 142	56,313 52,378 50,205	19,570 20,700 25,586	64,518 65,905 <b>64,850</b>	73,100 65,920 5 <b>4,308</b>	68,453 68,078 <b>66,207</b>	71,970 61,034 <b>44,0</b> 94	52,378 50,2 <b>0</b> 5 48,848	20,700 25,586 35,800
Year 1921. 1920. 1919. 1918.			26,7 40,4 53,5	800 791 899 i51	694 714	,605 ,889	707 727		On Hand Dece 48,848 35,800 26,791 40,499 53,551	

Bag Paper—Domestic Production, Shipments, and Stocks (Net Tons), by Months, 1920 and 1921; Stocks on Hand January 1 and December 31, and Total Quantity Produced and Shipped, by Years, 1917 to 1921, Inclusive

	Number of Mills		On Hand First of Month		Production		Shipments		On Hand End of Month	
Grade and Month	1921	1920	1921	1920	1921	1920	1921	1920	1921	1920
Bag— January February March April May June July August September October November December	38 37 38 39 37 39 45 41 43 43 38	46 44 45 43 44 44 40 40 40 39	3,031 3,466 3,298 3,792 3,432 3,392 3,159 3,194 2,885 3,014 3,737 7,750	2,087 2,343 3,498 2,829 3,595 2,949 2,662 2,107 2,192 2,015 2,362 2,785	6,296 7,603 \$,685 7,954 7,323 6,255 6,661 10,499 13,763 19,463 19,161 17,200	20,963 17,777 18,754 19,745 19,551 20,262 19,055 19,843 18,850 17,005 13,152 6,966	5,861 7,771 8,191 8,314 7,363 6,488 6,626 10,808 13,634 18,740 19,148 17,865	20,707 16,622 19,423 18,979 20,197 20,549 19,616 19,752 19,027 16,958 12,729 6,720	3,466 3,298 3,792 3,432 3,192 3,159 3,194 2,885 3,014 3,737 3,750 3,085	2,343 3,498 2,829 3,595 2,949 2,662 2,107 2,192 2,015 2,362 2,785 3,031
Year 1921. 1920. 1919. 1918. 1917.			2,0 3,4 6,4	31 87 08 98	211 175 177	duction ,863 ,923 ,424 ,362	210 176 180	ipments ,809 ,979 ,745 ,452 ,559	On Hand Dece 3,085 3,031 2,087 3,408 6,498	mber 31

Hanging Paper—Domestic Production, Shipments, and Stocks (Net Tons), by Months, 1920 and 1921; Stocks on Hand January 1 and December 31, and Total Quantity Produced and Shipped, by Years, 1917 to 1921, Inclusive

Number of Mills		On Hand Fir	st of Month	Production		Shipm	nents	On Hand End of Menth		
Grade and Month Hanging—	1921	1920	1921	1920	1921	1920	1921	1920	1921	1920
January February March April May June July August September October November December	26 25 25 20 22 23 22 23 22 23 21 19	26 22 24 23 24 21 23 27 25 26 24 25	3,027 4,799 7,403 9,314 10,087 10,522 9,538 9,001 9,668 10,217 9,429 8,856	1,452 960 1,538 1,281 1,171 995 1,112 1,381 1,510 1,380 1,809 2,544	9,507 7,522 5,715 3,862 2,479 3,109 4,459 5,476 5,482 7,158 7,505 7,451	9,935 8,654 10,047 8,550 10,776 8,861 9,037 9,554 10,124 10,322 9,698 8,266	7,735 4,918 3,804 3,089 2,044 4,093 4,996 4,809 4,933 7,946 8,525	10,427 8,076 10,304 8,660 10,952 8,744 8,768 9,425 10,254 9,893 8,963 7,783	4,799 7,403 9,314 10,087 10,522 9,538 9,001 9,668 10,217 9,429 8,856 7,782	960 1,538 1,281 1,171 995 1,112 1,381 1,510 1,380 2,544 3,027
Year 1921 1920 1919 1918 1917			1,4 2,9 6,7	27 52 33 89		725	Total Sh 64,9 112,2 93,6 67,1 82,0	70 49 17	On Hand Decer 7,782 3,027 1,452 2,933 6,789	aber 31

Tissue Paper—Domestic Production, Shipments, and Stocks (Net Tons), by Months, 1920 and 1921; Stocks on Hand January 1 and December 31, and Total Quantity Produced and Shipped, by Years, 1917 to 1921, Inclusive

January 1 and De	Number of Mills		On Hand First of Month		Production		Shipn		On Hand End of Month		
Grade and Month	1921	1920	1921	1920	1921	1920	1921	1920	1921	1920	
Tissue—			4								
January	99	96	8,774	5,697	7,704	15,695	7,356	15,542	9,122	5,850	
February	99	100	9.122	5,850	9,372	14,745	9,640	13.811	8,854	6,784	
March	97	101	8,854	6,784	10,760	15,363	10,889	16,150	8,725	5,997	
April	93	101	8,725	5,997	9,686	16,572	10.665	15,730	7,746	6,839	
May	94	101	7,746	6,839	11,135	16,053	11,560	17,003	7,321	5,889	
June	95	100	7,321	5,889	13,304	17,165	12,569	17,544	8,056	5,510	
July	93	100	8,056	5,510	12,238	16.850	12,209	16,993	8,085	5,367	
August	94	100	8,085	. 5,367	13,734	17,159	14,368	17,289	7,451	5,237	
September	90	99	7,451	5,237	14.241	16,359	14,465	15,963	7,227	5,633	
October	90	98	7,227	5,633	14,964	13,743	15,621	12,570	6,570	6,80	
November	86	98 97	6,570	6,806	15,169	9,653	15,928	8,344	5.811	8,11	
December	82	101	5,811	8,115	15,835	8,090	15,451	7,431	6.185	8,774	
Year			On Hand ]	anuary 1	Total Pro	duction.	Total Sh	ipments	On Hand Decer	nber 31	
1921			8,7	74		142	150	.731	6.185		
1920			5,6	97	177	.447	174	.370	8.774		
1919			5.4	00	155	400	155	.103	5,697		
1918			6,8	83	143	.298	143	.981	5,400		
1917			2,520		20	126	.286	122	.723	6.083	

Felt and Building Paper—Domestic Production, Shipments, and Stocks (Net Tons), by Months, 1920 and 1921; Stocks on Hand January 1 and December 31, and Total Quantity Produced and Shipped, by Years, 1917 to 1921, Inclusive

,,		of Mills	On Hand Fi	rst of Month		ection	Shipn	nents	On Hand End	of Month
Grade and Month Felt and Building—	1921	1920	1921	1920	1921	1920	1921	1920	1921	1920
January February March April May June July August September October November December	521 554 554 554 554 554 554 554 554 554 55	54 55 55 55 55 55 55 55 55 55 55 55 55 5	13,420 13,553 11,979 11,629 9,669 10,150 10,528 10,435 8,954 7,778 6,513 6,739	5,315 6,585 8,535 7,604 9,971 10,636 11,900 12,523 11,119 10,755 13,461 14,116	17,885 19,556 23,375 22,131 24,058 24,945 17,425 20,051 23,259 29,759 26,537	37,733 33,618 37,473 33,587 34,048 35,264 33,053 31,961 31,430 28,807 16,961 13,006	17,752 21,130 23,725 24,091 23,577 24,567 17,518 21,532 28,306 34,524 29,533 24,804	36,463 31,668 38,404 31,220 33,383 34,000 32,430 33,365 31,794 26,101 16,306 13,702	13,553 11,979 11,629 9,669 10,150 10,528 10,435 8,954 7,778 6,513 6,739 8,472	6,585 8,535 7,604 9,971 10,636 11,900 12,523 11,119 10,755 13,461 14,116 13,420
Year 1921 1920 1919 1918 1918			5,: 7,6	120 315 599	Total Pro 286, 366, 281, 284,	111 941 962 286	Total Sh 291, 358, 284, 284,	059 836 346 928	On Hand Dece 8,472 13,420 5,315 7,699 8,341	

Other Grades—Domestic Production, Shipments, and Stocks (Net Tons), by Months, 1920 and 1921; Stocks on Hand January 1 and December 31, and Total Quantity Produced and Shipped, by Years, 1917 to 1921, Inclusive

January 1 and De		of Mills	On Hand Fi			netion	Shipm		On Hand End	of Month
Grade and Month	1921	1920	1921	1920	1921	1920	1921	1920	1921	1920
January	94 94	95 84	17,160 18,236	12,482 14,005	17,682 14,760	24,956 22,308	16,606 13,461	23,433 21,378	18,236 19,535	14,005 14,935
March April May	94 95 98 99	89 86	19,535 20,082 19,985	14,935 15,030 15,791	16,218 16,061 14,120	26,071 24,193 27,338	15,671 16,158 13,863	25,976 23,432 26,171	20,082 19,985 20,242	15,030 15,791 16,958
June	100	86 90 94 95 98	20,242 20,580	16,958 14,184	16,366 13,190	28,194 28,808	16,028 13,844	30,968 28,379	20,580 19,926	14,184 14,613
August September October	100 96 96	98 94 97	19,926 18,773 17,475	14,613 14,389 13,621	17,241 16,139 22,613	28,418 27,241 29,190	18,394 17,437 20,542	28,642 28,009 28,581	18,773 17,475 19,546	14,389 13,621 14,230
November	87 89	95 92	19,546 20,210	14,230 15,715	23,038 22,846	25,177 21,493	22,374 23,493	23,692 20,048	20,210 19,563	15,715 17,160
Year 1921			On Hand		Total Pro		Total Sh		On Hand Dece 19,563	mber 31
1921 1920 1919			12,4	482	313, 208,	387	308,7 206,9	709	17,160 12,482	
1918			13,	382	264, 206.	869	266,9 203,2	941	11,310 13,382	

All Grades (Total)—Domestic Production, Shipments, and Stocks (Net Tons), by Months, 1920 and 1921; Stocks on Hand Ianuary 1 and December 31, and Total Quantity Produced and Shipped, by Years, 1917 to 1921, Inclusive

Number	of Mills				uction			On Hand End	d of Month
1921	1920	1921	1920	1921	1920	1921	1920	1921	1920
		214,396	164,317	420,468	650,293	385,923	646,715	248,941	167,89
	****	248,941		407,966		383,679			200,05
		273,228				416,668	656,658		184,74
	****	297,337				425,584			196,23
		293,765	196,233	383,995				291,089	179,05
	****		179,059	403,657					168,29
									169,45
	+ + +								170,61
* * *		274,009							165,34
									173,98
									192,84
* * *		248,927	192,843	508,284	445,539	503,507	423,986	253,044	214,39
		164,	317	7,334	1,614	7,284	1,535	214,396	
	********							164,317	
	********					5,083	2 226		
	1921		1921 1920 1921	1921 1920 1921 1920  214,396 164,317 248,941 167,895 273,228 200,059 297,337 184,744 293,765 196,233 291,089 179,059 288,787 108,299 279,344 169,457 274,009 170,617 262,807 165,340 244,657 173,980 248,927 192,843  On Hand January 1 214,396 164,317 199,860 238,113	1921 1920 1921 1920 1921  214,396 164,317 420,468 248,941 167,895 407,966 273,228 200,059 440,777 297,337 184,744 422,012 293,765 196,233 33,995 291,089 179,059 403,657 288,787 168,299 370,429 279,544 169,457 442,519 274,009 170,617 477,926 262,807 165,340 542,408 244,657 173,980 535,876 248,927 192,843 508,284  On Hand January 1 214,396 5,355 164,317 7,333 199,860 6,199	1921 1920 1921 1920 1921 1920  214,396 164,317 420,468 650,293 248,941 167,895 407,966 564,500 273,228 200,059 440,777 641,343 297,337 184,744 422,012 634,402 293,765 196,233 383,995 645,413 291,089 179,059 403,657 657,322 288,787 168,299 370,429 658,518 221,089 179,059 403,657 657,322 228,787 168,299 370,429 658,518 2274,009 170,617 427,926 643,018 224,057 173,980 553,876 518,144 244,657 173,980 553,876 518,144 244,657 173,980 553,876 518,144 244,657 173,980 553,876 518,144 244,657 173,980 553,876 518,144 244,657 173,980 553,876 518,144 244,657 173,980 553,876 518,144 244,657 173,980 553,876 518,144 244,657 173,980 553,876 518,144 244,657 173,980 553,876 518,144 244,657 173,980 553,876 518,144 244,657 173,980 553,876 518,144 244,657 173,980 553,876 518,144 254,977 173,980 553,876 518,144 254,977 173,980 553,876 518,144 254,977 173,980 553,876 518,144 254,977 173,980 653,377 173,34,614	1921 1920 1921 1920 1921 1920 1921  214,396 164,317 420,468 650,293 385,923 248,941 167,895 407,966 564,500 383,679 273,228 200,059 440,777 641,343 416,668 297,337 184,744 422,012 634,402 425,584 293,765 196,233 383,995 645,413 386,671 291,089 179,059 403,657 657,522 403,959 288,787 168,299 370,429 658,518 379,672 279,544 169,457 442,519 654,158 448,054 224,009 170,617 472,926 643,018 489,128 262,807 165,340 542,408 621,964 560,558 244,657 173,980 535,876 518,144 531,606 248,927 192,843 508,284 445,539 503,567  On Hand January 1 Total Production Total S1 164,317 7,334,614 7,334,614 7,314,614 7,314,614 199,860 6,190,361 6,222 238,113 6,051,523 6,088	1921 1920 1921 1920 1921 1920 1921 1920  214,396 164,317 420,468 650,293 385,923 646,715 248,941 167,895 407,966 564,500 383,679 532,336 273,228 200,059 440,777 641,343 41,668 656,658 297,337 184,744 422,012 634,402 425,584 622,913 293,765 196,233 383,995 645,413 386,671 662,587 291,089 179,059 403,657 657,322 405,999 626,082 288,787 166,299 370,429 658,518 379,672 657,360 279,544 169,457 442,519 654,518 448,054 652,998 274,009 170,617 477,926 643,018 489,128 648,295 262,807 165,340 542,408 621,964 565,58 613,324 244,657 173,980 35,876 518,144 531,606 499,281 244,657 173,980 35,876 518,144 531,606 499,281 244,657 172,986 52,624 445,539 503,567 423,986  On Hand January 1  Total Production 5,356,317 5,317,069 214,396 6,99,361 7,234,614 7,224,555 199,860 6,190,361 6,225,904 238,113 6,051,523 6,089,776	1921 1920 1921 1920 1921 1920 1921 1920 1921  214,396 164,317 420,468 650,293 385,923 646,715 248,941  248,941 167,895 407,966 564,500 383,679 532,336 273,228  273,228 200,059 440,777 641,343 416,668 656,658 297,337  297,537 184,744 422,012 634,402 425,584 622,913 293,765  293,765 196,233 383,995 645,413 386,671 662,387 291,089  291,089 179,059 403,657 657,322 405,899 668,082 288,787  288,787 168,299 370,429 658,518 379,672 657,360 279,544  279,544 169,457 442,519 654,158 448,054 652,998 274,009  224,009 170,617 477,926 643,018 489,128 648,295 262,807  262,807 165,340 542,408 621,964 560,558 613,324 244,657  244,657 173,980 535,876 518,144 531,606 499,281 248,927  244,657 173,980 535,876 518,144 531,606 499,281 248,927  244,657 173,980 535,876 518,144 531,606 499,281 248,927  244,927 192,843 508,284 445,539 503,567 423,986 253,644  On Hand January 1  On Hand January 1  Total Production  5,356,317 5,317,069 253,644  164,317 7,334,614 7,284,535 214,396  199,860 6,051,523 6,089,776 199,860

News Print Paper—Monthly Receipts, Consumption, Stock, and in Transit Tonnage, as Reported by Domestic Publishers of Publications with a Circulation of 5,000 and Over, 1921 and 1920; Total Receipts, Consumption, and Stocks on Hand

		mber ncerns	January 1 and December 31 On Hand First of Month Received			Consumption		On Hand End of Month		In Transit End of Month		
Month	1921	1920	1921 Not	1920 tons	1921 Net	1920	1921 No.	1920 tons	1921 Net	1920 tons	1921 Nee	1920 tons
January February March April May June July August September October November December	662 664 663 664 664 661 661 661 661	710 707 704 711 708 710 711 711 709 709 709 706	191,742 201,952 206,640 211,856 214,049 193,436 166,174 169,124 186,927 187,872 179,765 178,449	114,997 106,932 99,663 98,329 105,739 111,317 129,281 150,108 173,910 188,781 184,135 188,799	151,769 140,022 159,494 150,620 131,665 121,342 142,071 150,611 141,703 152,456 156,877 154,430	139,566 139,220 151,675 157,148 155,471 163,519 158,737 159,001 159,095 157,739 160,398 168,119	141,559 135,334 154,278 148,427 152,278 148,604 139,121 132,808 140,758 160,563 158,193 163,560	146,763 145,282 154,573 149,621 149,893 145,555 137,910 135,199 144,224 162,385 155,724	201,952 206,640 211,856 214,049 193,436 166,174 186,927 187,872 179,765 178,449 169,319	107,800 100,870 96,765 105,856 111,317 129,281 150,108 173,910 188,781 184,135 188,799 198,927	34,905 31,913 29,209 29,852 23,804 28,270 24,990 25,264 25,119 31,511 26,349 27,422	56,760 65,601 52,796 61,643 60,951 59,775 52,747 45,180 46,218 42,919 41,549 37,930
191	0					7	Receipt 1,753,0 1,869,6 1,632,7 1,328,2	60 88 58	Consumpt 1,775,4 1,785,1 1,705,0 1,322,9	83 20 91	On Hand Decer 169,319 198,927 115,047 185,345	nber 31

#### Percentage of Decrease

The following table gives for each grade of paper, the percentage of decrease of production for the year 1921, compared with the year 1920, and the maximum and minimum quantity of stocks on hand at the mills during the years 1920 and 1921.

Dav	Cent of	Stocks	on Hand at	the Mills,	Net Tons	
De Pr fo	erease of oduction or 1921,	Qua	imum ntity the Year	Quar	mum ntity the Year	
	ith 1920	1921	1920	1921	1920	
Total news print Standard news. Book Total taperboard. Boxboard* Wrapping Bag Fine Tissue Hanging Pelt and building Other grades	34 28 19* 22 38 38 17 39 22	41,789 35,517 40,253 70,780 35,233 62,811 3,792 41,143 9,122 10,552 213,553 20,580	27,955 25,104 28,434 53,104 25,451 35,800 3,595 32,260 6,839 3,027 14,116 17,160	23,015 18,227 28,880 57,169 28,696 45,241 2,885 33,389 5,811 4,799 6,513 17,475	16,934 14,576 20.826 38,249 16,361 19,570 2,015 27,127 5,237 960 6,585 13,621	
Total for all grades	27	297.337	214.396	244.657	165.340	

<sup>\*</sup>Figures for Boxboard prior to March, 1920, were included under Total Paperboard.

#### Pulp—Domestic Production, Shipments, and Stocks (Net Tons) by Grades, 1917 to 1921 Inclusive

	On Wand	Dandontina	T73	Chinasa	O- II 1
Grade and Year Ground Wood Pulp—	Jan. 1,	For Yr.	Used During Yr.		On Hand Dec. 31
1921	129,626 139,304 131,170 145,567 112,145	1,268,012 1,578.3(0 1,449,799 1,303,403 1,447,068	1,176,899 1,456,198 1,312,335 1,229,288 1,314,773	97,659 131,495 135,579 88,512 98,873	123,080 129,626 139,961 131,170 145,567
Sulphite, News Grade-					
1921	17,984 20,046 17,905 21,546 13,634	623,493 843,514 723,991 744,944 744,470	530,644 717,986 606,984 645,794 636,858	89,593 126,261 116,164 102,841 99,700	21,240 17,984 20,373 17,905 21,546
Sulphite, Bleached-					
1921 1920 1919 1918 1917	6,661 6,810 4,240 12,180 4,130	360,063 578,081 515,897 484,525 497,085	215,323 316,037 271,276 256,407 269,347	144,653 262,213 241,673 236,058 219,688	6,748 6,661 6,810 4,240 12,180
Sulphite, Easy Bleaching-	-				
1921	1,134 1,314 2,212 1,451 438	62,344 72,394 66,465 80,730 85,081	39,017 45,309 40,950 58,897 55,156	23,593 27,159 26,740 21,072 28,912	868 1,134 1,314 2,212 1,451
Sulphite, Mitscherlich-					
1921 1920 1919 1918 1917	2,768 1,809 1,489 1,752 1,147	60,005 82,687 79,353 74,799 78,751	41,365 50,404 47,895 45,966 50,441	20,280 31,479 30,571 29,096 27,705	1,128 2,768 1,809 1,489 1,752
Sulphate Pulp-					
1921	7.850 5,753 4,490 1,284 421	148,165 212,888 161,887 167,438 108,431	114,164 144,926 104,214 100,552 86,770	34,194 65,601 53,670 63,680 20,798	7,657 7,850 7,647 4,490 1,284
Soda Pulp-					
1921 1920 1919 1918 1917	6,507 5,672 3.395 6,586 6,088	272,287 431,971 377,473 343,611 398,684	174,102 235,808 217,351 204,411 225,239	95,668 195,296 158,002 142,391 172,947	9,024 6,507 5,672 3,395 6,586
Other than Wood Pulp-					
1921. 1920. 1919. 1918.	119 240 252 178 231	7,069 7,821 9,903 12,898 11,999	6,464 6,788 8,817 10,804 5,952	546 1,162 1,199 2,020 6,100	178 119 240 252 178
	200		0,500	0,.00	1/0
Total for all Grades— 1921. 1920. 1919. 1918. 1917.	172,649 180 948 165,153 190,544 138,234	2,801,438 3,807,656 3,384,768 3,212,398 3,371,569	2,297,978 2,973,456 2,609,822 2,552,119 2,644,538	506,186 840,666 763,598 685,670 674,723	169,923 172,649 183,826 165,153 190,544

Note—The pulp used and shipped during each year represents pulp produced in the establishment using or shipping same.

The annual totals do not always balance, owing to corrections, received from the mills, affecting stocks on hand from month to month.

News Print Paper—Receipts, Shipments and Stock (Net Tons) of Domestic Jobbers, by Months and by Years, 1920-1921

N	vs Print	On H	and 1st		ceipts			On Han	d End
Month	Paper	1921	1920	1921	1920	1921	1920	1921	1920
January	Rolls	3.046	1,920	6.869	6,721	7,002	6,742	2,913	1,899
2	Sheets	6,432	3,554	2,640	3,244	2,751	3,108	6.321	3,690
	Total	9,478	5.474	9,509	9,965	9.753	9,850	9,234	5,589
February	Rolls	2,913	1,718	5,397	6,166	5,779	5,905	2,531	1,979
	Sheets	6,321	3,701	1,480	2,914	2,038	2.946	5,763	3,669
	Total	9,234	5,419	6,877	9,080	7,817	8,851	8,294	5,648
March	Rolls	2,531	2,156	6,873	7.873	7,292	7.839	2,112	2,190
Homestan State	Sheets	5,763	3,671	1,642	2,465	2,457	2,877	4,948	3,259
	Total	8,294	5,827	8,515	10,338	9,749	10,716	7,060	5,449
April	Rolls	2,112	2,052	7,777	7,030	7.353	7,142	2,536	1.940
- apr in	Sheets	4,948	3,333	1.842	2,556	2,553	3.076	4.237	2,813
	Total	7,060	5,385	9,619	9.586	9,906	10,218	6,773	4,753
May	Rolls	2,536	1,939	6,384	5,669	6,540	5,663	2,380	1,945
and any	Sheets	4,237	2,757	2,408	2,974	2,827	3,101	3.818	2,630
	Total	6.773	4,896	8,792	8,643	9,367	8,764	6.193	4,575
Tune	Rolls	2,380	1,945	7,355	6,560	8,148	6,002	1,587	2,503
3	Sheets	3,818	2,630	2,814	3,197	2,599	3,013	4,033	2,814
	Total	6,198	4.575	10,169	9,757	10,747	9,015	5,620	5,317
July	Rolls	1,587	2,503	8,484	5,976	8,511	5,495	1,560	2,984
2	Sheets	4,033	2,814	2.120	3,481	2.218	3.042	3.935	3,253
	Total	5,620	5,317	10,604	9,457	10,729	8,537	5,495	6,237
August	Rolls	1,560	3,253	1,960	4,147	1,954	3,014	1.566	4,386
	Sheets	3,935	2,984	1,743	6,246	2,087	5,739	3,591	3,491
	Total	5,495	6,237	3,703	10,393	4,041	8,753	5,157	7,877
September	Rolls	1,566	3,491	5,792	6.231	5,595	6.352	1.763	3,370
	Sheets	3,591	4.386	2,290	3,209	2,415	2.772	3,466	4,823
	Total	5,157	7,877	8,082	9,440	8,010	9,124	5,229	8,193
October	Rells	1,763	3,370	7,504	6,167	6,874	6,255	2,393	3,282
	Sheets	3,466	4,823	3,250	3,001	3,649	2,678	3,067	5,146
	Total	5,229	8,193	10.754	9,168	10,523	8,933	5,460	8,428
November	Rolls	2,393	3,282	5,941	5,846	5,936	5,948	2,398	3,180
	Sheets	3,067	5,146	3.255	3.228	2.387	2,689	3,935	5,685
	Total	5.460	8,478	9.196	9,074	8.323	8.637	6.333	8,865
December	Rolls	2,398	3,180	7,044	7,355	7,144	7,489	2,298	3,046
	Sheets	3,935	5,685	2,359	2,892	2,032	2,145	4,262	6,432
	Total	6,333	8,865	9,403	10,247	9,176	9,634	6,560	9,478
				C					

		19	21		1920				
News Print Paper	On Hand Jan. 1	Receipts	Ship- ments	On Hand Dec. 31	On Hand Jan. 1	Receipts	Ship- ments	On Hand Dec. 31	
Rolls	3.046 6,432	77,380 27,843	78,128 30,013		1,920 3,554	75,741 39,407	73,846 37,186		
Total	0.178	105 223	109 141	6 560	5 474	115 148	111 032	9 478	

Standard News—Weighted Average Open Market and Contract Prices per 100 Pounds, F. O. B. Mill, Paid by United States Publishers of Publications with a Circulation of 5,000 and Over, from January, 1920, to December, 1921, Inclusive, and Per Cent of Increase, or Decrease, 1921 Compared with 1920

		Open	Market	Para			Cen	tract		
			Per	Cent				Per	Cent	
			In-	De-				In-	De-	
Month	1921	1920	crease	crease	Month	1921	1920	crease	crease	
	Dollars	Dollar			]		Dollar			
January	6.945	6.624	4.8	***	Tanuary	6.076	4.362	39.2		
February	6.279	7.997		21.4	February	5.921	4.533	30.6	***	
March	5.623	8.797		36.0	March	5.862	4.577	28.0		
April	5.206	9,443	4.8	44.8	April	5,409	4.726	14.4	***	
May	5.056	9,905		48.9	May	5.248	4.673	12.3	***	
Tune		10.072	4.6	49.0	Inne		4.752	9.9		
Tuly	5.013	10.498		52.2	Tulv	4.770	5.211		8.4	
August	5.160	10.212		49.4	August	4.762	5.371		11.3	
September.	4.185	9.800		57.2	September.	4.586	5.531		17.0	
October		9.362		56.5	October	4.188	5.790		27.6	
November.	4.170	9.148		54.4	November.	4.194	5.792		27.5	
December		7.854	**	53.3	December.,		5.969	***	31.2	

#### Percentage of Decrease in Pulp

The following table gives for each grade of pulp, the percentage of decrease of production for the year 1921, compared with the year 1920.

D.	er Cent of	S	tocks on Ha	ind at the B	d at the Mills		
P	roduction for 1921,	Qui	ximum antity the Year	antity . Quantity			
	with 1920	1921 Net Tons	Net Tons	1921 Net Tons	1920 Net Tons		
Groundwood pulp		226.089	152,973	115,363	92,823		
Sulphite, news grade		24,626	20,549	20,930	12,731		
Sulphite, bleached		16.614	6,682	4,581	3,808		
Sulphite, easy bleach	. 14	1,774	1,386	581	569		
Sulphite, Mitscherlich		3,990	2,768	1,064	915		
Sulphate pulp	. 30	9.354	7.850	6,200	2,248		
Soda pulp		10,390	6,938	6,281	3,313		
Other grades	. 10	208	238	15	26		
Total for all grades	. 26	286,216	183,876	158,555	121,338		

Imports and Exports of Paper (Pounds and Value) and of Pulp (Net Tons), by Grades, 1917 to 1920, Inclusive

					PAI	PER			7		
	1	1921		1920		19	19	191	8	19	17
Imports:	Pounds	Value	Po	unds	Value	Pounds	Value	Pounds	Value	Pounds	Value
	1,584,962,67 1,414,78 11,414,47	1 199,3 2 528,8 363,2	55 4, 49 4, 69	737.288 340,425 941,824	\$68,600,950 496,132 460,289 353,791 2,741,238	1,255,462,866 164,886 4,802,487	\$43,574.094 58 319 406,570 104,326 1,638,711	182,995	\$35,023,161 42,633 541,866 143,449 2,541,157	412,091 6,661,518	67,931 8 456,752 281,900
Exports: News print Book paper Paperboard Wrapping	33,641,46 40,167,00 26,044,15	5,892,6 2,323,9	09 95 49	,951,913 ,689,512	5,983,611 13,765,694 5,553,094 6,994,381	220,589,829 153,327,185 74,916,830	10,100,229 16.160,777 4,604,048 6,664,462		7,978,296 8,710,940 3,055,255 4,828,856	94,548,586	8,179,86 2,232,13
Bag Fine Tissue Hanging All other grades (b)		. 846,9 4,355,6 1,080,3 590,5	09 42 80		2,593,459 8,908,230 2,654,529 1,251,743 11,091,952	********	1,566,373 13,198,165 2,237,570 899,457 8,799,550	********	884,415 6,113,498 1,526,777 529,539 6,170,601		1,136,272 3,636,233 (c) 480,289 465,810
Total imports		00 000 0			72,652,400 58,796,693		45.882,020 64.220,631		38,292,266 39,798,177		
Imports:	1921 Net Tons	1920 Net Tons	1919 Net Tons	1918 Net Tons	Pu 1917 Net Tons			1921 Net Ton	1920 s Net Tons N	1919 19 Net Tons Net T	18 1917 Tons Net Ton
Chemical wood pulp: Bleached sulphite		128,206	42,755	16,757			weed pulp		32,133	40,095 22,	324 39,180
Unbleached sulphate Bleached sulphate Unbleached sulphate Ground wood pulp Paper stock other than	174,004 190,744	17,277 182,697	239,952 5,145 145,911 202,253	253,454 3,759 118,761 185,478	1,625 107,933	from ve	other materia getable fibre		42,282	27,271 16,	121 16,312
wood pulp	117,405	254,755	110,195	29,397	(d) 20,977			,			
Total	. 814,505	1,161,052	746,211	607,606	698,818	Total		48,68	9 74,415	67,366 38,	445 55,492

(a) Data furnished by the Department of Commerce. Figures for pulp given in long tons and reduced to net tons by the Commission. (b) Includes some paper already converted into commercial articles. (c) Last six months only. First six months included in other grades. (d) Bags only.

#### Coal Strike Threatens All Industry

The problem of the impending coal strike is one which will have to be faced by the paper industry, as well as other industries, and the best advices indicate that there is no doubt that a strike of serious proportions will take place on April 1, says The Paper and Pulp Industry, the organ of the Paper and Pulp Association.

In the last two years there have been special reports on the coal situation prepared for the paper industry at times when there seemed to be an impending shortage. The details of the proposed strike are so well and generally known at this time, however, that no particular warning is necessary.

There has been a feeling, however, in some quarters that the coal miners like the railroad men might not in the final "show-down" dare to face an aroused public opinion. A letter from a prominent officer of the coal operators, however, says that the coal industry can not share this view and adds that it might be well to advise industry to take some precautions to meet the possible shortage. The action of the miners in endeavoring to enlist the railroad employees in a joint strike is significant.

The reports of the Geological Survey indicate a slight increase in coal stocks as of January 1, with an average of 51 days' supply in the hands of industries other than coke and steel plants and excluding public utilities. The production for the week ending January 28 was sufficient to meet current consumption for the first time since the middle of November. The production is still 12 per cent below that resulting from the quickened demand in October at the time of the threatened rail strike.

Oscar A. Fogg, executive secretary and general manager of the American Gas Association has in a public address said the strike would be the greatest industrial disturbance the country has known, and that the thing to do and to do at once was to store coal.

A single ray of light comes at the last moment from the miners' convention in session at Indianapolis in the announce-

ment that the miners are considering withdrawing their demand for higher wages, and will only ask that the present scale be maintained. It is too early to say what the result will be upon the strike situation, in view of the fact that the labor costs in the coal fields have not been liquidated as has been the case in the majority of other great industries.

#### Miami Paper Manufacturers Meet

DAYTON, Ohio, February 20, 1922.—The Miami Valley division of the Paper Manufacturers' Association met on Thursday evening, February 9, at the Hamilton Club, Hamilton, Ohio.

The important subject of the evening's discussion was how to use to the best advantage the five technical books which have been given the trade through the efforts of the Technical Association of the Pulp and Paper Industry.

Suggestions were made that classes be formed in the paper mills, and instructors procured, in order that this very valuable information might be made available to as many people as wanted it. The Miami Valley mills want to co-operate in this work, and the subject was carried over until the next meeting. A committee was appointed to visit the next meeting of the Miami Valley Division of the Superintendents' Association which will be held at the Elks Club at Middletown, Ohio, on February 25, and get their opinions as to the best methods of disseminating this valuable information.

The next meeting of the Paper Manufacturers will be held at the Elks Club, at Middletown, Ohio, but the date of the meeting has not yet been announced.

Suit for the cancellation of a note for \$385 has been filed in the Superior Court in Springfield by Hyman Miller and the Springfield Paper Stock Company against David E. Greenberg, Inc. The note was indorsed to the defendant by the plaintiff corporation and it is alleged that it was signed by Miller merely for the accommodation of the corporation and was without any valuable consideration.

#### CONDITIONS IN EUROPE TOLD BY STUART LANSING

Thinks Allies Should Cancel Reparation Demands for Their Own Interests—Allies Furnish Germany with Gold with Which to Meet Reparation Payments—F. L. Carlisle Returns from South—Found Conditions in South to Be Improving—News Print Market Much Improved with Consumption Now 83 Per Cent of Capacity Production—Interest in Coty Bag Machine.

#### [FROM OUR REGULAR CORRESPONDENT.]

WATERTOWN, N. Y., February 20, 1922.—Stuart D. Lansing, president of the Bagley & Sewell Company, manufacturers in this city of paper mill machinery, with his family, returned Friday from a six months' tour of Europe. They visited England, France and Italy, having opportunity to study the political, economic and industrial conditions in each country. While it was a trip for rest and pleasure, Mr. Lansing did not fail to deduct some very important conclusions from an international standpoint.

"The Allies would find it greatly to their advantage to cancel their reparation demands from Germany instead of compelling that country to pay in gold," said Mr. Lansing. "The export system which has been inaugurated by Germany to meet the situation will ruin the Allies and result in Germany having the most contented and happy people in the world

within a few years.

"Here is what is happening: The only way Germany can pay in the gold demanded is through exports from which she acquires the gold from other countries. She now ships about 75 per cent of her exports to the Allies and the countries to which they export. The goods are paid for in gold with the result that the Allies supply Germany with the gold with which to pay themselves.

"There is a far-reaching feature to this situation. Germany has so flooded England, France, Italy and the United States with goods that a serious employment condition has been felt. Our tariff protects us to a degree, but it should be doubled to protect our labor.

"England is in a terrible condition and the other Allies are not much better.

"Germany has inflated her currency so that the gold received has a greatly increased value in marks. She pays wages in marks and the laborers pay for their living expenses in marks, but what they have left is practically worthless in gold. This means that the German people are practically slaves and the Allied countries must compel their working men to compete against slave-made goods. The result is only too obvious.

"It is on this account that I have concluded that it would be better for us to cancel our demands upon Germany and give her people a chance.

"This applies with more force to England, France and Italy, for

we have some protection in tariff.

"Where the Allies made the mistake is that they did not march into Germany and take sufficient things of value to pay the indemnities. Not having done that, I would suggest one of two things that should be done. The Allies should either go there now and take the value and move it out of the country or they should shut Germany up to develop wealth and then go and take it from her. In that way the rest of the world would not be compelled to pay her war indemnity."

Mr. Lansing said they saw the formalities of the opening of Parliament in England, visited Paris and the battlefields of France and visited Naples, Rome and Pompeii in Italy. They left Rome about 10 days before the death of the Pope. He was emphatic in his claim that Europe has not lost its charm of before the war.

#### F. L. Carlisle Returns from South

Floyd L. Carlisle, president of the Northern New York Trust Company, the St. Regis Paper Company and of F. L. Carlisle & Co. in New York City, returned Saturday morning from a month passed with his family at Belleair, Fla. He stopped off during the week in New York before coming North.

A heavy coat of tan on his face and hands corroborates his admission that he had a very pleasant vacation on golf links and bathing beach beneath a southern sun. His family will remain there until about the middle of April, when he will go back and get them. They will open their home here again

at that time.

"General business conditions in the South are very much improved," he said. "Florida is building roads and preparing for the large number of vacationists that are going there each winter. Everybody is a real estate agent there. The county in which Belleair and St. Petersburg are located has just voted a bond issue of \$2,500,000 for county roads, and this is typical of the South and Southwest along the line of building roads similar to the system in New York. They have just gotten so they can sell their tax exempt bonds. The little village of Clearwater, with 1,500 inhabitants, was just voting upon a bond issue of \$650,000 for streets and water system."

John N. Carlisle, president of the Northern New York Utilities, Inc., who is still in the South but about to return, passed a week with his brother at Belleair and then went to Key West.

"The news print market is very much improved over the past few weeks," he said. "Consumption is now 83 per cent of capacity production, and this is better than practically all other business enterprises. The foreign paper is being withdrawn from the local market and United States consumers of news print are already placing contracts with local mills again. The German paper was not always what the consumer desired and he has found that there is not enough difference in the price under the circumstances to make it worth while to depend upon the uncertain foreign supply."

R. J. Parham, head of the New York sales office of the St. Regis Paper Company, came to the city with Mr. Carlisle. He returned Saturday evening and Mr. Carlisle said that he would remain in the city about a week when he would go to New York, but would make frequent trips to this city.

#### Interest in Coty Bag Machine

Inquiries from all parts of the world are still coming to the Watertown Engine & Machine Company for information concerning the Coty Bag Machine which that concern formerly manufactured. The latest letter was just received from Denmark and was based upon data concerning the new design published in Paper Trade Journal.

Johs. Rasmussen & Co., Peder Skramsgade, 13, Kobenhavn, K, writes to get detailed information and figures. It is a bag company in Denmark which seeks to install a modern American invention for the manufacture of paper bags, and desires

the most modern machine.

Mayor R. E. Cahill, Charles R. Courtenay and A. C. Coty were the officers of the company when the first machines were placed on the market. Since that time the company was sold to local capitalists and it is understood that the machine is being manufactured by the Bates Valve Bag Company, of Toledo, Ohio. It is not reported as to whether the machine is being manufactured now for general distribution in the bag mills of the country.

# AGITATION FOR LONG LIST CONTINUES IN PHILADELPHIA

Paper Trade, However, Considers the Matter a Dead Issue
Locally and One That Can Be Settled Only Nationally—
Prices On Practically All Lines of Paper Continue Virtually Unchanged—Rags and Waste Paper Market Is
Quiet and Without Change—W. A. Schoenbucher Says
Grave Conditions Confront Paper Distributors—Riegel &
Co. Issue Large Sample Book.

#### [FROM OUR REGULAR CORRESPONDENT.]

PHILADELPHIA, Pa., February 21, 1922.—The efforts of the Typothetæ to create dissensions in the ranks of the paper distributors by the publication of its own long list under the alias of "The Retail Price List," has not in the slightest way disturbed the even tenor of its progress during the week. By excluding from the retail list all of the private water-marked brands carried by the Philadelphia distributors and by making an effort to induce its followers to restrict their buying exclusively to mill brands, the leaders of the Typothetæ long list movement, it is stated, were hopeful either that the distributors would be coerced into capitulating on the long price issue, hoping thereby to secure recognition of their own water-marked brands in the Typothetæ list or that there would be aroused dissension in the ranks of the paper trade. Association membership between those houses which like the Paper House of Pennsylvania carried only mill brands and the Whiting-Patterson Company which carries many of its own brands. The association maintained during the week its attitude that having unanimously passed resolutions taking the ground that the long list question was a national issue and could be settled only nationally, the incident was closed. It does not intend now as it has not in the past, to antagonize the printer and it is no more assured now than it ever has been that the Typothetæ stand reflects the attitude of the entire trade. Experience of paper salesmen continues to be that only in isolated spots is there any outward expression of demand for the long list. Salesroom accounts show an increase of business ever since the long list agitation began, a result of course not at all attributable to the agitation but interpreted as meaning that business in the paper field has improved about in the same rate as industry generally and that long list contention has been an almost negligible factor on trade.

#### Prices Continue Practically Unchanged

During the week values in all lines remained virtually without change, the only price element of any interest at all being a decline of \$5 per ton on a few lines of sulphite including manillas. The jobbers are still being flooded with offerings of foreign made papers, one of the most interesting being by a Stockholm banking house representing a German mill, which offered a line of news print on the basis of 3.30 cents including brokers' commission, c. i. f. Philadelphia. What response this offer evoked is not definitely known, although there is a disposition to approach the import question with circumspection in view of the experiences and delays suffered by some of the houses which have purchased abroad and the great uncertainty regarding tariff legislation at Washington.

The general wrapping paper market continues quiet with rather restricted demand but with orders slightly increased in volume over what they were when the month began. Save perhaps tissues and the cheaper lines of screening and silk fibers there is no oversupply on the market and a suddenly stimulated demand would be likely to be followed by temporary shortage, because the dealers are not as a rule carrying large stocks.

The fine paper market is quieter than the coarse but the hopeful aspect is that some of the inquiries of a few weeks ago are being

transformed into orders and a larger number of inquiries are supplanting those which have been filled. There were no changes of any moment in fine paper prices, nor does the trade look forward to any until the end of next month, if then.

#### Rags and Waste Paper Unchanged

Both the rag and paper stock markets continue without the slightest change in demand or in quotations. The only kind of paper stock which has any movement at all continues to be soft white and that movement is rather sluggish but is quite sufficient to transfer to the mills the small quantities of stock which are being received by the dealers.

The Typothetæ of Philadelphia has made no further steps toward the inauguration of its program of collective gathering and sale of printers' waste, the explanation being made that the subject is being held in abeyance only because of the prolonged absence from the city of Field Secretary J. O. Adams, who continues to be engaged in the Pittsburgh district.

#### Serious Problems Ahead

Grave conditions confronting the paper distribution business, by many regarded as the most critical through which the industry has passed in many years, were called to the attention of the members of the Paper Trade Association by W. A. Schoenbucher, director of the bureau of uniform accounting methods of the National Paper Trade Association, and by a number of informed members who participated in a symposium on present conditions and problems ahead for the next two or three years so far as they can be foreseen at this time at the meeting of the association held during the week. Disclaiming any intention of being sensational, the speakers emphasized the fact that immediately ahead of the distributors was a period sure to be made memorable by failures and financial embarrassments unless immediate steps were taken and covering the industry as a whole to safeguard against them. Several speakers pointed out that business conditions were more critical at this time than they had been within their memory and though there was not ahead an unavoidable period of panic, strenuous measures would have to be taken to avoid great calamities. They based their argument on the asserted fact that not one paper distributor out of forty doing a general business and involving the carrying of the large amounts of stock which changed business had made necessary, and which in effect had made the distributors more retailers than wholesalers of paper, had passed through last year without a financial loss. They argued further that the average of profit of all the distributors throughout the United States had now fallen, in many cases very considerably below 3 per cent of sales, that there remained for this year and the next and probably the next as well a large amount which must be charged off for depreciation of stock and that unless the distributor found some solution to the problem of cutting down overhead, or in otherwise affecting a larger margin between buying and selling price, financial embarrassment was inevitable. All the members of the association were urged as a matter of self protection to themselves and of highest importance to the entire industry to give earnest and immediate attention to the tremendous problem that is to be solved to avoid what one speaker says would be a string of failures all over the country. There were thrown into sharp contrast conditions as they existed a few years ago and as now they are being experienced. Then, printers and other consumers of fine papers thought they found it profitable to purchase in volume, thus securing lot discount and to keep stock on their shelves. Now, because of the changed character of the market and because of the bitter competition for business and the willingness of distributors to take orders on margin of 5 per cent or less, the printers and other consumers have decided that it does not pay to carry stock on hand particularly in view of the steady depreciation of values and that they are making of the distributors willing goats. There was consensus of opinion that under the radically changed conditions of business, as they now exist, there would have to be equally radical changes in methods of merchandising to avoid a portending calamity.

#### Consolidating the Ward Business

The sales service department of the D. L. Ward Company which, together with some clerks and Floor Manager Sparta Fritz, have remained in the old building at Sixth and Ranstead streets after the transfer of all the other executive departments to the immense warehouse at Delaware avenue and Federal streets, were in course of removal during the week, thus consolidating all of the Ward business at one place.

A centrally located office and perhaps a department of the making of dummies may be opened in the near future, but definite decision has not yet been reached.

#### Riegel & Co. Issue Sample Book

Riegel & Co., Sixth street above Cherry street, has completed and ready for distribution the most elaborate pamphlet filled with large sized samples of its complete line of bonds linen ledger writings and other fine papers which it ever has issued. The sample book is bound in a volume of more than five hundred pages showing all the lines in all the colors stocked, has a cover of executive paper Roosevelt style, has a sewn back making it flat opening and is printed in gold and black. There is also being arranged a cardboard packet of envelopes with a dozen or so in each jacket showing the diversified lines the extent of which can be appreciated when it is realized that a stock of 2,000 envelopes was required to make up the samples. It is the intention of the firm eventually to send to the customers whose names will be on its list a metal cabinet to hold the bound sample book, the envelope packet and a a number of other samples of cardboard and the like which subsequently are to be sent out.

#### Cargo of Paper Salvaged

The Paper House of Pennsylvania received rather definite assurances during the week that the consignment of several thousand dollars worth of English stereotype tissue which was aboard the English steamer Thistlemoore which went aground off Cape Cod will not be lost. The steamer has been floated and it is understood that the cargo of paper has been salvaged.

#### General Philadelphia News

The Paper Rulers and Employing Bookbinders Division of the Typothetæ of Philadelphia will meet at the Meridian Club this week for the consideration of a number of trade matters. Frederick Snellar of the blankbook and loose leaf department of the W. H. Hoskins Company will deliver an address on "An Analysis of Cost."

Secretary William A. Hentz of the D. L. Ward Company surprised many of his friends in the trade by the announcement which they received at the close of last week informing them of his marriage to Miss Josephine Eleanor Mende, daughter of Mr. and Mrs. Henry William Mende.

Twenty-one properties on Spring Garden street, Tenth and Nectarines streets, making up a plot which runs along Spring Garden and Nectarines streets for 190 feet and on Tenth street for 112 feet, have just been transferred by a real estate firm representing many others to James L. Lockhart and in turn by him to G. A. Bisler, Sr., head of the G. A. Bisler Corporation, one of the leading paper box manufacturers of the city. The Bisler plant is now located on Sixth street below Vine street and is the largest structurally in the city. But this immense plan shortly will be leveled to the ground in order to make way for the new Philadelphia-Camden bridge now in course of construction. The Philadelphia approach will take in the entire block from Fifth to Sixth streets and from Vine to Race streets. Mr. Bisler is at this time on the

high seas bound for the Orient and Mediterranean ports for a tour of three months. He is accompanied by his son and namesake and upon their return it is expected that plans will be drawn for the erection of a monster new factory on Spring Garden street to replace the condemned property.

The newly incorporated firm of Parke Wikert & Co., South Marshall and Ranstead street, is exhibiting a large line of cordage and allied goods in a booth at the show in the Commercial Museum Building of the Pennsylvania and Atlantic Seaboard Hardware Association, which attracted visitors from all over the east.

Frank P. Miller, whose recent retirement from the Frank P. Miller Paper Company, East Downington, Pa., was announced in these columns, is spending a few weeks in Florida. Upon his return he will rest for the present on his 100 acre farm near Downington. His post as secretary and treasurer has been filled by the advancement of Frank Parke, who for the past twenty years has been acting as assistant secretary and treasurer. Mr. Miller was one of the original incorporators of the firm in 1886.

#### Clarifies Trade Association Status

The long awaited statement from Washington clarifying the status of trade associations was given out February in the form of correspondence between Secretary Hoover and Attorney General Daugherty, in which the Department of Justice advises the Department of Commerce as to the trade activities under its jurisdiction.

Secretary Hoover, after a series of conversations with Mr. Daugherty, has outlined the problem of trade association activity, and business in general and makes this significant statement in his summary of the situation: "It is with much earnestness that I claim there is propriety, generally speaking, in trade associations. Their lawful field of activity is large and their activities work for promotion and advancement of the public welfare and for progressive economic organization. Information lawfully secured regarding trade and economic conditions made public for the information of everyone cannot be harmful."

Secretary Hoover then proceeds to ask whether certain activities are legal, including a uniform system of cost accounting; uniformity of trade phrases, names and terms; standardization of product and elimination of waste in production and distribution; credit information and co-operative advertising; promotion of welfare work; legislative, rate and transportation questions; promote closer relations with governmental agencies; collect and distribute statistics on production, wages, capacity, consumption, distribution and stocks and collection of price data and compilation into averages.

Attorney General Daugherty after placing certain definitions on cost accounting, and uniform trade-marks, makes this reply:

"I can now see nothing illegal in the exercise of the other activities mentioned provided always that whatever is done is not used as a scheme or device to curtail production or enhance prices, and does not have the effect of suppressing competition. It is impossible to determine in advance just what the effect of a plan when put into actual operation may be. This is especially true with reference to trade associationswhose members are vitally interested in advancing or, as they term it, stabilizing prices, and who through the medium of the associations are brought into personal contact with each other. Therefore the expressions of the view that the things enumerated by you with the exceptions stated, may be done lawfully is only tentative; and if in the actual practice of any of them it shall develop that competition is suppressed or prices are materially enhanced, this Department must treat such a practice as it treats any other one which is violative of the Anti-Trust Act."

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#### OSCAR GUMBINSKY & BROS. SELL PLANT AT KALAMAZOO

Corporation Will Be Controlled by the Bryant Paper Co.

The Object of the Purchase Being Primarily to Secure
a Definite Source of Supply of Waste Paper for the
Mills of the Company—Michigan Superintendents and
Cost Men Meet at the Park-American Hotel—Paper and
Allied Concerns Meet and Elect Officers and Directors—
Capitol Paper Co. Moves to Kalamazoo.

[FROM OUR REGULAR CORRESPONDENT.]

KALAMAZOO, Mich., February 20, 1922.—By a deal closed Thursday afternoon the Kalamazoo plant of Oscar Gumbinsky & Bros., paper stock dealers, was sold to a coterie of capitalists, who intend to take it over and operate it in the future, forming a new corporation for that purpose. While the price paid for the property is not announced, it is variously reported at from \$80,000 to \$115,000.

The new corporation will be controlled by the Bryant Paper Company, the object of the purchase being primarily to secure a definite source of supply of waste papers for those immense mills. The new company will not limit its sales to the Bryant company, intending to conduct a regular paper stock business and going

regularly into the open market for outside trade.

Felix Pagenstecher, president of the Bryant Paper Company, stated this morning that it is the intention to form a new company in the immediate future. Someone directly connected with the Bryant Paper Company will have charge of the financial arrangements, while the production management will be in charge of Louis Rosenburg of Three Rivers.

"The property, which occupies an entire city block at the junction of East Frank street and the Chicago, Kalamazoo & Saginaw Railroad, is well adapted for our needs," said Mr. Pagenstecher. "The equipment is in every way first class and the buildings are in

good condition. Shipping facilities are satisfactory."

The sale means the passing of Oscar Gumbinsky & Bros, as active local factors in the paper industry. The same concern will continue its large plant in Chicago and warehouses owned and controlled in other cities, also devoting much more time to the development of its woolen cloth manufacture, a line taken up about two years ago. It is likely that Herman Gumbinsky, former treasurer of the company and manager of the Kalamazoo plant, will move to Chicago to establish himself there.

Osear Gumbinsky & Bros. was founded by Jacob Gumbinsky over thirty-five years ago. He began at the bottom, but worked faithfully and industriously and became one of the wealthiest and most respected citizens of this city. He was everywhere recognized as thoroughly reliable and trustworthy. With his death, the business passed to Oscar Gumbinsky and younger brothers and under their direction has enjoyed a prosperous career.

Annual Meetings

The Sutherland Paper Company and Kalamazoo Loose Leaf Binder Company of Kalamazoo, and the Wolverine Paper Company of Otsego held annual meetings the past week and elected officers and directors for the ensuing year, as follows:

Sutherland Paper Company: President, L. W. Sutherland; vice-president, O. F. Miller; secretary, Fred W. Sutherland; treasurer, Walter L. Otis; directors, Fred M. Hodge, Walter L. Otis, O. F. Miller, F. B. Eilers, Edmond W. Chase, Fred W. Sutherland, L.

W. Sutherland, Kalamazoo, A. M. Meincke, Chicago.

Kalamazoo Loose Leaf Binder Company: President, George P. Wigginton; vice-president, H. S. Humphrey; secretary, Mark Smith; treasurer, Harry J. Broomhall; directors, George P. Wigginton, H. S. Humphrey, Walter M. Blinks, F. W. Blowers, C. A. Peck, E. S. Rankin, C. H. Stearns.

Wolverine Paper Company: President and treasurer, C. A. Buskirk; vice-president, Perry K. Heath; secretary, S. B. Monroe; directors, A. B. Connable, C. A. Peck, S. B. Monroe, Forris Stevens, Guy W. Rouse, Perry K. Heath, C. A. Buskirk.

The Kalamazoo Loose Leaf Binder Company was able to report conditions unusually favorable for the ensuing year. Business is good, heavy orders are being booked regularly and the productivity of the plant has been greatly increased during the past twelve months.

Superintendents and Cost Men Meet

The joint meeting of the Michigan Division of the American Pulp and Paper Mill Superintendents' Association and the Kalamazoo Valley local of the Cost Association of the Paper Industry, held Thursday evening at the Park-American Hotel, was very enjoyable and attracted a gathering of over sixty people.

Immediately following the dinner hour there were two addresses. Fred M. Hodge, president of the Kalamazoo Paper Company, considered "Uniform Cost Records Between the Superintendents and the Cost Departments." L. P. Corey, of Scovell-Wellington & Co., public accountants, spoke on "Cost Information for the Executives." A general discussion of both topics was participated in by those present.

Capitol Paper Co. Moves to Kalamazoo

The Capitol Paper and Envelope Company is moving from Chicago to Kalamazoo and will occupy the Harrison street structure, leased from the Kalamazoo Paper Box Company. This concern specializes in boxed paper and has a well established trade.

H. G. Pohlman, proprietor and general manager of the concern, is now superintending the unloading of machinery, equipment and stock and hopes to get under operation in a very short time.

"The plant is complete and up to date in every particular," said Mr. Pohlman, "and equipped to do the best grades of work and turn out high grade products. The building leased is well adapted to our needs and we will get under way as soon as possible."

Mr. Pohlman reports that he will have about 5,000 square feet of floor space at the outset and expects to work fifteen to twenty hands before thirty days have lapsed.

#### Continental Bag Mills Start Brooklyn Plant

The supplementary plant of the Continental Paper and Bag Mills started last November in the Bush Terminal Sales Building, 130 West 42nd street, is now in operation. The very central situation of the new plant aids materially in effecting a perfect organization for service to the growing clientele of the company.

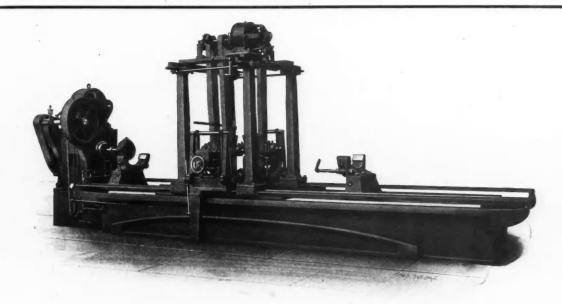
While production has not yet had time to arrive at a maximum, 200 men are now employed with prospects of an increase in that number when operation hits full stride in a few weeks. Forty-five thousand square feet of floor space on two floors are devoted to the manufacture of fancy tea and coffee bags, merchandise envelopes, carton liners, glassive bags of all dimensions, string tied envelopes, plain bags, printed bags, and bag specialties.

Those interested in the process of the Continental Paper and Bag Mills are much pleased with the results already attained and look toward this new department with confidence that it will further the interests and expand the reputation already enjoyed by the

concern for service and square dealing.

#### Geo. E. Robertson & Co. Incorporate

CONCORD, N. H., February 20, 1922.—Articles of incorporation have been filed in the office of the Secretary of State by a firm to be designated as George E. Robertson & Co., headquarters at Hinsdale and capital stock given as \$75,000, to engage in the manufacture of paper and pulp products of every description. The incorporators are George E. Robertson and Gustavus S. Smith, of Hinsdale, and Philip H. Faulkner and Levena I. Blake, of Keene.



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You can keep your rolls in the best condition at lowest cost by having in your plant a Farrel roll grinder at work on your spare rolls or ready to care for unforeseen damage to your calender stack.

We have made and used this grinder exclusively for years in producing the highest class of calender rolls, the best evidence for you as to its quality.

It cost one of our customers the price of a grinder to get one roll reground in a hurry. He had trains.

After that he bought a grinder—he was out for economy.

Write for Bulletin 755

### Farrel Foundry & Machine Company

Established 1848

Ansonia, Conn.

Branch Plant: BUFFALO, N. Y.

# PAPER MARKET IN TORONTO IS GRADUALLY RECOVERING

Buyers, However, Are Still Disposed to Feel Their Way and Not to Order Supplies Beyond their Immediate Requirements—Market Continues Without Any Important Price Changes—New Ground Wood Mill of the Temiskaming Pulp & Paper Co. Rapidly Nearing Completion—Great Lakes Co. May Erect a News Print Mill and Sulphite Plant at Port Arthur.

[FROM OUR REGULAR CORRESPONDENT.]

Toronto, Ont., February 20, 1922.—There have been no changes of any appreciable extent during the past week in the pulp and paper market. The trade is gradually recovering from the depression which characterized it for many months. News print is in a much better position than for some time but the pulp market does not seem to improve very much and has been hanging fire for some time. Roofing and building papers, toilet and tissue productions and kraft enjoy a steady demand and jobbers report a satisfactory turnover. February business so far is ahead of January on all kinds of wrapping papers. Buyers in most lines, however, are disposed to feel their way and not order other than sufficient to cover their direct requirements. The board market is dull and has been for some weeks.

If business abroad improves some manufacturers of certain lines of Canadian papers are looking toward the export market. Blotting paper firms are inquiring into the British situation and also

about other openings.

There are no price changes to record. Stabilization appears to be the watchword of the market, as in the past, it has been demonstrated that price fluctuations, instead of encouraging business, have had exactly the opposite effect. Book mills are fairly busy and printing establishments have had a fair run of trade this month. Collections are being watched carefully by most firms as there has been considerable difficulty in getting in the cash.

#### Pulpwood Outlook Slowly Improving

So far as the pulpwood of Northern Ontario is concerned, several companies are buying a moderate supply at the present time. Due to the low prices prevailing, there was not nearly the wood cut by settlers during the past season that there was in other years. On the Canadian National east and west of Cochrane are large quantities alongside the tracks, which have not been moved for several reasons, owing to the fact that the mills are pretty well supplied, the present freight rates are very heavy and a great deal of the product has the bark upon it. Most mills will not purchase anything now except peeled wood.

A recent report says that between LaReine and Nottawa, on the Canadian National Railways in Quebec, a distance of 112 miles, there are 120,000 cords, a large proportion of which is sold. Practically all this wood is unpeeled. An Ontario pulpwood dealer stated recently that an effort was being made to have the railways grant an emergency rate for a fixed period in order that a great deal of the material up north might be moved. Some mills are taking a fair quantity of pulpwood, but buying is by no means

extensive.

There are practically no changes in prices. Peeled spruce and balsam south of North Bay is selling at around \$12.00, and poplar at \$8.00 f. o. b. cars. North of North Bay, which is about 225 miles from Toronto, the figures are lower owing to the higher freight rate, spruce bringing about \$9.00 and poplar \$6.00 to \$7.00. One Ontario firm has this year contracted for 40,000 cords of pulpwood which will be delivered to various mills in the Niagara district and across the border.

#### New Pulp Plant Nearing Completion

The new ground wood mill of the Temiskaming Pulp and Paper Company is nearing completion. The location is two miles north of Haileybury on the shores of Lake Temiskaming, and it is expected the plant will be put in operation about the middle of May. The capacity will be 40 tons of ground wood daily. The buildings are admirably laid out and are adjacent to the Temiskaming & Northern Ontario Railway. In dimensions, the mill is 160x40 feet and of one-story construction except the grinder room which is two stories. The foundation is of a concrete with steel superstructure, with interlocking tile filling and roof of Robertson gypsum. Some short distance away right on the lake shore is the slasher and barking department. This is equipped with one Canadian barking drum of the latest type. The installations in the pulp mill are two Waterous grinders, two wet machines, two Worthington pumps, together with the latest screens, etc. The plant will be electrically driven. The company own 50 square miles of pulpwood along Lake Temiskaming on which it is estimated there is a supply of raw material ample to meet the needs of the mill for the next 20 years. This wood will not be cut at present as the company has entered the market for its supplies for the coming year. It purposes buying up its wood supply as long as it can secure it on favorable terms rather than operating its own limits. The head office of the Temiskaming Pulp and Paper Company is located in Toronto. Alex. Fasken, K. C., is the president, J. H. Black, managing director, and C. C. Calvin, secretarytreasurer.

#### Company Will Secure New Agreement

It is said that an arrangement will be arrived at between the Ontario government and the Great Lakes Company of Port Arthur, which hold the pulpwood concessions of the Pic and Black Sturgeon rivers in the Thunder Bay district. It is learned that the Ontario authorities will grant the company an extension of time and that there will be some changes in the agreement which will call for the erection of a news print mill and a sulphite plant instead of a ground wood plant as originally proposed.

#### Beaverboard Plant Will Be Speeded Up

It is good news to the people of Thorold, Ont., that the Beaver board plant there will soon take on a hundred more men as a result of the decision of the company to transfer all its orders for beaver board, which would ordinarily be cared for by their Tonawand. mill, to the plant at Thorold. The latter will be speeded up to full capacity as soon as possible to take care of the additional orders. The business now diverted to Thorold, by reason of the shutdown, owing to repairs, at Tonawanda, will not be returned to that unit, according to Mr. Robertson, manager at Thorold, unless the business so increases that the Canadian mill cannot handle it.

#### General Trade Jottings

There has been a decided improvement in railroad business at Bridgeburg, Ont., which yards are reported busier than at any time since the beginning of the period of slackness. Much of the east-bound freight moving out of the frontier terminal is pulp and pulpwood, which formerly went via Cobourg and is now being diverted.

C. W. Graham of Buntin, Gillias & Co., Hamilton, Ont., who is a former president of the Canadian Paper Trade Association, left recently on an extended holiday trip to Florida.

The Canada Paper Company of Windsor Mills, Que., which has branches in Toronto and Montreal, has put on the market recently a new cover paper, known as Cloudland, which is made in four colors and is commanding much favor.

E. L. Kinzie has resigned his position as superintendent of the Lincoln Paper Mills, Merritton, Ont., and has been succeeded by Peter Leslie. Mr. Leslie was for eight years with the Hammermill Paper Company as superintendent of their plant at Erie, Pa.

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Established 1886

# Experience

WISELY has it been said: "Experience is a jewel." And it is a jewel that neither money nor influence can bring. It is the product and the gift of Time. No person, no organization, can win it except through the labor of years.

WE count as one of the great assets and cherished possessions of this business, the fact that it has been our privilege to serve the trade for more than thirty-five years. We have constantly endeavored to render a service that should be commenced, carried on, and concluded with complete satisfaction to you and to us.

WE should like to show you in what manner you can profit by lessons we have learned in a thirty-five year schooling.

# M. GOTTESMAN & COMPANY

INCORPORATED

18 East 41st Street New York, N. Y.

#### BRANCHES AT

Holyoke, Mass. Kalamazoo, Mich.

# BOSTON TRADE REPORTS A GENERAL IMPROVEMENT

Betterment, However, Is Not as Noticeable as Was Expected
Owing to the Big Textile Strike Which Has Greatly Decreased the Demand for Certain Varieties of Paper—
Hollingsworth & Whitney Co. Interested in a Big Pulpwood Deal in Canada—A. Storrs & Bement Co. Takes
On Several New Lines—Highland Lake Paper Co. Files
Articles of Incorporation.

[FROM OUR REGULAR CORRESPONDENT.]

Boston, Mass., February 21, 1922.—A general improvement in all branches of the paper industry was noticed here this week. In some instances the business was brisk, the demand being constant, while in other cases the increase was nearer normal.

The week's activity, however, was far from what leaders in the trade had predicted or hoped for, due to the big textile strike which has spread throughout New England, paralyzing the industry, causing more than fifty plants to cease operations and throwing out of work more than 50,000 hands.

Had it not been for this unexpected event Boston would have enjoyed a banner week, according to those who have made a close study of the strike's effect upon the paper business—for paper plays an important part in the manufacture, preparation and shipment of all textile goods.

Boston, being the trade center of the paralyzed district, has received a crushing blow and the loss to paper dealers who for years have been supplying these big mills with a various assortment of paper stock have already lost thousands of dollars in business as a result. Each week carloads of paper products, including pasted boards, paper tubes, wrappings, etc., have gone from Boston houses to these plants. Now, of course, that business is dormant. One mill, accustomed to contracting for from 1,500 to 1,800 tons of pasted board at this time each year, sent word to its Boston dealer this week to eliminate the order. This is but one of many similar instances. The blow is a severe one and comes at a time when business was more than needed.

The American Woolen Company's plants, the big mills at Lowell and all through Rhode Island—all large users of paper products—are out of the market and with little hope of a near settlement at hand. Dealers in wrappings have been hit especially hard.

Despite this setback Boston's merchants refused to be downhearted and despite this most recent attack claim that orders are coming in from other quarters and that February—taking everything into consideration—has been much better than even the most optimistic dealer even hoped for.

Mills are reported running to fuller capacity, particularly those dealing in boards. Board prices are due for an increase in the higher grades this week, it was learned. Chip still remains at \$37.50. There is an increased demand in paper stock lines with prices still firm and firmer when a bit of business appears in sight. Speculation still is rife in this branch and some of the old line houses and conservatives have directed their guns upon the ones responsible, in an attempt to at least check the practice.

#### A. Storrs & Bement Co. Activities

Five members of the A. Storrs & Bement Company will spend the week of February 20 at the mills of the Strathmore Paper Company, where they are to have an intensive course of training in the materials and methods used in the manufacture of high-grade bond, wadding, book and cover papers. The party consists of Messrs. Blackmur, Hughes, Talbot, Spalding and Mullen. Samuel S. Talbot has just been added to the selling force. He has had extensive mill experience and has been with the C. M. Rice Paper

Company of Portland, Me., for several years. He will cover Maine, with headquarters at Portland.

This well-known house has taken on the agency for Duotone Translucent, manufactured by A. M. Collins Company, and Strathmore Script, the highest grade of writing ever made by this well-known mill. Both lines will be in the Boston stock of the abovementioned house. Old Hampshire Bond is being featured in an extensive newspaper advertising campaign over the name of A. Storrs & Bement Company, the New England distributor. The campaign is for three months and is for the purpose of presenting arguments to the business man to influence them in using the best in stationery and in this way aid the printers of New England in their drive for "Better Paper—Better Printing."

F. S. Cummings, president of the company, spent several days in New York recently. He took part in a conference of the Advertising Committee of the National Announcement Association, of which he is chairman, and in the annual conference of the clients of George Batten Company.

#### Hollingsworth & Whitney in Pulpwood Deal

Much interest is being manifested in paper circles here regarding a report that negotiations have begun between Charles T. White & Son, Sussex, N. B., and the Hollingsworth & Whitney Company of New York and Waterville, Me., for the purchase of immense areas of lumber and pulpwood lands owned by the former in Albert County, New Brunswick, and Cumberland County, N. S. Fifteen representatives of the Hollingsworth & Whitney Company are inspecting the property in the two provinces, it is reported.

#### Highland Lake Paper Co. Incorporates

The newly formed Highland Lake Paper Company at Walpole, Mass., has received its corporation papers. Following the announcement of the concern's incorporation it was announced that it has purchased the paper mill at Highland Lake operated for twenty-five years by John F. Wall. The concern will continue to manufacture high grade sheathings and special waterproofs. T. F. Hersey, formerly sales manager of the Angier Mills at Ashland, Mass., will have charge of sales and D. A. Donnelly, former superintendent of the Angier plant, will operate the new mill.

#### Association Renews Dumping Fight

Following the receipt of reports that the customs service has found no evidence abroad to bear out charges that foreign paper and pulp is being dumped in this country, Dr. Hugh P. Baker, executive secretary of the American Paper and Pulp Association has filed with the Federal authorities a number of new offers of foreign material, contained in letters from importers or agents of foreign mills.

This is in addition to the part the Association has played in the effort to secure the speedy enactment of an adequate protective tariff. The Association was largely represented at the Tariff Conference held in Washington, January 30 and 31 under the auspices of the National Manufacturers' Association, and took an active part in the effort to have the American Valuation Plan enacted into law.

The result of the ballot on the American Valuation Plan taken among members of the Association with its showing of 103 for and 7 against this plan, has already been sent to members.

#### U. S. Envelope Surplus Cut

The 1921 report of the United States Envelope Company shows a surplus of \$170,301 after interest, depreciation, taxes and reserves, which compares with \$512,764 in 1920. Net profits were \$728,154 and interest charges \$134,125. For depreciation \$423,728 was written off and \$645,000 was distributed in dividends, leaving a deficit of \$474,699.

# LVCK vs SVRETY

Sorcery and witchcraft,—reliance on the magic charm of the horse-shoe, the rabbit's-paw, the four-leaf-clover and other tokens of luck have succumbed to the advancement of the human intellect which now demands the tangible and the positive.

Factory superintendents, engineers, and production managers have learned that the utmost confidence and reliance can be placed in Columbian Tape-Marked Pure Manila Transmission Rope—as the red, white and blue Tape-Marker bearing the words "Guaranteed Rope, Made by Columbian Rope Co., Auburn, N. Y.," and the presence of the red, white and blue outer yarns, are tangible and positive proofs of the utmost quality in Transmission Rope.

The colored tape runs in one strand throughout the entire length of every coil. Insist on its presence,—it is your Rope Insurance policy.

Columbian Rope Company
373-90 Genesee Street
AUBURN, N. Y.

"The Cordage City"

Branches:—New York, Chicago, Boston, Houston, Baltimore





#### MAY START AT THREE RIVERS SOON ON BIG \$3,000,000 PLANT

Some Contractors State that They Have Been Approached to Undertake the Construction of the Mill—Paper and Pulp Industry Greatly Interested in Possibilities of Big Increase in Hydro-Electric Power Available, Owing to Bill Passed for the Development of 200,000 H. P. at Carillon Falls—Wayagamack Pulp & Paper Co. Holds Annual Meeting—Clean Water as Preservative for Groundwood.

[FROM OUR REGULAR CORRESPONDENT.]

MONTREAL, Que., February 20, 1922.—Rumors from Three Rivers are to the effect that preliminary steps for the construction of the plant of the "Three Rivers Pulp and Paper Company" with a capital of \$3,000,000 or more, will be taken up shortly, according to some contractors who state that they have been approached to undertake the construction. The Three Rivers Pulp and Paper plant has located near the Three Rivers Ship Yard now occupied by the Fraser Brace Company.

#### To Increase Hydro Electric Power

The principal feature of interest in the industry here this week is the possibility of a great increase in the hydro-electric power available owing to the fact that the Quebec Legislature has passed the bill of the Montreal Public Service Corporation for the development of 200,000 h.p. at the Carillon Falls. As was stated last week, these falls are about 25 miles from Montreal and the principal competitor of the company is the Montreal Light, Heat and Power Company, which in its turn is the distributor in this district for the power generated by the Shawinigan Water and Power Company. The Public Service Corporation expect to raise money in the United States for the development of the power and E. A. Roberts, the president of the company, states that the interests he represents, which include the Montreal Tramway Company as well as the Public Service Corporation, expect to expend at least \$100,-000,000 on schemes of expansion, and between thirty to forty million dollars of this will be expended within the next four or

In the meantime from Ontario there comes the news that the Ontario Government, which recently developed the power of the Nipigon Falls, finds that it is unable to earn even the interest charges of the cost of that development, and pressure is being brought to bear to induce the Great Lakes Pulp and Paper Company to proceed at once with the construction of the pulp and paper mill at Fort Williams so as to relieve the Government of its anxiety over the Nipigon power situation. When Attorney-General Raney last communicated with the company, he asked them to show reason in view of their failure to comply with certain terms affecting construction and operation of a plant, why their pulp limit concessions on the Pie and Black Sturgeon rivers should not be canceled. Fort Williams' councillors acted as mediators in bringing the company and the Government toward an amicable understanding. What the company is understood to have offered to do is to commence the construction of a pulp mill on somewhat smaller lines than that called for in the original agreement. The Government will consider the proposal.

#### Brompton Defers Preferred Dividend

The shares of the Brompton Pulp and Paper Company showed marked weakness on the Montreal Stock Exchange this week owing to the fact that the directors have decided to defer the dividend on the \$2,000,000 8 per cent preferred stock of the company. The statement was made by an interest close to the company that the action of the board was due to a desire to insure the liquid position of the company. On inquiry it was also learned

that under a clause of its new bond issue it is required to maintain a margin of \$2,000,000 work capital ahead of the distribution of the dividends. As the liquid position has dropped below that requirement, there was nothing else for the board to do but pass the dividend.

#### Wayagamack's Annual

The annual general meeting of the shareholders of the Wayagamack Pulp and Paper Company, Limited, was held at Three Rivers during the past week, when the following were elected directors: Norman J. Dawes, G. H. Duggan, Hugh MacKay, K. C., Alex. Maclaren, Sir Wm. Price, Jas. W. Pyke, C. R. Whitehead. At a subsequent meeting of the directors, C. R. Whitehead was elected president and Jas. W. Pyke, vice-president.

#### Alberta May Produce Pulp

The establishment of the paper and pulp industry in the Province of Alberta may come as the result of a series of experimental tests being arranged by the advisory scientific research council of the Provincial Government. Huge tracts of small timber in the north and in the western foothills will be turned to profitable account if the experiments work out successfully. Much of the woodedarea of northern Alberta is covered with small-growth poplar, for which, up to date, no other use than to serve as firewood for the settlers, has been found. It is believed that this wood, either clear, or mixed with spruce, which is found in smaller quantities, will produce a good marketable article.

#### Water Storage for Pulp

R. J. Blair, Pathologist of the Forest Products Laboratories, McGill University, who has been experimenting over a period of seventeen months in the use of clean water as a preservative for stored mechanical pulp, states that the various forms of pulp deterioration are due to the action of wood destroying fungi and moulds. To keep pulp free from attacks of any of these it is necessary to store the material in such a way that one or more of the requirements of the mould or fungus plant will be lacking. Starting from the accepted fact that wood which is immersed in water, or is covered with water-saturated soil, is not destroyed by agencies which bring about ordinary decay, he has experimented in the use of clean water for preserving pulp. He makes public the following summary and conclusions of the experiments:

1. Of the pulp received only part was stored in water. The remaining laps and sheets were left in the building with the storage tanks and were freely exposed to the air. After seventeen months this latter material was found to be in very bad condition.

2. A comparison between fresh lapped pulp and that stored in water shows that after seventeen months there was slight deterioration in all cases. For pressed pulp the same condition held but was more noticeable.

3. In stored slush stock the freeness was much higher than in the case with either laps or pressed pulp stored for the same length of time under the same conditions, and the strength tests were also somewhat lower.

4. In making a comparison between different methods of water storage running water apparently gave a better result than either a weekly or daily change.

5. In cold storage little deterioration seems to occur.

6. The results indicate that water storage is superior to air storage for groundwood pulp.

#### Changes in Hinde & Dauch Paper Co.

Sandusky, Ohio, February 20, 1922.—The Hinde & Dauch Paper Company announces the following changes in its executive personnel: Sidney Frohman, chairman of the board; Frederick Emmons, president; J. W. Harbrecht, vice president; O. F. Rinderle, treasurer; C. N. Kiefer, secretary; W. F. Pfeiffer, assistant secretary; R. K. Ramsey, general counsel.

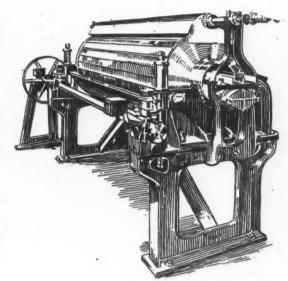
# Flance at the Illustration

Note the simple, practical design of the Walpole Screen. There are no superfluous knick-knacks or delicate parts to get out of order.

The Walpole Screen is designed for the particular purpose of screening high-grade rag-stock papers.

It delivers uniformly clean stock and maintains continuous production without breaks or shutdowns for washing up.

Let us send you the details.



#### BIRD MACHINE COMPANY, South Walpole, Mass.

Western Representative T. H. Savery, Jr., 1718 Republic Bldg., Chicago, Ill. Canadian Builders of Bird Machinery Canadian Ingersoll-Rand Co., I.td., 260 St. James St., Montreal, Canada

WALPOLE SCREENS

# MORE CONFIDENCE IS SHOWN BY CHICAGO PAPER TRADE

Business Is Said to Be Picking Up With the Outlook for a Continued Improvement from Now On—Orders Are More Numerous and for Larger Quantities than they Have Been for Some Time Past—National Association of Folding Box Manufacturers Meet at Congress Hotel and Discuss Numerous Important Subjects—Hampden Glazed Paper & Card Co. Has Exhibit.

#### I FROM QUE REGULAR CORRESPONDENT.

CHICAGO, February 20, 1922.—During the last two or three months of 1921, paper men in Chicago did much speculating on the future and what it had in store for the industry as a whole, and particularly locally. Now the speculation is not so persistent, not because the trade here has lost confidence in the future, but because it has gained some confidence and the ned of speculation appears to most of them to be unnecessary.

However, whenever a member of the trade is asked his opinion of the trend of trade, he usually responds with enthusiasm that business is picking up a little and looks very much as if it were

going to show improvements right along now.

"I think that we have passed over the worst of the depressed period and from the present indications we are on the uphill climb," one mill representative said this week. "Orders aren't flooding any of us under, but still I doubt if you'll find a man in the business who is pessimistic enough to think that better business conditions are being developed. We are getting more orders and of larger volume now than we have for some time. Buying is easier and the market seems to be firmer and a little more stable. Competition is growing strong, of course, and some of the buyers feel that this should bring them better prices, but I doubt whether it will to any large extent."

Another mill representative said: "February has been good so far and I expect that we'll finish the month and make a good start for a fairly prosperous year. Shopping around is still being done by a lot of our customers before placing orders. That's competition. But while our orders aren't so heavy as we would like to see them, we can still say that we've had a good month and look forward to much better business."

#### Folding Box Manufacturers Meet

The annual meeting of the National Association of Folding Box Manufacturers was held Friday, February 17, at the Congress Hotel, Chicago, in the Green Room. Two sessions were held, one in the morning and one in the afternoon. It was a spirited meeting, full of pep and enthusiasm for the future of the folding box industry, and the consensus of opinion was that while business today was a little slow, this situation would shortly come to a close and better business would follow.

Topics taken up for consideration were: "The industrial situation," "The increase in demand for members' product," "The statistical program," "The cost program," "Activities of the National Chamber," "Boxboard nomenclature," "Advertising" and "A code

of ethics and pending federal legislation."

The morning program was devoted to group meetings, and the afternoon was taken up with an executive session.

#### Hampden Glazed Paper Exhibit

The Hampden Glazed Paper and Card Company of Holyoke, Mass., held an exhibit of Sunburst Prize Covers at the Art Institute in Chicago last week, when 275 specimens were shown. These designs were selected from many which were submitted in the company's recent Sunburst Prize Cover contest. The contest brought forth 3,500 entries from all sections, not only of this coun-

try but from Canada, England, France, Belgium, Cuba and many other places. The purpose of the contest was to demonstrate the usefulness of Sunburst Covers as a medium of design. A very high standard of designs was sent in and by a gradual process of elimination fifteen prizes were confined to 270 contestants, following which directors of the American Institute of Graphic Arts, acting as judges, selected the fifteen prize winning covers.

#### Trade Golfing Tournaments

The paper merchants of Chicago have taken quite a little interest in a recent announcement made by a member of the committee in charge of the Printing Trades Golf Association of Chicago, as the paper merchants in 1920 gave this association a two foot silver loving cup, which is to be given to the golf shark who can win it three times. It is the annual grand prize of each season, and has already two contenders to its ownership. An announcement was recently made that three tournaments will be held this year. It was also said that last year the paper men of Chicago, in the tournaments "showed some speed" and the printers this year are going to try to go them one better, so that even this early in the season it looks as though there were going to be a golf war on between the printers and paper merchants handling printing papers.

The committee will hold a meeting next week when plans for the coming tournaments will be mapped out. Membership is to be limited at the start, but will gradually be increased. The association will use a selective method of picking members and the fee is to be \$10. The word now being passed among the paper merchants is that they should get in some early spring practice, for there is a hard summer ahead on the greens. The house of Parker, Thomas & Tucker is considered as one representing some leading trade golfers and there is some hope of something being done for the traditions of the paper industry by a member of this firm.

#### General Cricago Trade News

The Singer Paper Box Company, 814 W. Congress street, Chicago, recently increased its capital stock to \$35,000. The increase was made to allow for expansion and in line with the progressive program of this company.

H. W. Jenkins has opened an office in the Wrigley Building,

Chicago, where he is carrying on a jobbing business.

Frank D. Gilchrist, secretary and treasurer of the Watervliet Paper Company, Watervliet, Mich., spent two or three days in Chicago this week calling on his friends here.

Several groups of printers representing the various branches of this industry in Chicago held meetings during the current month and discussed their relationship to the paper industry and what steps should be taken to impress the paper merchants with their importance to the latter trade as distributors of paper.

#### Creditors of Cushnoc Paper Co. Meet

[FROM OUR REGULAR CORRESPONDENT.]

Augusta, Me., February 21, 1922.—The first meeting of the creditors of the Cushnoc Paper Company and the Kennebec Paper Company was held at the courthouse this week before Referee J. C. Little. Richard H. Smith of New York, president of the bankrupt companies, was the only witness examined.

Adjournment was taken for two weeks, when a trustee and appraisers will probably be appointed. Many lawyers representing

creditors were present.

Attorney Everett H. Mavey said that the payment of a dividend to the creditors was contingent upon the mills being kept running. Through advances being made by a New York bank, the payrolls of the companies are at present being met. The receivers are Percival Wilds of New York and Walter Wyman of this city.

Plans are in progress for a reorganization of the concerns. The sum represented by the unsecured creditors of both corporations

is \$1,000,000 and that of secured creditors, \$550,000.

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# "IMPCO" TAILING SCREENER

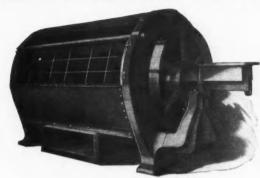
FOR SCREENING GROUND WOOD TAILINGS

Very Low

Power

and

Upkeep Expense



**Delivers** 

Rejections Free

from Good

Stock

ANOTHER UNIT OF OUR CLOSED SYSTEM FOR PULP SCREENING

WRITE FOR FULL DETAILS

CORRESPONDENCE A PLEASURE

IMPROVED PAPER MACHINERY CO. Nashua, N. H. SHERBROOKE MACHINERY CO., LIMITED, SHERBROOKE, CANADA

# WHALEN SULPHITE PULPS

Made from the SITKA SPRUCE of BRITISH COLUMBIA Noted for Fibre, Color and Strength

SNOWHITE BLEACHED SULPHITE

GLACIER EASY BLEACHING SULPHITE SWAN STRONG SULPHITE

As exclusive Sales Agents for all of the products of the WHALEN PULP & PAPER MILLS, LTD., in addition to stocks at the mills, we will carry large stocks of the above well-known brands in New York, thus insuring prompt deliveries.

Your inquiries addressed to any of our offices will bring prompt quotations by wire.

# CANADIAN ROBERT DOLLAR CO., Limited VANCOUVER, B. C.

U. S. ADDRESSES

Robert Dollar Co., Robert Dollar Bldg., San Francisco. Robert Dollar Co., 15 Moore Street, New York, N. Y. Robert Dollar Co., Harris Trust Bldg., Chicago, Ill. Robert Dollar Co., L. C. Smith Bldg., Seattle, Wash. FOREIGN OFFICES

Robert Dollar Ce., Shanghai, Hong Kong, Hankow, Tientsin, Ichang, Chungking, and Pekin, China; Kobe, Japan; Calcutta, India; Manila, P. I.; Singapore, S. S.

# CONTRIBUTORS TO THE JOINT VOCATIONAL EDUCATION FUND

The following is a list in the United States of the contri	ibutors	Hampshire Paper Company, S. Hadley Falls, Mass	100.00
to date to the Vocational Educational Fund of the Pulp and		Hanna Paper Corporation, Watertown, N. Y	335.48
Industry. A matter of something over \$3,000 is still nee	_	Heritage, C. C. (Balance of Buffalo Entertainment Fund)	190.00
complete the work of the committee and contributions are ea		Holyoke Card and Paper Company, Springfield, Mass	100.00
solicited from concerns and individuals who are interested by	ut who	Hummel and Downing Company, Milwaukee, Wis	50.00
have not as yet given to the fund. Checks should be sent to	R. S.	F. C. Huyck Sons, Albany, N. Y	50.00
Kellogg, secretary, Vocational Educational Committee, 342	Mad-	Inland Empire Paper Company, Millwood, Wash	100.00
ison avenue, New York.		International Paper Company, New York City	2,000.00
Adams Paper Company, Inc., Wells River, Vt	\$50.00	Itasca Paper Company, Grand Rapids, Minn	50.00
Albemarle Paper Manufacturing Company, Richmond, Vt.	100.00	Kalamazoo Vegetable Parchment Company, Kalamazoo,	
American Writing Paper Company, Holyoke, Mass	600.00	Mich	50.00
American Wood Board Company, Schuylerville, N. Y	100.00	Knowlton Brothers, Inc., Watertown, N. Y	100.00
Bardeen Paper Company, Otsego, Mich	50.00	Lee Paper Company, Vicksburg, Mich	100.00
Bedford Pulp and Paper Company, Richmond, Va	200.00	Mac-Sim-Bar Paper Company, Otsego, Mich	100.00
Bemis Brothers Bag Company, Boston, Mass	100.00	Manitowoc Paper Company, Manitowoc, Wis	50.00
Berkshire Hills Paper Company, Adams, Mass	50,00	McDowell Paper Mills, Philadelphia, Pa	50.00
Bird & Sons Company, E. Walpole, Mass	50.00	Merrimac Paper Company, Lawrence, Mass	100.00
Black-Clawson Company, Hamilton, Ohio	100.00	Miami Valley Paper Manufacturers, Hamilton, Ohio	2,000.00
Brown Company, Portland, Me	100.00	American Writing Paper Company, Franklin, Ohio.	
L. L. Brown Paper Company, Adams, Mass	100.00	Beckett Paper Company, Hamilton, Ohio.	
Brownsville Board Company, Watertown, N. Y	100.00	P. Cary Manufacturing Company, Lockland, Ohio.	
Brownville Paper Company, Watertown, N. Y	100.00	Champion Coated Paper Company, Hamilton, Ohio.	
Bryant Paper Company, Kalamazoo, Mich	100.60	Crystal Paper Company, Middletown, Ohio.	
Bryce, M. Hess (Balance Chicago Entertainment Fund),	212 21	Fox Paper Company, Lockland, Ohio.	
Chicago Delton Mass	212.31	Franklin Board and Paper Company, Franklin, Ohio. Gardner & Harvey Company, Middletown, Ohio.	
Byron Weston Company, Dalton, Mass	100.00 50.00	Mead Pulp and Paper Company, Dayton, Ohio.	
J. W. Butler Paper Company, Chicago, Ill	100.00	Miami Paper Company, W. Carrollton, Ohio.	
Case Brothers, So. Manchester, Conn	100.00	Miamisburg Paper Company, Miamisburg, Ohio.	
Central Paper Company, Muskegon, Mich	100.00	W. B. Oglesby Paper Company, Middletown, Ohio.	
Champion Fibre Company, Canton, N. C	500.00	Ohio Paper Company, Miamisburg, Ohio.	
Chemical Paper Manufacturing Company, Holyoke, Mass.	100.00	Patent Vulcanite Roofing Company, Franklin, Ohio.	
Cherry River Paper Company, Scranton, Pa	100.00	Peerless Paper Company, Dayton, Ohio.	
Claremont Paper Company, Inc., Claremont, N. H	100.00	Richardson Paper Company, Lockland, Ohio.	
Cliff Paper Company, Niagara Falls, N. Y	42.14	Paul A. Sorg Paper Company, Middletown, Ohio.	
Cornell Wood Products Company, Cornell, Wis	50.00	Wardlow-Thomas Paper Company, Middletown, Ohio.	
Edwin Crabtree & Sons, Claremont, N. H	50.00	Wrenn Paper Company, Middletown, Ohio.	
Crane & Co., Dalton, Mass	200.00	Millers Falls Paper Company, Millers Falls, Mass	50.00
Crocker-McElwain Company, Holyoke, Mass	300.00	Monroe Bridge Paper Company, Bogota, N. J	50.00
Crown-Willamette Paper Company, San Francisco, Cal	200.00	Mt. Tom Sulphite Pulp Company, Mt. Tom, Mass	100.00
Defiance Paper Company, Niagara Falls, N. Y	100.00	Munising Paper Company, Munising, Mich	200,00
Detroit Sulphite Pulp and Paper Company, Detroit, Mich.	400.00	Monroe Felt and Paper Company, Lawrence, Mass	50.00
Dill & Collins Company, Philadelphia	200.00	National Paper Products Company, San Francisco, Cal	100.00
District of Columbia Paper Manufacturing Company,		Neenah Paper Company, Neenah, Wis	50.00
Washington, D. C	100.00	Nekoosa-Edwards Paper Company, Port Edwards, Wis.	100.00
Eastern Manufacturing Company, Bangor, Me	250.00	New Haven Pulp and Board Company, New Haven, Conn.	100.00
Eaton Dikeman Company, Lee, Mass	100.00	Newton Falls Paper Company, Newton Falls, N. Y	50.00
Eddy Paper Company, Three River, Mich	100.00	New York and Pennsylvania Company, Johnsonburg, Pa.	500.00
Esleeck Manufacturing Company, Springfield, Mass	100.00	Niagara Paper Mills, Lockport, N. Y	100.00
Everett Pulp and Paper Company, Everett, Wash	100.00	Northwest Paper Company, Cloquet, Minn	200.00
Falls Manufacturing Company, Oconto Falls, Wis	50.00	Oswego Falls Pulp and Paper Company, Fulton, N. Y	99.08
Falulah Paper Company, Fitchburg, Mass	100.00	Oxford Paper Company, New York City	100.00
Federal Paper Board Company, Inc., Bogota, N. J	50.00	Paper Inc. (Payment for Articles), New York City	104.30
Finch, Pruyn & Co., Glens Falls, N. Y	275.95	Papermakers Chemical Company, Easton, Pa	50.00
Fitzdale Paper Company, Fitzdale, Vt	58.17	Parsons Paper Company, Holyoke, Mass	100.00
Fletcher Paper Company, Alpena, Mich		Pejepscot Paper Company, 42 Broadway, New York B. F. Perkins, Holyoke, Mass	187.88
Ft. Orange Paper Company, Castleton, N. Y	100.00	Pettebone-Cataract Paper Company, Niagara Falls, N. Y.	100.00
Hamersley Manufacturing Company, 23 Park Place,	100.00	Pittston Paper Corporation, Pittston, Pa	62,12
New York	200.00	Port Huron Sulphite and Paper Company, Port Huron,	50.00
W. C. Hamilton & Son, Inc., Philadelphia	100.00	M: 1	200.00
Hammermill Paper Company, Erie, Pa	200.00	(Continued on page 38)	200,00
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## New York Trade Jottings

John K. Stadler, of the Belgian Industrial Company, Shawinigan Falls, Quebec, and his wife will be in town for a few days this week.

Richard Bauer, paper dealer, 310 Church street, has removed to new quarters at 476-478 Broome street, New York. Telephone Canal 1334-1335.

W. H. Chamberlain, sales manager of the Hooker Electrochemical Company, is in the south on business and is expected to return in about one week.

The Manitou Paper Company, Inc., of Manitou-On-Hudson, New York, has removed their New York City offices to the Fisk building, Broadway at 57th street.

Orvar Hylin, vice-president and secretary of the Lagerloef Trading Company, has just returned to New York from a protracted trip through Sweden, Finland, Germany, France and England.

Nathan Griffler and Philip Griffler, doing business as the Rose Paper Company, at 3970 Third avenue, filed a petition in bankruptcy Wednesday, February 15, listing liabilities of \$1,761 and no assets.

R. S. Hatch, of the Hammersley Manufacturing Company, and former president of the American Paper and Pulp Association, will leave Wednesday, February 22, for a cruise through the Carribean and the Panama Canal.

Karl Hagenbacher announces the removal of his offices from 253 Broadway to larger quarters at 258 Broadway. The company has close mill connections with manufacturers of book, bond, tissue and wrapping papers. Phone Barclay 5511.

\* \*

Dr. H. P. Baker, executive secretary of the American Paper and Pulp Association, left New York for Buffalo, Monday evening, February 20 to attend a conference on the coal situation to be held on Tuesday. He will return to the City the latter part of the week.

Joseph Poppe, New York selling agent for Robertson Paper Company, Inc., Bellows Falls, Vt., has opened an office in the Canadian Pacific Building, 342 Madison avenue, New York. With Mr. Poppe will be associated M. Goldberg, who has been connected with the company during the last five years. The mill makes waxed and oiled papers of all kinds.

The Allied Paper Mills, of Kalamazoo, Mich., announce that D. C. Culbertson has become associated with them, as director of sales for their product in the Eastern territory, with head-quarters at 200 Fifth avenue, New York city. The company's product is quite varied, comprising the papers made by their mills, The King Paper Company, The Monarch Paper Company and The Bardeen Paper Company. J. W. Quimby continues his activities with the company, in charge of sales of blanks, box-boards, etc.

The Cohoes Envelope Company, Inc., Cohoes, N. Y., maker of envelopes, carrybags, tagvelopes, etc., has opened a New York sales office in the Canadian Pacific Bldg., 342 Madison avenue, New York, which will be in charge of Edward R. White. Mr.

\* \* \*

White served in the army as a lieutenant during the war and has since been employed in the Cohoes factory of this company. The Cohoes Carrybay, a new offering, will soon be available in a complete range of sizes including those for carrying phonograph records. An official of the company also promises some innovations in merchandise envelopes and shopping bags in the near future. There has been no business depression for this company as it has been running to capacity and is constantly adding new equipment in its eight story plant at Cohoes, N. Y.

## CONTRIBUTORS TO EDUCATIONAL FUND

(Continued from page 36)

(comment from have no)	
Racquette River Paper Company, Potsdam, N. Y	400.00
B. D. Rising Paper Company, Housatonic, Mass	100.00
Sandusky Foundry Company, Sandusky, Ohio	100.00
Schmidt & Ault Paper Company, York, Pa	100.00
Schuler & Benninghofen, Hamilton, Ohio	100.00
Sherman Paper Company, Watertown, N. Y	117.35
Skaneateles Paper Company, Skaneateles, N. Y	100.00
St. Regis Paper Company, Watertown, N. Y	225.98
Standard Paper Company, Kalamazoo, Mich	200.00
Strathmore Paper Company, Mittineague, Mass	250.00
Tidewater Paper Mills, Brooklyn, N. Y	50.00
Union Bag and Paper Corporation, New York City, N. Y.	300.00
S. D. Warren Company, Boston Mass	500.00
Watab Paper Company, Sartell, Minn	271.36
Wausau Paper Mills Company, Brokaw, Wis	100.00
Wausau Sulphate Fibre Company, Mosinee, Wis	100.00
Westinghouse Electric and Manufacturing Company,	
Pittsburgh, Pa.	250.00
West Virginia Pulp and Paper Company, New York City	500.00
Wisconsin Manufacturers:	3,459.40

Appleton Coated Paper Company, Appleton, Wis. Ashland Paper Company, Ashland, Wis. Bergstrom Paper Company, Neenah, Wis. Chas. S. Boyd Paper Company, Appleton, Wis. Combined Locks Paper Company, Combined Locks, Wis. Consolidated W. P. & P. Company, Wisconsin Rapids, Wis. Dells Paper and Pulp Company, Eau Claire, Wis. Flambeau Paper Company, Park Falls, Wis. Fox River Paper Company, Appleton, Wis. Gilbert Paper Company, Menasha, Wis. Grandfather Falls Company, Merrill, Wis. Interlake Pulp and Paper Company, Appleton, Wis. Kimberly-Clark Company, Neenah, Wis. Lakeside Paper Company, Neenah, Wis. Marathon Paper Mills Company, Rothschild, Wis. Menasha Printing and Carton Company, Menasha, Wis. Neenah Paper Company, Neenah, Wis. Nekoosa Edwards Paper Company, Pt. Edwards, Wis. Outagamie Paper Company, Kaukauna, Wis. Patten Paper Company, Appleton, Wis. Rhinelander Paper Company, Rhinelander, Wis. Riverside Fibre and Paper Company, Appleton, Wis. John Strange Paper Company, Menasha, Wis. Thilmany Pulp and Paper Company, Kaukauna, Wis. Wausau Sulphate Fibre Company, Mosinee, Wis. Geo. A. Whiting Paper Company, Menasha, Wis. Whiting Plover Paper Company, Stevens Point, Wis. Wisconsin River Paper and Pulp Company, Neenah, Wis. Wolf River Paper and Fibre Company, Shawano, Wis.

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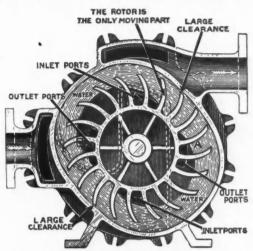
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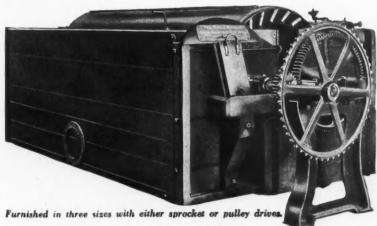
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## Editorial

Vol. LXXIV New York, February 23, 1922 No. 8
FIFTIETH YEAR

## Support for Educational Work

The Technical Association of the Pulp and Paper Industry through a Joint Vocational Education Committee, have been engaged in the preparation of a set of textbooks on pulp and paper manufacture for use in vocational education in class and correspondence instruction. The project which will consist, when completed, of a set of five volumes on pulp and paper manufacture prepared by men well qualified by training and experience, is well on the way towards completion.

The first two volumes have been issued and volume III on pulp manufacture, will be published in a few weeks. The material for volumes IV and V on paper manufacture, is well in hand and the volumes are expected to be out during the year.

The support of the plan by the industry as a whole, is indicated by the voluntary contributions of pulp and paper concerns as well as those in allied industries, a list of which is published elsewhere in this issue of the PAPER TRADE JOURNAL. The expense of the undertaking was somewhat underestimated and although over \$22,000 has been received and expended by the Committee for the Technical Association, it is found necessary that approximately \$3,000 additional be raised. The belief in the value of vocational education is well established in the paper industry, as evidenced by the fact that many of the more progressive concerns throughout the country, have organized classes in their communities and are making use of the first two volumes as a preliminary to the instruction in the manufacture of pulp and paper. In the issue of the PAPER TRADE JOURNAL of December 15, 1921, there appeared a very complete statement of vocational education as related to the paper industry, and it does not require to be emphasized at this time. It is the confident hope that as the work of the committee depends on the voluntary subscriptions of concerns, those who have not thus far assisted, will do so in order that the relatively small amount required may be forthcoming.

## Foreign Paper Prices Decline

The monthly average import price of news print for December continued to show the same decline which has marked its course for a number of months past. According to figures just issued by the Bureau of Foreign and Domestic Commerce of Washington the price per pound for the month averaged \$.0382 as compared with \$.0393 for November, \$.0405 for October and \$.0519 for December, 1920.

The monthly average import price per cord of pulpwood for December also continued to show about the same decline as during recent months.

The average price per cord for the month was \$10.70 as com-

pared with \$11.36 for November, \$12.30 for October and \$15.20 for December, 1920.

The monthly average import price per ton of ground wood, which increased slightly for November, showed a decline for December, the price for the month being \$25.80 as compared with \$26.94 for November, \$25.98 for October and \$58.28 for December, 1920.

The monthly average import price per ton of unbleached chemical pulp for December was \$54.04 as compared with \$54.25 for November, \$53.64 for October and \$132.77 for December, 1920.

The monthly average import price per ton of bleached chemical pulp for December was \$82.70 as compared with \$83.08 for November, \$76.77 for October and \$203.05 for December, 1920.

The monthly average export price per pound of news print for December was \$.045 as compared with \$.047 for November, \$.051 for October and \$.069 for December, 1920.

The monthly average export price per ton of wood pulp for December was \$58.72 as compared with \$49.00 for November, \$51.36 for October and \$130.95 for December, 1920.

## Anticipation and Realization

What we want and what we get are two different things. In the February 4 issue, page 28 of Editor and Publisher, a very simple method of estimating publishers' profits is propounded under the heading of "Newspaper Profits." These methods are advanced as plausible.

- (1) Determine the cash income for 1921, figure 25 per cent of this amount as the estimated profit for 1922, the balance to be expended under budgetry control on raw material and department
- (2) Estimated profits should be \$6.00 per year per subscriber.
- (3) Estimated profits should be \$2.00 per inhabitant for 1921 less 40 per cent for Federal taxes,

Editors and publishers are the most efficient trouble fixers yet discovered. Their specific cure for publisher's ills is—first decide what you want—then grab it.

How can this alluring plan be put into practice? It is easy enough to obtain from past records information on the cash income for the previous year, but to apply the proposed plan it is necessary to assume that an amount equal to or greater than the return in 1921 will be received during the current year. Apparently this is a minor consideration judging from Editor and Publisher's viewpoint, the presumption being that the anticipation of a fixed return is more or at least just as certain as its actual realization. Are publishers so certain of a fixed income that it is unnecessary for them to give consideration to such little matters as competition and economic conditions? Is there no possibility of failure to realize the cash income estimated, or are publishers so protected in this respect by implied agreements covering advertising rates or other means that their prospects for the future are assured? Fortunately the Sherman Laws sometimes step in to destroy or at least deter from the evils arising from restricted competition. Did Sherman ever consider the newspaper publisher when this law was written?

Why should publishers be in a different class from other business enterprises whose profits are affected by competition and the ordinary laws of supply and demand. Is there no relation between the investment and the reasonable per cent of return to be exnected?

Other people usually take into consideration first their cost of doing business based upon adequate cost records, the volume of business to be expected and, after allowing for general hazards, the reasonable per cent of return on their investment before fixing their selling pricess. So much for "anticipation." We have to live, however, and do business in every competitive and difficult economic period and we find that there is often a difference between anticipation and realization of profits. Along this line of reasoning Plan No. 1 appears rather like putting the cart before the horse.

Regarding plans 2 and 3, what basis is there for assuming that profits shall either be \$6.00 per year per subscriber, or \$2.00 per year per inhabitant, unless there is some assurance of a fixed return? How is this possible without conflicting with the natural laws of supply and demand? If the volume of business goes down rates and prices would have to be raised in order to maintain the profits anticipated. This is like trying to make water run up hill without the aid of an effective pump in the form of agreements between apparent competitors.

When competition and economic conditions are not themselves the principal controlling factors anyone who fixes selling prices based upon a per cent of return without relation to the investment as outlined by *Editor and Publisher*, is in danger on the one hand of being guilty of bamboozling the public if prices are too high, or on the other hand of committing financial suicide if the per cent of return when compared to the investment is too low.

## Senate Rejects House Valuation Plan

FROM OUR REGULAR CORRESPONDENT.]

Washington, D. C., February 21, 1922.—The work of framing the valuation scheme, to be incorporated in the forthcoming tariff bill on the basis of principles previously determined by the Senate Finance Committee, was turned over Friday to the Committee's experts.

The American valuation plan, approved by the House finally, has been rejected by the Senate Committee. The valuations sections of the bill as it is passed by the Senate are likely, therefore, to encounter a stiff fight in the House, with prospects of considerable delay in the final enactment of the bill.

The Finance Committee has decided, according to several of its members, to hold to the present system of levying duties upon the foreign invoice values of dutiable merchandise. To make for flexibility of the tariff and to meet changing conditions, a section will be included in the bill giving the President authority to increase or lower the rates set, not to exceed fifty per cent. The President would be empowered, after investigation by the Tariff Commission, to advance rates by proclamation on given commodities to meet foreign competition, and similarly to lower rates, if complaint that the rates fixed are so high as to bar certain commodities is found to be supported by fact.

The President would be given authority also to reclassify commodities upon which duties are fixed. A depreciated currency section, to be included in the bill, would come into operation when the money of the country fell below 70 per cent of par. Consideration of this section has caused considerable delay in the

The experts have been instructed to draft provisions to deal with all unfair practices in foreign trade. It is proposed, in addition, to embody in the bill provisions dealing with discriminations,

to guard against the granting of special privileges by foreign Nations to other Nations, if such privileges are withheld from American interests.

With the valuation problem out of its hands for the time being, the Finance Committee is expected to go ahead with the fixing of ad valorem rates. The number of such rates will be much smaller than in the Fordney bill. An effort has been made by the Committee to convert ad valorem into specific duties wherever possible.

## Reduced Fare for A. P. & P. A. Meeting

The American Paper and Pulp Association has been able to secure a reduced railway fare for its members who attend the Forty-fifth Annual Convention at New York the week of April 10. In addition it has been possible to secure the reduced fare for the wives of members, or others of their families. The reduced fare is one and one-half fare for the round trip, but in order to secure the reduced rate it will be necessary for those attending to secure the standard form of certificate from the agent from whom the original ticket is purchased. This certificate will then be signed by an Association officer, and when validated by a representative of the railroads, will be accepted for half of the return fare.

The securing of the reduced fare for those attending the convention is the latest step taken in the effort to make the Forty-fifth Annual Convention the best that has ever been held by the Association.

The special rate has been definitely authorized by the Trunk Lines Association, New England, Central, Western, Southwestern, Southeastern and Canadian Passenger Associations.

## National Paper Stock Co., in New Quarters

INDIANAPOLIS, Ind., February 20, 1922.—The moving of the National Paper Stock Company from Eleventh street and White River boulevard to its new building at 320-330 West Michigan street marks the opening of one of the most modern establishments of its kind in the state. The National Paper Stock Company is affiliated with the Toledo Paper Stock Company, C. M. Clark being general manager of both concerns.

Completely equipped with the most modern machinery and accessories necessary for the handling and assorting of waste paper, the plant has a capacity of more than 100 tons of paper a day. The equipment includes a five-ton elevator, with dimensions of sixteen by eighteen feet. Another smaller elevator also is contained in the building.

The structure is three stories in height with a basement under the entire building. Of entirely fireproof construction with complete sprinkler equipment, the building contains 6,500 square feet of floor space. Five balers with capacities of 1,500 to 2,000 pounds are maintained to take care of the output of the firm.

## Revising Dumping Investigation

[FROM OUR REGULAR CORRESPONDENT.]

Washington, D. C., February 20, 1922.—A committee of experts connected with the Customs Service of the Treasury Department is at work revising the procedure of the investigation of dumping of foreign goods on the American market as provided for by the anti-dumping law. As is generally known, the Secretary of the Treasury was designated in the anti-dumping law to investigate dumping of foreign goods on the American market. This power he in turn transferred to the Customs Service. Complaint has been made that it takes the Customs Service too long to investigate the charges of dumping and it is in an effort to speed up these investigations that the Committee is revising the procedure.



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## Section of the

# Technical Association of the Pulp and Paper Industry



AN ORGANIZATION FOR THE ENCOURAGEMENT OF ORIGINAL INVESTIGATION AND RESEARCH WORK IN MILL ENGINEERING AND THE CHEMISTRY OF PAPER, CELLULOSE AND PAPER-MAKING FIBERS GENERALLY; IT AIMS TO PROVIDE MEANS FOR THE INTERCHANGE OF IDEAS AMONG ITS MEMBERS IN ORDER THAT PROCESSES OF MANUFACTURE MAY BE MADE MORE EFFICIENT AND IMPROVED ALONG TECHNICAL LINES.



## Conducted by W.G.MacNAUGHTON, Secretary

## THE MANUFACTURE OF WOOLEN PRESS FELTS\*

BY E. S. BATES, OF BATES & INNES, LTD.

The first question that arises in dealing with this subject is, "Why is sheep's wool most generally used?" The chief reasons are its Felting Quality, Strength and Durability, and Resistance to Chemicals. Unlike all other fibers, such as hair and vegetable fibers, the wool fiber is a hollow tube the outside surface of which is serrated. These serrations or scales, with the hollowness of the fiber, account for the felting properties. In the course of manufacture the fibers curl and the scales interlock giving a strength not available in other fibers. The wool fiber as it comes from the sheep's back is full of natural oil, or yolk, and a portion of this oil is retained during manufacture. As it is removed the fiber tends to curl and shrink and felt. The nature of the work it is required to perform in its capacity of a porous belt carrying the liquid pulp through the stages of manufacture into paper, and allowing the water to be drawn or squeezed through without loss of pulp fiber makes this felting quality the most important reason why wool is the fiber most generally used.

This characteristic of the wool fiber varies according to the grade. In a long, coarse wool the serrations are further apart than in a finer, short stock and therefore its felting qualities are less, although the longer fiber gives additional strength to the yarn. The closer woven and smoother the surface of the felt required the shorter and finer must be the wool used in its manufacture, so that in all the different felts used in paper manufacture, from the coarse pulp felt to the fine plate felt, or the fine book machine felt, many grades of wool are brought into use, with a great variation in length of staple, diameter of fiber, felting quality, etc.

#### Grades of Wool

Wools from different breeds of sheep differ in length, diameter and strength of staple. In fact, each fleece contains upwards of fifteen to twenty distinct grades of fiber. The grading of wool is therefore a very important part of woolen manufacture. Much of this grading is performed before the wool is marketed, and mills are generally able to purchase, in any quantities required, approximately the types required. Generally speaking, a certain type of wool is bought either in the fleece, skirted, or sorted in a general way and either in the grease, that is, the natural state, or scoured. Grades are classed in a variety of ways. The British system is based on worsted counts, and a certain wool is said to be 36's or 40's, or 60's or 70's, according to its spinning properties, the basis being that, say a 40's quality, is supposed to spin into

a yarn 40 x 560 yards in length to the pound of wool, under fixed atmospheric conditions of 19 per cent regain of moisture from bone-dry condition. The American method of classifying wools is somewhat different, presumed to have been developed from the mixed-blood sheep, that is, mixture of the Merino and English breeds. Under this system wools are classified as Braid, Common Low Quarter, 1/4 Blood, 3/8 Blood, 3/2 Blood and Fine. It may be useful to some of you to know the comparative grades. Braid corresponds with the British grade 36's and Canadian Lustre, Common with British 40's and Canadian Coarse or Low Quarter, Low Blood with British 44's-46's and Canadian Low Medium, 1/4 Blood with British 50's and Canadian Medium, 3/8 Blood with British 56's and Canadian Fine Medium, 1/2 Blood with British 60's and Canadian Fine, and American Fine with British 64's-66's and Canadian Extra Fine. The wools used in making felts vary from Low Quarter used generally in manufacture of pulp felts to 1/4 Blood used generally in 1st and 2nd press news machine felts, to 3/8 Blood or 56's used in finer felts. Grades are mixed to produce desired results, so that it is impossible more to than generalize in saying what exact grades are used in certain felts. However, the above classification is sufficiently explanatory.

Wools are available to the felt manufactures in the fleece, skirted, that is with the outer edges removed, or graded, and either in the grease as it is removed from the sheep, or scoured, and is purchased by them in all these conditions according as the offering pleases. The wool buyer must know the types he requires, and must look for eveness of quality, strength of fiber, cleanliness, and if the wool is in the grease must be able to estimate shrinkage between that condition and the scoured state. Wools in the grease lose from 25 to 60 per cent in scouring according to type and cleanliness, that is freedom from extraneous dirt. Some wools contain more natural oil than others, fine wools a much larger percentage than coarse wools. So that the buyer must know the "handle" of wools.

Felt wools are produced in many countries. The Eastern Canadian wools contain many grades that are adaptable. England, New Zealand and South America furnish the most of the world's supply. The distribution of this supply has been remarkably developed, so that the woolen manufacturer in Canada has available a supply gathered from all corners of the earth, and by dealing with old-established wool brokers in the wool centres, like London, Bradford, or Boston, is enabled to buy from small hand

<sup>\*</sup>Papers read at the annual meeting of the Technical Section of the Canadian Pulp and Paper Association.

samples and to know that the shipment will come through as nearly like the sample in uniformity as it is possible to get.

## Wool Preparation

Assuming that fleece wool in the grease has been purchased the first operation is sorting, that is classifying the different qualities in the fleece, according to the grading required. Then comes Scouring. This process is carried out in a series of connected bowls containing warm water through which the wool is raked automatically, coming out on a revolving apron which carries it through the Drier. When dried the wool is allowed to condition, that is to regain normal moisture content, about 12½ per cent from bone-dry condition in Canada.

The Batch is then assembled comprising the mixture of grades required to make the desired quality of felt. A small quantity of oil is added to facilitate the passage of the fibers through subsequent processes. It is then passed through the Picker where the fibers are disentangled into a soft fluffy mass preparatory to the most important operation of Carding.

Carding further disentangles the fibers, straightening them out parallel to each other and forming the yarn structure. The card consists of a series of three or four large and small cylinders, covered with wire clothing. The base of the wire is attached to leather covering the cylinder, and the points of the wire stick out evenly and vertically from the cylinder. These cylinders revolve in close proximity to one another at varying speeds. The operation is continuous and the wool feeds through between these rolls, until the soft fluffy mass of wool fed into the breaker end of the card emerges from the finisher end in the form of roving, a very loose rope to the required weight, ready to be spun into yarn. This is the basic operation in the construction of woolen cloth.

The next operation is Spinning. In woolen manufacture this is accomplished on the Mule. The process consists of the drawing or stretching of the roving, and spinning or twisting it into yarns. The operation is mechanical. The mechanism is finely regulated, so that the exact draw and twist required can be performed and controlled by definite calculation.

#### Weaving

The wool has now been prepared for weaving into the form of a felt. Up to this point the machinery used has been regular woolen mill equipment. But the demands of the paper industry have compelled the construction of special machinery for the operations to follow to produce the heavy-weight, wide felt required on modern paper machines. Mills are generally equipped with a battery of special looms for the somewhat standardized pulp and wet felts, with looms of varying widths for other felts.

The yarn, after being prepared for the cloth to be made, twisted into several plies in the case of pulp felts, is laid out by the Warper according to specifications of length of felt, or series of felts to be made, as width, number of strands of warp yarn to the inch, etc., and is wound on to a warp beam which fits onto the back of the The warp is drawn across the loom, each strand through a heddle, or wire, attached in such a way to the harness, as to automatically rise or fall as desired in the weaving operation. This rising or falling of the warp strands in prescribed fashion forms a shed through which the weft, or filling strands, are passed automatically. The required weave, whether plain, broken twill, basket, or otherwise, is regulated automatically. The warp yarns fold over the weft which is forced forward into place by the Lay, thereby producing the felt or cloth, in a consecutive series of interlocked folds of warp and weft. The width is controlled and maintained evenly by the Reed, an upright comb in the lay, through which the warp yarns have been drawn, and which forces the west yarns into place.

Necessarily, owing to the heavy-weight fabric to be woven, felt

looms are much more strongly built than the ordinary woolen loom. Widths vary from 36 inch reed space to 480 inch, and wider to accommodate the tendency among paper makers to use longer felts. The 36-inch loom is used in the weaving of small jackets, while the very wide looms are used mainly for weaving the endless felt. The limit here is at present around 65 feet in length which in the woven endless felt is the width as lying in the loom. The majority of work however, is done on looms between 175 and 335 inch reed space, the average felt loom being about 280 inches in reed space. The weaving of felts endless is becoming more popular, thereby overcoming the joining process, so that the tendency is toward larger looms. The tension required on the warp yarn and the power required to operate the welt mechanism necessitate a very strongly constructed loom frame so that the modern felt loom is quite a formidable piece of machinery for a woolen mill.

All felts are used as an endless belt and must either be woven as such or joined. The single cloth, that is the felt that has to be joined after being woven, is the simpler, and up to the average widths felts can be woven in this way. Taking an average felt, say 43 ft. by 160 inches, wet felt for news machines, the warp is laid out or dressed with the necessary number of strands to take a filling to make approximately 21/2 ounces per square foot finished weight. As the felt is to be 43 ft. by 160 inches when stretched to length on the paper machine, the felt is made shorter and wider, finished size, in the woolen mill. It will be woven in a 312 inch loom 280 inches wide in the reed. Eight to ten picks of filling per inch are woven, a selvedge of about 21/2 inches is made and the felt is cut from the loom about 47 feet long, with a one foot fringe allowed on each end for splicing. Four to six felts of the same type and of varying widths can be woven from the same warp without changing the loom, and therefore saving much loss of time. Felts can be woven single to any length, but the width is a determining factor depending upon the available loom width. Woven-endless felts are limited by the length wanted and can be woven to any width.

#### Woven-Endless Felts

With a few slight changes made in the loom, a double cloth must be woven to make a woven-endless felt. The laying out of the cloth preparatory to weaving is similar to the single felt, except that the warp strands of the single woven felt become the filling strands of the woven-endless felt. Great care must be taken that the edges are made even, and that the take-up of the upper and lower cloths is performed evenly under uniform tension, so that the weaving in of the warp strands, now in filling, will be done evenly in both cloths. As the edges of the cloth as woven in the loom are crosswise of the felt when in operation on the paper machine it is obvious that perfect edges must be woven. This is practically overcome by patent attachments that hold the edges of the felt in place, and with due care from the weaver there is only slight liability of looped or loose edges.

The chief difficulty with felts woven endless is the lack of selvedge. When taken from the loom the sides of the felt are usually sewn or whipped, and if the felt has been made correctly these sides run satisfactorily. However, the strong, evenly woven, reinforced sides of the single-woven felts cannot be duplicated on the wovenendless felt, and very often this factor condemns the latter in the eyes of the paper maker.

#### Marking Felts

Marking or Stripe felts are made by the single cloth method with part of the warp of filling yarns of greater diameter and harder twist than the others, the designs being produced by these yarns in combination with a certain weave, such as a check, twill or herring-bone effect. However, the engraved roll is taking the place of the marking felt except where deep impressions have to be made or where the design cannot be too regular.

#### Joining or Splicing

Having been measured off to the correct length at the loom the felts are placed over long tables for Burling. All knots are untied, not cut, and the ends are spliced by hand. Mispicks, floats, double picks, etc., are fixed, and the felt is made as nearly perfect as possible. It is then drawn over an elevated roller or Perch and examined against the light. If a woven-endless felt it is then ready to be sent to the finishing room, or to the joining room if a single-woven felt.

#### Manufacture of Felts

Joining or Splicing is exactly what the name implies. The work consists of taking the two fringes of warp ends of the single felt and joining them together to make an endless belt. It has to be done so as not only to be unnoticeable but so that it will be practically the same and will wear as well as if it had actually been woven endless in the loom. The operation requires skill. The felt must be joined exactly true to prevent it running obliquely on the paper machine. Experience is necessary to know how wide to make the splice, how tight or how loose it should be, how far to splice by, how close to shear, etc.

The felt is drawn over a slanting table and the two ends are fastened across the center of the table. The ends are raveled down to where the weaving is perfect and the filling threads are brought together in proper formation. Starting at one end of the felt the joiner picks up the first warp thread of each end and ties them with a knot six inches from each end of the felt. After doing this she follows along the proper warp thread for about six inches, picks out the warp thread at this point and pulls it through knot and all. Then she ties the next warp threads in the same manner and pulls the knot six inches down in the other direction. The next warp threads are tied and drawn upwards about two inches, and so with the fourth drawn to the lower side, and so on across the felt. In this way the places where the tied warp threads emerge are staggered or evenly distributed. This done across the felt the tops are cut off the loops which have been drawn through leaving free ends about one inch long sticking out from the felt. These projecting ends are spliced by, the loose ends are cut off, and the felt is joined. A detailed description of this operation has been given as this method might easily be employed in the mills for mending holes, one mender being trained who might become very expert, thereby saving time and clothing.

## Woven and Pressed-Felt Jackets

d

f

11

Woven jackets can be made on the narrow felt looms. They are woven endless in a 3-5 ply cloth. The yarn is fine, made from the fine quality wools, and the warp is laid out with a great many more strands to the inch than felts, and woven with a great many more picks to the inch. The sizes required finished are easily calculated in the lay-out, and the finishing follows somewhat after the regular methods to be described later.

Pressed felt jackets are made by taking the web off the finisher end of the card before being made into roving, and rolling it over a drum to the necessary thickness, and hardening, felting and shrinking to the required thickness, diameter and width finished. These operations require special equipment and great accuracy, but data are available enabling the manufacturer to determine shrinkages and thereby produce the evenly felted jacket with which you are all familiar.

#### Finishing

While all the previous operations of laying the structure of the felt are most important it is here that the real work of fitting it for its ultimate uses on the paper machine are performed. The various stocks used in the manufacture of felts give the differently desired results, but the finishing operations are practically the same for all. They include scouring and fulling, called wet finishing, and drying, napping or singeing, stretching and measuring, called dry finishing. It is in the wet finishing operations where the felt receives its felt-

ing and characteristic qualities of hardness, softness, resilience, roughness, smoothness, slaziness, etc., and where the size and tension are controlled.

As received in the finishing room the felt appears a dirty, loosely woven, cloth. It contains the oil used in the wool preparatory processes and such other dirt as it has accumulated. It has been loosely woven to a predetermined width and length, wider and longer, as stated previously, than the required measurements finished. The first operation is the Fulling. Here the cloth is felted and shrunk to the required degree. The operation consists of wetting the cloth with fulling solution adapted for the reduction of the oil, and to the quality of wool used, the amount of twist in the yarn, the weave, the desired number of warp and filling threads per inch finished, the tension, the nap and "feel" required on the felt, etc., etc. The cloth is revolved at determined speed between heavy wooden rollers, folded loosely and evenly to prevent mill wrinkles and to ensure even shrinking. It is watched carefully, taken out several times during the operation for measuring and refolding, and run for from 30 to 90 minutes until it has attained the desired state. The operation is one that requires much experience and skill. While the experienced finisher has general rules to go by each felt demands individual attention. The size as taken from the fulling mill is shorter and wider than that required, to allow for length tension and width tension, that is the difference in lengths and widths between those as the felt is lying on the floor with no stretch to it and those in running.

With the necessary size obtained the cloth is ready to be scoured. No fulling or felting is wanted in this operation. So as the fulling solution has acted chemically on the oil and other outside substance, a non-alkali, good lather-forming soap is used. The goods are thoroughly scoured and rinsed, then de-watered and dried.

This completes the manufacturing operations in the case of pulp felts, except that in the drying operation the felt is stretched to the required length and width, approximating here the tension it undergoes on the pulp machine, and therefore attaining the exact size wanted. The felting and shrinking of the wool fibers in the fulling and scouring operations has already given a "cover" of nap to the felt, which fills the spaces between the warp and filling yarns and gives the pick-up quality to the felt. In pulp felts strength and porosity are the desired factors. The yarns are very strong, twisted strands and their size necessitates fairly large spaces between the warp and filling threads. These spaces must be filled to permit the easy drainage of water from the pulp without allowing the pulp fiber to get through. If too much cover or nap has been given the felts will fill up quickly and give endless trouble. It is clear therefore that the two factors the felt maker must keep in mind in making pulp felts are sufficient strength to stand the tension, pressure and kicking, and the porosity of the felt.

More cover is required on most other felts to give a greater quality of pick-up, a better diffused porosity, softness, smoothness and finish. This is accomplished on the Napper or Gig. The felt is stretched tightly across the surface of a cylinder fitted with teasels or wires. As the felt revolves slowly against the direction of the rapidly revolving cylinder the attendant carefully applies the surface of the felt against these teasels which pull out the fibers on to the face of the felt. This has to be done uniformly and in such a way as not to injure the felt. The lighter the felt the harder it is to nap. The ordinary wet felt is comparatively simple, but a great degree of accuracy is required with all felts to get the nap even and uniform. The third press news felt also requires care to obtain the necessary smooth surface required to give surface to the paper.

This completes the manufacturing operations. Felts should be allowed a week or so to "set" then should be re-measured and stretched before delivery to the paper mill. The folding is done in a manner best suited to the handling of the felt on the paper or pulp machine, as the case may be.

In wet press and second press news machines felts, the qualities of strength, pick-up and porosity are what are desired. Necessarily a strong coarse wool is used. The third press news felt must add finish as an important factor, so that a finer quality wool and finer yarn is used, also a smoother weave, to ensure a smooth even surface to the felt. This relation exists between these felts on each class of machines for the various main grades of paper. Naturally there could be even more variety, and perhaps this feature is given insufficient attention, but standardization and speed are determining factors. The result is that the felt maker looks for the average uses for which each grade of felt is required and endeavors to fill the conditions met with there.

Pulp felts and news machine felts are fairly standardized. Conditions in different mills vary slightly, but hardly sufficiently to affect the operation of felts. As the higher speed machines have been developed conditions have necessitated stronger, therefore coarser wools, larger yarns, less strands of warp and filling per inch, greater porosity, etc., and therefore standards have changed. These are all determining factors and if properly understood the felt maker should meet conditions. Some mills "nurse" felts, others "drive" them, hence varying "runs" in different mills; but with presses and rolls running true, and with equal conditions of operation standard "runs" can be obtained.

#### The Performance of Felts

The variation in "runs" between individual felts made in a series and run on the same machine has always been difficult to understand. Here the "human factor" enters, but it can be taken for granted that the felt maker has all the evidence on his side where such variation exists. The wide-awake felt manufacturer will notice any weakness in the felt before it leaves his mill. His facilities for detection of such are almost infallible, and he can make better use of a spoiled felt before it leaves his mill than after it has been returned from a paper mill perhaps after several days running.

Mill wrinkles produced in fulling give endless trouble on the paper machine, but a felt containing them should never leave the mill. Uneven joining is another fault, easily detected. But, if the felt-maker has not determined the strength required, the degree of porosity, the resilience, the hardness or softness, and the finish, you will have trouble and he will hear about it. These are factors every paper mill should be interested in determining, and they can be determined to a very useful degree. The exact measurements of felts required should be known, that is the exact lengths and widths on machines with allowances for stretch and shrinkage, leaving it to the felt-maker to know the floor size. Properly made felts of the proper size to suit the machine for which it has been built should first lengthen and narrow out slightly after it has been wetted and stretched and run for a few hours, then gradually widen out until set, and should hold this size fairly accurately until worn out. The variation in quality of stock and unavoidable mechanical imperfections prevent this from being absolute, but this is the desired result. This applies to all felts in more or less degree according to their quality. The finer quality and weave a felt is, the more set it should be when it leaves the felt mill, and therefore there should be less variation on the paper machine.

## Strength of Felts

The element of strength in a pulp or paper machine felt is determined by the conditions to be met with in use. As previously stated the qualities of a felt are strength, porosity, pick-up, hardness, softness, smoothness and finish. The tensile strength is dependent largely upon the degree of other qualities desired. Naturally the paper-maker is looking for the strongest felt he can get to enable long runs, but his conditions also compel him to insist upon the other qualities, and these qualities of nap, porosity, and finish produce limitations on the felt-maker in his consideration of

tensile strength. "Felt-marking" is a fault that must be guarded against continually. This factor places a decided limitation on the felt-maker.

The quality of strength is determined by the length and strength of the wool fiber, the diameter of the single yarn, the twist of the yarn, the ply of the yarn, the number of strands per inch of warp and filling, the type of weave, and the finish required on the felt. Where strength and porosity are the principal qualities considered, as in the case of pulp and wet press news machine felts, the ordinary "one and one" plain weave is employed. This gives porosity. In pulp felts, where marking or crushing of the stock is of only passing importance, a long fiber stock is used, tightly twisted in the single, and then again twisted to from 4 to 10 ply yarn in the warp and 2 to 6 ply in the filling. Little nap is required, other than the cover obtained in the fulling operation. But in the news felt, while a somewhat similar wool can be used, the felt must be softer, with more cover or nap, and, having to do with a much thinner stock, the felt must be much smaller mesh, requiring single yarn of medium twist to prevent crushing, and the plain weave is employed to give the desired porosity. Naturally the tensile strength is less than in the case of pulp felts, but the relation here between tensile strength and porosity and finish of the felt is the item of greatest consideration.

As smoothness and finish become of greater importance finer wool must be used, yarns become smaller in diameter, the weave is changed to a smooth flat broken twill, porousness becomes an item of less consideration, and softness, cover and finish of greater importance. In these days of competition and speeded production the danger of sacrificing these other qualities for strength and increased runs is very great. Of course, the desired result is a strong, smooth-running felt. Perhaps the stress laid upon the relation of desired qualities will emphasize the importance the feltmaker attaches to intelligent criticism of his felts in operation. And perhaps you will look for faults in this relation in your consideration of and report on felts giving unsatisfactory service. Co-operation of this nature will produce results in more standardized felts, longer runs and better service.

The high speed machines developed in recent years have called for increased tensile strength in the felt, and increased porosity, particularly in the wet and second press felts, but the limitation has persisted in the necessity for providing a napped felt to provide pick-up and sieve qualities and a sufficiently soft surface to prevent crushing. Increased suction has also been a factor to contend with. The demands of speeded up production have been difficult to contend with, owing to that relationship between strength, porosity and finish which the felt-maker must always keep in mind.

Naturally, felts fill up and require washing, frequently or otherwise as the case may be, according to the nearness to perfection the felt has been made in the relationship of the desired qualities. However, this subject is left for your discussion and our enlightenment. There is no doubt that a better understanding of this relationship by paper-men, and the passing on of information to the felt-maker will tend towards perfection, and do away with many troubles encountered with felts in operation. So far as the paper maker is concerned this relationship is the cause-all and end-all, of felts. If the felt-maker with only a limited and cursory knowldege of paper-making has to grope around for his information his experimenting might prove expensive and unproductive of results. It is to everyone's advantage to effect all possible improvements.

## To Sell Maine Paper Co. Property

FROM OUR REGULAR CORRESPONDENT.

Skowhegan, Me., February 21, 1922.—All the local property of the Maine Pulp and Paper Company will be sold Monday, February 27, by Attorney Abbott of New York, receiver for the concern, which recently filed petitions in bankruptcy in Buffalo and Bangor.

## PUMPS AND PUMPING MACHINERY

(Continued from last week)

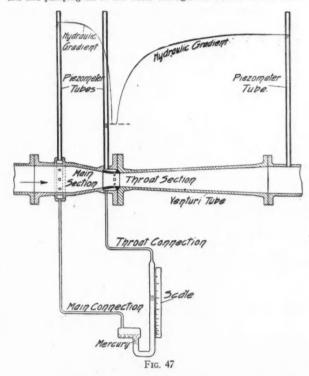
In order to assist the Joint International Committee on Text Books both financially and in attracting criticism of certain sections, the Paper Trade Journal has arranged to co-operate with the committee by publishing some of the material submitted to the editor of the text books. In presenting this series of articles to our readers a cordial invitation is extended to assist the committee by sugestions and criticisms of this material. It is hoped that in this way omissions and errors will be noticed and corrected.

#### CHAPTER XI

## Methods of Testing Pumps

It is very often necessary to make tests on pumps after they have been installed in a plant in order to determine their capacity head or efficiency and there are several methods by which this can be accomplished. For testing or checking for capacity there are several different ways in which this may be determined within very close accuracy.

1st. By placing a water meter or flow meter in the discharge line and pumping all of the water through the meter. This method



is usually a permanent feature of the installation and especially in the case of general water supply pumps it is a great advantage to keep daily, weekly and longer period records of the pumpage and such meters are usually equipped with a recording device which marks off a graphic record of the quantity of water passed through the meter during a 24-hour or longer period.

Such meters as are known to be correct in their reading within reasonable degree may be used for making pump tests for the purpose of determining the efficiency of pumps, and a meter which is in good working order may be accepted as being within 5% of accuracy.

2nd. Venturi meters are mentioned under a separate class from water meters and flow meters as such, for the reason that when accurate tests are essential these meters may be equipped with

mercury columns or manometers may be depended on to obtain readings within 2% of accuracy.

The Venturi meter or tube consists of a tapered or conical pipe or nozzle which is placed as a section of the discharge main of the pump.

The principle of the Venturi tube is a measurement of the difference in pressure at two points which determine the velocity of the

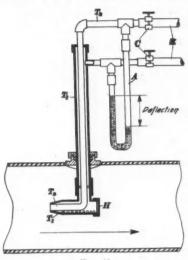


Fig. 48

water passing through the tube; these measurements being taken at a point on the upstream or inlet end of the meter tube and at the short contracted section which is accurately bored to size and calibrated.

Fig. 47 shows the Venturi meter tube and connections for taking the readings which are usually registered on a mercury column but may be arranged for permanent installation, as in other meters, with recording devices. The actual instrument would be of different dimensions, and is usually introduced into the pipe line by means of a special fitting called a corporation cock.

3rd. The Pitot Tube consists of a double tube, one tube being within the other, which is inserted into the pipe through which the water is flowing and measures its velocity. The pipe enters the pipe at right angles to the flow and has a bent end with an opening to the inner tube facing the flow of the water.

The outer tube, T, is punctured along the horizontal piece with several small holes, H, which permit the water to enter the outer tube and rise in the outer tube and its connections to a height equal to the static head in the watermain while the water which enters the inner tube, T<sub>2</sub>, will rise to the same height plus the velocity head due to the rate of flow through the main.

Therefore the outer and inner tubes are connected with pipes or rubber tubes to the two legs of a U-tube, A, partially filled with mercury or another suitable liquid, and as the pipe connected to the inner tube is subject to the static head plus the velocity head this excess head over the head to which the outer tube is subjected, will cause a deflection of the mercury column equal to the velocity of flow in the main.

Fig. 48 shows the Pitot tube inserted in a watermain with connecting tubes and U-tube for reading the velocity. In using the Pitot tube it is essential that all air should be worked out of the measuring tubes in order to obtain accurate results. R is a rubber tube and C a pinch cock for releasing air.

It is customary to take readings at different points across the watermain in order to determine the rate of flow which is the

average for the pipe and from these readings a coefficient may be developed, after which test readings may be taken with the upstream opening located in the center of the watermain and the coefficient applied to the readings thus obtained.

4th. The weir.—In measuring water by means of a weir it is necessary to discharge it into an open stream and the weir or Notch through which the flow is measured partially dams the stream so as to control the water and pass it all through the weir notch.

The weir measurement of water is based on the velocity of flow through the notch of a known width, and the depth of the water flowing over the lower edge of the weir notch should be measured either by a stake with a zero at the same elevation as the lower edge of the weir and graduated scale above the zero or by means of a hook gauge which should also be set with its zero at the lower edge of the weir.

The weir is a very convenient method of measuring moderate to large volumes of water when it can be carried through an open passage or flume so as to form a weir box with the notch at one end, and sufficient drop to the water flowing over the edge of the weir so as to permit air under the water fall.

The formulæ for weir measurements are based on extensive experiments in the flow of water through streams and open flumes or canals.

Figs. 49-50 illustrate curves for flow of water flowing through a trapezoidal weir having a width of 2"-6" on the base line and the sides at an angle of 15° from the vertical.

Fig. 51 illustrated flow through a weir 4"-0" wide on the base line with sides at right angles to the base line.

In order to measure the depth of flow over the weir accurately, the stake or hook gauge should be located about three times the width of the weir notch on the upstream side of the weir.

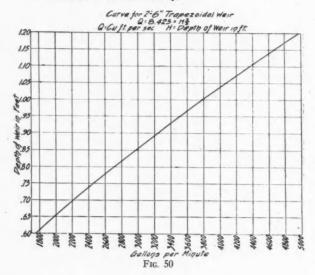
5th. The nozzle: This is often a very convenient method of measuring the flow of water and smooth bore nozzles which are

ables. The method of calculating the flow through nozzles and orifices is as follows:

C-which has just been referred to = 24.96.

 $C \times Y \times A \times V H = Gallons per minute.$ 

Y = Coefficient of nozzle efficiency,

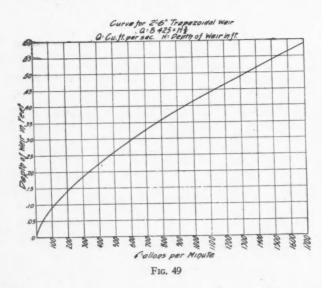


A = Area of nozzle or orifice in square inches.

V H = Square root of the head in feet at the point of discharge of the nozzle or orifice.

Y may be taken as follows:

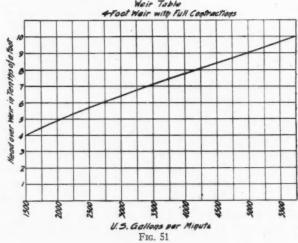
For smooth bore nozzle, carefully machined as to area but not extra smooth in bore .95.



accurately machined to micrometers will assure a high degree of

The flow through the nozzle is proportional to the square root of the head at the nozzle in feet and to the area of the nozzle at the coulet

In order to reduce the calculated results for nozzle flow to the convenient terms of U. S. gallons per minute a constant has been deduced which will apply to all measurements of water through nozzles and orifices when used in connection with the proper vari-



For smooth bore nozzles, carefully machined at the bore .98.

For ring nozzles .80.

For orifices through metal plates with sharpened edges .62.

Example:

To calculate the flow through a smooth bore nozzle, carefully machined and smooth 4" in diameter under a head of 25 feet.

Area of 4'' = 12.36,

Square root of 25 = 5.

Coefficient = .98.
Therefore:

 $24.96 \times .98 \times 12.36 \times 5 = 1512$  G. P. M.

Displacement: This method may be used for measuring pump capacities whenever circumstances will permit and there is no more accurate or convenient way of measuring water.

Any tank or vessel in which the water can be measured is suitable for pumping into or out of, and the time taken to fill or empty the tank, as the case may be, should be carefully recorded in order to measure the rate of flow through the pump.

In testing displacement pumps of the piston or plunger type the capacity may be measured by counting the number of strokes or revolutions per minute and calculating the G. P. M. according to the method described in the chapter on steam pumps. This method, however, does not show the amount of water slippage through the valves and past the pistons; this may be determined, in the case of direct acting steam pumps, by also making a "lock-up" test, which consists of closing the discharge valve on the water end and turning full steam pressure into the steam cylinder. The strokes per minute which the pump makes under such conditions should be counted and deducted from the number of strokes per minute which were counted when the pump was tested under full working conditions; the difference between the two may be taken as the effective displacement of the pump as the movement of the water pistons under the "lock-up" test conditions represents the slip.

This "lock-up" test should not be tried with any piston or plunger pump having crank-driven pistons as the positive stroke machine does not permit of cushioning effect and the water cylinder may easily be strained to the bursting point.

In testing displacement pumps the diameter of pistons or plungers and the length of stroke should be measured carefully when accurate tests are required.

Measurements of head are usually made with spring gauges of the vacuum and pressure type, but for low and moderate heads water and mercury columns may be used when convenient.

The water column is usually practicable only for low heads; as it necessarily registers actual pumping head less velocity head correction, which will be referred to later. For example, for measuring a head of 50 feet with a water column or manometer would require a measuring column 50 feet high. The mercury column is very convenient as moderately high heads can be measured on a mercury column of reasonable length as one inch of mercury height in the column is equal to a height of 1.132 feet of water.

The mercury column may be of either the U-tube or straight, one leg arrangement with the mercury contained in a cast-iron pot or a glass bottle in either kind of mercury column the reading should be made from the lower to the upper levels of the mercury and the column should be provided with a sliding scale so that the zero point may be moved to follow the movement of the mercury and the scale should read in inches and tenths of inches.

When testing pumps, the gauges of whatever type should be placed as close to the suction and discharge nozzles of the pump as possible. When there is a suction lift a vacuum gauge or mercury column should be connected to the suction nozzle and a pressure gauge or mercury or water column to the discharge nozzle.

The total head is the sum of the reading of the two gauges, with usually a plus or minus correction according to the location of the gauges, viz.: If the vertical distance between the point where the suction gauge is connected to the pump or pipe shows that it is below the center of the gauge connected to the discharge of the pump, then the amount of this vertical distance should be added to the sum of the gauge readings.

If such vertical distance shows that the center of discharge gauge is below the point where the suction gauge is connected, then the amount of this vertical distance should be subtracted from the sum of the gauge readings.

When there is a positive head on the suction of the pump, pressure gauges or mercury or water columns should be connected to

both the suction and discharge of the pump and the total head which should be credited to the pump is the difference between the two gauge readings referred to a common level as to the location of the gauges.

There is in addition to the gauge readings another element entering into the total pumping head which must be credited to the pump in such cases, as the suction pipe at the point where the gauge is connected is of larger area than the area of the discharge pipe at the point where the discharge gauge is connected.

This connection is called the "Velocity head" and it consists of useful effort imparted to the water, by the pump, which on account of the difference of velocity in the suction and discharge pipes is not fully credited to the pump by the gauge readings.

It can readily be understood that the velocity of the water passing through the pipe at right angles to the connection to the gauges will have a partial suction affect which will reduce the gauge reading proportional to the velocity of flow through the pipe.

This suction effects the results in an increase in the vacuum or suction gauge reading, but due to the higher velocity of flow through the discharge pipe the pressure gauge reading is reduced more than the suction gauge reading is reduced. So that in order to get full credit for the velocity head it is necessary to calculate it and add to the gauge readings the difference in velocity head between the suction and discharge. The velocity head is calculated on the same principle as the speed of centrifugal pumps and the formula is as follows:

V<sup>2</sup>
— = Velocity Head.
64

V = Velocity of water flowing through the pipe in feet per second.

Example:

1000

A pump delivering 1000 gallons per minute through an 8" suction pipe and a 6" discharge pipe. We have velocity heads as follows:

For 8" pipe.

= 6.4" per second velocity.  $50 \times 3.12$   $6.4 \times 6.4$ = .64" Velocity head. For 6" pipe. 1000= 11.3 per second velocity.  $28.3 \times 3.12$ 

 $\frac{11.3 \times 11.3}{64} = 1.99$ " Velocity head.

Therefore the velocity head to be credited to the pump is: 1.99 - .64 = 1.35 feet.

In figuring out the total pumping head it is customary to express this in terms of feet of water and where spring gauges are used which register in pounds per square inch and such pressure readings should be transposed to feet of water thus:

1 pound per square inch = 2.31 ft. of water. Spring Vacuum gauges are usually scaled to read inches of mercury for which we have given the transpositions to feet of water in this chapter.

In connection with the pump test it is always advisable when it can be done to secure power readings at the same time, or under the same conditions which the capacity and head conditions are obtained.

When steam driven reciprocating pumps are equipped for connecting a steam indicator it is the obvious method for arriving at (Continued on page 52)

## THE COOKING OF RAGS\*

By HERMANN GRIMM

Concluded from PAPER TRADE JOURNAL, January 19, 1922.

#### Mill Cooks

Bot ..

In order to obtain proof of the mechanical action of washing and beating upon the chemical constituents of the fibers, a mill cook was made with unbleached cotton, unbleached linen and unbleached hemp, using the following conditions:

Materiai	Pressure Atm.	Time of Cooking	Time of Steaming	of	Per Cent of Chlorine
Cotton, gray	4	5	15	4	0.90
Lanen, ticking	4	5	17	4	0.45
Hemp, common	4	5	17	6	0.75

The "crude" sample was taken upon introduction to the digester, the "cooked" sample was the finished half-stuff before the bleaching. The bleaching qualities were investigated only to give an idea of the results of the cooking process. It is calculated in percent of the material put into the digester.

The results of the analyses of the fibers are given in the following table:

Table I Constants of the Materials from Mill Cooks

					_	-Extract	_
			Fur-	Pen-		Alco-	
Material	Water	Ash	furol	tosan	Ether	hol	Total
Unbleached cotton	6.78	1.87	1.18	2.03	1.19	0.59	1.78
After cook	8.25	0.38	0.63	1.09	0.13	0.14	0.27
Linen	8,66	1.23	2.39	4.08	1.48	0.80	2.28
Atter cook	7.89	0.40	0.98	1.68	0.10	0.23	0.32
Hemp	8 89	2.19	2.25	3.86	3.44	1.18	4.62
After cook	8.35	0.90	1.06	1.82	0.11	0.20	0.31

These figures are, as far as is known, the first ones for materials obtained from a practical mill cook.

The ash content has fallen in all cases to 20 to 41 percent of the original values; the value for hemp appears too high, but a comparison with that from the laboratory cook is impossible, since this material had been washed with acid.

The petnosan number decreased from 41 to 53 percent of the original values; the difference between these results and those on the laboratory cooks may be due to difference in the samples, but the effect of the mechanical treatment is not seen.

In the unbleached hemp, the laboratory cook still showed an average of 78 percent of the extractives in the fibers, while from the figures above it is seen that only 7 to 15 percent of the original extractives remain in the fibers; the fat and wax-content of the three fibers is the same after the cooking process. The objection, that the high fat and wax content of the pulps obtained in the laboratory cooks, might have its origin in the ineffectiveness of such cooking conditions, is answered by a consideration of the figures for the pentosan content and especially those for the ash, which are 1.04 and 1.17 percent for the laboratory cooks and 0.90 for the mill cook.

These considerations show that the conditions used, 4 to 6 per cent of lime (up to the present linen and hemp, have always been cooked with the addition of 1 per cent sodium hydroxide), a satisfactory degree of purity was reached and that the difference in the ash and the extractives, which is in favor of the mill cook, must be ascribed to the mechanical effects of the washing and the hollander action.

## Comparative Mill Cooks with Lime and Lime-Sodium Hydroxide

The correctness of the above conclusions was tested by carrying out four additional cooks. In these, the material

\*This article appeared in Zellstoff und Papier, 1921. Translated by Claregre J. West, National Research Council.

was analyzed just before being put into the digester. It was again analyzed at the close of the cook, the only treatment being a short washing with cold water (this was for the purpose of comparison with the laboratory cooks). The third analysis was made after washing and bleaching, and just before the addition of the bleach.

In these experiments, also, the result of a mill cook following adsorption in the cold and also the result of the combination of lime and sodium hydroxide treatment were obtained. The conditions used were as follows:

M	aterial	Cook No.	Pressure Atm.	Time	Steaming Time	Lime, 1 Per Cent	Sodium Hydroxide, Per Cent
Linen,	unbleached	4	4	5	17	4	
	unbleached	5	4	5	~ 17	2	1.4
Hemp,	unbleached		4	5	17	4	
Hemp,	unbleached	7	4	5	17	4	1.75

\*Adsorption experiment.

The results of the cooks are shown, by means of analyses in Table II.

#### TABLE II

Constants of the materials from the second series of mill

					_	-Extract-	
Material	Water	Ash	Furfurol	Pentosan	Ether	Alcohol	Total
Cook 4—							
Raw	9.45	1.32	2.38	4.08	1.34	1.11	2.45
Cooked	8.00	1.38	1.23	2.10	1.08	0.50	1.57
Half-stuff	8.38	0.44	0.95	1.63	0.06	0.23	0.29
Cook 5-					9127	*****	
Cooked	7.94	2.15	1.13	1.98	1.11	0.53	1.64
Half-stuff	8.55	1.10	0.90	1.55	0.09	0.32	0.41
Cook 6-					2.22	4100	
Raw	9.58	2.90	2.51	4.31	0.80	0.63	1.42
Cooked	8.01	2.30	1.55	2.66	0.98	0.39	1.37
Half-stuff	8.67	0.44	1.38	2.36	0.05	0.17	0.22
Cook 7-							
Cooked	7.46	2.85	1.43	2.46	0.90	0.44	1.34
Half-stuff	8.27	0.78	1.14	1.97	0.06	0.21	0.28

The results of the table show very clearly that the supposition regarding the effect of the mechanical working of the fibers is demonstrated.

The ash in the cooked fiber and in the material as washed in the laboratory are about the same and in many cases it is even higher than in the raw fiber. In the unbleached but washed and beaten half-stuff, it has decreased, in the case of linen to 33 percent and in that of hemp to 15 percent of the original ash. In both samples it is only 0.44 percent. In the case of the combined cook (lime and sodium hydroxide) the ash is 83 percent in the case of the linen and 27 percent for hemp (1.10 and 0.78 percent) and is therefore considerably higher than in the case of lime alone. There appears to be an unfavorable action by the sodium hydroxide.

The furfurol numbers show on the other hand, that the action of sodium hydroxide is beneficial in reducing the pentosan content.

The mechanical action is seen specially in the values for the ether and alcohol extracts. These were reduced to 12-17 percent of the original values in the case of linen and to 14-20 percent in the case of hemp. Here, also, the effect of cooking with lime alone is more favorable than with lime and sodium hydroxide, though in this case the values are very low.

In the raw material the ether extracts are only a little higher than the alcohol extracts, while in the cooked fiber it is about twice as much but in the half stuff, on the other hand, it is only one-third to one-fourth of the alcoholic extract. The effect of the cooking thus appears to be upon the alcoholsoluble material, while the effect of the mechanical treatment is to remove ether-soluble material.

The conclusion from these two series of mill cooks is that he pure lime cook gives very good results; the disadvantage of the lime-sodium hydroxide cook as regards the high ash and extractive values is perhaps counterbalanced by the lower furfurol and saponification numbers. (The saponification numbers have been omitted from the above tables.) The lime cooking with previous adsorption has no advantage over the straight lime cook.

#### Practical Methods of Analysis

In determining the methods of analysis to be used in checking the results of the cook, the time required for the determinations, as well as the equipment of many small laboratories, must be considered. The first determination is that of the ash, and in some cases the quantitative composition of the ash must be known.

The extraction with ether and alcohol is important and it is of value to also determine the saponification number as described above. The separate determinations of the ether and alcohol extracts, which requires at least 8 hours, may, in most cases, be replaced by an alcohol-benzene extraction. Since these values are for comparative purposes only, it does not matter whether the values found are larger or smaller than those by the ether and alcohol extraction.

The furfurol value can, in most instances, be omitted.

A very good criterion of the characteristics of the cooked fiber may be obtained by the determination of the methyl number according to Benedict and Bamberger (Monatsh. 15, 509, 1894), but this is not suitable for control purposes at the present time because of the high cost of chemicals, and therefore must be omitted.

Another characteristic is the nitrogen content of the fiber; this is an indication of the degree of digestion, since the protein of the crude fiber is more or less destroyed by the digesting process. Nitrogen determinations have not been made in this study.

Good conclusions may be drawn as to the purity of a given pulp by the determination of the lignin content. This was determined according to König and his pupils; the present determinations were made by the method used by Ost and Wilkening for the hydrolysis of cellulose: 2 grams of air-dry fiber are allowed to stand with 60 cc. 75 percent sulphuric acid for 48 hours (frequent stirring), filtered on a Gooch crucible covered with asbestos, washed with one liter of water, dried 5 hours at 105°, weighed, ashed with a Bunsen burner until perfectly white and again weighed. The difference represents lignin. This is then calculated to an ash- and water-free fiber. Since this method, even in its simplest form, requires considerable time, an attempt was made to discover a shorter method.

The total impurity of the digested fiber should be determined by acetylation (Schwalbe, *Chemie der Cellulose*, p. 174). In the acetylation process the cellulose is transformed into the soluble acetylcellulose, while the lignified portions and other impurities are not dissolved.

The determination is carried out as follows: One gram of air-dried material is covered with a mixture of 5 grams acetic anhydride 5 grams of acetic acid and 0.15 gram of sulphuric acid (sp. gr., 1.84), (the sulphuric acid is first added to the acetic acid and the anhydride then added), and allowed to stand, with frequent stirring for the first 5 hours, for 24 hours. It is then diluted with 15 cc. of the acetylating mixture, transferred, after thoroughly mixing the two, to a graduated tube and centrifuged for 25 minutes. The insoluble part settles to

the bottom of the tube, the height of this precipitate is read on a scale and the percentage of the water- and ash-free material determined. The material must be carefully air-dried, and very finely divided, which is often difficult with dried half stuff. It is better to prepare the half stuff in the form of paper, dry, rasp and sift out the dust and the lumps, thus giving a suitable material for the determination. Since it is difficult to transfer after the dilution, especially in the case of very impure materials, it is better to carry out the acetylation in the graduated tube, which is closed with a rubber stopper carrying a stirring rod, and to put this into the centrifuge tube by means of wadding. The diameter of this tube is 15 mm., the height 165 mm., the divisions extend to 30 cc., and the tube is filled to 25 cc. The centrifuge is rotated at the rate of 1060 rev. per minute. The reading is best made by removing more or less of the supernatant liquid, the dark colored precipitate remaining as a solid lump in the bottom. The results of the determinations are given in the following table.

#### Table of the Lignin and Acetylation Numbers

Material Unbleached hemp, crude, not extracted. Unbleached hemp, crude, extracted. Unbleached hemp, laboratory cook 2, not extracted. Unbleached hemp, laboratory cook 2, extracted.	5.75
	Per Cent Acetylation Number
Original material-	
Unbleached cotton	. 16.0
Bleached cotton	4.0
Unbleached linen	. 12.8
Bleached linen	. 4.4
Unbleached hemp	. 9.4
Bleached hemp	. 3.2
Half stuff-	
Mill cook 1:	
Unbleached linen	. 2.8
Bleached linen	2.0
Mill cook 2:	. 4.0
Unbleached hemp, crude	. 6.8
Unbleached hemp, cook 6	. 0.8
Unbleached hemp, cook 7	0.4
Onbieached henry, cook /	. 0.4

The acetylation numbers show that there is, as was expected, a considerable difference in the crude, cooked and bleached fibers but that differences may be determined in the degrees of purity of the same kinds of fibers. This is seen in the case of hemp, where the crude material showed 6.8 percent, the sodium hydroxide cook, 0.4 and the lime cooked, 0.8 percent. The individual determinations agree well with each other. Naturally, nothing is said about the advisability of using the method. This must be determined by many trials.

#### Discussion

In summarizing the preceding work, it may be said that at present the method of digesting as used in practice is correct. The principal role is played by the lime, and it has been shown that this may be used without any other agent. This does not exclude the possibility that the use of sodium hydroxide with the lime in order to obtain certain kinds of paper is not without advantage. Lime has the advantage, because of its slight solubility, of causing the most satisfactory digestion. Since an excess of lime is always added, a saturated solution is always maintained, the excess taking the place of that consumed in the digestion. The concentration is always the same. In the case of sodium hydroxide the concentration is always greatest at the start of the digestion and gradually decreases. In addition the liquor is further diluted by means of the condensed steam. In cooking with lime, however, the excess permits the solution of more lime by the condensed water with the result that while the amount of lime increases in proportion to the amount of rags, the concentration is always the same. For this reason the action of lime alone is better than that of the combination of lime and sodium hydroxide.

There still remained the question whether, in many mills, a large excess of lime was being used. According to the existing literature this seemed to be the case. This would mean not only a waste of valuable material, but also a useless loading of the fibers with lime in addition to the unnecessary polluting of the streams, into which the waste liquors finally are dumped.

The correctness of the amount of lime used has been verified by experiment (laboratory cook) 1.

Further experiments were undertaken to determine whether better results would not be obtained by a preliminary absorption period.

#### Need for Careful Cooking Control

One of the results that should be emphasized is the need of more careful control of the cooking process. At the present time this control is by means of manometers. This does not consider the fact that, in the digesting of rags, ammonia and other gases are liberated which increase the pressure without affecting the temperature. Control by means of a thermometer should be used.

It is hard to establish to what extent the loss resulting in the preparation of half stuff is chemical and to what extent mechanical. The results of the mill cooks show that the greater part of the incrusting materials (decomposition products of cellulose and gum-like bodies) goes into solution during the washing process.

#### Conclusions

1.—A series of constants are reported for unbleached cotton, flax and hemp in the form of raw material for the paper industry.

The adsorption capacity of these same materials for alkalies and alkaline earths is reported.

3.—The changes produced by digesting these fibers were studied in 5 laboratory and 7 mill cooks.

4.—The amount of lime used in the laboratory cook is theoretically correct, but in many cases far too much lime is used.

5.—A preliminary adsorption of the lime before digestion is without effect.

6.—Steaming without pressure is not sufficient to produce a good cook; the use of pressure is necessary.

7.—Introduction of carbon dioxide to rupture the fiber bundles is ineffective.

8.—Soda cooking after a preliminary lime adsorption, by which the sodium hydroxide must be within the fiber, has no more marked effect than the ordinary cook.

9.—The mechanical working during the washing and beating operations has a great effect upon the chemical constituents of the fibers. This effect cannot be replaced by more vigorous cooking conditions.

10.—For the first time analytical figures are given for the products of mill cooks of rags.

11.—Comparison of mill cooks with lime and sodium hydroxide-lime mixture favored the former.

12.—The determination of the value of lime for digesting purposes should include, not only analysis, but its behavior upon solution.

13.-Methods of analyses for the mill are discussed.

14.-A new acetylation method for analysis of fibers is described.

(A short bibliography is appended. This will be expanded and published later by the Committee on Bibliography.)

## PUMPS AND PUMPING MACHINERY

(Continued from page 49)

the power consumed by the pump by means of the indicator card. Steam turbine driven pumps cannot be tested for power consumption by means of the driving turbine unless a prony brake or dynamometer test is made on the turbine, from which power consumption corresponding with the steam pressure at the turbine nozzles and the R. P. M. can be applied to the pump test where the driving turbine shows similar pressure and power to that indicated by the brake test curve.

Where it is not practicable to make such a brake test on the turbine a characteristic power curve can usually be obtained from the turbine manufacturer for the particular turbine required.

For testing electric motor driven pumps the Watt meter readings are most desirable as they show directly the power consumption and the only correction required is the efficiency of the motor, which should be deducted from the total electrical input readings and the remainder represents the brake H. P. used to operate the pump.

Ammeter and Wattmeter readings may also be used but they require more calculation in figuring the results and in the case of alternating current motors the power factor of the motor and the power line must be known and taken into the power calculation in figuring out the Brake H. P. used by the pump.

In all cases where it is practicable, it is recommended that a volt meter should be connected into the power line near the motor under test, in order to ascertain that the voltage is normal and within the prescribed limits of variation for which accuracy of the Watt meter readings may be obtained.

Full load motor efficiencies may be obtained by calculation from the nameplate ratings which referred to input or electrical horsepower that is, the motor output or Brake HP. rating divided by the product of the input or Electrical HP. ratings motor efficiency.

(To be concluded)

## New News Print Mills Starts in Finland

Washington, D. C., February 1, 1922.—American Consul Davis at Helsingfors, Finland, has sent the following report to the Department of Commerce regarding the completion of a paper mill:

"The large modern paper mill of A. Ahlstrom O/Y at Warkaus, Finland, which was begun in November, 1919, has just been completed and began the manufacture of news print paper on the 6th of this month. The building, which contains the largest factory room in this country, is 126 meters long and 37 meters broad, while the interior height of the paper room is 19 meters. A paper machine obtained from Maschinenfabrik L. M. Voith, Heidenheim, Germany, has been installed. It is the largest in Finland, having a total breadth of 4.5 meters and turning out paper 4.2 meters wide. The greatest width thus far in this country has been 3.6 meters.

#### Arrangements for T. A. P. P. I. Convention

The Seventh Annual Meeting of the Technical Association will be held in New York beginning Monday, April 10, 1922, in conjunction with the meetings of the American Paper and Pulp Association.

The contemplated arrangement is as follows:

Monday, April 10.—Meetings of Executive Committee and Standing Committees.

Tuesday, April 11.—First general session; Reports of officers and committees.

Wednesday, April 12.—Second general session; Discussion of committee reports and special papers; Election of officers; Continuation of papers and discussions.

Thursday, April 13.-Completion of T. A. P. P. I. program.

## CURRENT PAPER TRADE LITERATURE

Abstracts of Articles and Notes of Papermaking Inventions Compiled by the Committee on Abstracts of Literature of the Technical Association of the Pulp and Paper Industry

Knife Barker.-Can. patent No. 194,845, John Arrington, Vancouver, B. C., Canada, Dec. 16, 1919. The log is carried longitudinally and non-rotatably through a non-rotatable vertically adjustable ring frame. Rotatable disc cutters are mounted on arms radiating towards the center of the frame in such a manner as to accommodate themselves to the irregularities of the logs. Claims allowed 7.-A. P.-C.

Log Saw .- Can. patent No. 194,217, Warren Sabin, Tavera, Wis., U. S. A., Nov. 25, 1919. Claims allowed 2.-A. P.-C

Tree Sawing Machine.—Can. patent No. 194,885, Edwin Louis Dean, Shrewsbury, Mass., U. S. A., Dec. 16, 1919. Claims allowed 5.-A. P.-C.

Wood Sawing Machine.—Can. patent No. 195,134, Donald L. Crist, Richwood, West Virginia, U. S. A., Dec. 23, 1919. Claims allowed 2.-A. P.-C.

Paper Coating Machine.—Can. patent No. 194,259, Bird & Son, Ltd., assignee of Harry M. French, Norwood, Mass., U. S. A., Nov. 25, 1919. Claims allowed 9.-A. P.-C.

Method of Softening Water.-Can. patent No. 194,279, The Minerals Separation North American Corporation, New York City, N. Y., U. S. A., assignee of Edwin Edser and Stanley Tucker, both of London, England, Nov. 25, 1919. The salts which produce hardness are precipitated with tri-sodium phosphate; a small proportion of a soluble soap is then added, and the mixture is agitated and aerated to form a flotation froth which carries away the precipitated salts. Claims allowed 5.-A. P.-C.

Apparatus for Handling Pulp.—Can. patent No. 194,283, The Sherbrooke Machinery Co., Ltd., Sherbrooke, Que., Canada, assignee of Anton J. Haug, Nashua, N. H., U. S. A., Nov. 25, 1919. Claims allowed 8.-A. P.-C.

Discharge Device for Pulp Tanks.—Can. patent No. 194,316, Olaf Quiller and Kristian Holter, co-inventors, both of Christiania, Norway, Dec. 2, 1919. In the bottom of the tank there is a discharge opening, and above this opening is a vertical spraying pipe having nozzles near its lower end and which can be rotated. Claims allowed 3.-A. P.-C.

Paper Reinforcing Machine.—Can. patent No. 194,375, Charles Henry Howard, Saugus, Mass., U. S. A., Dec. 2, 1919. Claims allowed 33 .- A. P.-C.

Apparatus for Coating Containers with Paraffin.—Can. patent No. 194,470, The Creamery Package Mfg. Co., Chicago, assignee of Theodore L. Valerius and Olaf Larsen, both of Fort Atkinson, Wis., U. S. A., Dec. 2, 1919. Claims allowed 22.-A. P.-C.

Air Preheating Device for Paper Machines.-Can. patent No. 194,323, John Edward Alexander, Port Edwards, Wis., U. S. A., Dec. 2, 1919. Claims allowed 12 .- A. P.-C.

Paper Dryers.-Can. patents 194,523, 194,524, 194,525, John Edward Alexander, Port Edwards, Wis., U. S. A., Dec. 9, 1919. 194,523 The sheet is made to pass through a chamber containing electric heaters. Claims allowed 9. 194,524 The dryer consists of a cylindrical casing on which are several spiral electrical heating elements suitably insulated from the casing. Claims allowed 7. 194,525 The dryer consists of a chamber heated electrically, the sheet being carried through on wire screens in a circuitous path, while the heated air follows the same path in the opposite direction. Claims allowed 16 .- A. P.-C.

Paper Bottle.-Can. patent No. 194,602, Jesse H. Perrault, Detroit, Mich., U. S. A., Dec. 9, 1919. A bottle made of one or more plies of paper, the fibers of which are disposed transversely to the bottle, with a neck formed by plaiting the paper and overlapping it in layers with a groove for the cap. Claims allowed

8. Also, Can. patent No. 194,957, Dec. 16, 1919. Claims allowed 2. —A. P.-C.

Paper Reinforcing Machine.—Can. patents 194,911, 194,912, The Paper Products Co., Boston, Mass., assignee of Charles Henry Howard, Saugus, Mass., U. S. A., Dec. 16, 1919. Claims allowed 17 and 65 respectively .-- A. P.-C.

Paraffined Paper Bottle.—Can. patent No. 194,956, Jesse H. Perrault, Detroit, Mich., U. S. A., Dec. 16, 1919. The bottle is made up of layers of paraffined paper, the fiber being disposed transversely to the receptacle. A waxed cord is disposed in a groove between the layers, an end of the cord projecting, so that the bottle may be opened by severing the successive layers on pulling the string. Claims allowed 9.-A. P.-C.

Revolving Drum Suspension.—Can. patent No. 194,985, John Stadler, Shawinigan Falls, Que., Canada, Dec. 16, 1919. Claims allowed 7.-A. P.-C.

Knife Device for Wet Machines.-Can. patent No. 195,114, Eugéne Marius Bené, Montreal, Que., Canada, Dec. 23, 1919. Claims allowed 2.-A. P.-C.

Pulp Distributor.—Can. patent No. 195,272, Wm. T Varney, Vancouver, B. C., Canada, Dec. 3, 1919. Claims allowed 5 .-

Recovery of Alkali from Black Liquor-Can. patent No. 195,309, The Dorr Co., assignee of Daniel S. McAfee, New York City, N. Y., U. S. A., Dec. 23, 1919. Unslaked lime is ground with a liquid lime slaking agent in the presence of the ash from the smelting furnace. Claims allowed 17.-A. P.-C.

Studies in Evaporator Design.-W. L. Badger, Evaporator Expt. Station, Univ. of Mich., Ann Arbor, Mich. Chem. Met. Eng., xxv, 459-463 (Sept. 7, 1921). Experimental data are given for horizontal tube evaporators, showing the relation between hydrostatic head, temperature drop, and heat transmission. The conclusions must for the present be considered as indicating tendencies only, and must be applied with caution to evaporators differing much in design from the one in which they were determined. (For description of the experimental evaporator see Chem. Met. Eng., xxiii, 159, July 28, 1920.) In horizontal tube evaporators the maximum capacity occurs when the tubes are from one-half to two-thirds submerged. The maximum capacity is reached at levels nearer the top of the heating surface as the apparent temperature drops become smaller. The maximum apparent heat transmission co-efficient is 105-108 per cent of the heat transmission co-efficient where the liquid level is at the top of the heating surface. The ratio of corrected heat transmission co-efficients for two different temperature drops is constant for all levels above the optimum.-A. P.-C.

Benefits from Preliminary Impregnation of Chips in the Soda and Sulphate Processes .- Chem. Met. Eng., xxv, 463 (Sept. 7, 1921). Chips are impregnated with cooking liquor under pressure before starting the cooking action, the required pressure being obtained by pumping liquor into the digester after it has been completely filled and closed. Laboratory cooks of treated chips on a 50-lb. scale showed greater uniformity of cooking, increased yields, reduced bleach consumption, increased concentration of the cooking liquor, and reduced time for cooking. Mill trials on a 3-ton scale resulted in increased concentration of the cooking liquor, reduced time for cooking, a reduction of the steam required for cooking from 9,000 to 6,000 lbs. per digester charge, and an increase in the concentration of black liquor from the digester from 15 to 18 degrees Baumé.-A. P.-C.

The Duplex Plate and Frame Filter Press.-Chas. D. Burchenal, New York City. Chem. Met. Eng., xxv, 476-480 (Sept. 7, 1921). A comparison of the advantages and limitations of various types of filtering apparatus and a description of a modified form of plate and frame filter which, in certain features, appears to present a number of important improvements. The Duplex filter press employs double inlets and double outlets. The cloths are supported on a special screen of wide mesh double crimp wire, which in turn is carried on widely spaced reinforced ribs cast on the plate, so that ample space behind the cloth is provided for the fall of filtrate and for the easy access of wash water to the entire surface of the cake. This method of support allows of the formation of cakes of unusual thickness, thus reducing the labor since the filter is dumped at less frequent intervals. A double system of washing is provided so that all cakes may be washed (in alternate directions if desired) by the manipulation of a single valve. Drip cocks have been eliminated, as well as the open drip gutter, yet turbid filtrate from any one cloth can be detected and shut off without stopping the flow from a perfect cloth on the other side of the same plate.-A. P.-C.

The Effect of Chemical Reagents on the Microstructure of Wood.-Allen Abrams, Research Lab. of App. Chemistry, Mass. Inst. of Technology, Cambridge, Mass. J. Ind. Eng. Chem., xiii, 786-790 (Sept. 1921). A new procedure has been developed whereby the action of chemical reagents on the microstructure of wood may be followed readily either by the microscope or by photomicrographs. It consists essentially in first making thin sections of wood and treating these with the reagents under the proper conditions of temperature and pressure. This method has been used in investigating the effects of various electrolytes (cellulose solvents, acids, alkalies, oxidants, and chemicals used in paper making) on pine wood. The effects on the microstructure of wood have been studied both by microscopic observations and by cell measurements. Some of these effects may be summarized as follows: (1) Cellulose solvents act strongly and about equally on the middle lamella and on the cell wall. (2) Strongly oxidizing solutions act on the cell wall but have comparatively little effect on the middle lamella. (3) The ordinary paper making chemicals act strongly on the middle lamella and, relatively, have much less effect on the cell wall. Caustic soda solutions cause swelling of the cell wall, but solutions of sodium sulphite and of sodium sulphide cause little or no swelling.-A. P.-C.

The Testing of Paper .- U. S. Bureau of Standards Circular No. 107, Feb. 12, 1921. The circular contains information relating to the methods of testing and the apparatus employed in the paper laboratories of the Bureau of Standards for the routine testing of paper. In the introduction a brief description of the raw materials used, the size and importance of the paper industry, and the general groups of classes of papers are given. The classification of paper is only of a general nature. The purpose of the tests and the development of methods of testing is touched upon, and suggestions are given as to methods of developing specifications. The testing of paper is divided into three groups, and the methods are classed as physical, chemical and microscopical. Under each group the various standard methods are given in detail with photographs of apparatus employed. No attempts are made to interpret results. It is brought out that changes in temperature and humidity affect the physical qualities of paper, and for this reason a constant temperature and humidity room has been installed. It has not been possible to give the relation between humidity and temperature changes and the physical characteristics of paper, but it is hoped to have this information available later. The chemical testing of paper is concerned with the determination of the amount and kind of sizing in the paper, and the amount and kind of filler or loading materials used, and the methods are given in some detail, both qualitative and quantitative. It is desirable to know the kinds of fibrous materials out of which a sheet of paper is made and for this purpose certain stains are used to color the

fibers on a microscopical slide. The procedure is given and suggestions are made as to the value of microphotographs. A short working bibliography is included, as well as regulations for tests and methods of sampling and submission of samples for test.—A. P.-C.

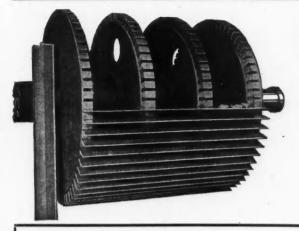
The Fordney Tariff.—Paper, xxviii, 9-11, 18, 28 (July 27, 1921). Text of the provisions relating to the pulp and paper industry.—A. P.-C.

Notes on the Drying of Paper and Cardboard in Sheets.-Lambrette, Brussels. Papeterie, xliii, 722-733 (Aug. 25, 1921). The so-called "counter-current" method of drying paper has two drawbacks: (1) the thermal efficiency is lower than that of any other properly designed system; (2) the average drying temperature must necessarily be relatively low as the maximum temperature is applied to the material when it is practically dry and easily deteriorated by excessive heat. In other systems the highest temperature is applied to the wet material which cannot be injured by it. Moreover, in the case of cardboard, the system possesses the following disadvantages: (1) the edges dry faster than the middle portion of the sheets, and the edge which is turned toward the current of dry air dries faster than the other three, which causes the sheet to cockle; (2) with a propeller blade fan the outside sheets frequently dry faster than the ones in the middle; while with a centrifugal fan the converse is usually true. The so-called "gradual" system of drying overcomes most of the defects of the "counter-current" system. It consists essentially in dividing the dryer into a number of compartments each of which is connected to an independent heater, so that the temperature can be graded as required, and the hottest part is at the wet end, where the paper cannot be damaged by a high temperature, Various modifications of this system are briefly described, and examples are given showing how to calculate the number of compartments, capacity of heaters and of fans, etc.-A. P.-C.

Device for Obtaining a Good Finish on Wove or Laid Paper.—Anon. Papeterie, xliii, 734-736, (Aug. 25, 1921). A silk brush about 10 cm. wide is placed under the wire between the first and second suction boxes, directly under the dandy roll. The brush is supported so that its height is adjustable. The hairs should be about 8 cm. long. The function of this brush is to remove the water which the dandy roll has a tendency to retain in the sheet, and thus to prevent crushing of the laid marks at the wet press.—A. P.-C.

Crowning a Calender Roll.—Anon. The Super-Calender; Pulp and Paper, xix, 854 (Aug. 18, 1921). A brief discussion of the reason why the top and bottom rolls of a stack of calenders are crowned.—A. P.-C.

The Principle of the Elmendorf Paper Tester.-Armin Elmendorf. Paper, xxviii, 15-17 (Aug. 10, 1921). Also, E. Messmer. Monit. Papeterie Française, lii, 679-681 (Nov. 1, 1921). The tearing strength of the paper is tested by determining the work done during the tear and dividing by the length of the tear so as to obtain the average force. The mechanism adopted consists of a swinging pendulum or segment provided with clamps for holding the paper. A knife blade is provided for cutting a slit in the sample to start the tear. If the pendulum or segment were allowed to swing when there is no paper to be tested, it would swing as far to the right as it was at the left at the start. The tearing of the paper requires a certain amount of work, which is equal to the difference in the potential energy of the pendulum in the starting position and its potential energy at the end of the swing after the tear has been made. The amount of swing to the right is indicated by means of a pointer which comes in contact with a stop at the base of the machine to prevent it from swinging to the right but which is carried back by the pendulum (due to slight friction at the hub) as the segment recedes from its maximum position at the right. The scale is calibrated so that if 8 sheets are tested at one time the reading multiplied by 4 gives the force in grams.-



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Manufacturers of

BEATING and WASHING ENGINES FLY BARS—BED PLATES— MACHINE KNIVES

Our new KEYED TYPE BANDLESS ROLL is the final result of Many Years of Experience.

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For Pulp and Paper Mills

STEEL, COPPER, BRASS, BRONZE and other Alloys

punched for Centrifugal and Rotary Screens, Pulp Washers,

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FELT SOAP and OTHER SPECIALTIES

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They seldom wear out and are never thrown out. PERFECT CIRCULATION. NO "PADDLING."

## The "EMERSON" JORDAN

does its work with half the power required by others of no greater capacity.

WRITE FOR DETAILS

## **O**hituary

## Franklin P. Walter

MONROE MILLS, February 20, 1922.—Franklin P. Walter, age 70 years, one of the organizers of the River Raism Paper Company and vice president of the company, died at his home, 219 North Macomb street, Sunday morning. He had been ill with bronchitis and pleurisy for the past two weeks.

He was a public spirited citizen and was instrumental in getting some of Monroe's largest factories to locate here. He was one of the heavy stockholders of the River Raisin Paper Company.

He was in the manufacturing business in Tennessee for ten years. Previous to the organization of the River Raisin Paper Company he was a member of the firm of Radtke-Walter Company of Monroe.

He was born in Milwaukee, Wis., on January 25, 1852. He was married to Miss Barbara Kull, of Monroe, May 9, 1875.

He was a member of the Kilburn Milwaukee Lodge F. and A. M., he was a member *emeritus* of this lodge, River Raisin Chapter No. 22, R. A. M., Moslem Temple Shrine, Michigan Consistory, Monroe Club, Monroe Yacht Club and the Monroe Country Club.

He leaves a wife, three sons, Joseph W. of Monroe, Byron, of Milwaukee, Carl W. of Milwaukee, one brother Byron Walter, of South Milwaukee, two sisters, Mrs. Carl Von Baumbach, of Milwaukee, and Mrs. Edwin Zinn, of Milwaukee.

Mr. and Mrs. Walter just recently moved into their beautiful new home on North Macomb street.

#### Edward E. Allen

#### [FROM OUR REGULAR CORRESPONDENT.]

Boston, Mass., February 21, 1922.—Edward E. Allen, one of the best known paper salesmen in the East, forty-five years in the business, died last week at the home of his son in Somerville, Mass. For the past thirty years he had been the Vermont representative of A. Storrs & Bement Company, Boston. He was of the "old school" type of salesmen, beloved by countless friends, a friend to the younger generation on the road and a successful salesman in every sense of the word.

His early life in the business was with Fred Packard, old-time jobber. Later he joined the Carter-Rice staff and in 1891 went with the A. Storrs & Bement Company, by whom he was employed at the time of his death. Some time ago his health failed him and he was forced to retire, but even under these conditions he kept in touch with many of his old customers and greatly aided his successor.

He made friends everywhere. Printers, jobbers, dealers, manufacturers, everyone affiliated with the paper business in New England, will miss "Ed" Allen. Scores of paper men in this vicinity attended the funeral.

## Mrs. A. L. Rieger

DAYTON, Ohio, February 20, 1922.—The many friends of A. L. Rieger, president of the Peerless Paper Company, of Dayton, Ohio, were shocked to learn of the death of his wife Anna Rose Dennewitz Rieger, on Thursday, February 16, at 6:50 P. M. Mr. and Mrs. Rieger were married on February 19, 1891. Mrs. Rieger was an accomplished violinist, and was trained in music by her father, Professor Christian Dennewitz, deceased, who is remembered as prominent in the musical world.

Two sons were born to Mr. and Mrs. Rieger, Lowell P. Rieger, who is associated with his father as secretary and treasurer of the Peerless Paper Company, and Nelson M. Rieger, a student at Ohio State University.

Mrs. Rieger's death was the outcome of but a few days illness, and is a greater shock because it was so unexpected. She leaves a host of happy memories to solace her large circle of friends.

## Niagara Falls Tablet Co. Incorporates

NIAGARA FALLS, N. Y., February 20, 1922,—The Niagara Tablet Company, Inc., has been incorporated under the laws of the State of New York with a capital stock of \$60,000, with principal office at Niagara Falls, to make writing tablets, note books and all other items usually included in similar lines. The plant will be located at 1023-1039 Grove avenue, Niagara Falls, N. Y., and will be in operation about the middle of April.

The directors of the company are Paul Kellogg, Mark H. Robinson, William H. Howe, Frederick G. Pierce and Nelson J. Bowker. Mr. Kellogg has been a buyer of paper and paper supplies for the Larkin Company, Buffalo, and for the United Drug Company at New York City. Mr. Robinson has been in the production department of Eaton Crane & Pike Co. for seven years. These two will be the active directors and officers in the new company. The other three directors are well known in the paper trade.

## Pulpwood Suit for \$25,000 Held up

FROM OUR REGULAR CORRESPONDENT.

Bangor, Me., February 21, 1922.—The suit for \$25,000 damages-brought by Perley R. Eaton of Rutland, Vt., against Frank S. Sawyer of Jonesport, Me., for a breach of contract concerning a pulpwood deal came to a sudden and rather sensational halt this week when one of the jurymen informed the court he had been "approached" in regard to the case.

The case was taken from the jury and continued to a later date at which, it is expected, a new trial will be started. The alleged

"fixer" was sentenced to a sixty-day term in the jail.

The case has attracted considerable attention in New England paper trade circles. The plaintiff claims that the defendant failed to fulfill a contract to deliver 5,000 cords of pulpwood which the plaintiff had contracted to deliver to the Remington Pulp and Paper Company, Norfolk, N. Y. The plaintiff said that as a result of the breach of contract he was forced to buy pulpwood in the open market, resulting in heavy loss to him.

## Wyoming Valley Paper Mill Burned

PITTSTON, Pa., February 20, 1922.—The Wyoming Valley Paper-Mill, at Cron and Thomas streets, was completely destroyed by fire February 5, causing a loss estimated at about \$150,000. The fire was discovered about 1 o'clock by John Williams, a fireroom employe.

The fire is believed to have started in the boiler rooms, which lead into the machine rooms. It is thought that a galvanized iron stack, leading to the chimney, became overheated, causing the fire. The mill was a wooden structure.

The loss caused by the blaze is partly covered by insurance.

The plant employs thirty-five people.

Joseph Ferguson, superintendent of the plant, stated that according to information received by him the plant will be rebuilt, but it will be a modern mill, two stories and will be constructed of either brick or concrete. It will be some time before work is started.

#### Export Paper Company Doing Well

[FROM OUR REGULAR CORRESPONDENT.]

Montreal, Que., February 20, 1922.—The three news print mills in the Canadian Export Paper Company, namely, the Laurentide, Price Brothers and Brompton, are at present running at capacity. Prospects have considerably improved during the past month and already the company has signed up contracts for 80 per cent of its possible output for the year. An important factor is, of course, the contract between the Laurentide Company and the New York Times for the whole output of that Company's two new machines for five years.



CUT down excessive wrapping paper investment. Why carry two wrapping paper lines for one wrapping paper purpose?

## **MOSINEE**

presents a perfect wrapping paper, weight and strength for each wrapping purpose. Made in all weights, from 15 lb. to 100 lbs. basis. The one complete, standardized and economical line of wrapping paper sold.

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"The Wrapper That Delivers the Goods"

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# Craig-Becker Company

INC.

Domestic and Foreign Ground Wood and Sulphite

52 VANDERBILT AVE. NEW YORK CITY



## PAPER

"It more than Wraps-It Advertises"

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And now we are going to advertise it.





## Trade Marks Department

CONDUCTED BY NATIONAL TRADE-MARK CO., WASHINGTON, D. C. The following are trade-mark applications pertinent to paper and pulp field pending in the United States Patent Office which have been passed for publication and are in line for early registration unless opposition is filed promptly. For further information address National Trade-Mark Company, Barrister building, Washington, D. C., or Bush building, 130 West Forty-second street, New York, trade-mark specialists.

As an additional service feature to its readers, the Paper Trade Journal gladly offers to them an advance search free of charge, on any mark they may contemplate adopting or registering.

FELTEX-No. 153,339. The Philip Carey Manufacturing Company, Lockland, Ohio. For roofing composed in whole or in part of felted materials, namely, saturated papers.

REPRESENTATION OF AN ARROW HEAD-No. 131,577. The Heppes-Nelson Roofing Company, Chicago, assignor to The Richardson Company, Lockland, Ohio, a corporation of Ohio. For building paper.

TYPOPHANE-No. 154,023. Frank W. Hyman, New York. For transfer sheets for use in the art of printing.

## Receiver for Hercules Paper Corp.

Judge Learned Hand in the United States District Court has appointed Percival Wilds receiver under a bond of \$25,000 for the Hercules Paper Corporation, a Delaware corporation of 135 Broadway controlling 90 per cent of the stock of the Frank Gilbert Company, a New York corporation, and the Union Wax and Parchment Paper Company, a New Jersey corporation, both subsidiaries of the Hercules. The Hercules Paper Corporation has plants at Cornwall, N. Y., and Rock City The book valuation of the Hercules assets is placed at \$3,315,487 and its liabilities at \$1,790,509. Archibald Palmer is the attorney for the following complaining creditors:

The Hartwell & Lester, Inc., alleging a debt of \$4,413. The company's present condition has been brought about by the depression in the paper business in general and the state of receivership is merely a protective measure since all three are solvent. Creditors have co-operated heartily with the corporation which discounted its bills directly up to the time the receivership went into effect. If collections had been reasonably good there would have been no trouble and there would not have been even a temporary financial embarrassment. Wilds has also been appointed receiver for Frank Gilbert Company under a bond of \$10,000 and as receiver for the Union Wax and Parchment Paper Company with a plant at Hamburg, N. J. The bond in this case is \$5,000. The complainants against Frank Gilbert Company are Srere Bros. & Co. alleging debt of \$5,463. Craig Becker Company with a claim of \$3,789 brings complaint against the Union Wax

The liabilities for Frank Gilbert Company are placed at approximately \$1,000,000 and its assets at \$1,774,773. The union's liabilities are placed at \$1,295,822 and its assets at \$1,589,768. The attorney for the defendants is Jacob L. Holtzmann, of 232 Broadway.

## Perfect Package Month a Big Success

Shippers of the country made a score of 99.10 per cent in the "Perfect Package Campaign," according to a recapitulation of the results of the movement just announced by the Joint Campaign Committee of the American Railway Association and the American Railway Express Company, which conducted the campaign throughout the country in November.

Reports of the business handled and the number of exceptions taken on packages, because of some error or defect in packing, marking or registration, were tabulated in Chicago by a corps of accountants, and took a week to complete.

During the Perfect Package Month, as November was designated, the railroads were credited with handling 9,339,745 freight shipments, to which 101,760 exceptions were filed by the carriers. During the same period, the express company handled 10,899,352 shipments, to which 81,070 exceptions were taken. In other words, all of the carriers handled 20,239,097 shipments, freight and express, on which 182,830 exceptions were entered by carriers, giving a national percentage of 99.10 per cent.

These figures were tabulated from reports received, up to December 22, 1921, from 1294 cities in the United States, divided into five classes, according to population. The fifty-six leading cities, with a population of 100,000, shipped out more than half the business handled by the carriers, representing 5,724,760 shipments by freight and 7,871,455 by express, for

a percentage of 95.15 per cent.

The one hundred and fifty-six cities having a population from 25,000 to 100,000 forwarded 3,455,254 shipments by freight and express, with total exceptions filed of 37,891, for a score of 98.91 per cent. Two hundred and fifty-four cities, with a population between 10,000 and 25,000, shipped 1,946,683 shipments, with 21,883 exceptions for a score of 98.88 per cent. Two hundred and twenty-seven cities, with a population from 5,000 to 10,000 made 688,678 shipments, with 4,898 exceptions, for a score of 99.29 per cent. Six hundred and one cities with a population of 5,000 and under, obtained a score of 99.40 per cent, with 552,263 freight and express shipments, on which 3,338 exceptions were filed.

The exception reports covered errors made by shippers in the packing and marking of shipments, and in making out bills of lading or express receipts. A number of the smaller communities failed to forward their reports in time and were

not included in the recapitulation.

The Joint Perfect Package Campaign Committee has issued a statement, expressing the thanks of the carriers and their representatives, to all traffic clubs, chambers of commerce and other shippers' organizations, who gave active support to the movement and contributed to its success.

#### Business Won by Aggressive Selling

"Business is coming to the paper manufacturer who is going aggressively after it," said the statement made by the Paper and Pulp Industry, the official bulletin of the American Paper and Pulp Association in its monthly review of business conditions. Continuing this tone of fighting optimism, the review adds:

"Conditions are more favorable in some lines than in others, but on the whole the situation is better than a month ago. The forecast made several weeks ago of a dullness after the holidays and the inventory period proves to be fact, but February is showing a brighter condition.

"The reports from all sections of the industry show that there has been a noticeable increase of business in the cases of those concerns which have gone after business forcefully and systematically. This is true in the fine paper grades, among the specialties, and in the coarser grades as well. One prominent manufacturer of wrapping paper said that his concern had noted slightly more than the normal picking up after the inventory period of slackness.

"The fine paper industry is entering 1922 with low stocks in the hands of the consumers, merchants and mills. The volume of demand is fair and is improving. Based on these facts and as a revival in general business is slowly becoming evident, 1922 is expected to show decidedly better business for the paper industry. It is expected that the business of this year will be more normal and without the wide fluctuations in demand, costs and prices that took place during the years of the war and post-war periods."



## Jenkins Brass Y Valve

Particularly adapted for boiler blow-off service, and for handling the thick fluids consequent to paper making. The opening is nearly in line with the pipe, so that very little resistance is offered to the flow. Regularly furnished with Jenkins Composition Disc, and renewable seat ring. Made in standard and extra heavy patterns.

Fig. 124, Jen kins Standard Brans Y or Blow Off Valve, screwed.

Jenkins Valves are made in types and sizes for all requirements. The genuine are identified by the Jenkins "Diamond" and signature cast on the body. At supply houses everywhere.







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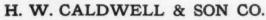
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# CALDWELL SERVICE



HALF a million dollars worth of well-selected stock, constantly maintained, and an organization keyed up to the theory that plant efficiency is measured by the number of orders shipped on the day of receipt, accounts for Caldwell service. Let us figure on your requirements.



LINK-BELT COMPANY, OWNER

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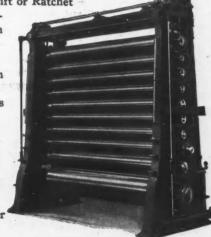
Equipped with Electric Motor Lift, Hydraulic Lift or Ratchet

Lift all operated from floor.

Chilled Iron Rolls of all sizes

Roll Grinding Machines

Micrometer Calipers



LOBDELL CAR WHEEL CO. Wilmington, Del., U. S. A.

## Recent Incorporations

J. C. Brophy Paper Company, White Plains, New York. Capital, \$30,000. Incorporators, J. C. and J. H. Brophy, R. C. Durie. Attorney, A. O. Warren, White Plains.

J. J. Partridge Company, Manhattan New York, paper makers' supplies. Capital, \$50,000. Incorporators, I. J. W. Marx, T. J. Stapleton, L. Sills. Attorney, S. D. Spector, 305 Broadway

BAXTER PAPER CORPORATION, Manhattan, New York. Capital, \$100,000. Incorporators, H. L. Bunker, I. Baxter, H. J. Wellebil. Attorneys, Graves, Miles & Yawger, 111 Broadway.

Coy, Disbrow & Co., Inc., Manhattan, New York. Deal in paper. twine, cordage, etc., and textile manufacturing. Capital, \$150,000. Incorporator, R. H. Coy, Brinkerhoff street, New Canaan, Conn.

## Indicted for Cancelling Paper Assets

Julius Zittenfeld, Aaron A. Jacobus and two others were indicted last week on charges of conspiring to conceal assets of the Merit Paper Company of 305 Broadway, New York, which went into the hands of a receiver a few weeks after it began business last summer. Assistant United States Attorney, presented evidence gathered by Samwick's Investigation Bureau and the New York Credit Men's Association. Many of the biggest paper concerns in New York were said to be backing the prosecution. The amount said to have been involved in operations that are made the basis for the conspiracy charges is between \$60,000 and \$100,000.

According to one of the investigators, the concern sent a man to San Francisco to open a bank account with a few

Then, it is represented, the company deposited in the Pacific Bank's branch at Forty-ninth street and Seventh avenue here two checks drawn on that account for \$12,500 apiece or a total of

Its credit was further established by the issuance of a signed report showing its net worth to be \$27,050.

Because the concern then had \$25,000 "uncollected funds" in the local bank, it was said that it was able to induce paper concerns to ship many carloads of paper to its account. These carloads were converted into quick cash assets at 50 cents on the dollar, it is charged. Members of the firm, it is also charged, divided these assets and disappeared. They were shadowed for months and indicted as soon as they came back to New York. Zittenfeld and Jacobus were held in \$2,500 bail each.

Among the firms that had more or less unfortunate dealings with the company were the following: H. G. Craig & Co., 52 Vanderbilt avenue; S. W. Dunning, 132 Nassau street; Unity Paper Mills, 135 Broadway; H. P. Andrews Paper Company, 104 Worth street; Rainbow Paper Corporation. Windsor, Conn.; National Wax and Paper Company, Bush Terminal, Brooklyn; J. E. Linde Paper Company, 84 Beekman street; Ajax Paper Company, 135 Broadway, and Three River Paper Company.

#### New Jeffrey Catalogs

The Jeffrey Manufacturing Company, Columbus, Ohio. We are attaching copy of our new Bulletin No. 360 featuring the Jeffrey Portable Car Unloader, for unloading coal from hopper-bottom or gondola types of railroad cars.

The design of the Jeffrey Portable Car Unloader is such as to enable it to meet various conditions of unloading. It is so constructed as to require but a minimum of space in which to operate and can readily be placed in between the car hopper door and the rails. Where conditions permit, a more permanent arrangement

can be had by placing the unloader underneath the rails and thus eliminate the necessity of resetting it for each car,

It is in reality a double purpose machine since it will load directly into a motor truck, or can be extended to serve a shortage pile by use of a separate portable conveyer.

The Jeffrey Manufacturing Co. also has just issued Catalog No. 345, for Coal and Ashes Handling Machinery for Boiler Houses.

Twelve distinctive types of Jeffrey power house equipments for economically meeting a wide range of capacity requirements in various sizes of plants are illustrated and described in this catalog. It will undoubtedly be of valuable assistance in the selection of the proper type of equipment for new power houses, installation of new equipment which can later be extended as conditions warrant; making temporary extensions to present equipment or replacing worn out or inadequate handling machinery.

## Filer Fibre Co. Increases Capital

[FROM OUR REGULAR CORRESPONDENT.]

Manistee, Mich., February 20, 1922.—The Filer Fibre Company, manufacturers of a high grade sulphite pulp at Filer City, Mich., at its annual meeting held in January authorized the increase of capital to \$1,000,000. The company also declared a 30 per cent stock dividend at that time to the present stockholders of record. The purpose of increasing the capital stock is for the purpose of installing a kraft paper machine and the construction of the necessary buildings so that the company can furnish and produce standard kraft papers.

The Filer Fibre Company has been operating for about five

years and during that time had an excellent business.

This company owns extensive timber holdings and on account of its close proximity to large cities on the Great Lakes, has decided to make kraft papers, as it can be delivered from the mill by water

The officers of the company are as follows: Frank Filer, president; R. W. Smith, vice-president; Max Oberdorfer, vice-president; Gus Kitzinger, treasurer; P. P. Schnorbach, secretary and general

Mr. Schnorbach states that announcement will be made soon as to when ground will be broken for the building of the new plant.

#### Bids and Awards for Paper

[FROM OUR REGULAR CORRESPONDENT.]

WASHINGTON, D. C., February 21, 1922.—The purchasing officer of the Government Printing Office has received the following

5,000 pounds 22x26, No. 25, Binders' Board: Dobler & Mudge, \$82.50 per ton; Mathers-Lamm Paper Company, \$103.75; Geo. W. Millar & Co., Inc., \$80.00; Old Dominion Paper Company, \$80.00; Philip Rudolph & Sons, Inc., \$75.14; The Republic Bag and Paper Company, \$81.20; Dennison-Pratt Paper Co., \$101.20; The Whitaker Paper Company, \$155.40.

The Maurice O'Meara Paper Company has been awarded the contract by the Government Printing Office for furnishing 1,810 pounds of 221/2x281/2-181 buff index bristol board at \$.1975 per pound, bids for which were opened on February 8.

R. Rudolph & Sons will furnish 8,000 pounds (2,500 sheets) of 22x26 No. 25 binders board at \$.03757, bids for which were opened

on February 13.

## News of the Holyoke Trade

HOLYOKE, Mass., February 20, 1922.-E. J. McDonald, formerly of this city, and L. A. Marr of the Lewellyn A. Marr Paper Company of Boston, have purchased the Mt. Holly paper mills at Mt. Holly Springs, Pa. They will take possession on April 1. Mr. McDonald has been superintendent of the Tileston & Hollingsworth Company of Boston for the past 12 years.

**Howard Bond** 



Howard Ledger

"The Paper of Many Uses"

Manutactured by

THE HOWARD PAPER COMPANY,

Urbana, Ohio

## FORGE LAP-WELDED

VERTICAL
SEAMS
HEATED WITH
FURNACES
AND WELDED
WITH
HYDRAULIC
POWER

SOFT STEEL

# **DIGESTERS**

ALL SEAMS LAP-WELDED

AMERICAN WELDING COMPANY CARBONDALE, PA.

CIRCUMFEREN-TIAL SEAMS HEATED WITH FURNACES AND HAMMER WELDED

## Felt Test-Lowest Cost per Ton

If you judge felt values, not by what you put into the equipment, but what you get out of it—then you will specify ORR 3 stripe Endless Felts, for ORR felts will produce the lowest cost per ton. They "stand up" under severe usage. Orr durability is acknowledged everywhere. Their strength and long life are as dependable as their reliability and quality.

In the 32 grades of Felts and Jackets we can match your most exacting demands. Tell us the kind of paper you desire to make, and we will send you samples of felts that will economically serve you and help you to produce paper at lowest cost per ton.

THE ORR FELT & BLANKET COMPANY, Piqua, Ohio

## WILLIAM A. HARDY & SONS COMPANY, Fitchburg, Mass., U.S.A.



## New York Market Review

OFFICE OF THE PAPER TRADE JOURNAL, TUESDAY, February 21, 1922.

The New York paper market is convalescent. The process of liquidation has gone forward now about as long as possible. Uncertainty has halted the demand nearly long enough. Stocks of paper and papermaking materials are low on every hand and buyers of those commodities must soon be in the market again. A renewal of activity in the paper market is confidently expected. New notes of optimism are sounded with more frequency and although collections are bad and money is not easy, economic factors making for betterment are beginning to overcome the few remaining impediments to normal business. Buying in general is still light but in greater volume than at the same time last year. While some wholesalers find it harder to book orders now than a month ago, it is significant that real bargains are accepted by buyers with some alacrity. The attention of the business world has been turned so long in the direction from which tariff reform is expected to emerge that impatience is manifest generally. It would seem that at least a temporary settlement of the tariff question cannot be far off, but the capacity of the reformers for delay apparently is unknown. With the American valuation plan put across in style, with a stabilization in taxes brought about, and with a general reduction in freight rates effected there would remain very few impediments to normal industry and to a conservative and prosperous paper market. The farmer is declared to be coming back and since his welfare is fundamental in the economic complexity of modern times, there is justification for the statement that America is about to see the dawn of its greatest day. Paper will have its share in this awakening of a new day and as though in anticipation the mills are running better, especially those manufacturing the coarser grades. Prices are firm on the whole while that tendency to fluctuate widely so characteristic of the late days of disorganization apparently has disappeared,

The news print situation is on the mend with the large mills increasing their output slowly but surely. The demand is also growing but seemingly not in proportion to the output. While the demand turns first to the foreign supply of news print in many cases for absolute dependability as regards quality and service, it is found that domestic manufacturers are still supreme. Production by United States mills in January was 13,835 tons or 13 per cent less

than during the same month a year ago.

From the condition of book paper stocks now on hand many buyers will soon be in the market. Buying has proceeded on a hand to mouth basis about as long as was expected and now confidence is beginning to express itself in slightly larger orders than have been received in some time. The regular receipt of small orders and the promising number of inquiries into the condition of the market is responsible for some betterment in mill activity. Prices are firm and are not liable to fluctuate over a very wide range in the next few months.

The condition of the fine paper market shows little change. It still requires considerable effort to bring about sales of any size, but there always seems to be business for the salesman who goes out after it with the firm determination to bring back an order or return incapacitated. The manufacture of the cheaper grades of sulphite bond is proceeding at capacity in some of the larger plants, which indicates that the entire department should be running better before long.

The tissue market is still listless. There is practically no demand at present except for small spot lots for immediate delivery. Since the market as a whole improved somewhat after the new year the present state of dullness is considered to be temporary and a much better state of affairs is anticipated in the very near future.

The kraft market maintains its strong position, showing little change from last week. Kraft products are necessities as compared

to finer papers and as such are bound to be in good demand even in times of unusual quietness. With general market conditions much better than for some time the kraft market stands out as leader in activity. The product of the larger mills is sold up for six or eight weeks in advance and production is going forward at capacity, much to the optimism of the trade.

The board market is experiencing the final stages of what is hoped will be the last slump for a long time. A demand for board is hard to find and board plants are working on part time, hoping to bridge over the present and hold out if possible until the long awaited day of normalcy arrives. The trade is not well supplied with board and must of necessity be in the market for small lots in any event. Since the board market is on its back it can do little but look up and the general feeling is more optimistic in the light of a marked improvement in underlying conditions.

#### Mechanical Pulp

The mechanical pulp market is still quiet but is believed by the best authorities to be on the road to improvement. Production has gone on at a loss or at a very nominal margin of profit about as long as may reasonably be expected and prices should take a rise before long unless foreign competition should interfere, which is rather doubtful in this market. The production of ground wood is larger and the tone of the market much better on the whole.

#### Chemical Pulp

The mechanical pulp market is showing some improvement. A good many buyers have been feeling their way into the present market situation and should soon be convinced that prices can go no lower. High freight rate schedules tend to keep prices up and prospects for their adjustment to suit pulp dealers seem remote. About 80 per cent of the surplus strong unbleached pulps is out of the market and the remaining 20 per cent, mostly manufactured in Wisconsin, has no influence on the market. It is felt that prices must rise as manufacturing cannot continue at a loss for an indefinite period. Possibly 50 per cent of the surplus bleached pulps is out of the market. The foreign product is demanded first by reason of its unprecedentedly low cost. When that supply is exhausted the demand turns to domestic producers whose position while not wholly enviable is improving.

## Old Rope and Bagging

Some betterment in the operating capacity of the paper mills accounts for a slight improvement in the old rope and bagging market. Although things are still quiet the demand from the mills promise to increase steadily from now on and should go far toward keeping this department in a healthy condition.

#### Waste Paper

A great deal of overissue news is going to Asia at the present time, with the result that while the demand here is subnormal the supply also is negligible. The demand from paper mills is better, but prices expected allow just about enough to cover the cost of collecting and packing.

#### Rags

The rag market is weak and dealers are unable to account for the total lack of pressure on the market from those who should be interested. Prices reveal a tendency to fluctuate and apparently mean very little.

#### Twine

A slight improvement is noticeable in the twine market and sales are on the increase. Prices are firm and unchanging for the most part.

Restrictions on mills using water from the first level canal were placed in force during the past week by the Holyoke Water Power Company because of the sudden drop in the waters of the Connecticut River. Mills on the second and third canals were free from restrictions.

## Market Quotations

Paper Company Securities
New York Stock Exchange closing quotations February 20, 1922:

STOCKS American Writing Paper Company, pref International Paper Company, com International Paper Company, pref., stamped Union Bag & Paper Corporation	67	ASKED. 27 481/4 671/2 69
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Because of the unusual conditions prevailing in the various markets quotations are more or less nominal.

Paper	Domestic Rags
F. o. b. Mill.	Prices to Mill, f. o. b. N. Y.
Ledgers	Prices to Mill, 1. o. b. N. x.  Shirt Cuttings— New White, No. 2. 6.00 @ 6.50  Silesias, No. 1. 6.00 @ 6.50  New Unbleached 8.75 @ 9.50  Washables 3.25 @ 3.75  Fancy 4.50 @ 5.00
Writings-	New White, No. 2. 6.00 @ 6.50 Silesias, No. 1. 6.00 @ 6.50
Extra Superfine. 14 @ 25 Superfine 13 @ 20 Tub Sized 10 @ 16 Engine Sized 9.00 @15.00 News-f. o. b. Mill- Rolls, contract 3.50 @ —	Silesias, No. 1. 6.00 @ 6.50
Tub Sized 10 @ 16	New Unbleached. 8.75 @ 9.50 Washables 3.25 @ 3.75
Engine Sized 9.00 @15.00 News-f. o. b. Mill-	
Rolls, contract 3.50 @ — Rolls, transit 3.75 @ 4.00	to Grades—
Sheets 4.00 @	Blue Overall 5.75 @ 6.00 New Blue 4.00 @ 4.50 New Black Soft. 3.25 @ 3.50
News—f. o. b. Mill— Rolls, contract 3.50 @ — Rolls, transit 3.75 @ 4.00 Sheets 4.00 @ Side Runs 3.25 @ 3.50 Book, Cased—f. o. b. N. Y.— S. & S. C 6.70 @ 7.50 M. F 6.45 @ 7.25 Coxted and Fr.	Cottons—according to Grades— Blue Overall 5.75 @ 6.00 New Blue 4.00 @ 4.50 New Black Soft. 3.25 @ 3.50 New Light Sec-
S. & S. C 6.70 @ 7.50 M. F 6.45 @ 7.25	onds 2.75 @ 3.00
S. & S. C. 6.70 @ 7.50 M. F. 6.45 @ 7.25 Coated and Enamel 8.00 @ 10.00 Lithograph 8.00 @ 10.00 @ 10.00 Tissues—f. o. b. N. Y. White, No. 1 80 @ .90 Colored 1.00 @ 2.00 Anti-Tarnish 82½ 85 Silver Tissue 1.50 @ 2.70 Manila 75 @ .80	onds 2.75 @ 3.00 O. D. Khaki Cut- tings 3.25 @ 3.50
amel 8.00 @10.00	Corduroy 2.25 @ 2.40
Lithograph 8.00 @10.00	New Canvas 6.00 @ 6.50 New Black Mixed 2.75 @ 3.25
White, No. 180 @ .90	Old
Colored 1.00 @ 2.00 Anti-Tarnish82½ @ .85	White, No. 1—  Repacked 5.75 @ 6.25  Miscellaneous 4.50 @ 4.75
Silver Tissue 1.50 @ 2.70 Manila75 @ .80	Repacked 5.75 @ 6.25 Miscellaneous 4.50 @ 4.75
Kraft-f. o. h. Mill-	White No. 2— Repacked 3.00 @ 3.25 Miscellaneous 2.25 @ 2.50
No. 1 Domestic. 7.25 @ 7.50 No. 2 Domestic. 5.75 @ 6.50 Imported 6.00 @ 6.50	Miscellaneous 2.25 @ 2.50 St. Soiled White 1.50 @ 1.65 Thirds and Blues—
Imported 6.00 @ 6.50	Thirds and Blues—
M!!-	Repacked 1.50 @ 1.75 Miscellaneous 1.10 @ 1.25
No. 1 Jute 8.50 @ 9.00	Riack stockings 2.25 @2.50
No. 2 Jute 7.75 @ 8.50 No. 1 Wood 5.00 @ 6.00	
No. 2 Wood 4.25 @ 4.75 Butchers 4.25 @ 4.75	No. 1 1.10 @ 1.15 No. 2
	No. 3
No. 1 Fiber 6.00 @ 6.25	No. 4
No. 1 Fiber 6.00 @ 6.25 No. 2 Fiber 5.25 @ 5.50 Common Bogus 1.75 @ 2.25 Card Middies 4.00 @ 5.00 Boards—per ton—	New Light Silesias 6.00 nominal
Boards per ton-	Light Flannelettes. 6.75 nominal
News	New Light Silesias 6.00 nominal Light Flannelettes. 6.75 nominal Unbl'chd Cottons. 7.50 nominal New White Cut- tings 9.50 nominal
Straw40.00 @45.00 Chip37.50 @40.00	tings 9.50 nominal New Light Oxfords 6.00 nominal New Light Prints . 4.50 nominal New Mixed Cut- tings
Chip	New Light Oxfords 6.00 nominal New Light Prints. 4.50 nominal
Wood Pulp75.00 @90.00 Container65.0^ @70.00	New Mixed Cut- tings nominal
Wood Pulp75.00 @90.00 Container65.00 @70.00 Wax Paper—	
Self Sealing White	No. 1 White Linens 8.50 @10.00
basis11.00 @ 12.75	No. 3 White Linens 5.00 nominal
Container	New Dark Cuttings. 1,90 @ 2.10 No. 1 White Linens 8.50 @ 10.00 No. 2 White Linens 5.00 nominal No. 4 White Linens 3.50 nominal No. 4 White Linens 3.50 nominal Prints
Bleached, basis 25	Prints 2.25 nominal
Bleached, basis 20	Med. Light Prints. nominal
lbs	Dutch Blue Cottons 2.10 nominal
Mechanical Pulp	tons 1.65 nominal
(Ex-Dock)	tons 1.65 nominal Ger. Blue Linens. 3.50 nominal Checks and Blues. 1.50 nominal Dark Cottons. 1.10 nominal
No. 1 Imported 34.00 @ 36.00 F. o. b. Pulp Mills.)	Dark Cottons 1.10 nominal Shoppery95 @ 1.00
No. 1 Domestic29.00 @31.00	French Blues 2.00 nominal
Chemical Pulp	Bagging
(Ex-Dock Atlantic Ports)	Prices to Mill f. o. b. N. Y. Gunny No. 1— Foreign
Sulphite (Imported)—	Foreign75 @ .80 Domestic65 @ .75
Bleached 4.25 @ 5.00 Easy Bleaching 3.00 @ 3.25	Wool, Tares, light. 1.20 @ 1.30
No. 1 Strong un-	Wool, Tares, heavy 1.25 @ 1.40 Bright Bagging 1.20 @ 1.30
bleached 2.75 @ 3.00 No. 2 Strong un- bleached 2.50 @ 2.75 No. 1 Kraft 2.75 @ 3.00	No. 1 Scrap75 @ .85
bleached 2.50 @ 2.75 No. 1 Kraft 2.75 @ 3.00	Sound Ragging75 @ .85
	Foreign 4.50 @ 4.75 Domestic 4.75 @ 5.00
Bleached 4.00 @ 4.50 (F. o. b. Pulp Mill.) Sulphite (Domestic)—	New Bu Cut 2.00 @ 2.1!
Sulphite (Domestic)	27
Bleached 4.50 @ 5.00 Strong unbl'chd 2.50 @ 3.00	Domestie 4.00 @ 4.2
Easy Bleaching	Foreign
Sulphite 2.75 @ 3.50 News Sulphite 2.50 @ 3.00 Mitscherlich 3.25 @ 3.75 Kraft (Domestic) 2.50 @ 3.00	
Mitscherlich 3.25 @ 3.75	No. 1
Kraft (Domestic) 2.50 @ 3.00 Soda bleached 4.00 @ 4.25	No. 1

India, No. 6 basis— Light 17 @ Dark 17 @	18 18	Old Waste Papers (F. o. b. New York)
Dark	60	Shavings— Hard White, No. 1 4.00 @ 4.25 Hard White, No. 2 3.25 @ 3.50 Soft White No. 1 3.20 @ 3.30
Light, 18 basis. 25 @ Dark, 18 basis. 26 @	26 28	Flat Stack
Fly— No. 1 22	23	Stitchless 1.50 @ 1.60 Over Issue Mag. 1.50 @ 1.60 Solid Flat Book . 1.40 @ 1.50 Crumpled No. 1. 1.05 @ 1.15 Solid Book Ledger 2.00 @ 2.25
No. 1	31	Crumpled No. 1 1.05 @ 1.15 Solid Book Ledger. 2.00 @ 2.25 Ledger Stock 1.75 @ 1.85
4-ply and larger. 14 Prine Tube Yarn— 5-ply and larger. 18 Prine Tube Yarn— 19 Quantum 1	20 21	No. 1 White News 1.75 @ 1.85 New B. B. Chips .471/2@ .523/5
4-ply	16	Manilas— New Env. Cut 2.90 @ 3.15 New Cut No. 1 1.60 @ 2.00 Extra No. 1, Old 1.60 @ 1.70
Paner Makers Twine	14 17	Container Board, 60 @ 70
Balls	14	Bogus Wrapper
No. 1 Basis 14 @ No. 2 Basis 12 @ Sisal Lath Yarn—	16 14	Bales 1.85 @ 2.00 News— Strictly Overissue .80 @ .85
No. 2 10 @ Manila Rope 17 @	12 18	Strictly Folded55 @ .65 No. 1 Mixed Paper .50 @ .55 Common Paper35 @ .40
[FROM O	CHIC.	CORRESPONDENT.]
F. o. b. Mill.		Straw Board35.00 @ 40.00
No. 1 Rag Bond. 30 @ No. 2 Rag Bond. 18 @ Water Marked Sul-	35	Filled Pulp Board.60.00 @65.00 Old Papers Shavings—
Sulphite Bond 9	12	No 1 Hard White 200 @ 228
Superfine Weiting 10 6	23	No. 1 Soft Shav. 2.50 @ 2.75 No. 1 Mixed 1.00 @ 1.10 No. 2 Mixed 1.00 @ 1.10 White Envel. Cut-
No. 1 Fine Writing 13 (No. 2 Fine Writing No. 3 Fine Writing No. 1 M. F. Book. No. 1 S. & S. C.	13	Ledgers and Writings 1.50 @ 1.75
Coated Pook 83/		Solid Books 1.25 @ 1.50 No. 1 Books, light
News-Rolls mill 31/4	@ 10½ @ 4½	Rlanks 1.65 @ 1.75 Ex. No. 1 Manila . 1.90 @ 2.00 Manila Envelope
News—Sheets, mill 344 No. 1 Manila 544 No. 1 Fiber 514 No. 2 Manila 5 No. 2 Ma	-	Cuttings 2.00 @ 2.25 No. 1 Manilas 1.20 @ 1.30 Folders News (over issue)
Butchers' Manila . 434 No. 1 Kraft	@ _ @ _	Old Newspaper 80 @ .85 Mixed Papers 70 @ .75
Screenings 3	@ <u>_</u>	Kraft 1.75 @ 2.00
Boards, per ton— Plain Chip35.00 Solid News40.00 Manila Lined	@ 40.00 @ 45.00	Roofing Stock, f.o.b. Chicago, Net
Chip47.50 Container Line— 85 Test60.00	@ 22.00	No. 1
100 Test	@70.00	No. 423.00 @ -
		DELPHIA AR CORRESPONDENT.] Best Tarred, 1-ply
Bonds	@ .60 @ .40	(per roll) 1.35 @ 1.50 Best Tarred, 2-ply
Writings-	@ .20 @ .22	(per roll) 1.00 @ 1.15 Best Tarred, 3-ply, 1.50 @ 1.65 Bagging
Fine Wa 2 20	@ .30	Gunny No. 1.
Book, M. F	@ .09 @ .15	Foreign90 — Domestic85 — Manila Rope 4.00 😝 4.50
Book, Coated08 Coated Lithograph .10 Label	@ .15	
News .05 No. 1 Jute Manila .12 Manila Sul, No. 1 .08 Manila No. 207 No. 2 Kraft Common Bogus02 M	@ .13 @ .081/4	Mixed Rope7580 Scrap Burlaps 1.00 1.25 Wool Tares, heavy 2.50 2.75 Mixed Strings7580 No. 1, New Lt.
No. 2 Kraft	@ .08½ @ .08½ @ .09½	Burlap
Common Bogus	@45.00 @35.00	Old Papers F. o. b. Phila.
Chip Board27.50 Wood Pulp Board90.00 (Carload Lots)	@ 32.00 @ 100.00	Shavings— No. 1. Hard
Binder Boards— Per ton\$65.00 Carload lots60.00 Tarred Felts—		No. 2, Hard White 3.00 @ 3.25 No. 1 Soft White. 3.00 @ 3.25
Slaters	@ 50.00 @ 56.00	White 3.50 @ 3.75 No. 2, H ard White 3.00 @ 3.25 No. 1 Soft White . 3.00 @ 3.25 No. 2 Soft White . 1.75 No. 1 Mixed 1.50 @ 1.75 No. 2 Mixed 1.00 @ 1.28
	- Unithis C	on page out

## Imports and Exports of Paper and Paper Stock

NEW YORK, BOSTON, PHILADELPHIA AND OTHER PORTS

#### **NEW YORK IMPORTS**

WEEK ENDING FEBRUARY 18, 1922

#### SUMMARY

News Print
Wrapping Paper 6 cs., 22 bls.
Packing Papers
Wall Paper 6 bls., 1,692 rolls.
Filter Paper9 cs.
Surface Coated Paper32 cs., 210 cs.
Cigarette Paper79 cs.
Miscellaneous Paper 6cs, 1,130 rolls, 243 cs.

#### CIGARETTE PAPER.

British-American Tobacco Co., Albania, Liverpool, 29 cs. P. J. Schneltzer, Asia, Marseilles, 50 cs.

## SURFACE COATED PAPER.

Defender Photo Supply Co., Gothland, Antwerp, 32cs. Defender Photo Supply Co., Geo. Washington, Bremen, 210 cs.

#### FILTER PAPER.

H. Reeve Angel & Co., N. Amsterdam, Rotterdam, 9 cs.

#### WALL PAPER.

A. Murphy & Co., Albania, Liverpool, 6 bls. The Prager Co., Gothland, Antwerp, 1,692 rolls.

#### PACKING PAPER.

Wilkinson Bros. & Co., Mongolia, Hamburg, 230

J. L. N. Smythe & Co., by same, 25 rolls.

#### WRAPPING PAPER.

E. Dietzgen & Co., Mongolia, Hamburg, 6 cs. Blauvelt Wiley Paper Mfg. Co., Tarantia, Glasgow, 22 bls.

#### NEWS PRINT.

NEWS PRINT.

Parsons & Whittemore, N. Amsterdam, Rotterdam, 16 rolls.
Nat'l Bank of Commerce, Stavangerfjord, Kristiania, 884 rolls.
N. Y. Globe, by same, 142 rolls.
N. Y. Tribune, by same, 433 rolls.
Haring Paper Corp., by same, 580 rolls.
Bryce, Roberts & Co., by same, 200 bags.

Parsons Trading Co., Caprero, Genoa, 6 cs. Republic Bag & Paper Co., Corson, Hamburg, 252 rolls. Commerce Corp., G. Washington, Bremen, 878 rolls.

Heensel, Bruckman & Larbacher, Mongolia, Ham-

P. P. Zuhlke, by same, 177

Bros., by same, 39 cs.
Richardson Bros., by same, 39 cs.
Chauson & Montgolfier, Providence, Marsellles, 7 Birn & Wachenheim, Gothland, Antwerp, 15 cs.

#### RAGS. BAGGING. ETC.

F. P. Gaskell & Co., G. Washington, Bremen, 63

F. F. Chaster bales, rags. Arrowhead Mills, by same, 192 bales rags. Diamond, Slade Fibre Co., by same 32 bales

Irving Nat'l Bank, by same, 85 bales flax waste. Equitable Trust Co., Tarantia, Glasgow, 31 bales paper stock.

E. J. Keller Co., Vestalia, Genoa, 190 bales cotton waste.

Dallas Waste Mills, by same, 98 bales cotton

M. Farris, Cragness, Liverpool, 74 bales flax Royal Waste Manfg. Co., by same, 28 bales cot-

E. J. Keller Co., Taranlia, Glasgow, 21 bales thread, 10 bales cuttings.

E. J. Keller Co., Gothland, Antwerp, 337 bales flax waste.

Castle, Gottheil & Overton, Noordam, Amsterdam, 12 bales new cuttings, 18 bales rags.

#### OLD ROPE.

Bennis Bros. Bag Co., Asia, Marseilles, 29 coils. Equitable Trust Co., N. Amsterdam, Rotter-im, 71 coils.

E. J. Keller Co., Nieuw Amsterdam, Rotterdam, First Nat'l Bank of Boston, Sarcoxie, Rotter-dam, 142 ccils.

Brown Bros. & Co., Chicago City, Bristol, 101 coils.

#### CHINA CLAY.

English China Clay Sales Corp., Chicago City, Bristol. 50 casks, 25 tons.

#### WOOD PULP

WOOD PULP.
J. Andersen & Co., Stavangerfjord, Kristiania, 1,200 bales.
Whalen Pulp & Paper Co., S. Dollar, Vancouver, B. C., 9,690 bales.
Whalen Pulp & Paper Co., Knoxville City, Pt. Alice, B. C., 7,820 bales, 1,162 tons.
Brown Bros. & Co., G. Washington, Bremen, 3,250 bales, 550 tons.
Tidewater Papermills Co., H. D. Machean, Liverpool, N. S., 8,122 bales, 812 tons.
E. M. Sergeant & Co., Mongolia, Hamburg, 700 bales.

bales.
M. O'Meara Co., by same, 21 rolls wood pulp M. Gottesman & Co., New Amsterdam, Rotter-dam, 1,059 bales wood pulp.

## **BOSTON IMPORTS**

WEEK ENDING FEBRUARY 18, 1922

Whalen Pulp & Paper Co., Knoxville City, Pt. Alice, B. C., 5,270 bls. wood pulp, 752 tons. M. Gottesman & Co., Carlsholm, Norrkapony, 2,500 bls. wood pulp.

## PHILADELPHIA IMPORTS

WEEK ENDING FEBRUARY 18, 1922

Republic Bag & Paper Co., Carson, Hamburg, 7 rolls paper. Castle, Gottheil & Overton, by same, 348 bls.

Castle, Gottheil & Overton, by same, 348 bls. rags.
Corn Exchange Bank, by same, 121 bls. rags.
Coal & Iron Nat'l Bank, by same, 189 bls. rags.
Castle, Gottheil & Overton, Corson, Bremen,
1,125 bales wood pulp, 559 bales rags.
Castle, Gottheil & Overton, Schoharie, Hamburg, 732 bales wood pulp.
Castle, Gottheil & Overton, Texas, Havre, 617
bales rags.
Castle, Gottheil & Overton, West Inskip, Antwerp, 448 bales rags.
E. J. Keller Co., Corson, Hamburg, 38 bales rags.

rags. E. J. Keller Co., Corson, Bremen, 44 bales rags. E. J. Keller Co., Corson, Hamburg, 233 bales

## Eddy Paper Co. Provides New Capital

KALAMAZOO, Mich., February 20, 1922.-A million dollars working capital, enough to tide over the present period of depression, was provided for the Eddy Paper Company at a meeting of the stockholders, held Friday in the general offices, Three Rivers. With over 80 per cent of the stock represented either in person or proxy, there wasn't a dissenting vote against the plan of relief favored by President C. A. Blaney.

The proposition carried unanimously was to issue general mortgage bonds to the amount of \$2,250,000, drawing 71/2 per cent and running ten years. Of this issue, \$1,250,000 is to be deposited with the trustee for the purpose of refunding at a later date the bonds now outstanding. The issue has met with the approval of the Michigan Securities Commission. Quite a block of the new issue will be taken by directors and stockholders of the company, leaving the balance for sale in the open market.

A. B. Thomas, general manager of the company, addressed those present on conditions. He showed that during the period of slow business that the efficiency of the new mill at Three Rivers and also the White Pigeon plant had been greatly increased, assuring an increased production at a minimum of expense added.

"Better business is assured," said Mr. Thomas. "Conditions are improving and the worst of the depression is behind us. We now have the plants and organization that with two years of favorable

business conditions could pay off the company's entire bonded indebtedness "

Mr. Thomas also spoke of a new department that has recently been started-i. e., the manufacture of suit boxes. He said it is advancing very rapidly, that big orders are being booked regularly and that it is a very profitable line, with wonderful chances for future development.

A cordial feeling of optimism prevailed during the meeting. There was a most commendable disposition shown to accept conditions philosophically, confident that the future offers speedy revival all along the line.

#### Cotton Paper Co. Buys Property

CHATTANOOGA, Tenn., February 20, 1922.—The Southern Cotton and Paper Company, which has been organized to manufacture paper from cotton linters, has acquired the property of the Lookout Bleachery.

The stockholders of the paper company recently met and elected the following directors: S. S. Price, J. S. Poindexter, J. Scott Price, Mercer Reynolds, N. T. Montague, Fred A. Bryan, Mark K. Wilson and Cartter Lupton, and at a recent directors' meeting Mercer Reynolds was elected president and treasurer; S. S. Price, vice-president, and N. Thayer Montague, secretary.

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PAPER BAGS

Sacks and Specialties

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SCHORSCH & CO.

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on a Paper Bag Vouches for Its Good Quality

New York

# BLEACHED SULPHITE

FOR

Writing, Book and Tissue Papers

PARSONS
Pulp and Lumber Co.

EDWIN J. DEWEY, Manager Pulp Sales

Offices, 1807-1810 Finance Bidg., PHILADELPHIA, PA. Milia at PARSONS, WEST VA.

## Blotting Paper of the Best Quality

MANUFACTURED BY

## THE EATON-DIKEMAN COMPANY

LEE, MASS.

Manufacturers of Blotting, Matrix, Filter and all other grades of absorbent papers.

Registered brands Magnet and Columbian, also Lenox and Arlington.

SEND FOR SAMPLES AND PRICES

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High Grade

Paper Finishing Machinery

Write for Information

NORWOOD ENGINEERING CO.

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## Hudson Bag Co., Inc.

Our Brands: Prominent

Prominent My Choice

Popular Favorite MANUFACTURERS OF

Self-Opening

Square and Flat Bags

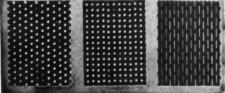
SACKS AND SPECIALTIES

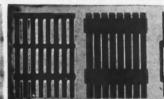
New York Office, 516 Fifth Ave. (Cor. 43rd St.)

Factory: Brooklyn, N. Y.

## PERFORATED METALS

All sizes and shapes of Holes







All kinds and thicknesses of Metal

For Centrifugal and Rotary Screens, Drainer Bottoms, Filter Plates, Pulp Washers, etc.

The Harrington & King Perforating Company

618 No. Union Ave., Chicago, Ill., U. S. A.

New York Office, 114 Liberty St.

## Miscellaneous Markets

OFFICE OF THE PAPER TRADE JOURNAL Tuesday, February 21, 1922.

ALUM.—The demand for alum from the paper mills is only slightly better in spite of the steady improvement in underlying conditions. Prices are firm with ammonia alum quoted at 3.65 to 3.75 cents a pound for the lump, 3.75 to 4.00 cents for the ground, and 4.15 to 5.25 for the powdered.

BLEACHING POWDER.-The bleach market is quiet with only small lots moving. Low stocks held by the mills indicate a more active market in the near future. Imported bleach sells at 1.90 cents a pound and domestic at 2.00 to 2.25 cents a pound.

BLANC FIXE.—The blanc fixe market is more active and a better feeling exists throughout the trade. Blanc fixe pulp is quoted at \$40 to \$50 a ton, and powdered at 3.50 to 3.75 cents a pound.

BRIMSTONE.-The tone of the sulphur market is firm and dealers optimistic that a large volume will be used this year by the paper industry. Domestic brimstone is quoted at \$18 to \$20 a ton f. o. b. New York, and \$16 to \$18 a long ton at the mines.

CASEIN.-The casein market is becoming firmer. The supply in the New York market is not plentiful and the steady demand leads dealers to anticipate higher prices. The price is 9.00 cents

CAUSTIC SODA.-Orders for small quantities of caustic are fairly plentiful although inquiries for larger lots are beginning to make their appearance. The contract price is 3.50 cents a pound on the basis of 76 to 78 per cent.

CHINA CLAY.-The china clay market is still dull although its position has improved since the first of the year. The price of the English product has been reduced to compete on better terms with the domestic. Domestic unwashed now sells at \$6 to \$8 a net ton, washed at \$8 to \$10, and imported at \$13 to \$18.

LIQUID CHLORINE.-The liquid chlorine market is fairly active. Prices are firm with liquid chlorine quoted at 6.00 to 8.00 cents a pound depending upon quality, in 100 pound cylinders, f. o. b. works.

ROSIN.—The volume of trading in the rosin market is very light. The domestic demand is almost at a standstill and few iew inquiries are forthcoming from foreign buyers. Prices are firm at 5.40 for grades E. F, and G, per barrel of 280 pounds net.

SALTCAKE.-Some improvement has lately been registered in the saltcake market. The glass manufacturing business is picking up and renewed demand is coming from that industry. The production of muriatic acid is also on the increase so that the supply will keep pace with the demand without a doubt. Chrome saltcake sells at \$18 a ton and acid white at \$20.

STARCH.-The demand for starch is steady but not yet back to a normal volume. The trade looks to the paper industry to use a greater amount of starch this year than has been used in the past two or three. Prices are firm at 2.22 cents per pound for bags and 2.50 cents per pound for barrels, carload quantities.

SATIN WHITE.-Trading is light in the satin white market although small lots of the commodity continue to move with regularity. Supplies of satin white are adequate and the trade awaits a normal demand from the paper industry. Price fluctuates around 2.10 cents a pound.

SULPHATE OF ALUMINA.—Buying in the sulphate of alumina market is light because there is a feeling that hoped for reductions in freight rate schedules will allow a reduction in the market price of this chemical. The commercial grade is quoted at from 1.50 to 1.60 cents a pound and the iron free grade at 2.60 to 2.75 depending upon the location of the supply.

TALC.-The feeling has improved in the talc market and orders are received with regularity and for somewhat larger amounts. Talc is now quoted at \$10 to \$12 a net ton.

## Market Quotations

(Continued from page 63)

Solid Ledger Stock. 2.00 @ 2.25 New Black Soft. 03 @ .03 Writing Paper 1.80 @ 2.00 New Light Sec-	36
No. 1 Books, heavy. 1.50 @ 1.75 onds021/4 @ .02	
No. 2 Books, light. 1.25 @ 1.50 Khaki Cuttings0234@ .03	14
No. 1 New Manila. 2.75 @ 3.00 Corduroy02 @ .02	
No. I Old Manila 1.50 @ 1.75 New Canvas071/2 .08	
Container Manila 1.00 @ 1.10 New Black Mixed 3.00 . 3.25	
Old Kraft 1.90 @ 2.00 Old	
Overissue News75 @ .80 White, No. 1-	
Old Newspaper50 @ .60 Repacked06 @ .06	34
Common Paper40 @ .50 White, No. 2-	74
Straw Board, Chip40 @ .45 Repacked03 @ .03	24
Binders' Bd. Chip40 @ .45 Miscellaneous0234 0 .03	
Domestic Rags—New. Thirds and Blues—	78
Price to Mill, f. o. b. Phila, Repacked 1.85 @ 2.00	1
Shirt Cuttings— Miscellaneous 1.55 @ 1.71	
New White, No. 1 .09 4 Black stockings 1.75 @ 2.25 New White, No. 2 .05 @ .06 Roofing Stock—	
Fancy05 @ .05½ No. 475 @ .8: Cottons—according to grades— No. SA nominal	)
New Blue021/2	

#### **BOSTON**

I FROM OUR REGULAR	CORRESPONDENT.
Paper	Wood, Vat Lined 47.50 @ 50.00
Bonds	Filled News Board. 42.50 @45.00 Solid News Board. 42.50 @45.00 S. Manila Chip 42.50 @45.00 Pat. Coated 70.00 @75.00
Fine	Old Papers
Books, M. F	Shavings— No. 1 Hard White .04 @ .04½ No. 1 Soft White .03 @ .03½ No. 1 Mixed07½@\$8.00 Ledgers & Writings .02 @ .02½
Manilas— No. 1 Manila\$6.75 @	Solid Books011/4 @\$1.35 Blanks\$1,30@\$1.40
No. 1 Fibre 8.00 @ 9.00 No. 1 Jute 8.50 @ 9.00 Kraft Wrapping 7.00 @	No. 2 Books Light60 .70 Folded News, over issues\$11.50 @12.00
Boards  (Fer Ton Destination)	Mixed paper50 @ Gunny Bagging .80 @ Manila Rope04 @ .04 % Comman Paper 8.00 @
Chip\$37.50@ News, Vat Lined 39.00@40.00	Manila Rope

## **TORONTO**

FROM OUR REGULAT	CORRESPONDENT.]
Paper	Sulphite bleached 95.00@105.00
Mill Prices to Jobbers f. o. b. Mill)	Sulphate 75.00@
Bond—	Old Waste Papers
Sulphite 12½ @ 14 Light tinted 13½ @ 15	(In carload lots, f. c. b. Toronte) Shavings—
Dark tinted 15 @ 161/2	White Env. Cut. 3,75 @ -
Ledgers (sulphite) @ 141/2	Soft White Book
Writing 111/2@ 15	Shavings 3.15 @ -
News, f. o. b. Mills-	White Bl'k News 2.00 @
Rolls (carloads). 3.50 @	Book and Ledger-
Sheets (carloads) - @ 4.25	Flat Magazine and
Sheets (2 tons or	Book Stock
over) — @ 4.50	(old) 1.45 @ -
Book-	Light and Crum-
No. 1 M. F. (car-	pled Book Stock 1.30 @ -
loads)10.00 @ -	Ledgers and
No. 2 M. F. (car	Writings 1.80 @ -
loads) 9.00 @ -	Solid Ledgers 1.80 @ -
No. 3 M. F. (Car-	Manilas-
loads) 8.50 @ -	New Manila Cut. 1.95 @ -
loads)10.50 @ -	Printed Manilas. 1.00 @ -
No. 2 S. C. (car-	Kraft 2.25 @ -
loads) 9.50 @ -	Strictly Overissue .90 @ -
No. 1 Coated and	Folded News 80 @ -
litho 15.00 @ -	No. 1 Mixed Pa-
No. 2 Coated and	pers
litho14.00 @ -	Domestic Rags-
No. 3 Coated and	Price to mills, f.o.b. Toronto.
litho	Per lb.
Coated and litho.,	No. 1 White shirt
colored15.25 @ -	cuttings0934@ .10
Wrapping—	No. 2 White shirt
Grey 4.75 @ -	cuttings051/2@ .051/4
White Wrap 5.25 @ -	Fancy shirt cut-
"B" Manila 5.75 — — No. 1 Manila 7.50 — —	tings051/4@ .051/4
Fibra 7.25	No. 1 Old whites .04 @ -
Fibre 7.25 6 -	Thirds and blues .02 @ .0234
M. G 8.75 @ -	Plack stockings 200 Per cwt.
	Black stockings. 2.00 @ -
Pulp	Roofing stock No. 1 1.25
(F. o. b. Mill)	No. 2 1.15 @ -
Ground Wood\$25.00@\$32.50	Roofing stock
Sulphite easy bleach-	Manila rope041/4@ .041/4
	37- 0 10pc0474 @ .0473

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WANTED—Paper Bag and Envelope Salesmen. A Specialty House having recently enlarged its Manufacturing Equipment desires the services of young aggressive salesmen. A broad field and excellent future. Experience and knowledge essential. Write in detail. Address, Box 4638, care Paper Trade Journal.

WANTED: COMBINER MAN—To make lay-outs and take charge of operating one 80° and 120° machine for pasting solid fibre container board. Pressman: Must be experienced in High-class solid fibre container work to assume direct charge of Printing Department, consisting of various makes of fibre-Board Presses, both fiat beds and cylinder types. General Foreman: Man who is experienced in all the finishing processes of solid Fibre Container Work. Must be able to take full charge of Slitting, Cutting, Creasing and Stitching Departments. Full particulars as to experience, references, and salary expected to be covered in first letter of application. All correspondence treated confidentially. Address, Box 4708, care Paper Trade Journal. WANTED: COMBINER MAN-To make

WANTED—An assistant Chemist for lab-oratory of a large Pulp and Paper Com-pany located in the Middle West. A young college graduate with a year or two Paper Mill experience preferred. Must be wide awake. Address, Box 4796, care Paper Trade Journal.

WANTED-Machine Help and Beaterman, Mill in good location. Address, Box 4831, care Paper Trade Journal. M-9

WANTED—Superintendent for 2-machine Mill, making Book and Bond Paper, Practical experienced man wanted. In re-ply, enclose references, state experience, Must have ability and character. Address, Box 4808, care Paper Trade Journal. F-23

WANTED—Two machine tenders, two beater engineers, boss finisher and mill-wright, for book mill on Pacific Coast. Only first class men experienced in Machine Finished Book and Writings. References required. Address, Box 4847, care Paper Trade Journal.

## A CAREER **NOT A JOB**

Wanted: A high class man as General Manager of modern Waxed Paper Plant. Must be fully experienced in this line and not be afraid to shoulder responsibility as to quality and production. Only those who have earned \$5,000 or more can be considered. All answers, which should contain details as to experience and references will be kept in strictest confidence. Address, Box 4794, care Paper Trade Journal.

#### HELP WANTED

EXPERIENCED MEN IN PAPER INDUS. EAPERIENGED MEN IN PAPER INDUSTRY—Our Confidential Personal Service limited to the Pulp and Allied Trades. Can be of the utmost value to you in locating desirable positions. Write to the Industrial Service Bureau. 1502 Monadnock Block, Chicago, Ill. F-23

WANTED—First class Cylinder Machine Tender and Beaterman for 80" machine, three tours. Test Board and Bogue Papers. Address, Box 4833, care Paper Trade Journal.

WANTED—Two Cylinder Machine tenders and two Beatermen experienced on high grade Manila Rope Specialties. Mill located in good Eastern City. Address, Box 4834, care Paper Trade Journal.

WANTED—Machine Tender, Beater Fore-men, Back Tenders in an Eastern Roof-ing Mill. Eight hours. In reply give ref-erences, stating age. Address, Box 4873, care Paper Trade Journal.

WANTED—Three First Class Machine
Tenders and three First Class Back
Tenders on modern, high speed 158" Fourdrinier Machine making Kraft and Sulphite.
None but first class men need apply. State
age and experience, also submit references.
Address, Box 4874, care Paper Trade Journal.

M-9

WANTED—Man to take charge of a number of Coating Machines principally running on Book and Litho Paper. In replying state where present and past employed, giving entire experience. Address, Box 4861, care Paper Trade Journal.

WANTED—Envelope machine adjusters, experienced on Web Machines. Steady employment. Address, Box 378. Room 2503, 110 West 40th St., New York City. F-23

WANTED-Envelope machine adjusters for W Vierengle Machines. Address, Box 379. Room 2503, 110 West 40th St., New York City.

WANTED-A first class finisher on Book Writing and Envelope Papers. Mill located in New York State. Address, Box 4862. care Paper Trade Journal.

SALESMAN WANTED—Experienced man to handle exclusively Fine Papers, Bonds, Bristols, representing Mill selling to New York Paper Dealers, Commission basis, Ad-dress, Box 4863, care Paper Trade Journal. F-23

WANTED-High grade salesman for sell-WANTED—High grade Saleshia.

ing Pulp and Paper Mill Machinery. Address, Box 4864, care Paper Trade Journal.

M-16

## SITUATIONS WANTED

SUPERINTENDENT-Open for position; 20 years experience. Practical paper maker on Bonds. Writings, Ledgers, Waxing and book. Will go to Canada or any Foreign Country. Address, Box 4737, care Paper Trade Journal.

SULPHITE SUPERINTENDENT, 20 years' practical and some technical training, wishes to get in touch with managers of mills who want the best and are not getting it. Address, Box 4744, care Paper Trade F-23

A-1 ALL AROUND MECHANIC—Wishes to make change. Twenty years' experience in Pulp and Paper Mills. Satisfactory work guaranteed. Employers interest is mine. References. Address. Rox 4760, care Paper Trade Journal. M-2

MARRIED MAN desires position as Sul-MARRIED MAN desires position as ourphite Cook. Has had several years' experlence in acid making and cooking sulphite. Can give best of references. Address, Box 4822, care Paper Trade Journal.
F-23

## SITUATIONS WANTED

PAPER SALESMAN in New York City who Can produce a large volume of business-with adequate co-operation, desires connec-tion. Drawing account on Commission basis. Correspondence invited. Address, Box 465. care Faper Trade Journal.

WANTED POSITION—As superintendent, Twenty-one years' experience; used to Specialties, Colors and Wrapping, all grades of Boards and Fibres. Knows how to handle help. Can keep up repairs. Used to Four-drinier and Cylinder Machines. Address, Box 4786, care Paper Trade Journal.

TECHNICAL GRADUATE-Desires position of responsibility with progressive concern. Fifteen years' varied experience in Pulp and Paper Industry, including Techni-cal Control research, operating and engineer-ing duties. Thoroughly practical and re-liable man. Excellent references. Address, Box 4787, care Paper Trade Journal. F-23

YOUNG MAN—College educated, with practical experience in manufacture of sulphate, soda and sulphite pulp, wishes to connect with progressive concern. Best references. Address, Box 4803, care Paper Trade Journal.

MASTER MECHANIC with 20 years experi-M ence desires position. Good record in construction and maintenance in pulp and paper mills in United States and Canada. Best of references. Address, Box 4806, care Paper Trade Journal. M-9

CITUATION WANTED—Engineering draftsman, technical graduate, 12 years' experience, Pulp and Paper Mills, Power House and Hydro-Electric Design. Thoroughly practical and reliable. Address, Box 4316, care Paper Trade Journal.

KRAFT PULP-Experienced sulphate mill superintendent, 10 years' successful experience on all bleached and unbleached kraft wishes to connect with mill desiring maximum production. Is willing to guarantee a full output per unit. Address, Box 4817, Care Paper Trade Journal. F-23

WANTED POSITION—Superintendent open for a position. Have had fifteen years' experience on all grades of Box Boards, Tests, Containers, etc. Familiar with repairs, maintenance, and knows how to handle men. Address, Box 4818, care Paper Trade Journal.

WANTED POSITION as superintendent used to making all Wrapping, Chip and Box Boards and Building Papers, also Fliter Paper. Used to cylinder, fourdrinler and Harper machines. Knows how to handle help. 22 years' experience. Can furnish good references. Address, Box 4821, care Paper Trade Journal.

MASTER MECHANIC—Desires position.
Twenty years' experience in Mills of all grades of Paper and Pulp; also on Steam, Water and Electric Power. Best references. Address, Box 4765, care Paper Frade Journal.
M-9

## A CHANGE

A MAN WITH SEVENTEEN YEARS' EXPERIENCE IN THE WHOLESALE PAPER BUSINESS, STILL YOUNG, DESIRES A CHANGE IN CONNECTIONS. THIS EXPERIENCE HAS BEEN CONFINED TO FINE PAPERS IN THE CAPACITY OF SALESMAN AND BRANCH MANAGER. WOULD WANT ONLY A POSITION WHERE A FUTURE WOULD BE OFFERED FOR ABILITY, HOMESTY OF PURPOSE AND A DE-HONESTY OF PURPOSE AND A DE-SIRE TO WORK. ADDRESS, BOX 4878, CARE PAPER TRADE JOURNAL.

#### SITUATIONS WANTED

PULP AND PAPER MILL ENGINEER wishes permanent position. Capable all around man, civil, mechanical, structural. Good draftsman. Eleven years' experience. University graduate. American, 33 years old. Married. Address, Box 4824, care Paper Trade Journal.

WANTED POSITION as Secretary to Pres ident or Manager of Mill, young man thoroughly experienced in Wrapping Paper and Board Mill, possessing initiative and executive ability. Address, Box 4825, care Paper Trade Journal.

SUPERINTENDENT wants to make change.

Twenty-seven years' experience on News,
Book, Writing, Bond, Fibre and Board, also
Sulphite and Ground Wood. Always increased the production wherever I have been
and put the mill in A-No. 1 shape. 44 years
old and can give the best of references. Address, Box 4827, care Paper Trade Journal.

M-9

SUPERINTENDENT desires position run-ning Friction or binders board mill. Have had many years of experience. Understands repairs and can superintend building of mill. Can furnish best of references. Address, Box 4828, care Paper Trade Journal. M-16

CHEMICAL & PRODUCTION ENGINEER
—Quality on quantity basis, wants Western Mill or Industrial Commercial Position.
Age 38. Address, Box 4849, care Paper Trade
Journal.

M-2

BOSS FINISHER—Practical Executive, wide experience, all grades and weights of Fourdriner and cylinder paper, desires connection with good mill. Address, Box 4850, care Paper Trade Journal. M-2

SULPHITE PULP SUPERINTENDENT-With proven ability for big production at lowest costs, desires position. Would consider offer from concern where production is below the average. Address, Box 4851, care Paper Trade Journal. M-9

BOSS FINISHER—Open for position. Thoroughly experienced. All grades of book, writing, envelope and board papers. Highest references. Address, Box 4852, care Paper Trade Journal.

CORRUGATED AND CONTAINER BOARD COMPUGATED AND CONTAINER BOARD
MILLS—Mill agent with well established
trade wants to represent mill exclusively,
New York and East. Commission or salary
basis. Address, Box 4856, care Paper Trade
Journal. M-2

A-1 BEATERMAN—Experienced on all grades, desires position. Best of references. Address, Box 4839, care Paper Trade Journal.

SALESMAN—At present employed selling to Jobbers in Minneapolis and St. Paul wants mill agency. Experienced on all lines of paper and specialties. Satisfactory references furnished. Address, Box 4840, care Paper Trade Journal. M-2

POSITION WANTED as Machine Tender.
Good on fourdrinier and cylinder
machine with Edwards attachments or without. Experienced on all grades of Tissue
and Crepes. Married, have family. Can
furnish best of references. Address, Box
4841, care Paper Trade Journal.
M-2

## WANTED

Young man with fifteen years' ex-perience in the selling end of the paper business, for reasons entirely foreign to his present connection, desires to make change. Now managing executive in a Division of one of the best known Fine Paper Merchants in the country; 34 years of age, married. My record will stand the closest scru-Correspondence must be strictly confidential. If interested, address Box 4829, care Paper Trade Journal.

#### SITUATIONS WANTED

A-1 MACHINE TENDER desires position as Boss Machine Tender with good company where his ability and experience may be of value. Experienced on large and fast machines. All grades manila, Tissues and specialties. Married. Best references. Address, Box 4842, care Paper Trade Journal. F-23

WANTED—Position as Ground Wood Superintendent. Over 20 years' experience with some of the largest News Mills in the Country. Address, Box 4843, care Faper Frada Journal.

SITUATION WANTED—By Superintendent of Ability. Twenty years' practical experience on all grades of felt and floor coverings and building papers of all kinds. Wide experience on mill construction and repairs, also in managing help to get greatest efficiency. Middle-aged, married. Can furnish No. 1 references. Address, Box 4774, care Paper Trade Journal.

SULPHITE SUPERINTENDENT twelve years' practical experience, combined with technical training desires position with a Progressive Concern where ability is recognized. Excellent references. Address, Box 4875, care Paper Trade Journal. M.-30

YOUNG MAN—College education. Four years' experience, desires connection with Board Mill, preferably in Purchasing Department. Address, Box 4876, care Paper Trade Journal.

SUPERINTENDENT open for position, experienced on Book, News, Manilla, Specialties and Colors. Am experienced Paper Mill Engineer of ability. Can furnish very best of references. Address, Box 4877, care Paper Trade Journal.

WANTED-Position as assistant to Coat-Wing Mill Superintendent. Can furnish references as to ability. 16 years experience. Married. Address, Box 4865, care Paper Trade Journal. F-23

PRODUCTION MANAGER or Superintendent of Waxing Plant open for position.

Broad experience, Printing, Coating, and Waxing Paper, Plant Management, Production, Cost Systems, up-to-date methods, installations and maintenance. Can furnish references. Address, Box 4866, care of Paper Trade Journal.

M-2

SALESMAN who has been calling on Paper Boxmakers, Printers and Publishers, in Philadelphia and nearby territory for the past twelve years and who knows Cardboard, Fine and Fancy Papers is seeking connections with reliable Concern looking for intelligent representation in this market. Record will stand any investigation. P. O. Box 978, Philadelphia, Pa. F-23

SUPERINTENDENT—Envelope Mfg. with 20 years experience, Office Estimating, Buyer of Paper and Supplies, practical experience in Cutting Adjusting of plunger type, Vierengle Open End and Fastener Machines. Address, Box 4867, care Paper Trade Journal.

GRADUATE MECHANICAL ENGINEER GRADUATE MECHANICAL ENGINEER 25. Four years experience Paper and Box Industry, desires position as assistant to Chief Engineer in large Paper Mill. Address, Box 4868, care of Paper Trade Journal.

SUPERINTENDENT-Wants position capable of producing counter, heeling Shank and Filler, Board and all kinds of high grade Fibre Boards. Thoroughly understands and can operate all machinery used in mak-ing Fibre Boards. Good mechanic. Address, Box 4869, care Paper Trade Journal. M-9

YOUNG MAN; SALESMAN, thorough ALESMAN, thorough wan; before the knowledge Bags, Coarse Papers, Tissues and Specialties, desires position selling Paper; prefer small towns around metropolitan district. Address, Box 4879, care Paper Trade Journal.

#### FOR SALE

COAL—Moshannon and "E Seam" bituminous coals, low sulphur, low ash. Lowest freight rate east and north. Prices and freight rates will be furnished on request. Halden-Kelley Coal Company, 209 Market St., Clearfield, Pa.

FOR SALE—Roofing and Saturating Ma-chines, 73°x36" wide. Chilled steel rolls. Also Painter Mixing Machine, Grinders, etc. Address Box 4310, care Paper Trade Journal.

FOR SALE-14 Calender Rolls, 58" face, F to 14" diameter. 2 No. 1 Claffin Engines.

1 small Jordan Engine. 1 6" Horizontal Water Pump. 2 Air Fans. Complete triple-deck frames for 44 Dryers. Will arrange terms to suit. Chesspeake Paper Board Co., Baltimore, Maryland.

FOR SALE: DRYERS—8-60"x120" Dryers with bearings. A bargain. W. V. Sullivan, Call Bidg., San Francisco.

FOR SALE—Paper machine reel 110" Face. Heavy pattern revolving reel for 4 drums. Marinette & Menominee Paper Co., Mari-nette, Wisconsin.

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OFFERS FOR SALE 1-2-18" x 42"Filer & Stowell Non-Condensing Engines 12' x 25" Fly-wheel. 135 lbs. Pressure. 110 R.P.M.

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IN STOCK AND GUARANTEED
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Fourdrinier Tissue Machine—One 96", one 72".
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Kutter Trowbridge 96".
Press Parts for Paper Machines—Pusey & Jones-Bell Crank housing, two sets 18" x 96"; Black & Clawson swing arm housings with rolls.
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Marshall Drives—Three Black & Clawson selicontained stand with friction clutch cone pulley and 6" mortise gears. Mortise gears and pinions for Pusey & Jones Marshall crives 5" to 8" face.
Chilled Calenders—One 66" face, five roll; one 54" face, five roll.
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Sitters and Winders—One 120" Warren, one 108".

Sitters and Winders—One 120" Warren, one 108".

36" Kidders.

Reels—Puscy & Jones two drum upright 48" to

114"

Reeis-Pusey & Jones two drum upright 48" to 114".

Beaters-Six 72" x 42" Noble & Wood, two 66" x 42" Noble & Wood, equipped with three cylinder washers; one Dilts 62" x 50" iron tub, one Jones 62" x 52", seven Horne 36" x 35".

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Screens-Three 12 plate open side Packer. Six 10-plate. Two six plate.

Stuff Fumps-Deane Triplex 8" x 12", Gouldt triplex 8" x 10", Sandusky triplex 4" x 6".

Revolving Sheet Cutters-One 104" Horne, one 50" Hamblet diagonal, one 42" Finlay, four 61" Hamblet, four 61" Finlay.

Wet Machines-Four 72" Bagley & Sewall Hydraulic.

We have a large number of pumps and over five hundred calender, press and couch rolls in stock-

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## FOR SALE

FOR SALE—Controlling interest in a three Machine Mill. This mill is located in the Central West and is in wonderful physical condition. Owner wishes to retire. Size of machines, 78", 88" and 105". Address, Box 4857, care Paper Trade Journal. F-23

FOR SALE—One New York Safety 5"x8" vertical steam engine, 32"x4½" fly wheel, Pickering governor. One bank of 13 Dryers 28" diameter, 80" face, set in two tiers, complete with top and bottom felt stretcher guides, and carrying rolls in first-class condition, with steam headers. Now in use. One two drum reel for 84" machine complete, now in use. One 10 plate, Packer screen, complete with plates, driving pulley and three extra sets of plates. One Pope mullen screen, 10 plates, 12"x42". One 36" Holyoke Machine plater. Valley Paper Company, Holyoke, Mass.

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BOX BOARD MILL. CENTRAL PART OF NEW YORK STATE, OR WILL CON-SIDER OUTSIDE CAPITAL FROM EX-PERIENCED MAN. GOOD OPPOR-TUNITY. ADDRESS BOX 4871, CARE PAPER TRADE JOURNAL.

#### FOR SALE

FOR SALE-Moore & White Sorting Table, absolutely new, equipped with motor. Size 57" x 60". Price reasonable. Address, Box 4830, care Paper Trade Journal. M-9

FOR SALE-One Jones Standard Belt Driven Jordan Engine in first class condition having been in operation six months only. Reason for sale changing of plant to electric drives. Lewis, Slocum & Le Fevre Company, Beaver Falls, New York.

M-16

#### **MISCELLANEOUS**

MILLER PAPER CO., FRANK P., high grade specialties. Boards. East Downington, Pa.

SIMMONS, JOHN, SONS, Paper and Paper Stock, 28 and 30 South Marshall street, Philadelphia, Pa. Mar.-1

S Wiff, GEORGE W., JR., Designer and Manufacturer of Special Machinery for Manufacturing and Printing Paper Goods. 1—1—24

PULP WANTED—Will pay cash for any quantity Foreign Pulps on spot and to ar-rive. Send particulars with price. Address, Box 4832, care Paper Trade Journal. tf

WANTED—To buy all Tissue Culls for drop shipment, direct from Manufacturer. Address, P. O. Box 871, Norfolk, Va. M-2

WANTED—Variable speed, second hand double engine, 12x12 to 16x16. State make, size, condition, price, and when can be inspected. Address, Box 4858, care Paper Trade Journal.

M-9

## **MISCELLANEOUS**

WANTED-To connect with Chip Board Mill in East for part or all of output. ild invest \$10,000. Address, Box 4846, Would invest \$10,000. care Paper Trade Journal.

WANTED a small Beater for an Expermental Mill, also complete paper machine and other equipment for experimental mill. What have you to offer? State price Address, Box 4870, care Paper Trade Journal.

WANTED-To purchase second hand National or Dulin Flat Bag Machines. Not particular as to condition. State sizes and prices. Address, Box 4879, care of Paper Trade Journal.

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News, Novel, Catalog, Book Writing Specialties

Well organized firm of New York mill agents in excellent standing with the trade are ready to serve to advantage the right mill making above papers. Will finance orders if required. Box 4860. care The Paper Trade Journal.

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Windsor, Connecticut

Fully Equipped up-to-date plant with 74-inch Four-Cylinder Machine trimming 65 inches. Power-both Steam and Electricity. Excellent water for manufacturing purposes. Product-Glazed Press Boards, Jacquard Card or any Cylinder Specialties. Approximately \$100,000 has been spent on improvements to this mill during the past two years.

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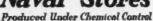
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COTTON, JUTE AND FLAXWASTES
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Concrete dust ruins machinery and merchandise. It shows that the concrete floor is disintegrating.

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Makes Concrete Floors Dustproof and Wearproof

Over 200,000,000 square feet of concrete floors lapidolized thus far.

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264 Pearl St., New York

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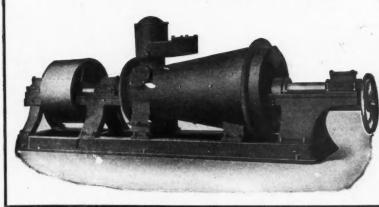
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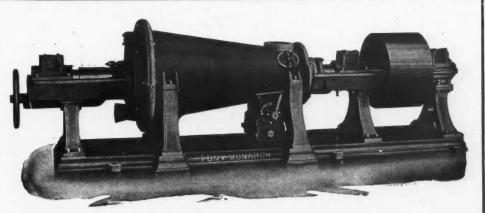
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Fitchburg Process Company — Menasha Wood Split Pulley Co	PULP PROCESS.  Castle, Gottheil & Overton	Saranac Machine Co
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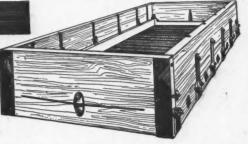
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